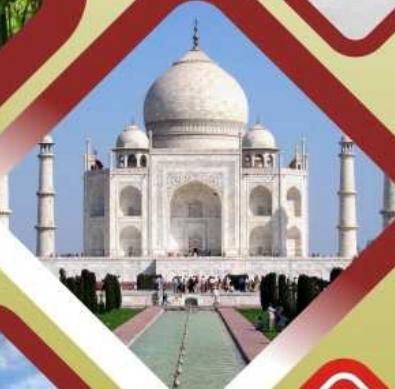
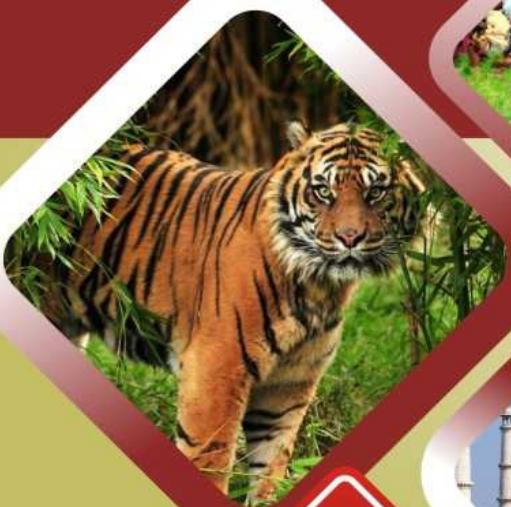




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# INDIA

## Through MAPS



Prem Patel

## 1. NEW MOORE ISLAND:

- Also called as “**Purbasha**”and “**South Talpatty Island**”
- In front of the Sundarban Delta near the Indo- Bangladesh border.
- Formed in 1970 due to Bhola cyclone.
- Has mangrove vegetation and fragile ecosystem
- Disputed between India and Bangladesh
- It may be disappeared due to of sea level change.

## 2. SAGAR ISLAND :

- One of the largest islands of the Sundarban Delta at the mouth of the Hugli River
- Has Sagar Marine Park, Kapil Muni Temple, rich mangrove forests
- Pilgrimage place, especially for the holy dip during the **Makar Sakranti**

## 3. WHEELER ISLAND :

- Off the coast of Orissa, north –east of Paradeep
- Just 10 km. away from the coast
- 2 km. long and area is 390 acres
- Missile test facility for the most of Indian missiles
- Nearest port is **Dhamra Port**

## 4. HOPE ISLAND :

- A small tadpole shaped island situated off the coast of Kakinada in the Bay of Bengal
- Young island is formed in the last 200 years from the sands carried by the waters of the Godavari
- Protects the port of Kakinada from strong cyclones, tidal waves and tsunamis
- It makes the Kakinada port one of the safest ports in the eastern coast of India

## 5. SRIHARIKOTA :

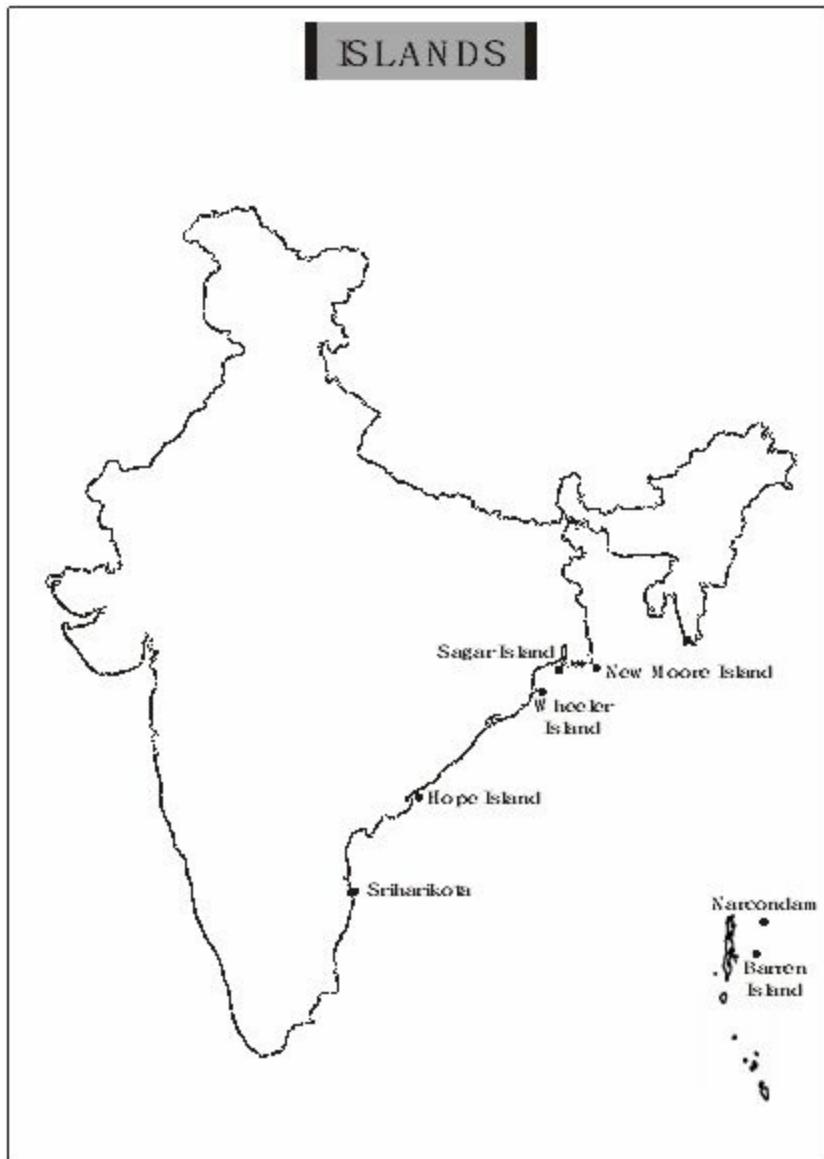
- At the sea margin of the Pulicat Lake in Andhra Pradesh
- Has the rocket launching station of **ISRO (SHAR)**
- Barrier island that separates the Pulicat Lake from the Bay of Bengal
- Connected to Chennai by expressways

## **6. NARCONDAM :**

- In the Andaman Sea, east of the North Andaman
- **A dormant volcano** with conical shape but no remains of a crater at the top (710 m above sea level)- second tallest point after the Saddle Peak
- Proximity to Myanmar lends it great strategic and geopolitical significance
- Easternmost point of the Andaman and Nicobar Islands

## **7.BARREN ISLAND :**

- In the Andaman Sea, south of the Narcondam Island
- **Only active volcano of India and South Asia**
- Most recent eruption – January, 2011
- Part of the volcanic arc formed at the margin of the tectonic plates
- No human population true to its name
- 2 km. wide caldera at the top



## 8.LANDFALL ISLAND :

- North of the North Andaman
- Separated from the Coco Island of Myanmar by the Coco Channel
- Northernmost point of the Andaman and Nicobar Islands
- Tourism does exist here but exposure to the public is limited

## 9.NORTH ANDAMAN :

- Northernmost of the important islands of the Andaman Group
- Hosts the **Saddle Peak** – the highest peak of the Andaman and Nicobar (737 m)
- Its northern tip is called **Cape Price**
- Geologically part of the Arakan Yoma

- Main town is Diglipur
- Main economic activities – rice and orange production

#### **10. MIDDLE ANDAMAN :**

- **Largest island of India**
- Between North Andaman and South Andaman
- **Jarawa** people live here
- Geologically part of the **Arakan Yoma**
- Fishing and agriculture
- **Towns:** Rangat, Billiground and Mayabunder

#### **11. SOUTH ANDAMAN :**

- Southernmost of the great Andaman Group (**third largest after Middle and North**)
- **Port Blair** is located in the south-eastern part of the island (**less mountainous than others** )
- Home to the majority of the population of Andaman and Nicobar

#### **12. RUTLAND :**

- Between South Andaman and Little Andaman
- North of the Duncan Passage
- Rich in marine life having a good representation of fish and corals
- Formerly home to the Jangil
- Presently without any permanent indigenous settlement

#### **13. LITTLE ANDAMAN :**

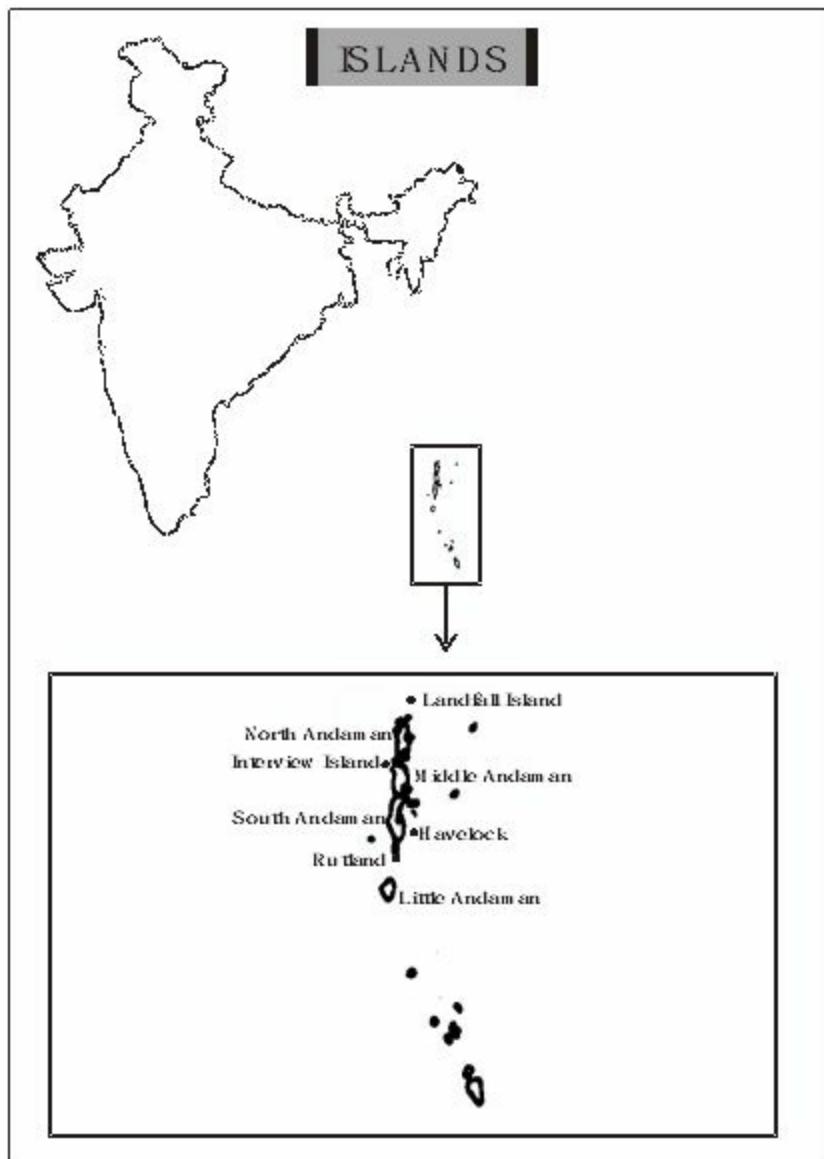
- Southernmost of the Andaman Group : Fourth largest of the Andaman Group
- Between Duncan Passage and Ten Degree Channel
- Home of **Onge people**
- Picturesque location, sea water crocodiles
- Widespread rainforests and several rare species of marine turtle

#### **14. INTERVIEW ISLAND :**

- On the west of Andaman Islands
- Area- 99 sq km.
- West of Austen Strait which separates the North Andaman from the Middle Andaman

#### **15. HAVELOCK :**

- Largest island of the Richie's Archipelago, a chain of islands to the east of the great Andamans
- 57 km. North-East of Port Blair
- Named after Henry Havelock, a British general
- Main settlers are Bengalis (5,354 people)
- It has **Radhanagar Beach** which was named “Best Beach in Asia” by Time in 2004



## 16. CAR NICOBAR :

- Southernmost of the Nicobar Islands
- South of the Ten Degree Channel
- Flat fertile island covered with clusters of coconut plants and

enchanting beaches with a roaring sea all around

- **Major crops:** coconut and arecanut
- Home to more than half of the total Nicobar population

## **17. CAMORTA :**

- An island of the Nicobar group
- North of the Nancowry Island
- Affected by the tsunami of December 2004

## **18 NANCOWRY :**

- Refers both to a single island and to the group of adjoining islands
- At the central part of the Nicobar group
- Part of **the Tribal Reserve Area**
- Has magnificent land – locked **Nancowry Harbour** described as one of the safest natural harbours in the world

## **19. KATCHAL ISLAND :**

- Part of the Nicobar Island
- In the central part of the island group, east of the Nancowry Island.
- Devasted by Tsunamis in 2004 at least 1500 people died due to it.

## **20. LITTLE NICOBAR :**

- Part of the Nicobar Islands
- Separated from the Great Nicobar Island by the St. George's Channel
- In recent time it has suffered tsunami and earthquake

## **21. GREAT NICOBAR :**

- Largest island of the Nicobar group
- Southernmost tip- **Indira Point (Pygmalion Point)**
- Separated from the Sumatra Island by **the Great Channel**
- **Mt.Thuillier** –highest point in the Nicobar (642m)
- **Great Nicobar Biosphere Reserve**

## **22. PAMBAN ISLAND :**

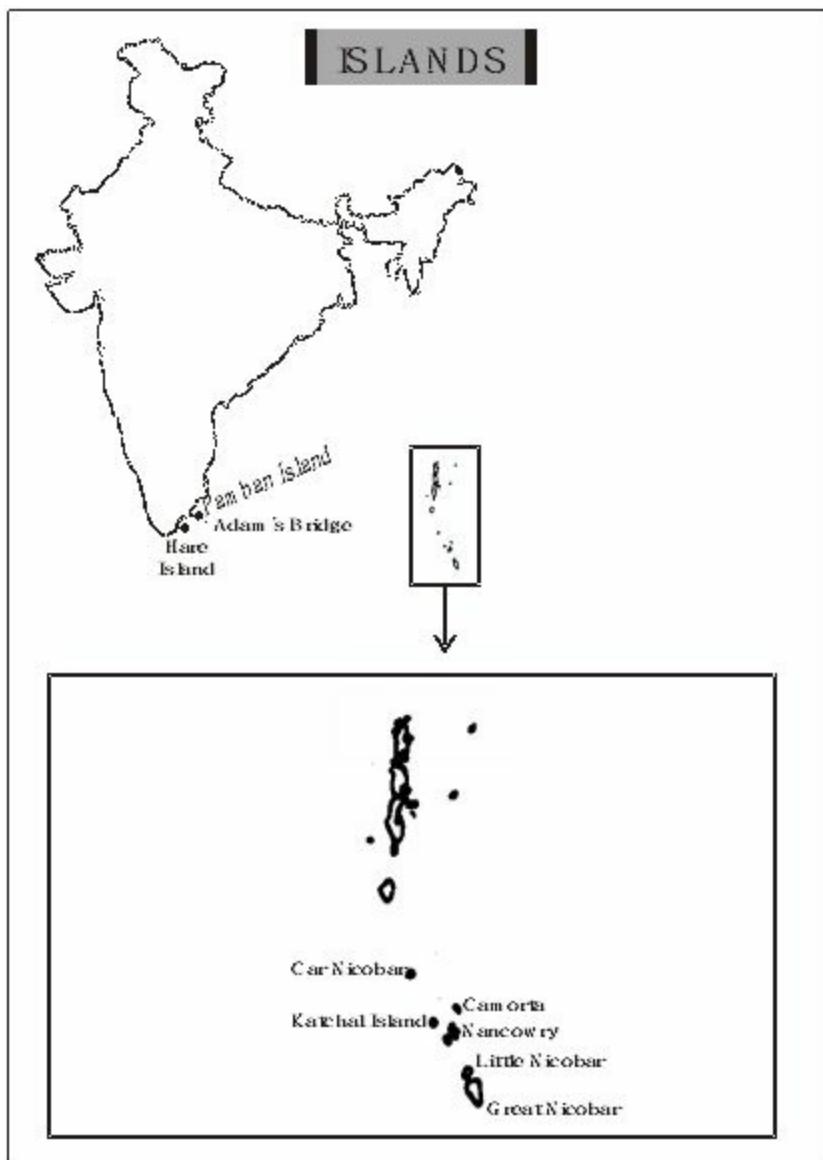
- Also known as **Rameswaram Island**
- Separated from the mainland India by the Pamban Channel
- Most of the island is covered with white sands
- Coconut and palm trees are found in abundance
- **Main towns** – Rameshwaram, Dhanushkodi

### **23. ADAM'S BRIDGE :**

- Also known as **Ram's Bridge** or **Rama Setu**
- Between Palk Bay and Gulf of Mannar
- A chain of limestone shoals Between Pamban and Mannar Island of Sri Lanka
- Geologically link b/w India and Sri Lanka
- 30 km. long
- There is a plan of **Sethusamudram Project** which is strongly opposed by hardcore Hindus.

### **24. HARE ISLAND :**

- Lies adjoining the Tuticorin Port
- Very good picnic spot for holiday seekers and the domestic tourists
- Many people visit there during **the Pongal**



## 25. VAN TIVU :

- It is one of the 21 islands of the Gulf of Mannar located at 8°50' N and 70° E
- The islands are situated at an average distance of about 8 km from the coastline

## 26. DHARMADAM (GREEN ISLAND) :

- A small 2 hectares private island in the **Kannur district** of Kerala
- 4 km from the town of Thalassery
- Covered with coconut palms and dense bush in a beautiful sight from the Muzhappilangad Beach . During low tide one can walk out to it from the beach

- Earlier known as Dharmapattanam, was a Buddhist stronghold

**27. GUNDU ISLAND :**

- Smallest of all the islands those constitute together the city of **Kochi**
- Spreaded over 5 acres of land
- Originally the home of a coir factory, it is now a resort owned by the Taj Malabar Hotel

**28. EZHUMANTHRUTHU :**

- 8 km. west of Kaduthuruthy town in the district of Kottayam, Kerala
- Area is about 2 sq km.
- Densely populated (3500)
- It is a twin island along with another small island called Pulithuruthu

**29. KURUVADWEEP :**

- Situated 17 km. from Mananthavady which is in Wayanad district , Kerala
- It is a group of islands forming 950 acres of evergreen forests
- Popular tourist place, famous for its scenic beauty, picturesque water bodies and exotic wildlife sanctuary
- It is uninhabited
- A series of seven islands on the tributaries of Kabani River

**30. MUNROE ISLAND :**

- Formed at the confluence of Asthamudi Kayal and Kallada River in Kerala
- 25 km. from Kollam
- Tourism, coir, fishing, coconut farming

**31. NEDUNGAD :**

- A small island located in Ernakulam district of Kerala

**32. PULIN CUNNU :**

- An island village in Alappuzha district of Kerala
- Near the Pampa River
- Part of the Kerala backwaters
- The famous **Rajiv Gandhi Trophy** boat race is held here during the months of October–November every year

**33. RAMANTHRUTHU :**

- One of the smallest islands that make up the city of **Kochi**

- It was the smallest polling booth in central Kerala during the 2006 state elections

- It has untrekkable terrain and is sparsely populated

### **34. VALIYAPARAMBA ISLAND :**

- Perhaps the most scenic backwater stretch in Kerala
- Fed by four rivers and dotted with numerous little islands
- Located near **Kasargod**
- Lush green groves of coconut and emerald green backwaters make the tour of the island a perfect treat
- Just 50 km. from Mangalore



### **35. VALLARPADAM :**

- A small idyllic island in the Vembanand Lake , 1 km north of the mainland **Kochi**
  - About 3.9 km. long 1.5 km. wide
  - Between Mulavukad Island and Vypin Island
  - A proposed container terminal project could make this small island one of the best hub ports in the world
  - A major pilgrim centre for Christmas :**Church of Our Lady of Ransom**

### **36. VENDURUTHY :**

- A small island in **Kochi**
- Now a part of greater Willingdom Island
- Approachable only from the Ernakulam backwater channel
- It boasted of two edifices, the **Roman Catholic Church of Saint Peter and Saint Paul**
  - INS Venduruthy
  - **2 defense schools:** Gunnery School and the Navigation and Direction School

### **37. WILLINGDON :**

- Named after **Lord Willingdon**, the erstwhile governor of Punjab
- **An artificial island** created from the materials dredged while deepening the Kochi Port
- Home of the modern port of **Kochi**
- It has airport, shipbuilding yard, Southern Naval Command Headquarters, custom house etc
- Also known as **Wellington Island**

### **38. VYPIN :**

- One of the islands that makes up the urban agglomeration of **Kochi**
- About 27 km long island was formed in the year 1347 after a heavy flood
  - **One of the heaviest dense islands in the world**
  - Connected to Kochi by a bridge from Kalamuku
  - **Goshree Bridge** also connects Mulavukadu **and** Vallarpadam
  - **Narakkal** is the business capital of Vypin

### **39. NETRANI :**

- Also known as **Murudeshwar** and **Pigeon Island** – A tiny island
- 10 nautical miles away from the temple town of Murudeshwara
- Some of the best sites for scuba – diving
- A coral island suitable for snorkeling and diving
- Comes in North Kanara district of Karnataka near Karwar
- Used by the **Indian Navy** for target practice

#### **40. KAVERI NISARGADHAMA :**

- An island formed by river **Kaveri** in the district of **Kodagu**
- It is a famous picnic spot
- This 25 acre island has lush foliage of thick bamboo grooves, sandalwood and teak trees
- Just 30 km from Madikeri

#### **41. ST. MARY'S :**

- Also known as **Coconut Island**
- A set of four small islands off the coast of Udupi in **Karnataka**
- Formed of columnar basaltic lava
- Formed when Madagascar was attached to India (88 million years ago)
- Uninhabited islands
- According to legend it was first seen by Vasco da Gama, on his way to Kozhikode



#### 42. UPPINAKUDRU :

- Known as **Salt Island**
- Located at 6 km. towards north of Kundapura in Udupi district of Karnataka
- A small island village, once famous for trading of **salts (uppu)** and for sea food
- 3 temples and 8 mutts
- Lord Gopalalakrishna, Lord Vasudeva and Siddi Vinayak temples
- **Economy** – agriculture (paddy, pulse)

#### 43. ANJADIP :

- Island off the coast of South Goa district

- Legally it is part of Goa, although there is a widespread misconception that it is a part of Karnataka off whose coast it lies
- 1.5 km long and 25 km wide
- Known for its annual **Feast of Our Lady of Springs** on 2<sup>nd</sup> February and **Feast of Chapel of St. Francisco D' Assissi** on 4 October

#### **44. CACULO :**

- A riverine island located in the **St. Inez Creek** in Panaji, Goa

#### **45. CHORAO :**

- An island along the river Mandovi near Panaji, Goa
- Earlier known as '**Chudamani'**
- Home of the **Salim Ali Bird Sanctuary**
- Hindu and Christian shrines are found

#### **46. TISWADI :**

- Tiswadi is an island with the Mandovi River forming its northern boundary
- **Panaji** is located on this island
- It was here that the city of **Old Goa** was established where a magnificent **Church of Bom Jones** lies

#### **47. DIVAR :**

- An island on the river Mandovi in Goa
- Located about 10 km upstream from Panaji, to which it is connected
- Konkan Railway passes through it
- Scenic beauty, paddy, birds and barren lands

#### **48. SALSETTE :**

- Site of Mumbai and Thane
- 3<sup>rd</sup> most densely populated island in the world after Ap Lei Chau, Hong Kong and Male I, Maldives,
- Highest Point – 450m in the **Borivali National Park**, which is the world's biggest park within city limits
- Surrounded by Vasai Creek from the north and Thane Creek from east
- Island city of Bombay was separated from it by **Mahim Creek**

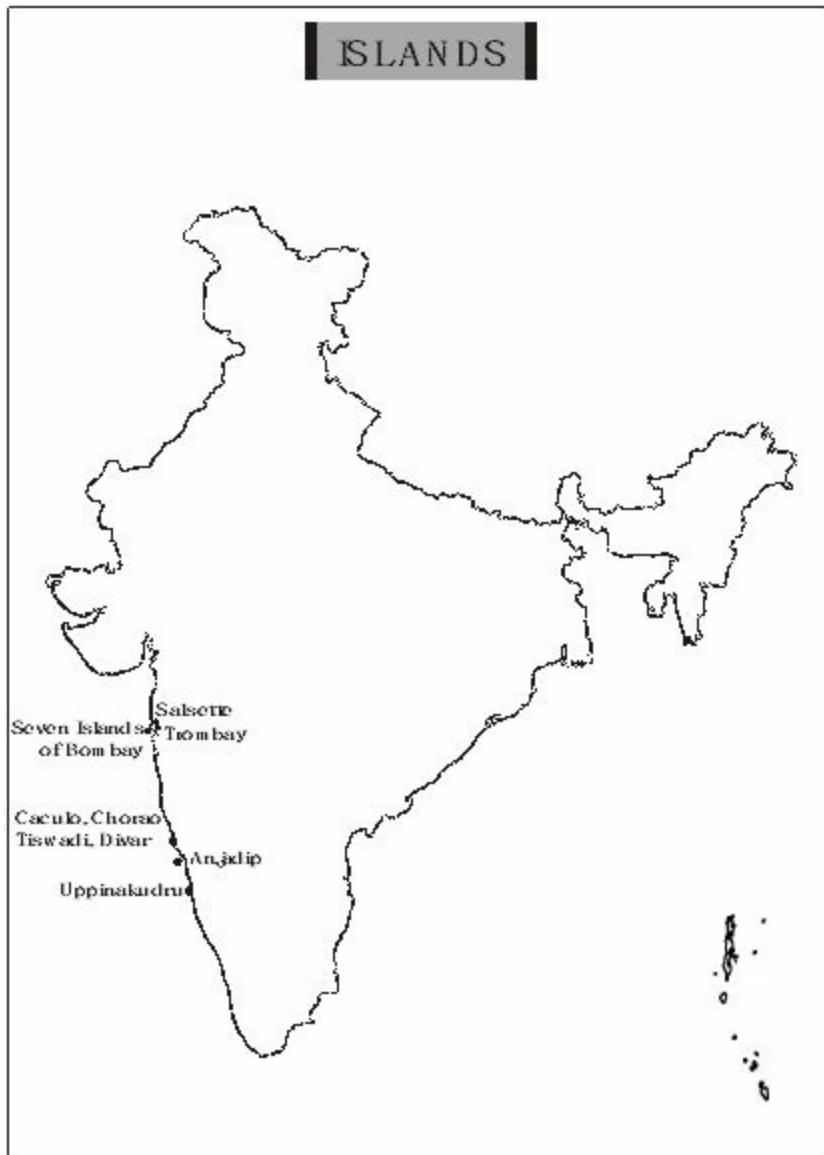
#### **49. SEVEN ISLANDS OF BOMBAY :**

- Isle of Bombay

- Colaba
- Mazagaon
- Parel
- Old Woman's Island ( Little Colaba)
- Mahim

#### 50. TROMBAY :

- NE suburb of Mumbai
- West of Thane Creek
- North of Elephanta and Butcher islands
- Site of **BARC**
- Along with Seven Islands of Bombay and Salsette it forms **Greater Mumbai**



### 51. KAWAYI :

- Kannur district, Kerala
- Ruled by family based organisation

### 52. AMBU :

- An isle off the coast of Mumbai near **Madh Island** in the Arabian Sea
  - Accessible during low tide across a rocky isthmus
  - A mosque was built on the island
  - Malad is the closest railhead to the island, 15 km away

### 53. BUTCHER ( JAWAHAR DWEEP) :

- An island off the coast of Mumbai, west of the Elephanta Island

- It has an **oil terminal** where the crude oil is stored and later on piped to Wadala for refining
- It is a restricted area and most of the island is covered with dense vegetation

#### **54. ELEPHANTA :**

- Also called as **Gharapuri** or place of caves. It is one of a number of islands in the Mumbai Harbour
- A popular tourist destination because of the **island's cave temples** that have been carved out of rock
- It has an area 10 sq km and comes under the **Raigarh district** of Maharashtra

#### **55. CROSS :**

- Uninhabited island in the Mumbai Harbour between the coast at Dockyard Road and Elephanta Island
- It hosts an **oil refinery** and **several large gas holders**.
- It has the ruins of an old fort
- Locally known as **Chinal Tekdi**

#### **56. HOG :**

- Named '**Nhave**' in Marathi
- An island in the Mumbai Harbour about ten miles east of the Appolo pier
- It gets its English name because it was here that ships used to be hogged

#### **57. MIDDLE GROUND :**

- An island in the Mumbai Harbour
- It has a fortified **naval base** known as the **Middle Ground Coastal Battery**

#### **58. OYSTER ROCK :**

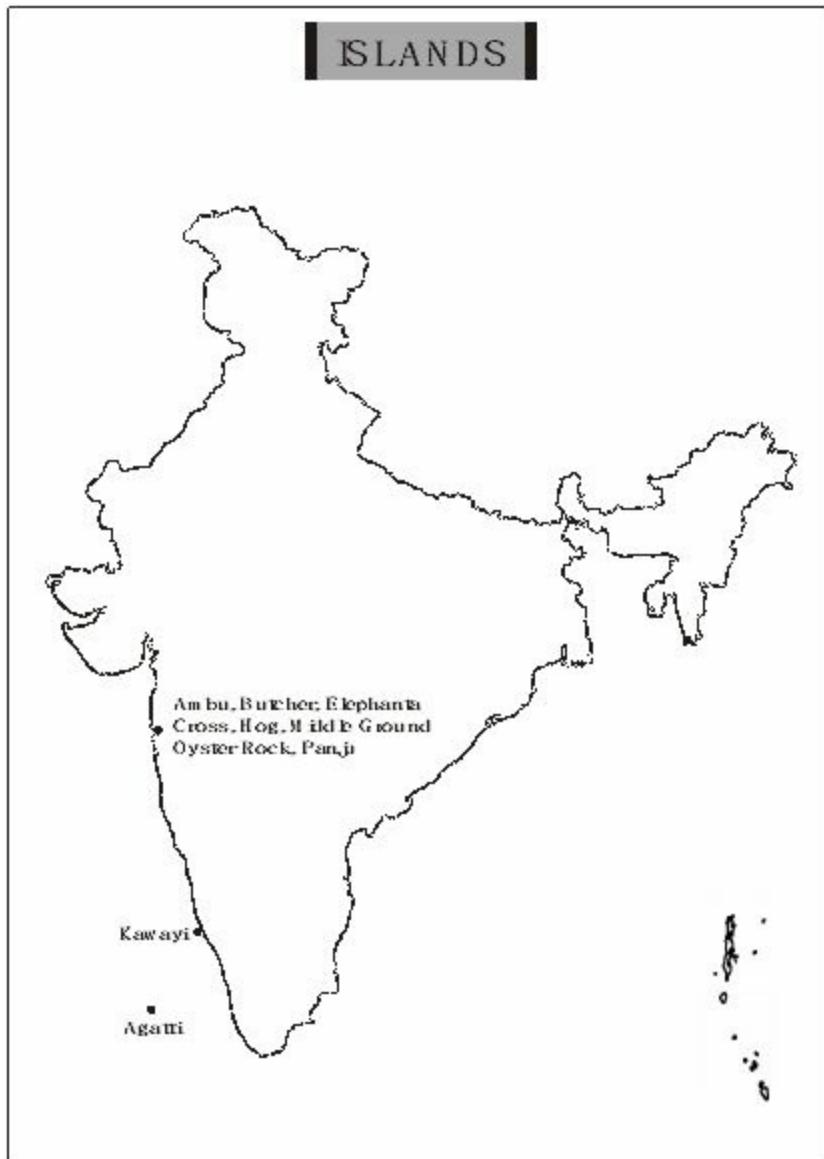
- An island in the Mumbai Harbour
- Fortified and owned by **the Indian Navy**
- For a short while, it was used as a **naval museum**
- The Maharashtra government had thought of anchoring the decommissioned **INS Vikrant** (now a naval museum) on the island

#### **59. PANJU :**

- An estuarine island in the Vasai Creek just north of Mumbai
- Used by **the Western Railway** to connect the island of Salsette with the mainland at Vasai
- Its maximum elevation is **1 m**

#### **60. AGATTI :**

- A small 7 km long island
- Surrounded from all sides by coral
- Total population -5667
- Part of Lakshadweep
- **Agatti Aerodrome** is the only airport of Lakshadweep
- One can enter it only if one has confirmed place to stay
- There is only one hotel in Agatti, called **Agatti Island Beach Resort**



#### 61. ANDROTH :

- Nearest island to the mainland
- **First island of Lakshadweep to embrace Islam**
- **Biggest island** of Lakshadweep
- Cradle of many civilisation, splendid architectural monuments, lighthouse etc.
- **Fishing** forms its economic backbone

#### 62. BINGARAM :

- An island of the Lakshadweep Archipelago
- A popular tourist resort
- Population is only around 60, mostly tourists

**63. BITRA :**

- An island atoll of Lakshadweep
- There is a small shrine dedicated to an old Arab saint by the name of **Malik Mulla**, who was buried in the island. The shrine has become a site of pilgrimage
- About 300 people live here

**64. CHETLAT :**

- An island of Lakshadweep
- It is a part of Amindivi subgroup
- This beautiful island attracts many tourists who are thrilled with its bewitching beauty and varied and diverse aquatic life in large number

**65. KADMAT :**

- 8 km long north and south and 0.5 km wide island of Lakshadweep
- Surrounded on the eastern and western sides by a lagoon, and has corals
- Best attractions are long sandy beaches
- A ideal place for solitude

**66. KALPENI :**

- An island of Lakshadweep
- An atoll with coral debris which was the result of a violent storm that hit the area in 1847
- It was the first island in Lakshadweep where **woman were allowed to go to school and get education**

**67. MALIKU ATOLL :**

- Southernmost atoll of the UT of Lakshadweep
- Upto 16<sup>th</sup> century it was part of Maldives
- 10 km long and maximum width of 6 km
- Only two islands in this atoll – **Minicoy** and **Viringili**

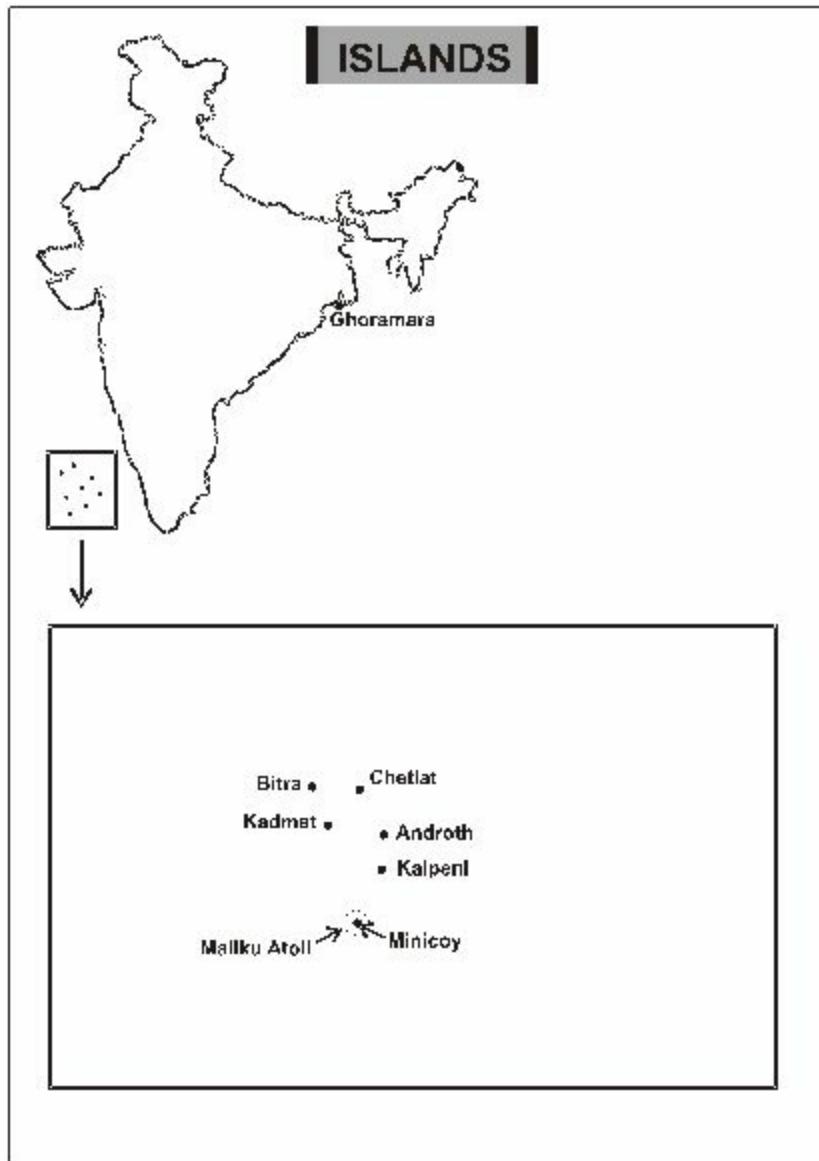
**68. MINICOY :**

- Only inhabited island of **Maliku Atoll Second largest** and the **southernmost** of the islands of Lakshadweep
- Long islands (10 km ) completely covered with coconut trees
- Tall lighthouse
- Separated from the rest of Lakshadweep by the **Nine Degree**

## Channel

### 69. GHORAMARA :

- An island located 150 km south of Kolkata in the **Sundarban Delta** complex
- Small island roughly five square kilometers in area
- It is fast disappearing due to erosion and sea level rise



### 70. HENRY :

- An island near Bakkhali in South 24 Paraganas, West Bengal
- Dense mangrove forests parted by numerous canals
- **Wildlife:** Tiger, deer, wild pig, crocodile and snake

**71. LOHACHARA :**

- Was permanently flooded in 1980s.
- Was located in the Hoogly River, a part of the Sundarban Delta
- Was an inhabited island where more than 6000 people used to live
- Thousands of refugees in the area who were forced to move to the mainland

**72. NAYACHAR :**

- An island in the Hoogly River off Haldia in Purba Medinipur, West Bengal
- Inhabited by few fishermen
- Has flashed in the larger public view as the site of a major chemical hub initiated by the West Bengal Govt. The hub was earlier proposed at **Nandigram**

**73. PIROTAN :**

- An island in the **Marine National Park, Jamnagar district**
- 12 nautical miles away from the coast
- Consists of mangroves and low tide beaches
- Area – 3 sq km
- Of the 42 islands in the park , it is the most popular and is one of the two islands where visitors are normally permitted

**74. DIU :**

- A small island covering an area of 38.8 km near Junagarh
- Connected to Gujarat only by road
- Site of the famous **Battle of Diu** in 1509 between Portugal and others, and the Sultan of Gujarat, **Mahmud Begada**
- Population – 52,074

**75. SHORTT'S :**

- An island off the coast of Orissa, near the Wheeler Island
- Located in the Bay of Bengal in the northeastern coast off the Mahanadi delta

**76. PARIKUDA :**

- A island inside the Chilka Lake
- It is a populous island
- Picturesque island, a popular tourist destination

**77. TEENCHINAR :**

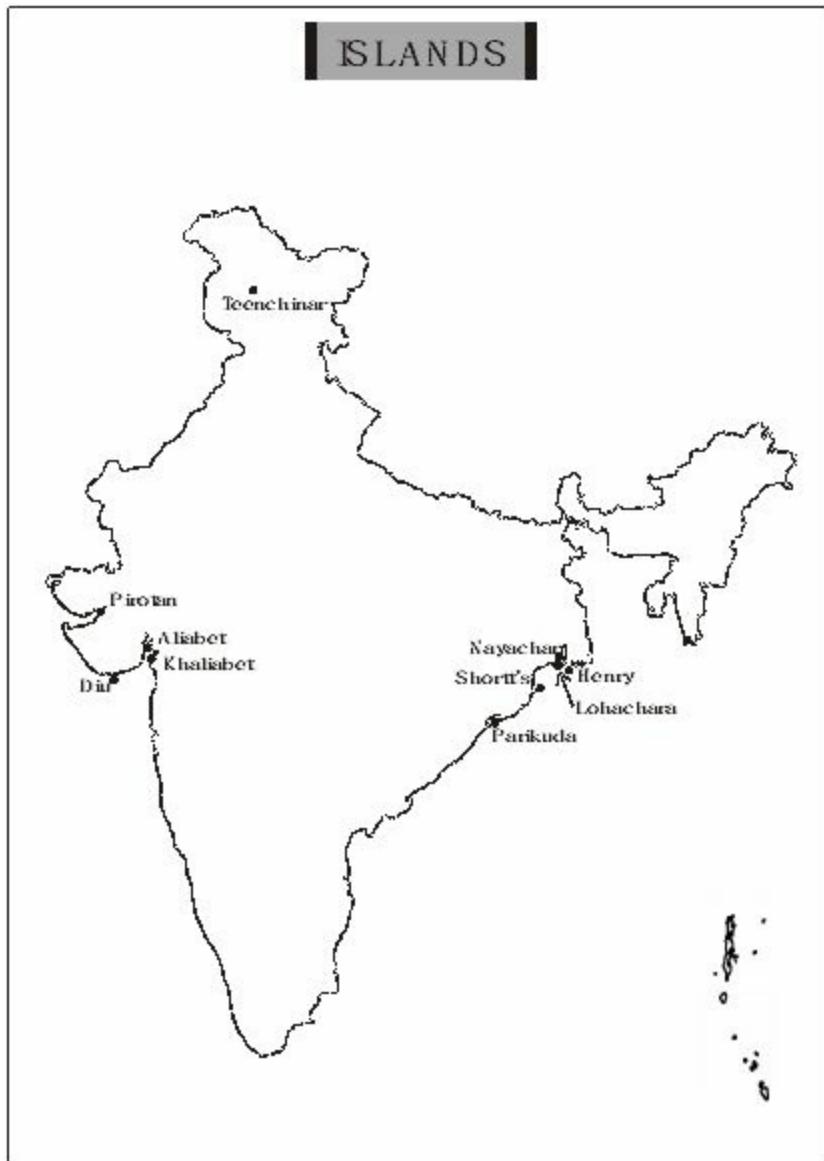
- Dal Lake

**78. ALIABET :**

- An island at the mouth of the Narmada River in the Gulf of Khambhat
- Good place for entertainment and tourism
- Area has mangroves and rehabilitation of the vegetation is required as the industries are polluting them

**79. KHALIABET :**

- An island in the Gulf of Khambhat
- Has mangroves and corals
- Affected by the industrial pollution
- A Tidal energy potential region



#### 80. KHANDERI :

- A fortified island 20 km off the coast of Mumbai
- Fort was built by **Shivaji in 1660** is still in tact, the most prominent structure is a **lighthouse** built in 1837
- It can only be accessed with the permission from the Bombay Port Trust

#### 81. ROSS :

- About 2 km east of Port Blair
- Controlled by the Indian Navy
- It was **the administrative headquarter** of the Andaman and Nicobar Island, before an earthquake rocked it in **1943**

- With its treasure of ruins, it has become **hot tourist spot**

## **82. AMINDIVI :**

- They are the northernmost of the Lakshadweep group
- 5 islands:** Amini, Kiltan, Chetlat, Kadmat and Bitra
- Each of these islands is exquisitely beautiful
- Among them **Kadmat** is very popular

## **83. CANNANORE :**

- South of Amindivi group of islands in the Lakshadweep Islands
- Islands:** Suheli Par, Pitti, Kalpeni, Andrott, Agatti, Kavaratti
- Harmonious blend of traditional culture, nature and modernity

## **84. PACHHAM :**

- Westernmost of the islands formed of marshy lands in the Kachchh region of Gujarat
- Khavda** is the main town here

## **85. KHADIR :**

- Central island of the Kachchh region
- Part of the **Great Rann of Kachchh**
- Marsy landforms
- Luni River drains here

## **86. BELA :**

- Easternmost of the islands of the Kachchh region
- Part of the **Great Rann of Kachch**
- Marsy landforms
- Luni River drains here

## **87. MAJULI :**

- Largest riverine island of the world Between the Brahmaputra and Subansiri rivers
- Formed due to course changes by the rivers
- Adobe of Assamese neo-Vaishnavite culture
- India is trying to include it under the **World Heritage Sites**
- It is facing ecological problems

## **88. PIGEON-COCK :**

- West of the **Mangalore seaport**

- Elongated island extending north to south
- Helped in the development of the Mangalore seaport
- Surrounding water is polluted

### 89. SRIRANGAPATNAM:

- Riverine island mere 19 km from Mysore, but lies in Mandya district
- The main **Kaveri River** flows along the eastern coast
- It was a de facto capital of **Hyder Ali and Tipu**
- Site of the **last (fourth ) Mysore War, 1799**



### 90. KACHCHA TIVU :

- Uninhabited island of **Sri Lanka**, northeast of the Adam's Bridge
- A Catholic shrine is located there

- India ceded to Sri Lanka in 1974
- Under the treaty, Indian fishermen have rights to catch fish in the region

**91. ABUNDA ISLAND :**

- In the **Gulf of Mannar**
- Coral island
- Inhabited by Tamil fishermen
- Thin soil cover supports coconut and vegetables
- Petro- refinery of Tuticorin is polluting it

**92. NALLA TANNI TIVU :**

- It is situated in the gulf of Mannar about 4 km from the coast of Tamil nadu.
- It is one of the three inhabited islands in the gulf, the other being Kruadai and Musal tivu
- It forms part of the Ramnathapuram district.

**93. QUIBBLE ISLAND :**

- It is a riverine island located in Tamil Nadu, formed by Asayar river and one of its tributaries.
- During the British time, an European cemetary was built here.

**94. SRIRANGAM ISLAND :**

- It is a riverine island located in Tiruchirapalli city. It is formed between the Cauvery and the Kollidam rivers.
- The grand anicut is located to the east of the island.
- Srirangam is important Hindu vaishnavite pilgrimage center.

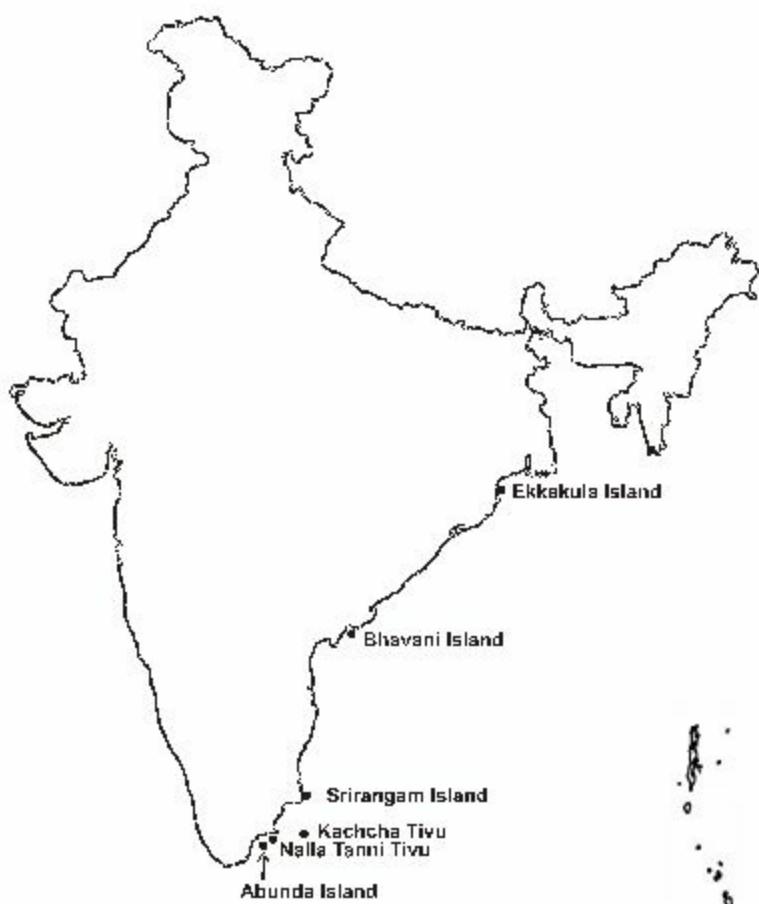
**95. BHIVANI ISLAND :**

- It is a riverine island located 4 km upstream from Vijaywada in the Krishna river.
- Total area : 133 acres
- The island is grate tourist attraction.

**96. EKKAULA ISLAND :**

- It is located in Odisha within the Gahirmatha marine sanctuary.
- It is a prominent neasting site of Olive Ridley sea turtles.
- The serene and tranquil Ekkaula beach attracts lots of tourists.

## ISLANDS



2

## OTHER COASTAL FEATURES

### 1. COCO CHANNEL :

- Located between Landfall Island and Coco Island (**Myanmar**)
- Links the Bay of Bengal with the Andaman Sea
- Maritime boundary between India and Myanmar

### 2. DUNCAN PASSAGE :

- Strait that separates the Rutland Island to the north and the Little Andaman to the south
- Links the Bay of Bengal and the Andaman Sea
- Several islands in the passage

**3.AUSTEN STRAIT :**

- Located between North Andaman and Middle Andaman
- East of the Interview Island
- Links Bay of Bengal with the Andaman Sea

**4. TEN DEGREE CHANNEL :**

- Separates Andaman and Nicobar islands
- 150 km wide, lies on the 10-degree North latitude
- Links Bay of Bengal with the Andaman Sea

**5.SOMBRERO CHANNEL :**

- Between Katchal Island and Little Nicobar
- Links Andaman Sea the Indian Ocean
- Waterway for the Port Nancowry

**6.GREAT CHANNEL :**

- Between Great Nicobar and Sumatra
- Maritime boundary between India and Indonesia
- Important international waterway passes through it
- South of the Indira Point

**7.PALK BAY :**

- Between India and Sri Lanka
- NE of Adam's Bridge and South-West of the Palk Strait, which links it with the Bay of Bengal
- So many smaller islands are found
- Fishing ground and strategically important

**8.GULF OF MANNAR :**

- Between India and Sri Lanka, South-West of the Adam's Bridge
- Dotted with many islands
- Marine biosphere reserve
- Fishing ground, sea route, strategically important
- Coral reefs

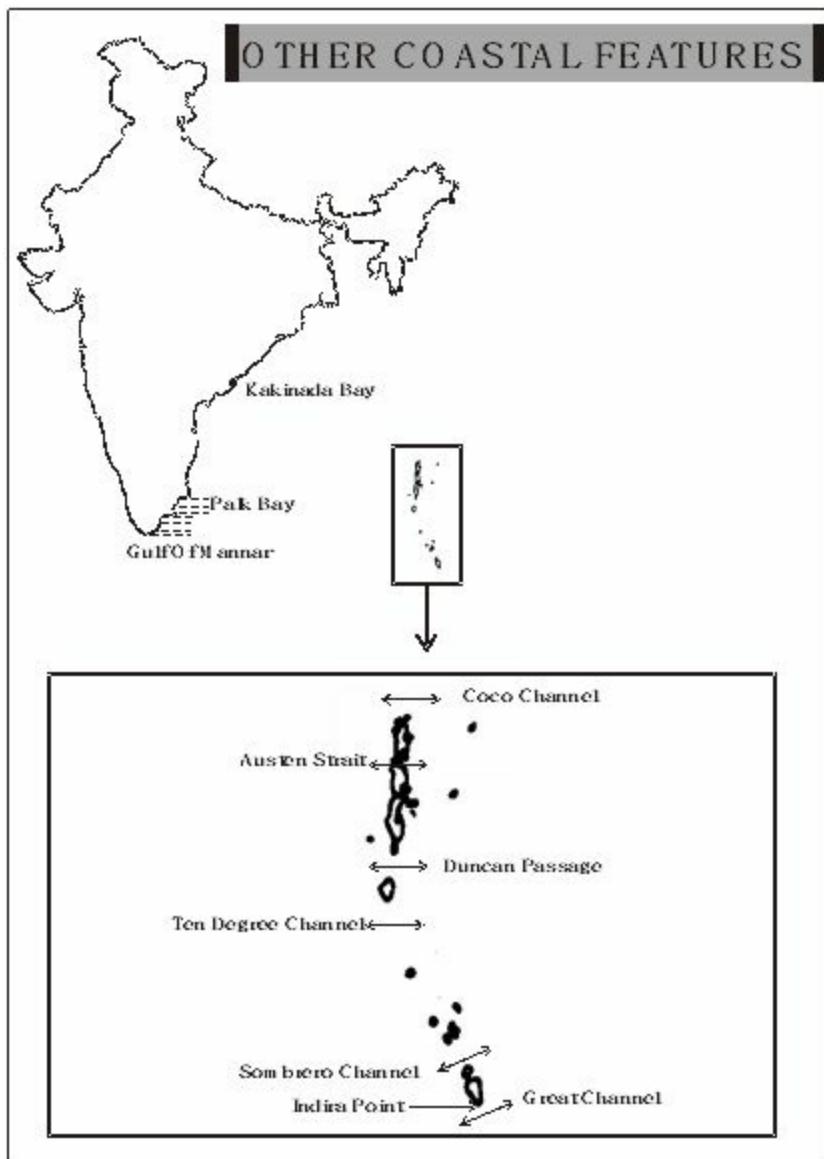
**9.KAKINADA BAY :**

- Shallow- bar- built water body (Depth 3-8 m at high tide), north-east of the Godavari Delta
- Kakinada Port on the western coast

- Hope Island protects the port from storms, waves and cyclones

#### **10. INDIRA POINT :**

- Located at the southern tip of the Great Nicobar
- The southernmost point of India
- Touches the Great Channel
- Also called as **Pygmalion Point**



#### **11. CAPE COMORIN :**

- The southernmost point of mainland India in Tamil nadu
- Meeting point of Arabian Sea, Gulf of Mannar and Indian Ocean
- Average elevation- **0 metre**
- Favourite tourist place

- Closest major city is **Nagercoil**

## 12. POINT CALIMERE :

- Low headland on the Coromandel Coast
- At the apex of **the Kaveri Delta**
- A right angle turn in the Indian Peninsula
- **Point Calimere Wildlife Sanctuary**

## 13. THANE CREEK :

- Part of the estuary of **Ulhas River** opening into the Bombay Harbour
- Stretches from Mumbra Ritibunder to the Mankhurd Vashi Bridge
- Thane city is located at its head
- Important bird nesting area

## 14. MAHIM BAY :

- Between Worli (S) and Bandra (N) to the west of Mumbai
- Named after the island of Mahim
- **Mithi River** drains into the Mahim Creek
- **Bandra- Worli Sea Link** aims to link the two ends by a **flyover bridge**

## 15. GULF OF KHAMBHAT :

- Between Kathiawar Peninsula and Gujarat Plain
- Sabarmati, Mahi, Narmada and Tapi drain into it
- It is shallow and abounds in shoals and sandbank's including Mal Bank and Malacca Banks
- Oil and gas, tidal energy, corals

## 16. GULF OF KACHCHH :

- Between Kutch and Kathiawar
- **Rukmavati River** drains into it
- Mandvi, Mundra, Kandla, Jamnagar, Salaya, Okha are located
- **Marine National Park** (near Jamnagar)
- Corals, tidal power, sea route
- So many small islands

## 17. SIR CREEK :

- Strip of water disputed between India and Pakistan in the Rann of Kutch marshlands
- Locally called as **Baan Ganga**
- Pakistan claims entire creek as per Paras 9 and 10 of **the Bombay Government Resolution of 1914.**
- Rich in oil and gas

**18. KORI CREEK :**

- Large creek east of the Sir Creek in the marshlands of the Kutch
- Disputed between India and Pakistan
- Region is rich in oil and gas

**19. MAL BANK :**

- Located at the head of the Gulf of Khambhat, where Sabarmati and Mahi rivers drain
- Khambhat city is located in the north-eastern part
- Oil and gas, coral, tidal power potential

**20. MALACCA BANKS :**

- At the southern entrance of the Gulf of Khambhat
- Sandbanks below the sea surface (shoals)
- West and southwest of Surat
- A system of four irregular ridges running roughly from north to south
- Malacca Bank proper refers to the second ridge from the west

**21. SUNDARBAN :**

- Largest single block of tidal halophytic mangrove forests in the world
- The name came from '**Sundari trees**'
- Spreaded at the seaward fringe of the Ganga Delta in West Bengal and Bangladesh
- **UNESCO's World Heritage Site**
- Royal Bengal Tigers are much famous

## OTHER COASTAL FEATURES



3

## COASTS

### 1. PORBANDAR COAST :

- Southwestern coast of the Kathiawar Peninsula
- From Dwarka to Diu
- Important salt producing region
- **Main ports** - Dwarka, Porbandar, Veraval and Kodinar

### 2. GOHELWAR COAST :

- South eastern part of **the Kathiawar Peninsula**
- From Diu to Bhavnagar
- **Important ports** - Mahuwa, Alang and Bhavnagar

### **3.KONKAN COAST :**

- Coast of Maharashtra and Goa
- From Gujarat border upto Karwar
- Highly indented coast
- So many fast flowing high gradient river streams.
- **Ports** – Mumbai, Alibag, Ratnagiri, Marmugao

### **4. KANARA COAST :**

- Coast of Karnataka
- Narrower coast
- **Ports** - Karwar, Uduppi and New Mangalore
- Smaller rivers – HEP production
- Trade of iron ore and petroleum

### **5.MALABAR COAST :**

- Coast of Kerala
- Known for **backwaters**
- High rainfall, rubber, spices, coconut
- **Ports** – Kasargod, Kannur, Kozhikode, Thrissur, Cochin and Thiruvananthapuram
- Relatively broader coastal plain with signs of emergence

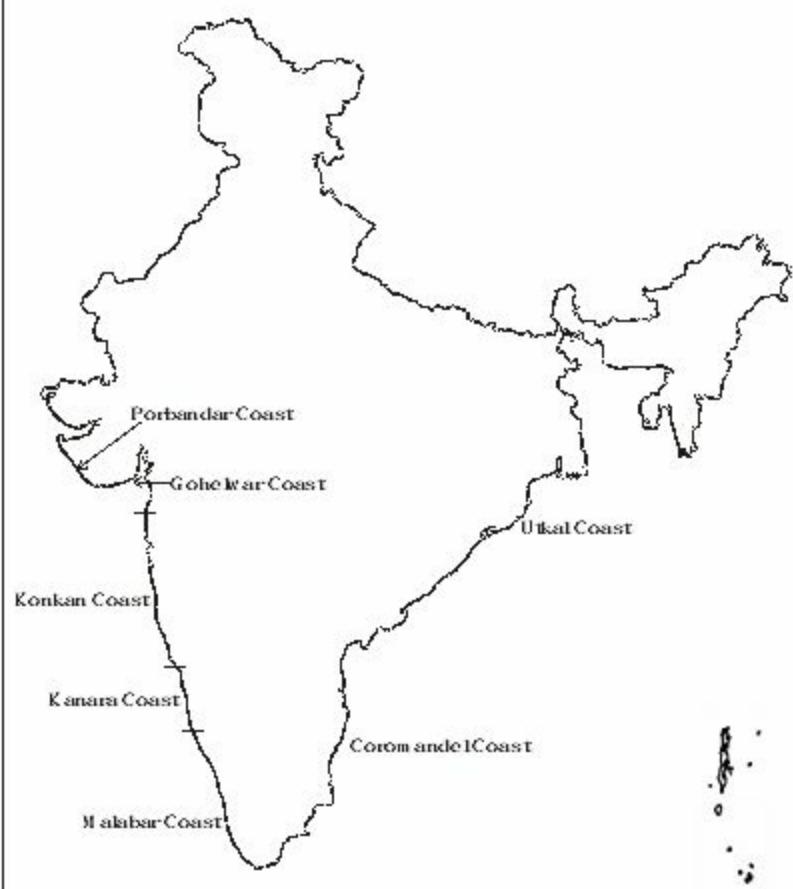
### **6.COROMANDEL COAST :**

- From the Krishna Delta upto Kanyakumari
- The area of Cholamandalam, of which it is a corrupted form
- Kaveri forms its delta
- Winter rainfall
- **Ports** - Tuticorin, Nagapattinam, Chennai, Ennore

### **7.UTKAL COAST :**

- Coast of Orissa
- Mahanadi Delta and Chilka Lake
- Breeding ground of **Olive Ridley Turtles**
- **Cyclone-prone** region
- **Ports** – Baleshwar, Paradeep, Gopalpur

## COASTS



4

## BEACHES

### 1. MARINA :

- A beach in the **Chennai** city along the Bay of Bengal
- 13 km. long from Fort St. George (N) to Nao (s)
- Primarily a sandy beach
- A popular tourist spot

### 2. KOVALAM :

- Located on the Arabian Sea coast in Kerala just 13 km. downtown of Thiruvananthapuram
- Kovalam means **grove of coconut**

- 3 crescent – shaped beaches: **Light House, Hawah, Ashoka**
- Was famous among hippies
- **First topless beach of India**

### **3.GOPALPUR:**

- Situated 16 km away from Behrampur in Orissa on the Bay of Bengal coast
  - The old lighthouse is still blinking
  - Famous for its swaying trees, and sand dunes which separate the beach from the blue waters.

### **4. DIGHA :**

- Most popular sea beach and tourist spot of West Bengal
- Near the Orissa border
- Has low gradient with a shallow sand beach
- A perfect holiday spot on the Bay of Bengal

### **5.BEACHES OF GOA :**

- Arambol, Mandrem, Morgim, Vagator, **Anjuna**, Baga, Calangute, Candolim, Sinquerim, Miramar, Dauna, Paula, Vainguinim, Siridao, Bogmalo, **Varca**, Cavelossim, Mabor, Betul, Canaguinim, Agonda, Palolem, Talpona, Colva

### **6.BEACHES OF MUMBAI :**

- Has many beaches but most of them are polluted and are unfit for swimming
  - **Chawpatti** (Girgaum), Dadar Chawpatti, **Juhu** Beach, **Versova** Beach, **Madh Island**, **Aksa**, Manori, Marve, Gorai,

### **7.MADH ISLAND :**

- A group of several quaint fishing village and farmlands in northern Mumbai
  - Between Arab Sea (W) and Malad Creek (E)
  - Fort, Church of St. Bonaventure, 16<sup>th</sup> century
  - Inhabited by **Kolis**

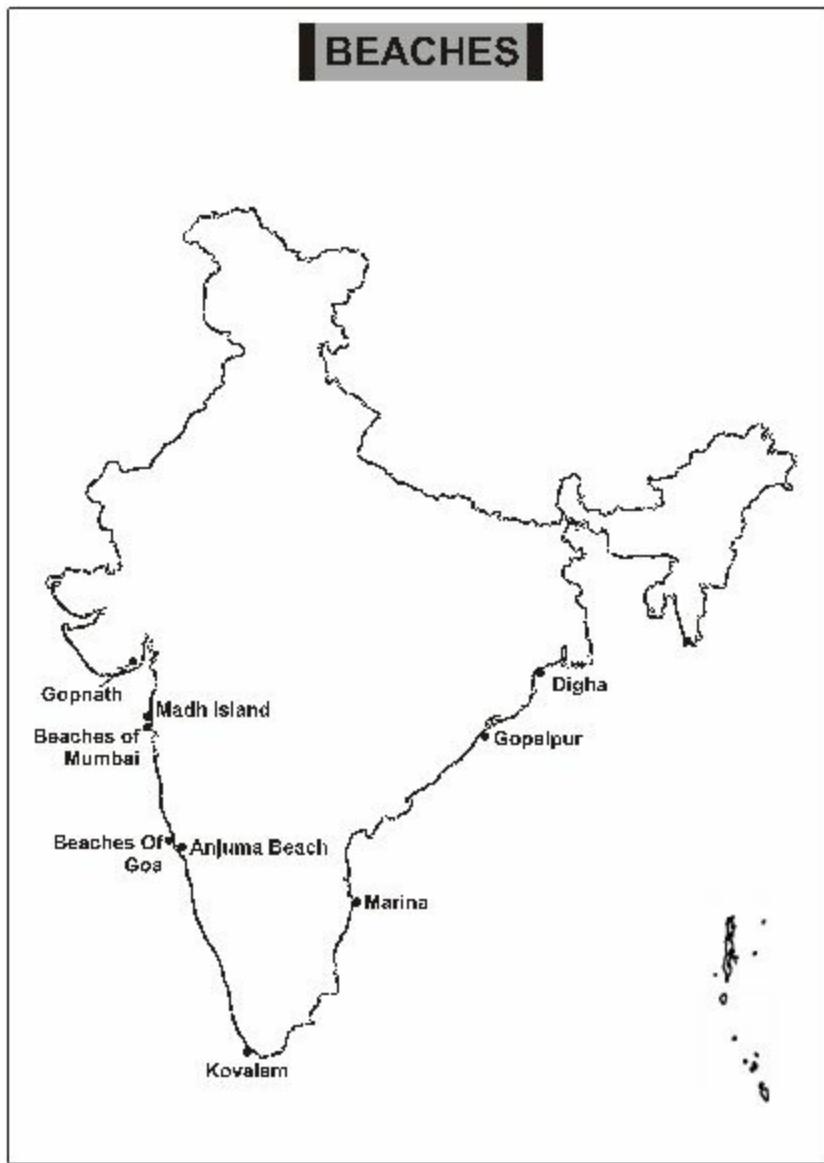
### **8.GOPNATH :**

- It is located in the Bhavnagar district of Gujrath, on the coast of the gulf of Khambhat.
- It is a pristine beach known for its natural beauty.

- There is a nice fort of king of Gohilvad

### **9.ANJUNA BEACH :**

- It is located in Anjuna village in Goa.
- Anjuna has St. Michaeli church.
- Anjuna is world famous for its trance parties held on the beach.



5

LAKES

### **1.CHILKA :**

- Largest lake of India, largest lagoon of Asia and the second largest lagoon in the world
- At the mouth of Daya River, southwest of the Mahanadi Delta

- **First wetland of India under Ramsar Convention (1981)**
- **6 islands** – Parikud, Phulbani, Barahpura, Nuapara, Nalbana, Tampara
- Largest wintering ground of migratory birds on the Indian sub-continent

## **2.KOLLERU :**

- **Largest freshwater lake in India**
- Between Krishna and Godavari deltas
- Fed by the two rivers
- **Wildlife sanctuary**, Ramsar Convention Site
- Attracts migratory birds from northern Asia and eastern Europe

## **3.PULICAT :**

- Second largest lagoon of India
- Southern part of Andhra Pradesh(86%) and northern Tamil Nadu (14%)
- **Sriharikata Island** separates it from the Bay of Bengal
- Fishing, tourism

## **4. ASTHAMUDI :**

- Second largest backwater of Kerala
- **Deepest wetland of India**
- Near **Kollam**
- Many corners, true to its name
- Under the Ramsar Convention
- **Munroe**, a cluster of eight tiny islands
- Tourism ,coconut, fishery, minerals

## **5.VEMBANAD :**

- **Largest backwater lake of India**
- **Longest lake of India**
- **Cities** – Kochi, Ernakulam, Alappuzha
- **Islands**- Vypin, Willington, Vallarpadam etc.
- **Rivers**- Pambiyar, Manimala, Meenachil
- Fishing, Tourism, Trade

## **6.KODAI LAKE :**

- Manmade lake located in the Kodaikanal city in Tamil Nadu

- Kodaikanal's most popular geographic landmark and tourist attraction

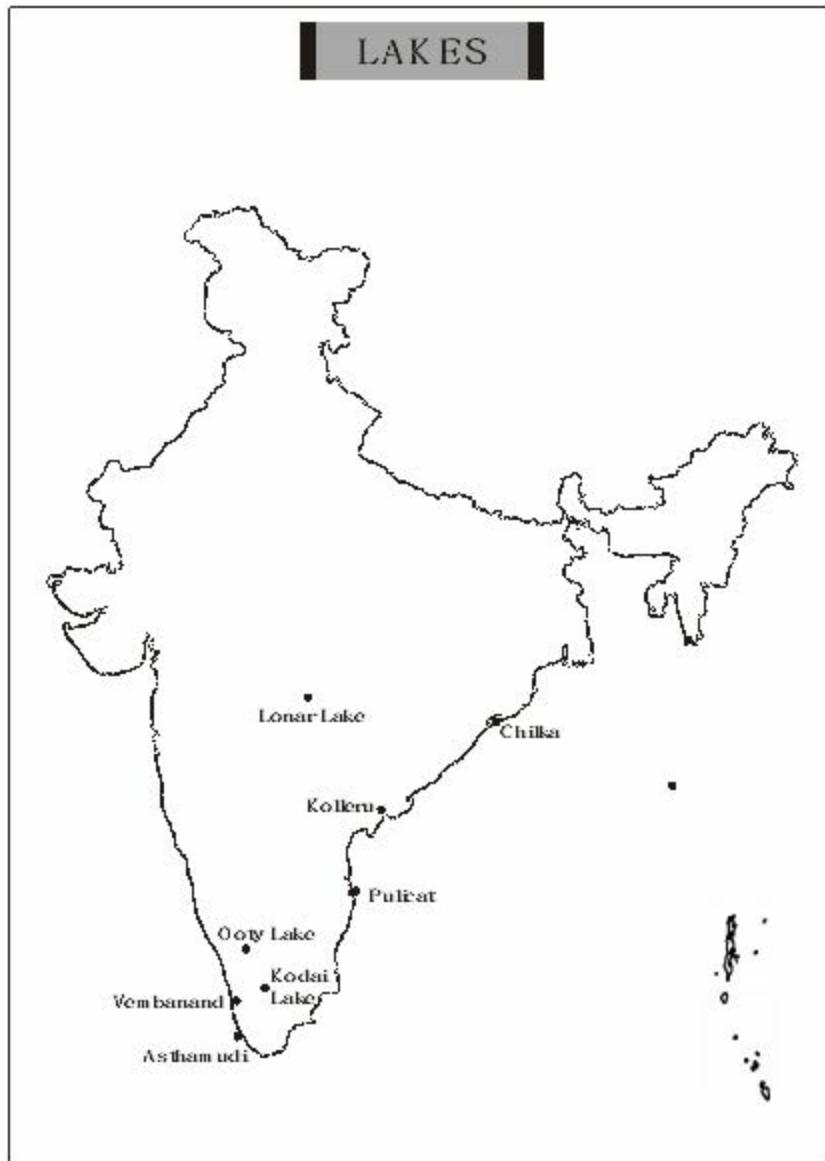
- **Sir Vere Hentry Levinge**, the then collector of Madurai, was instrumental in creating the lake in 1863

## 7. OOTY LAKE :

- 'L-shape' lake in the heart of the Ooty city (about 2 km long)
- Popular place of boating
- It was constructed by **Mr. John Sullivan**, the first collector of Ooty in between 1823 and 1825

## 8. LONAR LAKE :

- A saltwater lake at Lonar in Buldhana district of Maharashtra
- Created by **a meteor hitting** the earth during the Pleistocene epoch
- Only crater in the great basaltic formation in India



## 9. NAL SAROVAR :

- 64 km from Ahmedabad (west)
- Area -123 sq km
- Centerpiece of the **Nal Sarovar Bird Sanctuary**
- A natural lake that makes an excellent nesting ground for birds
- It is proposed as a Ramsar Convention Site

## 10. NAKKI :

- An artificial lake situated in **Mt. Abu**
- Half mile long and quarter mile wide
- A popular tourist attraction
- **Mahatma Gandhi's ashes** were immersed

## **11. DHEBAR LAKE :**

- Also known as **Jaisamand Lake**
- Asia's second – largest artificial lake
- Located in the Udaipur district of Rajasthan
- Built by **Rana Jai Singh** of Udaipur in the 17<sup>th</sup> century across the **Gomati River**
- **Jaisamand Wildlife Sanctuary** surrounds it
- 3 islands in the lake, largest island is **Jaisamand Island**

## **12. RAJSAMAND :**

- Situated near Rajsamand of Rajasthan
- Built in the 17 century across the Gomati, Kelwa and Tali Rivers by **Maharaja Jai Singh – I**
- The oldest known relief work in Rajasthan

## **13. PUSHKAR :**

- Sacred lake of Hindus located near Ajmer
- Surrounded by 52 bathing ghats
- Pilgrims throng in large numbers to take a sacred bath, especially around **Karthik Poornima** when the **Pushkar Fair** is held
- A dip in the lake is believed to cleanse sins and cure skin diseases
- Over 500 Hindu temples are situated around the lake precincts

## **14. PACHPADRA :**

- A saltwater lake near the town of Pachpadra in Barmer district
- Salt collection is done
- Pachpadra town is located there
- There is a **Jawahar Navodaya Vidyalaya** in the town

## **15. SAMBHAR :**

- **Largest inland salt lake of India** located between Jaipur and Ajmer along the NH-8
- **Elliptical shaped**, surrounded from all sides by the **Aravali Hills**
- Used for the salt production (8.7%of India)
- Included under the **Ramsar Convention**
- Lake basin is divided by a 5.1 km long dam made of sand – stones
- Water level fluctuates with seasons

## **16. SUKHNA :**

- Artificial lake at the foothills of the Sivalik Hills, near **Chandigarh**
- Built in 1958 by damming **Sukhna Choe**
- Inseparable part of the city designed by Le Corbusier and Chief Engineer P.L. Verma
- Wetland and the wildlife sanctuary
- Venue of many festive celebrations



### 17. RENUKA LAKE :

- Located in the Sirmour district of Himachal Pradesh
- Situated at the height of **672 m**
- **Largest natural lake of Himachal Pradesh**
- Ramsar Convention Site

- Full of colourful fish and other aquatic animals
- Surrounded by a wildlife sanctuary

#### **18. DIDWANA LAKE :**

- A saline lake located in Rajasthan

#### **19. NAINI LAKE :**

- At the heart of the city of Nainital in Uttarakhand
- Located amidst seven mountains that surround it
- **Naina Devi Temple** is located beside it
- Famous tourist attraction

#### **20. LOKTAK :**

- Largest freshwater lake in the North-East
- Located in Manipur
- It has floating islands called '**phumdis**'
- **Keibul Lamjao National Park**
- Source of water for hydropower generation, irrigation and drinking water
- Fishing
- Under the **Ramsar Convention**

#### **21. LAKE SALT (KOLKATA) :**

- Located at the centre of the Salt Lake City of Kolkata
- Surrounded by the Central Park
- Recreation and tourist spot
- Surrounded from all sides by well planned buildings with grid settlements

#### **22. GOHNA :**

- A massive landslip in September 1893 created a natural dam across tributary of Alaknanda, the Birahi Ganga near Gohna village
- Existed till 1970 when it was broken again
- Garhwal region of Uttarakhand

#### **23. NAGIN LAKE :**

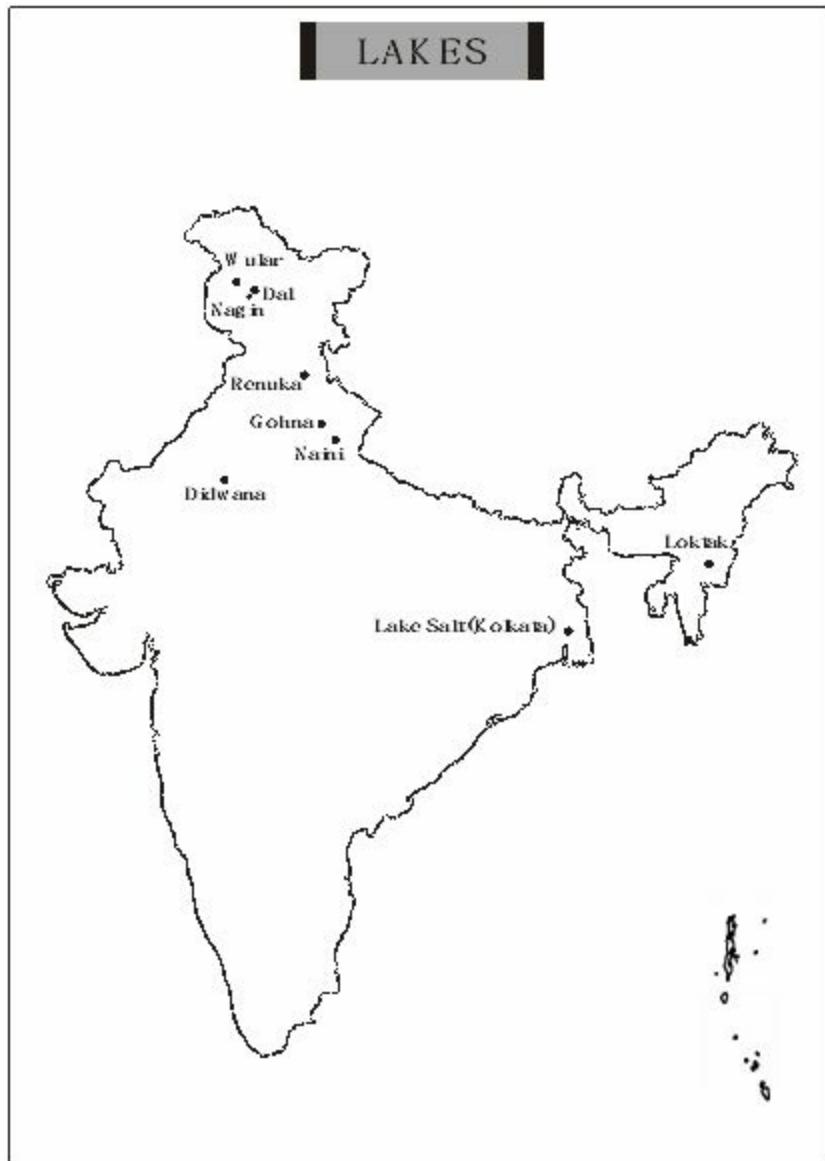
- Nagin Lake is an offshoot leading from the Dal Lake located to the **east of Srinagar city**
- Number of willow and poplar trees on the edges
- A popular tourist destination

**24. DAL LAKE :**

- Second largest lake of Kashmir Valley located in Srinagar
- Nicknamed '**Jewel of Kashmir**'
- Tourism, recreations, fishing, water plant harvesting
- Shore line is dotted with gardens, parks, houseboats, hotels

**25. WULAR LAKE :**

- Horse – shoe shaped large fresh water lake in Bandipore district
- Formed of the tectonic activity and fed by Jhelam.
- **Ramsar Site**
- Lake's size varies with season
- Largest lake of the Kashmir Valley
- Important fish habitat
- **Tulbul Project** at its mouth



## 26. MANSAR LAKE :

- Mansar Lake is just 62 km from Jammu
- Beautiful lake fringed by forested hills
- Popular tourist destination
- As sacred lake shared legend and sanctity of **Lake Mansarovar**
- Two temples and a shrine of Sheshnag

## 27. SALT LAKE :

- Northernmost of great lakes of Ladakh region
- Part of Aksai Chin, under Chinese occupation
- Freshwater lake, frozen in the winter

## **28. PANGONG TSO :**

- Frozen in winter even though it is saline. Endorheic lake in the Himalayas in the ladakh region, found both in India and Tibet
- Situated at the height of 4350m
- 135 km long and 5 km wide at its broadest point
- Ramsar Convention proposed
- This will be first trans-boundary wetland in South Asia under the convention

## **29. TSO MORIRI :**

- Located at the height of 4595 m in the South-East Ladakh
- Largest of the High Altitude Lakes entirely within India
- **Ramsar Site**
- Threats to lake from many sources

## **30. RAKAS :**

- Tibetan freshwater lake west of Mansarovar Lake near Indo – Nepal border
- Source of the **Satluj River**
- Connected to the Mansarovar Lake by a stream
- Only one road reaches upto the lake from the southeast

## **31. MANSAROVAR :**

- Tibetan freshwater lake near the Indo-Nepal border east of Rakas Lake
- **Highest body of freshwater in the world**
- Height- (4556m)
- Frozen in the winter
- Connected to the Rakas by the natural **Ganga Chhu Channel**
- Source of Sutlej and nearby it Indus, Brahmaputra and Karnali originate
- As per the Hindu theology one who touches the earth of Mansarovar will go to the paradise

## **32. DODIL TAL :**

- It is freshwater lake, located near Uttarkashi in Uttarakand.
- It is located at the height of 3204 meters.
- According to one popular legend Lord Ganesha chose it as his abode.

- Its other name is 'Dhundital' means lake of Ganesha.

### **33. DEEPER BEEL :**

- It is freshwater lake, which is located to the south-west of Guwahati city.
- It is a former channel of Brahmaputra.
- It was listed in the Ramsar Convention site in November 2002.



### **1. CARDAMOM HILLS :**

- Southernmost part of the Western Ghats, in Kerala and Tamil Nadu
- Named after the cardamoms which are grown here, beside pepper and

coffee

- Has the **Shencottah Gap**
- Climatic barrier, source of many rivers
- So many forest reserves for ecological conservation, source of HEPs

## 2.PALANI HILLS :

- Mountains of Tamil Nadu east of the Anaimudi Peak
- North of Vaigai River
- Mostly within Dindigul district
- Hill station of **Kodaikanal**
- Wildlife Sanctuary and National Park

## 3.ANAIMALAI HILLS :

- Anaimalai means '**Elephant Hills**'
- Located between Kerala and Tamil Nadu, south of the Palghat Gap
- **Highest peak** -Anaimudi (Idukki district, Kerala )
- Many sanctuaries and parks
- Trekking destination
- Tea, coffee, rubber and teak forests

## 4. NILGIRI HILLS :

- Trijunction of Tamil Nadu, Kerala and Karnataka, north of the Palghat
- Meeting point of the Eastern and Western ghats
- **Nilgiri Biosphere Reserve** and other conservation areas
- **Highest peak – Doddabetta**, 4 km from Otty
- So many falls Pykara, Catherine, Kotagiri

## 5.BABA BUDAN HILLS :

- Part of the Western Ghats in the Chikamangaluru District of Karnataka
- Highest peak- Mullayangiri
- **Baba Budan** was a 17<sup>th</sup> century sufi, who is believed to have introduced **coffee** in India
- Known for coffee cultivation

## 6.VARUSHNAD HILLS :

- South of the Vaigai River and southwest of Madurai, up to the Cardamom Hills

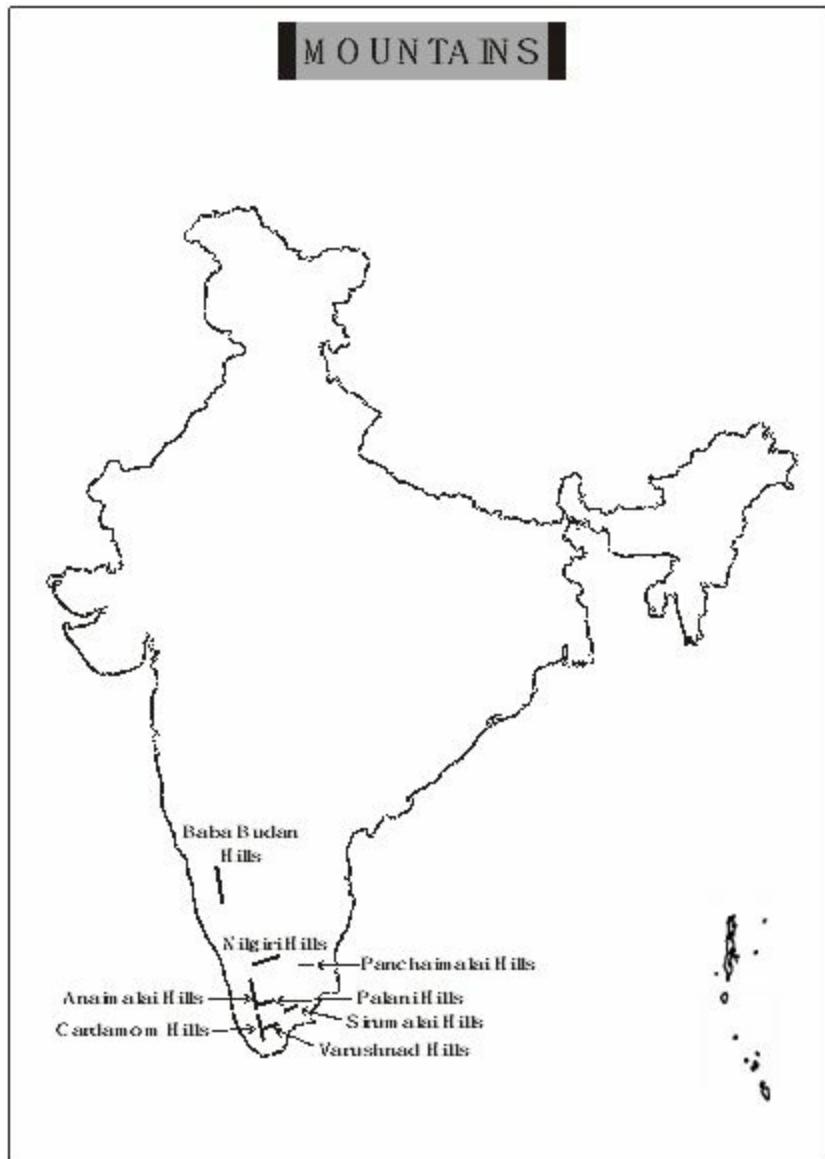
- Eastern offshoot of the Western Ghats
- Cumbum Valley (Vaigai) divides it from the Western Ghats
- Source of Arjuna and Gunnar rivers

## 7.SIRUMALAI HILLS :

- Between Vaigai (S) and Kaveri in Tamil Nadu
- Source of Valiyar and Manimuttar rivers
- **Dindigul** is the main city nearby it
- **Hill station:** Sirumalai

## 8.PANCHAIMALAI HILLS :

- Panchai mean ‘**green**’ and malai means ‘**hills**’
- Between Kaveri and Vellar rivers in Tamil Nadu
- Haven of tribals
- Average elevation : 500m to 1000m
- Good for trekking and enjoying nature
- **Namakkal** is the main city



## 9. SHEVROY HILLS :

- Between Vellar and Ponnaiyar rivers in Tamil Nadu
- Around Salem city
- Sanatorium and several old coffee plantations
- Tourist attraction
- Source of Turunanimuttai, Vellar, Gomukha and Manimukta rivers

## 10. JAVADI HILLS :

- Northern Tamil Nadu in Vellar district
- Between Ponnaiyar and Palar rivers
- Bisected into eastern and western sections by Cheyyar and Agaram, tributaries of the Palar

- Sparsely populated
- Grains, legumes, oilseeds are chief crops

## **11. NAGARI HILLS :**

- Southernmost part of Andhra Pradesh, west of the Pulicat Lake in Chittur District
- Main city – **Nagari**
- ‘Nag’ means nose in Telugu
- Beautiful picnic spot
- Highest cliff: **Nagari Nose**

## **12. PALKONDA RANGE :**

- Arc-shaped mountain between Penneru and Palar rivers
- Relict of mountains formed during the Cambrian Period
- Main crops- Jowar,peanuts
- Formed of quartzites, slates and lavas
- Source of rivers
- Densely forested

## **13. VELIKONDA RANGE :**

- Part of the Eastern Ghats
- Southeast of Andhra Pradesh, east of the Nallmalla Hills
- Strongly folded and faulted
- Assumed to be elevated during the Cambrian Period, now a relict range
- Sparsely wooded
- **Chenchu** tribal people live here

## **14. MELAGIRI RANGE :**

- Smaller hill located south of Bangalore in Karnataka and Tamil Nadu
- Range of hills, part of the Eastern Ghats
- Melagiri Sanctuary is located here
- Arkaveti River flows through the range
- Hosur city, Bennerghatta NP and Kolar gold fields are near to it

## **15. VELIKONDA :**

- Located in the southeastern part of Andhra Pradesh
- Forms part of the Eastern Ghats
- Parallel to the Coromandel Coast

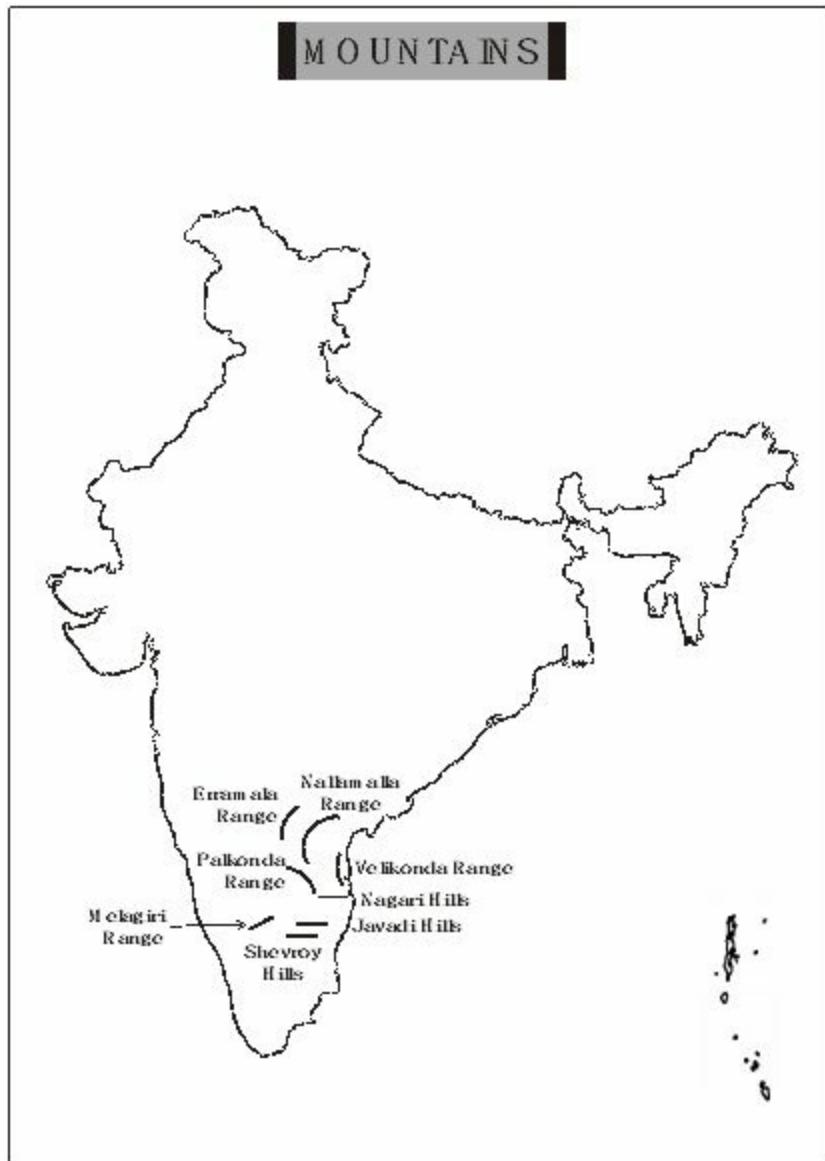
- Crossed by **the Penneru River**

**16. NALLAMALLA RANGE :**

- Between Penneru and Krishna
- Parallel to the Coromandel Coast
- Part of the Eastern Ghats
- Old mountain extensively weathered and eroded
- Largest stretch of undisturbed forests in Southern India excluding the Western Ghats
- **Srisailam Tiger Reserve**

**17. ERRAMALA RANGE :**

- A range of low hills in southern India, in Kurnool district of Andhra Pradesh
- Between Krishna and Penneru rivers
- West of Nallamalla Range



#### 18. HARISHCHANDRA RANGE :

- Eastward spur of the Western Ghats, in Maharashtra
- Average elevation -600m.
- Elevation gradually decreases towards the southeast
- Flat topped, consisting of basaltic lava
- Slopes are eroded into terraces
- Named after **Harishchandragarh**, its highest peak
- **Ahmednagar** is the chief city in the region

#### 19. BALAGHAT RANGE :

- Series of hills in western Maharashtra originates from the Western Ghats

- Extends for 200 miles to form border between Maharashtra and Karnataka
- Flat topped hills with lava covers
- Source of **Manjra River**
- Rainier west has dense vegetation but the eastern part is barren and stony

## **20. AJANTA RANGE :**

- A mountain of Maharashtra entirely within the state
- Forms the watershed between the Godavari and the Tapi river systems
- Source of **Purna** and **Penganga**
- **Ajanta Caves** are located

## **21. SATMALA RANGE :**

- Branch the northern Western Ghats in the northwest Maharashtra

## **22. NIRMAL RANGE :**

- A low hill of Maharashtra located between Penganga and Godavari rivers
- **Nanded** city is located on it

## **23. GARHJAT HILLS :**

- Hill on the northern Orissa and adjoining Jharkhand
- Mayurbhanj and Keonjhar come under it
- Famous for iron ores
- Several Gond tribes live here
- **Highest peak**-Malaygiri (1187m)

## **24. RAMGARH HILLS :**

- Hills of the northeastern Chhattisgarh, adjoining Jharkhand
- Source of Rihand, Sankh and Mand and Ib rivers
- Main city is Ambikapur

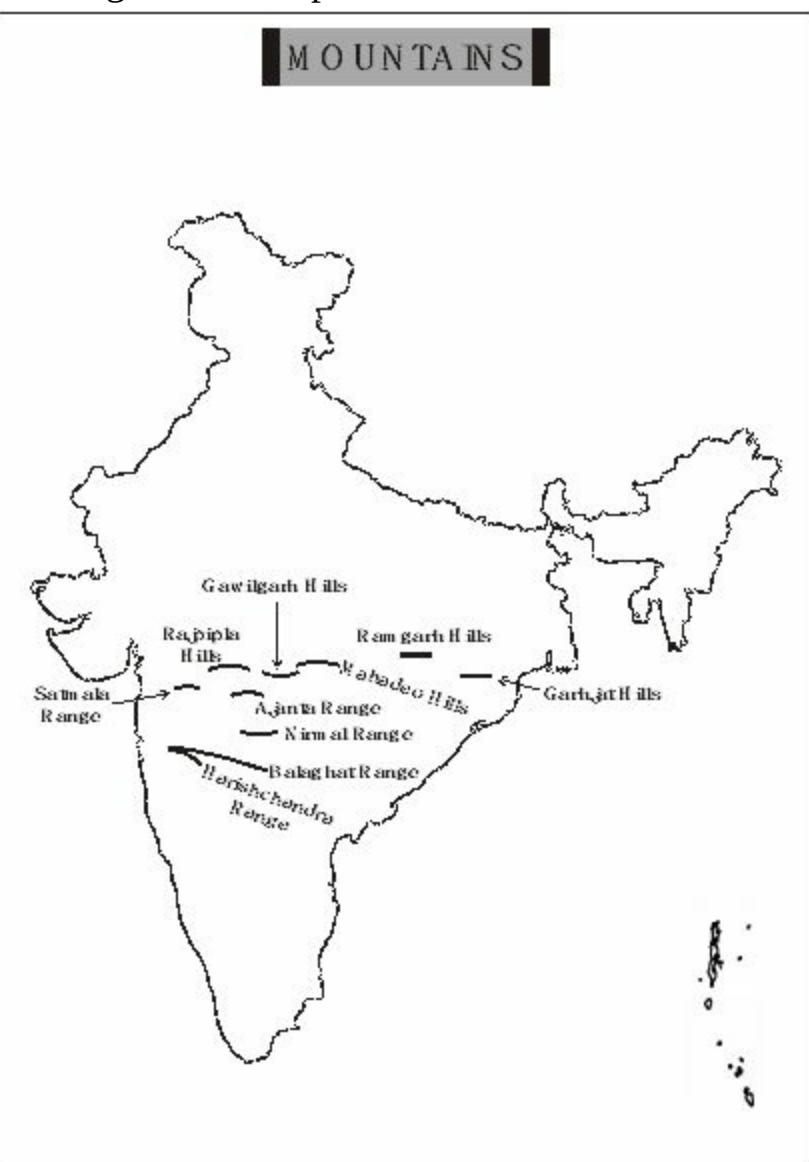
## **25. RAJPIPLA HILLS :**

- The westernmost part of the Satpura Range, mainly in eastern Gujarat, around the city of Rajpipla
- Separated from the Gawilgarh Hills by the **Khandwa Gap**

## **26. GAWILGARH HILLS :**

- Part of the Satpura Range located between the Rajpipla Hills (West) and the Mahadeo Hills (East)
- Spreaded over Maharashtra and Madhya Pradesh
- Located between Tapi and Purna rivers
- Main city- **Burhanpur**

## 27. MAHADEO HILLS :



## 28. MAIKAL HILLS :

- Eastern part of the Satpura Range, located between Madhya Pradesh and Chhattisgarh
- Source of many tributaries of Narmada, Mahanadi and Godavari
- Inhabited by the tribal peoples like **Baiga** and **Gond**
- Kanha National Park, Achanakmar-Amarkantak Biosphere Reserve.

### **29. KAIMUR RANGE :**

- Eastern range of the Vindhya located between the Son and the Tons rivers in northeastern Madhya Pradesh
- Its northern edge forms escarpments
- Prehistoric rock paintings have been discovered

### **30. GIR HILLS :**

- Low hills of the Kathiawar Peninsula to the southeast of the Girnar Hills
- **Highest Peak** - Sarkala (643m)
- **The Gir National Park** is located in the region

### **31. GIRNAR HILLS :**

- A collection of mountains in the Junagarh district, in the Kathiawad
- **Girnar Peak** (945m) is highest peak of Gujarat
- **The Gir National Park** is located in the region
- Holy place for both Hindus and Jains

### **32. MANDAV HILLS :**

- Hills of the central Kathiawar
- Forms a radial drainage pattern
- Main city-**Rajkot**
- Covered with the basaltic lava

### **33. ABU HILLS :**

- The southwestern part of the Aravalli Range, between the Sabarmati and the Banas Rivers
- **Mount Abu** is located on it

### **34. ARAVALLI RANGE :**

- Old dissected mountains of northwestern India, from Gujarat to Haryana
- Source of Banas, Luni and Sabarmati rivers
- Rich in non- ferrous minerals

- Highest peak – **Guru Shikhar**

### **35. KARAKORAM RANGE :**

- A Trans- Himalayan mountain starts from the Pamir Knot
- Heavily glaciated part of the world outside the polar regions
- **K2**-Second highest peak of the world
- **Glaciers** – Siachen, Biafo, Batlboro, Batura

### **36. LADAKH RANGE :**

- Trans-Himalayan mountain located between Shyok and Indus rivers
- **Leh** is located at its southern edge
- Runs parallel to the Indus River from the Shyok River in the west to the Tibet border in the east
- **Khardung La Pass** is located on it

### **37. ZASKAR RANGE :**

- Trans-Himalayan or Tibetan Himalayan range located between the Great Himalayas and the Ladakh Range
- Branches off from the Great Himalayas near  $80^{\circ}$  E longitude runs parallel to the latter
- **Nanga Parbat** forms its culmination in the northwest
- Coldest place of India, **Dras** is located here



### 38. PIR PANJAL :

- Westernmost range of the Lesser Himalayas which separates Jammu from Kashmir
- Extends from the Jhelam River to the upper Beas River for 300-400km.
- **Pir Panjal and Banihal passes** are located in it
- **Jawahar Tunnel** passes through the Banihal Pass.

### 39. DHAULADHAR RANGE :

- Range of the Lesser Himalayas in Jammu and Kashmir and Himachal Pradesh
- **Hill Stations** -Dalhousie, Chamba, Kullu, Manali, Botata,

Dharmshala, Shimla

- Southern slope is steeper than the northern slope
- The southernmost range of the Lesser Himalayas

#### 40. NAG TIBBA :

- Part of the Lesser Himalaya in the southwestern Uttarakhand
- **Nag Tibba (3022m)** is its highest peak
- Most easterly of the ranges of the Lesser Himalayas in India
- **Hill Station-** Mussoorie

#### 41. KUMAON RANGE :

- Part of the Lesser Himalayas in the south-eastern part of Uttrakhand

#### 42. GARO :

- Westernmost part of the Meghalaya Plateau
- Inhabited by the Garo tribes
- **Nokrek Biosphere Reserve**
- **Tura** is the main city in the region
- Highest peak- **Nokrek**

#### 43. KHASI :

- Middle part of the Meghalaya Plateau
- Highest point of the Meghalaya Plateau
- **Cherrapunjee** and **Mawsynram** are located in it
- **Shillong** is located in the hill
- Inhabited by the matrilineal **Khasi tribes**

#### 44. JAYANTIYA :

- Eastern part of the Meghalaya Plateau
- Inhabited by the Jatantiya tribes
- **Jhuming cultivation** is practised
- High rainfall region
- Presence of the **laterite soils**

#### 45. BARAIL RANGE :

- Lies along the border of Assam and Manipur
- Links the Meghalaya Plateau with the Purvanchal Hills
- Covered with bamboo and pine trees
- Degraded due to the **Jhuming**

- Water divide between the Brahmaputra and the Barak rivers
- The Barak rises in its southern slopes

#### **46. MIZO HILLS :**

- Southernmost part of the Purvanchal, also known as the **Lusai Hills**
- Lies in Mizoram
- Highest peak – **Blue Mountain**
- Crossed by the **Tropic of Cancer**

#### **47. MANIPUR HILLS :**

- Part of the Purvanchal in Manipur
- **Loktak Lake** is located in it
- **Manipur River** originates here
- Forms boundary between India and Myanmar



#### 48. NAGA HILLS :

- Part of the Purvanchal, located between the Patkai Bum and the Manipur Hills in Nagaland
- Highest peak- **Saramati (3826m)**
- Forms boundary between India and Myanmar

#### 49. PATKAI BUM :

- Northernmost range of the Purvanchal, located in Arunachal Pradesh
- Forms boundary between India and Myanmar
- Source of **Burhi Dihing** and **Disang** rivers

#### 50. MIKIR :

- Part of the Meghalaya Plateau located in Assam, just south of the

## Brahmaputra River

- **Mikir tribes** live here who practise Jhuming cultivation
- Hills consist of the Archaean rocks

## 51. RENGMA :

- Part of the Meghalaya Plateau in Assam located to the east of the Mikir Hills
- Full of bamboos and Rengma tribes live here.

## 52. DAFLA :

- Part of the Siwalik located in Arunachal Pradesh between the Subansiri River and the Kameng River, that to the south of the Kamla River
  - Tribes living here practice Jhuming
  - Covered with dense bamboo, pine and deodar trees.

## 53. MIRI :

- Part of the Outer Himalayas (Siwalik) in Arunachal Pradesh located between the Subansiri River and the Kameng River that to the north of the Kamla River which separates it forms the Dafla Hills.
  - Inhabited by tribes.
  - Terraces are built for the cultivation.

## 54. ABOR :

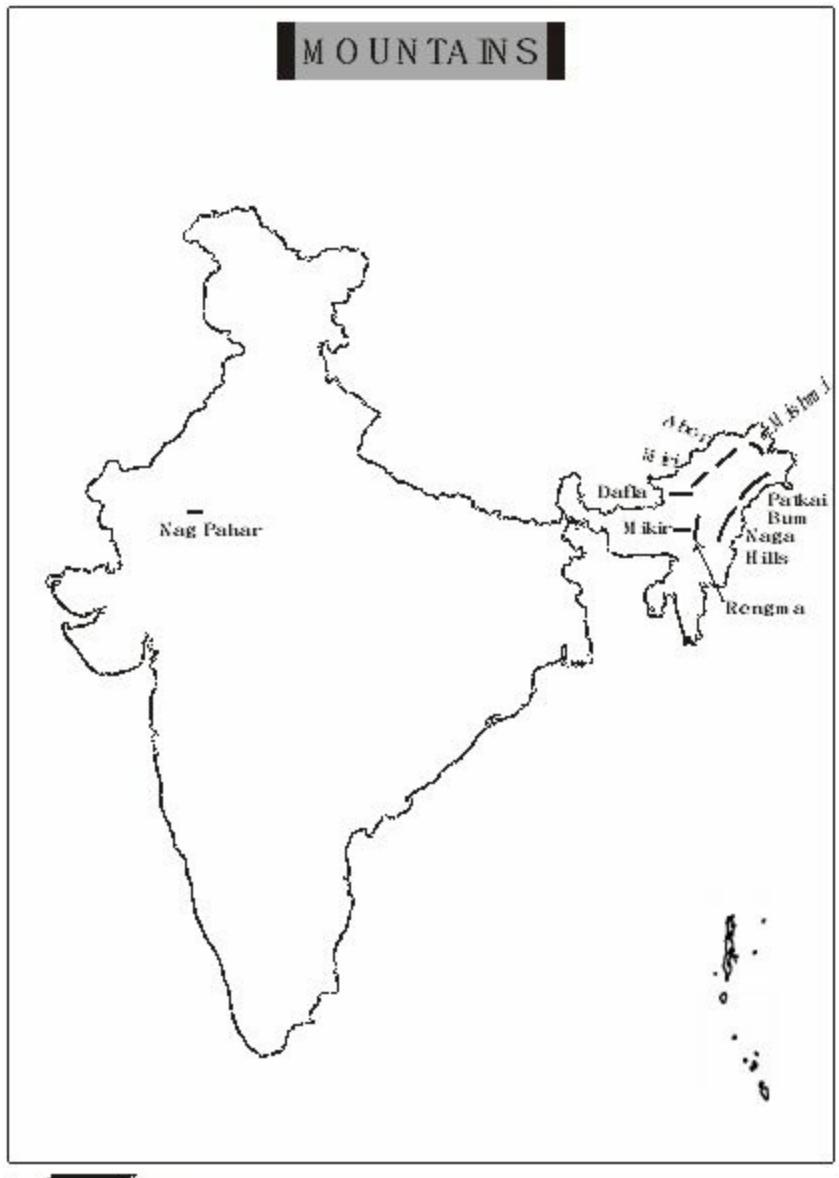
- Part of the Siwalik, located in Arunachal Pradesh between the Dibang and the Subansiri river
  - Covered with deciduous and evergreen forests
  - Inhabited by the tribal peoples
  - Highest peak is **3992 m** above sea level

## 55. MISHMI :

- Easternmost part of the Siwalik in northeast Arunachal Pradesh from the Dibang River (West) to the Myanmar border in the east
  - Dibang River flows through it

## 56. NAG PAHAR :

- Located between Pushkar Lake and the city of Ajmer.
- Famous for **Panchkund** and saint Agastaya's Cave, and it is believed that **Kalidas**, the 4<sup>th</sup> century poet and playwright composed **Abhigyanam Shakuntalam** here itself



7

PEAKS

### 1. NANGA PARBAT :

- Ninth highest peak of the world located in the PoK, just near the Indus Gorge (8126m)
- Forms western terminus of the Himalayas
- First climbed by Austrian climber **Hermann Buhl** on 3 July 1953

### 2. GODWIN AUSTIN (K2) :

- 2<sup>nd</sup> highest peak of the world located in the central part of the Karakoram Range
- Known as the **Savage Mountain** due to the difficulty of ascent,

second highest fatality rate after the Annapurna

- Never been climbed in the winter

### **3.KAMET :**

- Second highest peak of Uttarakhand located north of the Gangotri Glacier, near the border with Tibet.
- Lies in the Chamoli district.
- A peak of the Great Himalayas near the Mana Pass

### **4. NANDA DEVI :**

- Highest peak of Uttarakhand between the Milam Glacier and the Pindar Glacier
- Part of the **Nanda Devi National Park**
- Second highest peak of India (excluding PoK )

### **5.GURU SHIKHAR :**

- Highest peak of the Aravallis and Rajasthan.
- Located at a distance of 15km from Mount Abu.
- Home to the temple of **Dattatreya**, an incarnation of the Lord Vishnu.
- Adjacent to the temple is the Mt. Abu Observatory

### **6.DHUPGARH :**

- Highest peak of the Satpura Range located in the Mahadeo Hills near Pachmarhi (1350m.)
- Rock structure is basaltic with abundance of slate, schist and granite deposits
- An important tourist spot

### **7.MALAYGIRI :**

- Located in the southeastern part of the Garhjat Hills, is the highest peak of the hills
- Located between the Brahmani and Baitarni rivers
- Rich in metallic minerals

### **8.MAHENDRAGIRI :**

- Peak of the Eastern Ghats located near Behrampur in the district of Gajapati, Orissa
- **Highest peak of Orissa** located near the border with Andhra Pradesh

### **9.DODDABETTA :**

- Highest peak of the Nilgiri Hills in the Nilgiri district of Tamil Nadu
- 35km north of Ooty
- A popular tourist attraction with road access up to the summit
- There is an observatory at the top with two telescopes
- Shola forests over its slopes



#### 10. ANAI MUDI :

- Located in the state of Kerala, it is the highest peak of the Western Ghats as well as of the South India, also highest outside the Himalayas in India
- It literally means 'Elephant Forehead'

- Located at the junction of the Palni Cardamom and Annamalai hills, in the southern part of **the Eravikulam National Park**

#### **11. KALSUBAI :**

- Highest peak of the Sahyadris in Maharashtra
- To reach the summit there are various trekking routes and animal tracks
- At the summit a **small temple** of Kalsubai is located

#### **12. MAHABALESHWAR :**

- Largest hill station in the Sahyadri Range of Maharashtra
- Located in the **Satara district**, with the height of 1438m.
- Due to its high altitude it has cool climate

#### **13. NAMCHA BARWA :**

- Eastern anchor of the Himalayas located in Tibet near the Indian border where the Brahmaputra bends
- Easternmost mountain in the world over 7600m. high

#### **14. SARAMATI :**

- With the height of 3826m. it is the **highest peak of the Purvanchal Hills** located in the Naga Hills, near the border with Myanmar
- Snow covered during the winter
- A popular trekking destination

#### **15. BLUE MOUNTAIN :**

- Also known as **Phawngpui** is the **highest peak of Mizoram** (2156m.) near the Myanmar border
- With spectacular trees and flowers of all colours it presents a fairytale view of the **blue hazed hills**
- The area is encircled by matted bamboo groves and other alluring vegetations

#### **16. SADDLE PEAK :**

- A twin peaks with a distinct saddle between them, is the **highest peak of Andaman and Nicobar**
- Located in the North Andaman Island
- It is 732m. high
- Part of the **Saddle Peak National Park**

#### **17. PARASNATH :**

- **Highest peak of the Rajmahal Hills**, located in the northeast Jharkhand
  - An important Jain temple devoted to Parasnath
  - Archaean rock deposits of iron and manganese are found in this region

**18. AGASTYAMALAI :**

- It is located at the border of Tamil nadu and kerala.
- The Thavirabarni River originates from the eastern side of the hill.
- The hill is part of the Neyyar wildlife sanctuary.
- Surrounding region has been declared the Agasthyamalai Biosphere Reserve.

**19. SALTORO KANGRI :**

- It is located at the Line of control.
- Its elevation is 7,742m above the sea level.
- In 1984 India assumed military control on the peak.

## ■ PEAKS ■



8

## PLATEAUS

### 1. MALWA PLATEAU :

- Triangular shaped plateau north of the Vindhya range, drained by the Chambal and its tributaries
- Lava covered, black soils
- Northern part is marked by the Chambal **ravines** – Badland topography
- Height decreases from the south towards the north

### 2. MADHYA BHARAT :

- An open rolling plateau between the Malwa Plateau (SE) and the

### Aravallis (NW)

- Drained by the Chambal, which forms **ravines**
- Thickly forested
- Consisted of old rocks interspersed with rounded hills composed of sandstones

### 3.BUNDELKHAND :

- Between Madhya Bharat Plateau (West) and the Vindhyan scarplands (East)
- Five districts of UP and four of MP
- Presence of rounded hummocky hills made of granite and sandstone
- Drained by Ken, Dhasan and Betwa

### 4. BAGHELKHAND :

- Located in the east of Maikal Range and the south of the Son River
- Made of limestone and sandstone in the west and granite in the east
- Water divide between the Son and Mahanadi systems
- The area has not undergone any major disturbance

### 5.CHOTANAGPUR :

- Northeastern projection of the Indian Peninsula, covers Jharkhand, northeastern part of Chhattisgarh and the Purulia district of West Bengal
- Composed mainly of Gondwana rocks with patches of Archaean granite and gneisses and Deccan lavas
- Special features **Patlands** (high level laterite plateau )

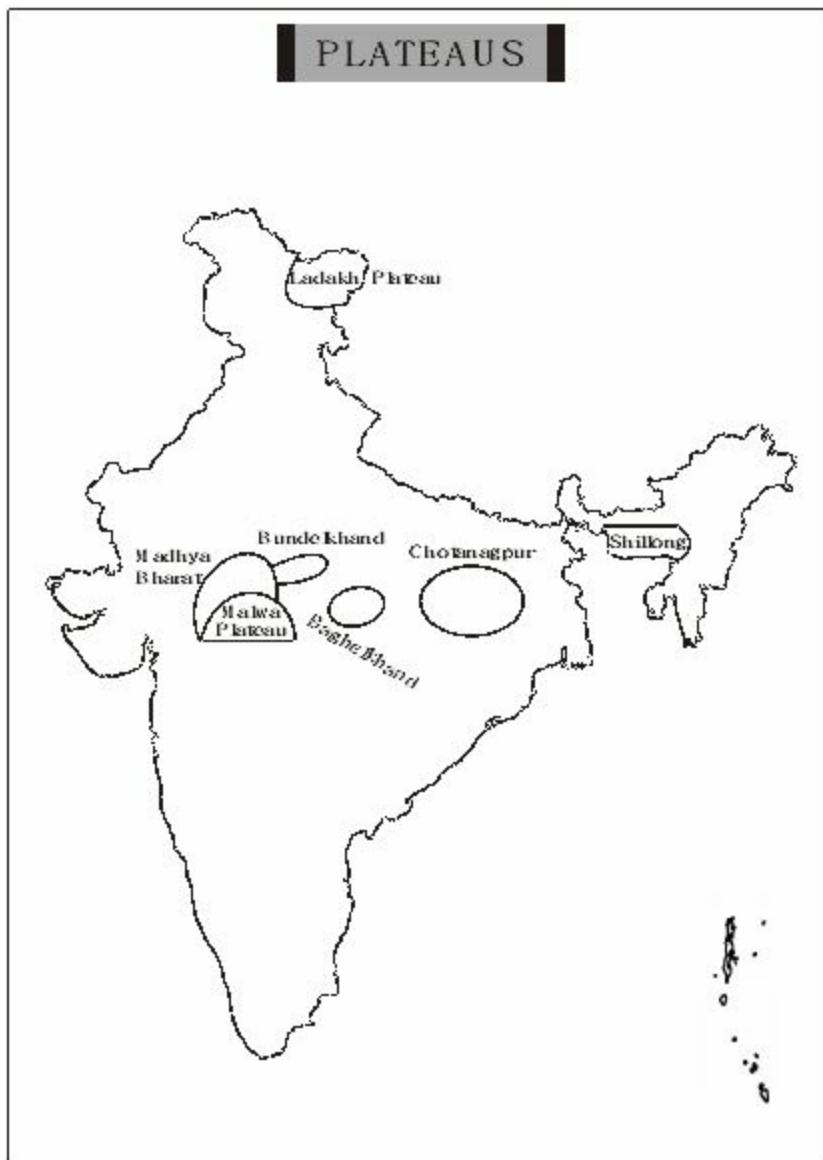
### 6.SHILLONG :

- A rectangular block separated from the peninsular plateau by the **Garo Rajmahal Gap**
- Highest plateau of the Indian Peninsula.
- Divided into Garo, Khasi and Jayantia Hills
- Laterite soils and **highest rainfall of the world**
- Inhabited by the tribes

### 7.LADAKH PLATEAU :

- **Highest plateau of India**, in the northeastern section of Jammu and Kashmir
- **Coldest place of India – Dras**
- It's a kind of a **cold desert**

- Northeastern part is occupied by China



### **8.BHANRER PLATEAU :**

- Part of the Vindhyan Range located in Madhya Pradesh
- A series of plateaus, run along the Kaimur Range, out of them it is one
- Forms scarplands and thereby many waterfalls in its northern parts

### **9.DECCAN PLATEAU :**

- Largest unit of the Peninsular Plateau covering an area of about 5 lakh sq km.
- **Triangular shaped plateau** south of the Satpura Range
- Consists of Maharashtra, Telangana and Karnataka plateaus

- Covered with lava and black soil

#### **10. MAHARASHTRA PLATEAU :**

- Part of the Deccan Plateau in Maharashtra
- Underlain by basaltic rocks formed of the Deccan Trap
- Looks like a rolling plain due to erosion
- Godavari River system.
- Covered with the black cotton soils ‘**regur**’

#### **11. TELANGANA PLATEAU :**

- Part of the Deccan Plateau in Andhra Pradesh adjoining Maharashtra and Karnataka.
- Consists of Archaean gneisses.
- Average elevation – 300 - 600 m.
- Rainshadow region, prone to frequent droughts
- Major physiographies – ghats and peneplains

#### **12. BASTAR PLATEAU :**

- Southern part of Chhattisgarh between the Mahanadi and the Godavari rivers.
- Bisected into two parts by the Indiravati River.
- Highly forested and rich in minerals.
- Tribal dominated region.
- Under the strong grip of **Naxalism**.

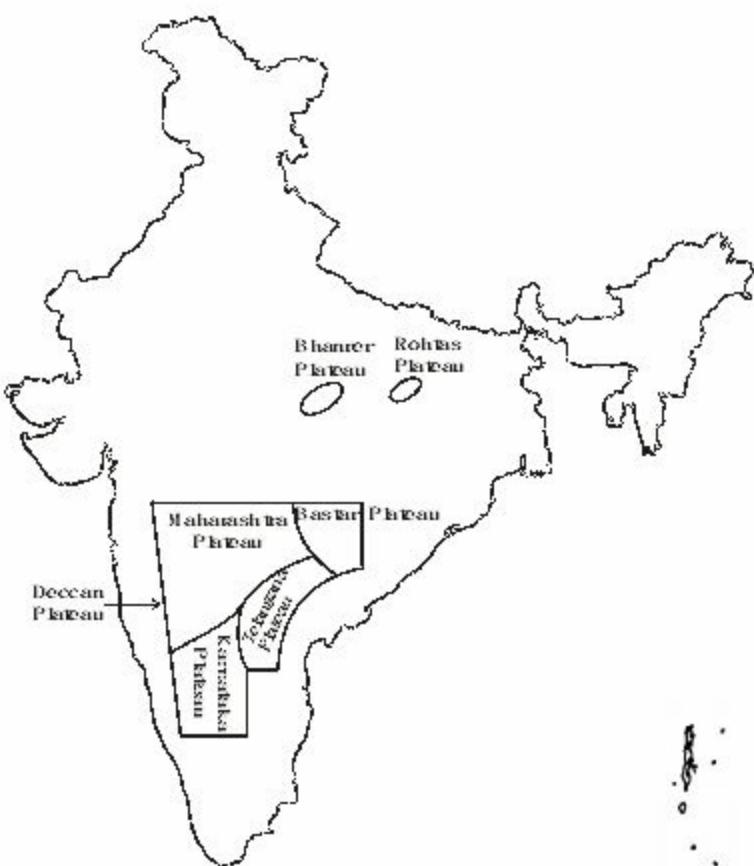
#### **13. KARNATAKA PLATEAU :**

- Part of the Deccan Plateau in Karnataka, also known as the **Mysore Plateau**
- Made up primarily of Archaean formation
- Sources of **Tungabhadra** and **Cauvery**
- Divided into two parts – **Malnad (western hilly)** and **Maidan** (eastern lower part)

#### **14. ROHTAS PLATEAU :**

- Easternmost of a series of plateau formed along the Kaimur Range
- At its northern edge so many rivers drop suddenly to form waterfalls
- It reaches upto Sasaram

## PLATEAUS



9

## PLAINS

### 1. DOABS :

- Land between two rivers, best represented in the North India by the doabs of the Indus river system.
- Bist:- Beas- Satluj
- Bari:- Beas- Ravi
- Rachna: - Ravi – Chenab
- Chej:- Chenab – Jhelum
- Sind Sagar:- Jhelum –Chenab – Indus

### 2. ROHILKHAND :

- Located in northwestern UP, on the upper Ganges alluvial plain.
- Between the Ganga River (West) and the Avadh Plain (East).
- Named after **the Rohilla tribe**, and was known as **Madhyadesh** in the Mahabharata.
- Rohillas were the Pathan highlanders of the Yusufzai tribe

### **3.AVADH PLAIN :**

- Central part of UP between Purvanchal (E) and the Rohilkhand (W)
- Earlier known as the granary of India
- Known for its unique cuisines and culture
- **Cities** – Lucknow, Kanpur, Rae Barely, Faizabad

### **4.BHABAR :**

- A narrow belt about 8-16km wide running east – west direction along the foot of Shiwalik with a remarkable continuity from Indus to Teesta.
- Fans of gravels and unassorted sediments.
- Due to higher porosity the water streams disappear.

### **5.TARAI :**

- A 15-30 km. wide marshy tract to the south of Bhabar running parallel to it.
- Marked by the re-emergence of the under ground streams of the Bhabar belt.
- More marked in the eastern part due to higher rainfall.
- Reclaimed for agriculture in the western part

### **6.BHANGAR :**

- Composed of **old alluvium** of the Middle Pleistocene age and forms the alluvial terrace above the level of flood plains
- Often impregnated with calcareous concretions known as '**Kankar**'
- Contains the remains of animals like rhinoceros, hippopotamus, elephants etc.

### **7.KHADAR :**

- Composed of newer alluvium and forms the flood plain along the river banks
- Deposited almost every year
- The clays have less Kankar and the organic remains entombed in them belong to still living species

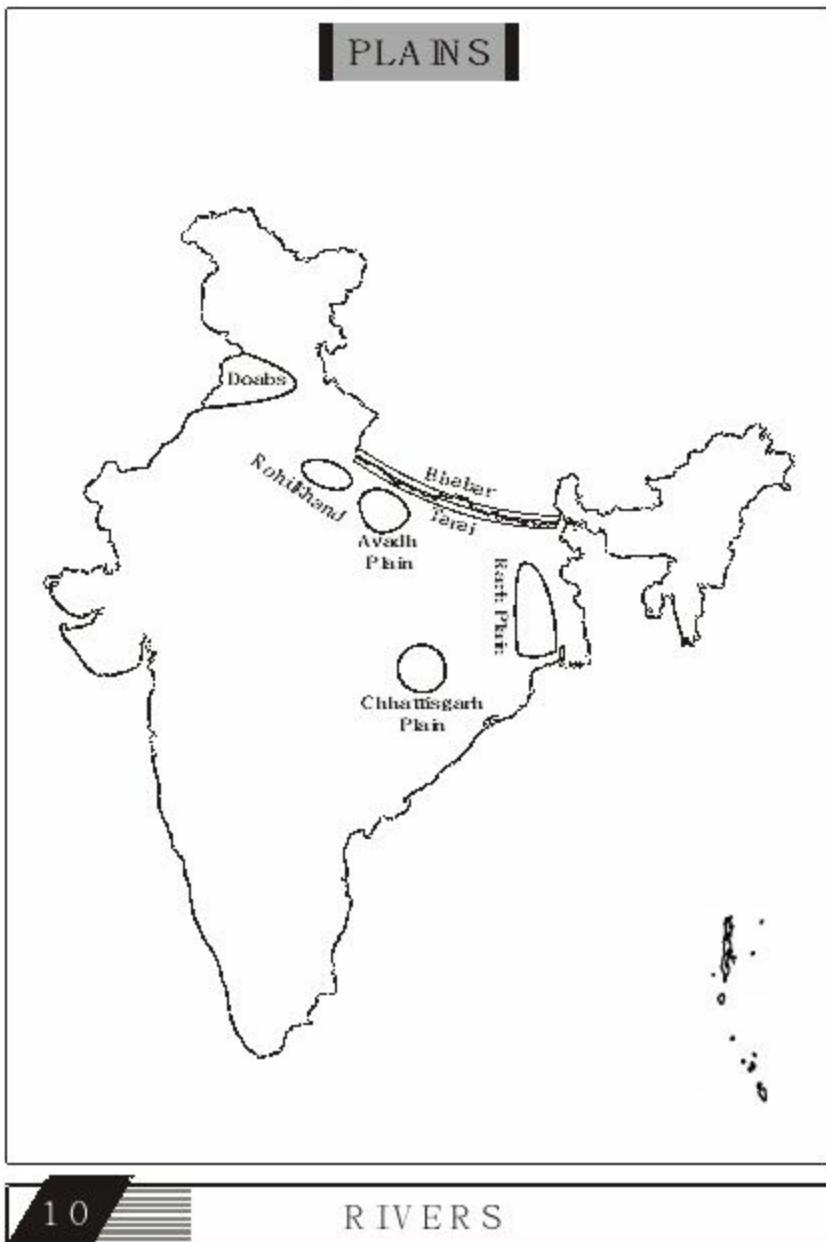
### **8.CHHATTISGARH PLAIN :**

- Most marked plain of the Indian Peninsula formed, in a saucer shape, by the Mahanadi and its tributaries
- Surrounded from three sides by the hills and open in the east

- Famous as the ‘rice bowl of India’

#### **9.RARH PLAIN :**

- Western part of the Lower Ganga Plain, formed by the tributaries of the Hugli
- The main river being **Damodar**
- Highly industrialized region
- Earlier ill famous for disastrous floods



10

RIVERS

#### **1.INDUS :**

- 2880 km long river originates in Tibet near the Mansarovar Lake and empties into the Arabian Sea

- Its five great tributaries meet it at **Mithankot** in Pakistan.
- Flows between Ladakh and Zaskar ranges in India, forming a gorge.
- **Leh** is located on its bank

## **2.SHYOK :**

- Right bank tributary of the Indus, originates in Depsang Plains and flows along the Karakoram Range
- Forms the eastern limit of the Karakoram
- Fed by various glaciers like Siachen Glacier
- Found completely inside Jammu and Kashmir

## **3.ZASKAR :**

- Left bank tributary of the Indus, flows between the Zaskar Range (S) and the Ladakh Range (N)
- It meets the Indus just west of Leh
- Found completely inside Jammu and Kashmir

## **4. GILGIT :**

- Right bank tributary of the Indus River, at present in the PoK.
- Rises in the northwest corner of India proper and meet the Indus very near, where the latter bends towards the southwest
- **Gilgit city** is located on its bank

## **5.JHELUM :**

- Rises from Verinag, located at the foothill of the Pir Panjal in the southeast Kashmir
- It is the main river of the **Kashmir Valley** flow through the **Wular Lake**
- **Srinagar** is located on its bank
- **Tributaries**- Kishanganga, Lidar, Sind, Pohru
- Forms 170 km.boundary between India and Pakistan

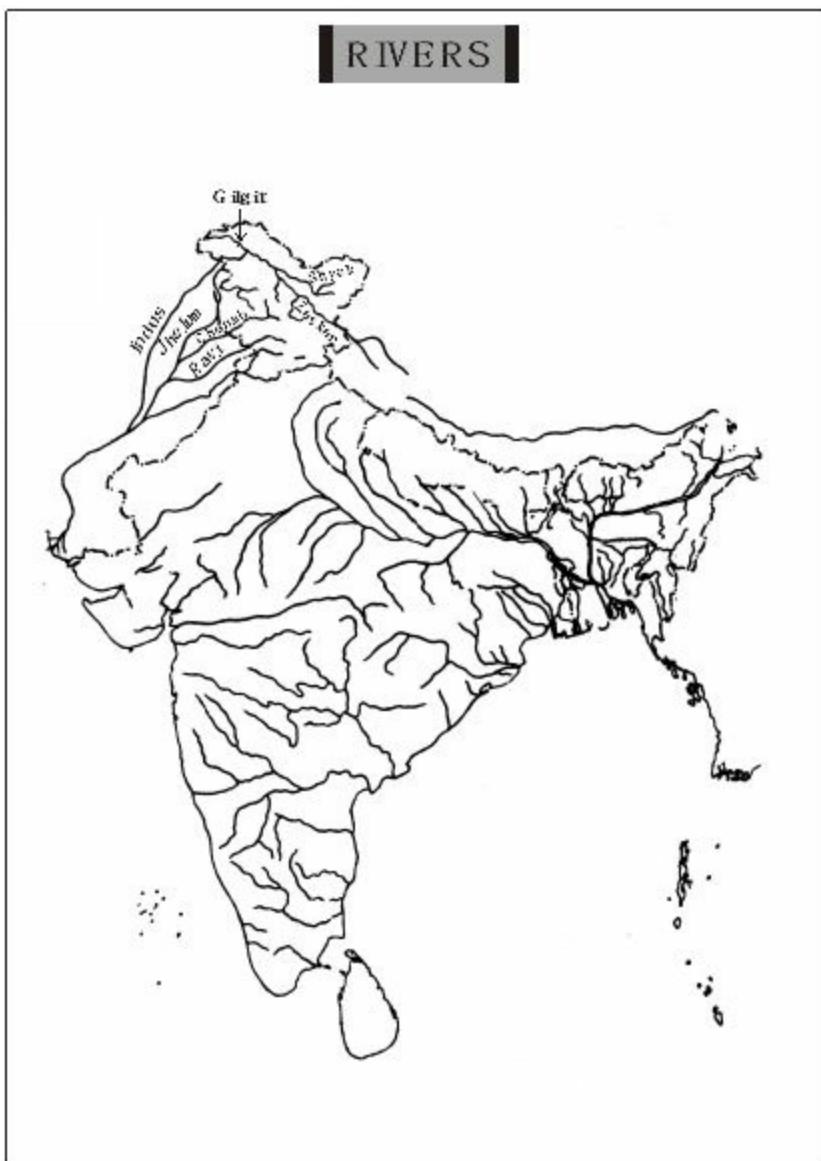
## **6.CHENAB :**

- It originates near the **Bara Lacha Pass** as two headstreams **Chandra** and **Bhangla** on the both sides of the pass.
- The united stream flows through the **Pangi Valley** parallel to the Pir Panjal Range.
- Meets the Indus at **Panchnad** in Pakistan.
- **Cities** – Doda, Kishtwar, Ramban.

- **Projects**- Salal, Baglihar, Dul Hasti.

### 7.RAVI :

- Rises in the Kullu hills near the **Rohtang Pass** in Himachal Pradesh.
- Flows between the Pir Panjal and the Dhauladhar
- Forms deep gorge in the Daula Dhar Range
- **Cities**-Chamba, Kathua
- Forms **boundary** between Punjab and Jammu and Kashmir and then between India and Pakistan.



### 8.BEAS :

- Rises near the **Rohtang Pass** in HP and meets the Satluj at Harike near Kapurthala

- Completely in India
- **Pong Reservoir (HP)**
- Forms a deep gorge in the Dhauladhar Range

#### **9. SATLUJ :**

- Southernmost major tributary of the Indus, it originates from the **Rakas Lake** in Tibet and enters India through the **Shipki La**
- Projects : Nathpa Jhakri, Bhakra – Nangal
- **Tributaries:** Beas, Spiti, Parechhu.

#### **10. SPITI :**

- Right bank tributary of the Satluj rises near the Rohtang Pass
- Completely found inside Himachal Pradesh in its northeastern corner
- **Tributaries:** Parechhu, Rohtang, Surahi, Hanze etc.
- In Kinnaur it merges with the Satluj
- In the summer its flow is increased and becomes dangerous

#### **11. PARECHHU :**

- Right bank tributary of the Satluj rises near the Tso Moriri Lake, then flows through Tibet and meets the Satluj after the Shipki La
- Its flow is increased in the summer and becomes dangerous, while in the winter it is somewhat frozen.

#### **12. TONS :**

- The tributary of the Yamuna, rises in the Yamunotri Glacier and flows through the western part of Uttarakhand
- The NH-94 runs along it.

#### **13. BHAGIRATHI :**

- **The headstream of the Ganga**, rises from the Gangotri Glacier and meets the Alaknanda River at **Devprayag**
- **Cities** – Uttarkashi, Tehri
- **Projects:** Tehri, Koteswar.

#### **14. ALAKNANDA :**

- First major tributary of the Ganga found completely inside Uttarakhand
- Rises near the Niti Pass , at the border with Tibet
- Meets Bhagirathi River at **Devprayag**
- **Tributaries:** Pindar, Mandakini

#### **15. PINDAR :**

- Most important tributary of the Alaknanda River, found completely inside Uttarakhand
  - Rises from **the Pindar Glacier** near the Nanda Devi Peak
  - Joins the Alaknanda at **Karan Prayag**

#### **16. KALI – SARDA :**

- Important tributary of the Ghaghra, that rises in Tibet near the **Rakas Lake**
  - Flow between India and Nepal forming a **natural boundary** and known as **Kali** in the Nepal section and Sarda in the Indian part
  - Passes through the **Doodhwa National Park**

#### **17. KARNALI /GHAGHRA :**

- Originates near **Gurla Mandhata** peak, south of Mansarovar in Tibet
- Known as **Karnali** in western Nepal
- **Tributaries:** Sarda, Sarju, Rapti.
- Meets Ganga a few kilometers downstream of **Chapra** in Bihar.
- Forms boundary between UP and Bihar.

## RIVERS



### 18. GANGA :

- **Largest and longest river inside India.**
- Originates from the Gangotri Glacier as the Bhagirathi and drains into the Bay of Bengal.
- Named Ganga after Devprayag and enters the plain after Haridwar.
- Known as **Padma** in Bangladesh.
- **Holiest river of India.**

### 19. RAMGANGA :

- Important tributary of the Ganga between the Gomati (E) and the Ganga (W)
- Rises in Garhwal district of Uttarakhand and joins the Ganga near

## **Kannauj**

- **City:** Moradabad

## **20. GOMATI :**

- Important tributary of the Ganga, rises from the **Pilibhit district** of UP and joins the Ganga downstream of Sarnath.
- Irrigates the **Avadh Plain**
- **Cities:** Lucknow

## **21. SARJU :**

- A small river in UP on the bank of which **Ayodhya** is located
- Some times synonymous with the river Ghaghra or some time as its tributary

## **22. RAPTI :**

- Important tributary of the Ghaghra
- Rises in Nepal and joins the Ghaghra downstream Gorakhpur
- Tributary : Burhi –Rapti
- **Cities :** Shrasvati , Gorakhpur

## **23. GANDAK :**

- Important tributary of Ganga, originates near the **Tibet-Nepal border**
- **Tributaries:** Kali-Gandak, Mayagadi, Bari, Trishula
- Join the Ganga at Hajipur, just east of Patna.
- Flows between UP and Bihar.

## **24. BURHI GANDAK :**

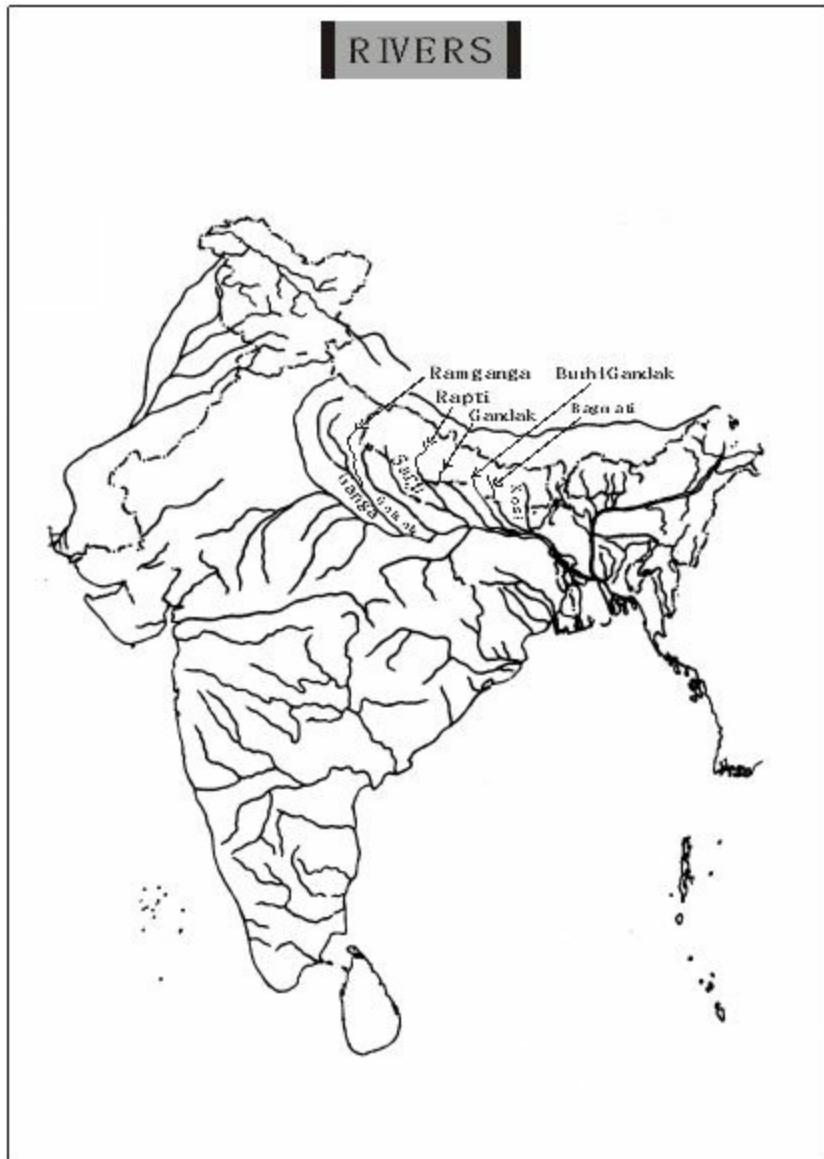
- Originates from the western slopes of Sumesar Hills near the India-Nepal border, joins the Ganga opposite Monghyr town.
- **Cities :** Motihari, Muzaffarpur, Samastipur
- Flows through the **Valmiki National Park**

## **25. BAGMATI :**

- River of Nepal and India which flows through the Kathmandu Valley and joins Kosi in India
- Forms Chokar Gorge in the Mahabharat Range
- **Kathmandu** is located on its bank
- Considered holy by both Budhists and Hindus

## **26. KOSI :**

- Consists of seven streams namely Sut Kosi, Tamba Kosi, Talkha, Doodh Kosi, Botia Kosi, Arun and Tamber
- **Arun** is the main stream which rises to the north of **Gosainthan**
- The three important streams (Tumar, Arun and Sun Kosi ) unite at **Triveni**
- North of the Mahabharat Range to form Kosi
- It is ill-famous for floods and changing its directions as it enters India and known as the '**Sorrow of Bihar**'
- A barrage has been built at **Hanuman Nagar** in Nepal



## 27. RANGIT :

- The largest river of Sikkim

- A tributary of Teesta
- Famous among the rafters owing to its turbulent waters
- Forms boundary between Sikkim and West Bengal
- Has 60 MW electricity plant

### **28. MAHANANDA :**

- Trans-boundary river that flows through West Bengal, Bihar and Bangladesh.
- Last important left bank tributary of the Ganga before the Brahmaputra.
- Rises in the Darjeeling district and flows through the **Mahananda Wildlife Sanctuary**.
- 360 km long (324 km in India ).

### **29. TISTA :**

- A major tributary of the Brahmaputra
- Rises in Tibet and flows through Sikkim and West Bengal and joins the Brahmaputra in Bangladesh
- Upto 1787 it was a tributary of the Ganga, when a devastating flood diverted it eastward
- An antecedent river, does large scale cutting during the rainy season

### **30. SANKOSH :**

- An important tributary of the Brahmaputra, rises in Bhutan and joins the Brahmaputra near the Indo-Bangladesh border
- Forms boundary between West Bengal and Assam

### **31. MANAS :**

- Important right bank tributary of the Brahmaputra , rises in Bhutan and joins the Brahmaputra opposite to Goalpara
- Flows through the **Manas Biosphere Reserve**
- NH-31 passes over it, linking Bongaigaon with Nalbari.

### **32. KAMENG :**

- Important right bank tributary of the Brahmaputra, rises near the Indo- Tibet border in Arunachal Pradesh and joins the Brahmaputra, a few kilometres downstream of **Tezpur**

### **33. SUBANSIRI :**

- Important right bank tributary of the Brahmaputra, rises near the Indo

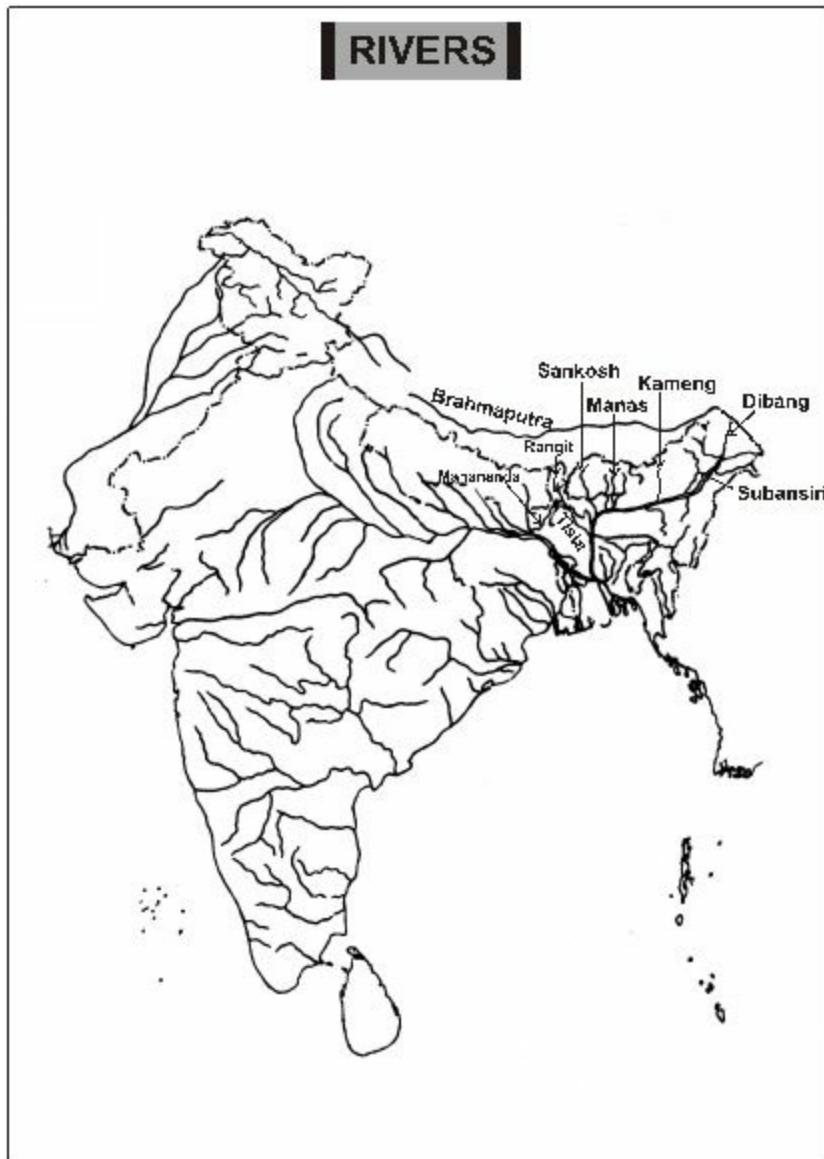
- Tibet border, and joins the Brahmaputra near the Majuli Island
  - Separates the Abor Hills (East) from the **Miri** and **Dafla Hills**
  - Tributary – **Kamla**

#### **34. BRAHMAPUTRA :**

- Rises in the **Chemayungdung Glacier** in the Kailas Range and joins the Padma in Bangladesh.
- Known as **Tsangpo** in Tibet.
- Forms the largest riverine island **Majuli**.
- Largest volume of water of any river in India.
- Famous for floods.

#### **35. DIBANG :**

- Important left bank tributary of the Brahmaputra in Arunachal Pradesh and Assam
  - Flows through the Mishmi Hills
  - Forms a **Trijunction** in the northeast Assam along with the Dihang and the Lohit
  - Cities – Tezu, Parasuram Kund



### 36. LOHIT :

- Important left bank tributary of the Brahmaputra in Arunachal Pradesh and Assam
- Forms a **Trijunction** in the northeast corner of Assam along with the Dihang and the Dibang

### 37. BURHI DIBING :

- Left bank tributary of the Brahmaputra, rises from the **Patkai Bum** in Arunachal Pradesh and joins the Brahmaputra downstream of Dibrugarh before the Majuli Island
- **Cities:** Naharkatia , Digboi

### 38. DIKHU :

- Left bank tributary of the Brahmaputra, rises from the Naga Hills and joins the Brahmaputra at the south of the Majuli Island
- **City:** Sibsagar

#### **39. DHANSIRI :**

- Left bank tributary of the Brahmaputra rises from the **Barail Range** and joins the Brahmaputra just downstream of the Majuli Island
- Flows east of the Rengma Hills and the Mikir Hills where the **Kaziranga National Park** is situated
- **Boundary** between Assam and Nagaland
- **Cities** – Dimapur, Golaghat

#### **40. BARAK :**

- Important river of the northeast India rises from the **Barail Range**, near the trijunction of Assam, Manipur and Nagaland
- Forms **boundary** between Assam and Manipur
- **Tipaimukh Dam** in Manipur
- It becomes Surma and then Meghna
- City – **Silchar**.
- **NH-53** crosses it.

#### **41. MANIPUR :**

- It originates in the Manipur Hills and flows southward, just east of the Loktak Lake and enters Myanmar to join the Myitha River, a tributary of the Chindwin.
- Flows between the Laimatol Range and the east Manipur Hills.

#### **42. DHALESHWARI :**

- Originates in the Mizo Hills and flows northward to join the Barak River
- Passes through **the Tropic of Cancer**

#### **43. AJAY :**

- Important northernmost tributary of the Hoogly
- Flows through Bihar, Jharkhand and West Bengal
- **Shantiniketan** is situated north of it

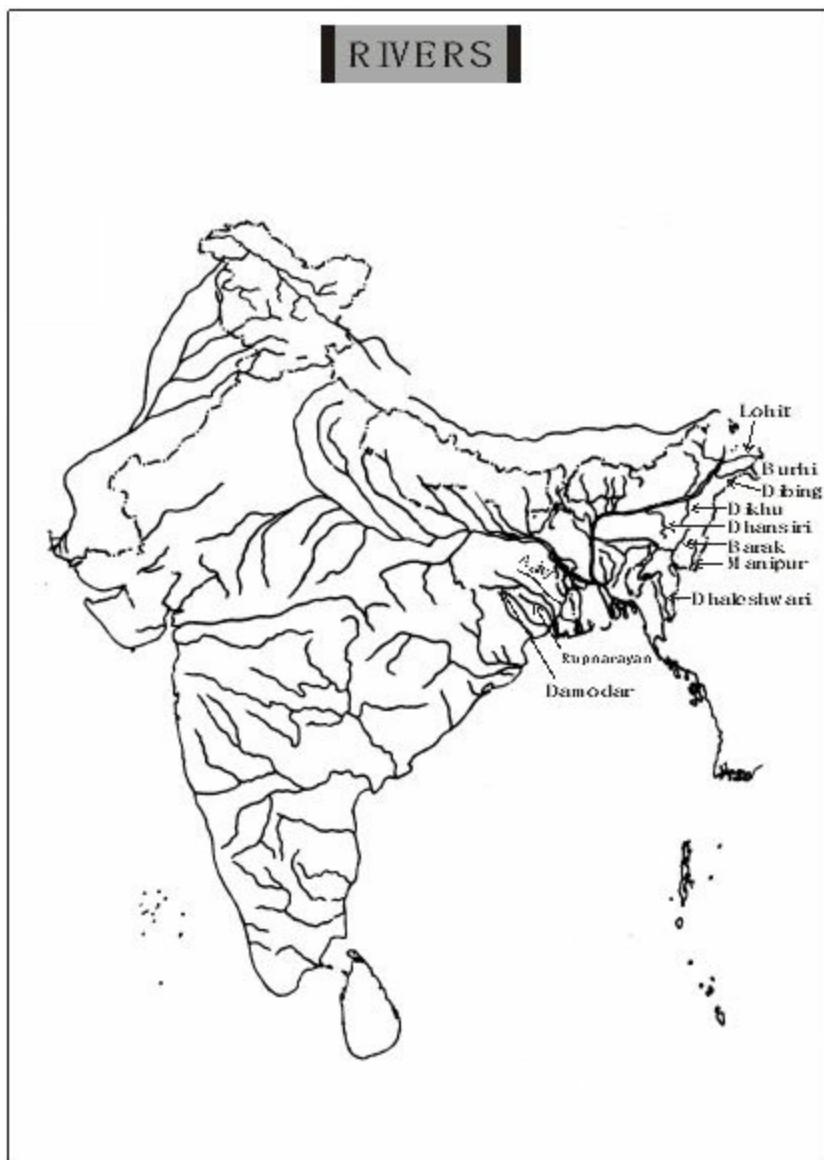
#### **44. DAMODAR :**

- Most important tributary of the Hoogly originates from the Palamau district of Jharkhand.

- Known as ‘**Sorrow of Bengal**’.
- **DVC**-First multipurpose project of India.
- Tributaries: Barakar, Konar, Jamunia, Ghari etc.

#### **45. RUPNARAYAN :**

- Tributary of Hoogly south of the Damodar
- Rises in the western part of West Bengal and meets **Silai River** before joining the Hoogly
- City – Bankura
- NH-6 passes over it.



#### **46. HALDI :**

- Important southernmost tributary of the Hoogly River, rises from the

**Purulia district** of West Bengal and joins the Hoogly at **Haldia**

- **Cities** –Medinipur , Haldia

#### **47. YAMUNA :**

- Most important tributary of the Ganga, rises from the Yamunotri Glacier and joins the Ganga at Allahabad
- **Tributaries** : Chambal, Sind, Betwa , Ken
- **Cities** – Delhi, Mathura, Agra, Allahabad
- **Excessively used and highly polluted**

#### **48. BARAKAR :**

- Main tributary of the Damodar River
- 225 km long, originates in the Hazaribagh district and joins the Damodar in the Bardhaman district of West Bengal
- Tributaries – Barsoti, Usri.
- Dams and HEPs – Tilaiya , Maithon

#### **49. GAMBHIR :**

- Important tributary of the Yamuna, between the Yamuna and the Chambal.
- Rises from the northeastern part of the Aravallis, north of Jaipur.
- Before meeting the Yamuna , it forms **boundary** between Rajasthan and Uttar Pradesh
- **Keoladeo Ghana Bird Sanctuary** is located just north of it

#### **50. CHAMBAL :**

- Most important tributary of the Yamuna
- Rises from the **Janapao Hills** of the Vindhya range and meets the Yamuna in Uttar Pradesh near Etawah
- **Tributaries:** Banas, Kali Sindh, Parbati
- **Reservoirs:** Gandhi Sagar, Rana Pratap Sagar, Jawahar Sagar.
- Famous for ‘**ravines**’ (bandland topography )
- Forms border between Rajasthan and Madhya Pradesh

#### **51. SIND :**

- A right bank tributary of the Yamuna, flows between Chambal and Betwa rivers through Madhya Pradesh and Uttar Pradesh
- Originates in the Vidisha district of Madhya Pradesh and joins the Yamuna in the Etawah district of Uttar Pradesh
- **Manikheda Dam** in the Shivpuri district of Madhya Pradesh

## **52. BANAS :**

- Most important left bank tributary of the Chambal
- Rises from the southeastern part of the Aravallis and meets the Chambal at the Rajasthan and Madhya Pradesh border
- **Ranthambore National Park** is situated at the confluence of the Banas and the Chambal
- **Tributaries:** Berach, Khairi, Bandi, Dhand

## **53. KALI SINDH :**

- First important right bank tributary of the Chambal flows through **the Malwa Plateau** in Madhya Pradesh and Rajasthan
- Crosses the **Tropic of Cancer** from the south to north
- **Tributaries:** Parwan, Ahu
- Forms **ravines** in its lower course

## RIVERS



### 54. PARBATI :

- Important right bank tributary of the Chambal
- Flows through the **Malwa Plateau** in Madhya Pradesh and Rajasthan
- Crosses the **Tropic of Cancer** from the south to north
- Forms the **boundary** between Madhya Pradesh and Rajasthan for a short length twice

### 55. BETWA :

- Tributary of the Yamuna rises from the Vindhyan Range near **Kumara Village** of the **Raisen district** of Madhya Pradesh
- Flows through the **Bundelkhand Plateau**
- **Dams:** Matatila, Rajghat

- **Cities** – Sanchi , Orchha

#### 56. KEN :

- Rises from the **Kaimur Hills** in the **Satna district** of MP and joins the Yamuna in the Banda district of Uttar Padesh
- Flows through the **Bundelkhand Plateau**
- Almost dried up during the summer
- There is a plan **to link it with the Betwa**

#### 57. TONS :

- Tributary of the Ganga between the Yamuna and the Son
- Rises from **the Vindhyan Range** and joins the Ganga few kilometers downstream of **Allahabad**

#### 58. SON :

- Important right bank tributary of the Ganga, rises near Amarkantak and joins the Ganga near Ramnagar in Bihar
- Flows between **the Kaimur Hills** and the **Sonpar Hills**
- Forms various waterfalls
- Forms **short border** between Jharkhand and Bihar
- **Tributaries:** Johilla, Gopad, Rihand , Kanhar, North Koel.

#### 59. RIHAND :

- Most important tributary of the Son
- Rises from **the Ramgarh Hills** of Chhattisgarh and joins the Son in the Mirzapur district of Uttar Pradesh
- **Gobind Ballabh Pant Sagar** is formed behind **the Rihand Dam**
- Passes through the **Tropic of Cancer**

#### 60. NORTH KOEL :

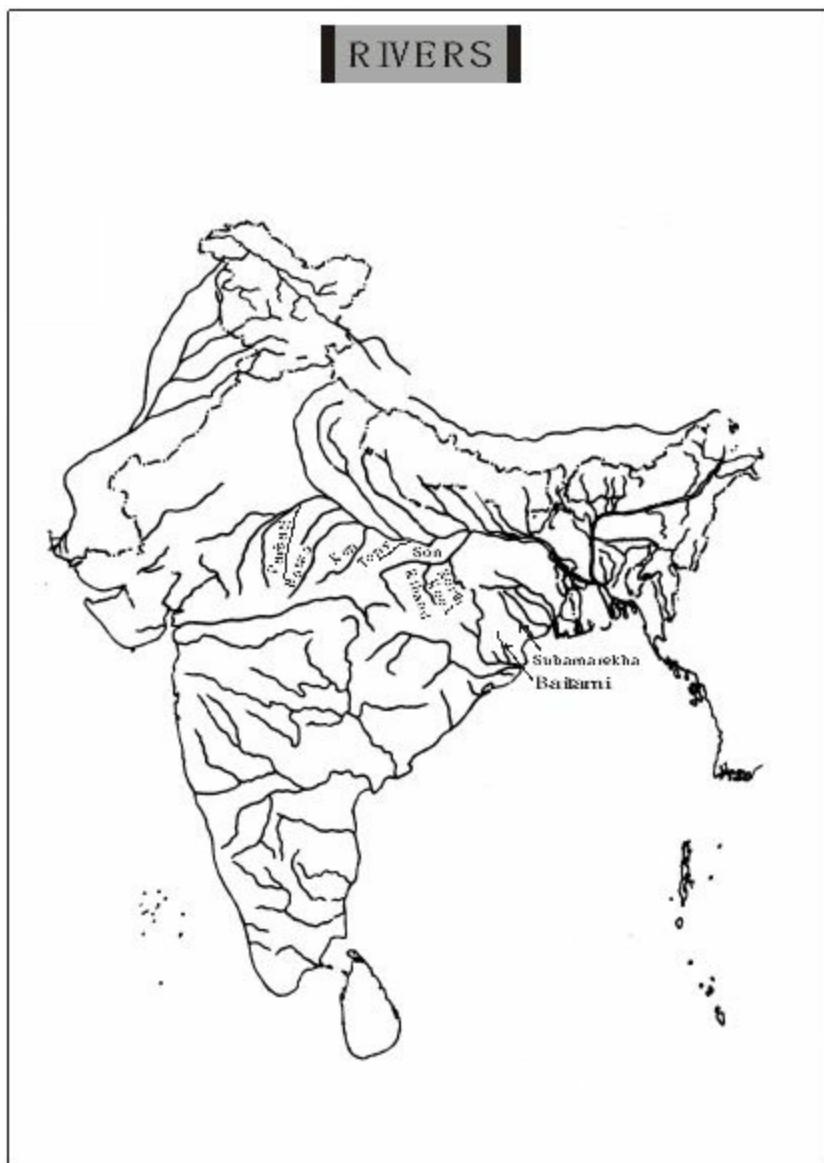
- Last important tributary of the Son, rises from the Chotanagpur Plateau and joins the Son at the **Jharkhand-Bihar border**.
- Passes through the Tropic of Cancer as well as the **Palamau Tiger Reserve**.
- **City:** Daltenganj

#### 61. SUBARNAREKHA :

- Rises from the Ranchi Plateau and flows through Jharkhand , West Bengal and Orissa before emptying into the Bay of Bengal
- **Cities** – Ranchi, Jamshedpur
- Its valley is famous for the **alluvial gold**

## 62. BAITARNI :

- Important river of Orissa rises from the Garhjat Hills and before emptying into the Bay of Bengal joins the Mahanadi delta along with the Brahmani River
- **Dhamra Port** is located at its mouth



## 63. BRAHMANI :

- Important river of the northern Orissa, forms when the Sankh and the South Koel join together.
- It joins the Mahanadi Delta before emptying into the Bay of Bengal
- Flows through the **Garhjat Hills**.
- **Cities:** Rourkela, Talcher.

- Its valley has rich coal deposits.

#### **64. MAHANADI :**

- Rises from the **Sihava Parbat** of the Raipur district of Chhattisgarh and forms large delta in the Bay of Bengal
- **Hirakud Dam** near Sambalpur in Orissa.
- **Tributaries:** Sheonath, Hasdo, Ib, Mand, Jonk, Tel etc.
- **Cities** – Sambalpur, Cuttack
- Forms the Chhattisgarh Plain, '**Rice Bowl of India**'.

#### **65. BANSHADHARA :**

- Important river of the southwest Orissa and the northeast Andhra Padesh.
- Rises from the Eastern Ghats and empties into the Bay of Bengal

#### **66. SILERU :**

- Last important left bank tributary of the Godavari rises from the Eastern Ghats and joins the Godavari in Andhra Padesh after forming **boundary** between Orissa and Andhra Padesh
- Tributary – Sabari
- **Reservoirs** – Jalaput, Machhkund, Balimela
- **Dudma Falls** after the Machhkund Reservoir

#### **67. INDRAVATI :**

- Important left bank tributary of the Godavari rises from the Eastern Ghats near the Nimgiri (1515m.)in Orissa.
- Flows through the centre of **the Bastar Plateau** and forms **boundary** between Maharashtra and Chhattisgarh before joining the Godavari at the trijunction of Maharashtra, Chhattisgarh and Andhra Padesh
- **City** – Jagdalpur–main city of Bastar region

#### **68. WAINGANGA :**

- Important left bank tributary of the Godavari rises from the eastern part of the Mahadeo Hills in Madhya Padesh and after joining the Penganga it becomes Pranhita which forms boundary between Maharashtra and Andhra Padesh
- Short boundary between MP and Maharashtra
- **Tributaries:** Pench , Kanhan , Mul
- **Cities:** Balaghat , Bhandara , Garchiroli

#### **69. WARDHA :**

- Important tributary of Penganga , rises from the southern Mahadeo Hills and meets the Penganga near Chandrapur

- **Tributaries :** Bemla , Wunna

## **70. PENGANGA :**

- Important left bank tributary of the Godavari , rises from **the Ajanta Range** and joins Wainganga near the Andhra Padesh – Maharashtra border to form Pranhita which forms boundary between the above two states

- Upstream it forms the boundary between the two states.

- **Tributaries:** Wardha , Aran , Pus



## **71. PURNA :**

- Small left bank tributary of the Godavari, rises from the southern part of **the Ajanta Range**

## 72. GODAVARI :

- Second largest river inside India and the longest river of southern India
- Rises from the **Trimbak Plateau** in the **Nasik district** and forms a large delta along with Krishna in the Bay of Bengal
- Known as the '**Vriddha Ganga**'
- **Projects** – Jayakwadi
- **Tributaries** : Pranhita, Indravati, Sileru, Manjra

## 73. MANJRA :

- Most important right bank tributary of the Godavari, rises from the Balaghat Range in Maharashtra and flows through Karnataka and Andhra Pradesh
- **Nizam Sagar** is built on it in Andhra Pradesh near Nizamabad.
- **Tributaries** – Tirna ,Manar

## 74. MUNERU :

- Last important left bank tributary of the Krishna
- Found completely inside Andhra Pradesh
- **City:** Khammam

## 75. MUSI :

- Important left bank tributary of the Krishna , rises in the **Balaghat Range** in the **Telangana Plateau** (Andhra Pradesh)
- **Hyderabad** is located on its bank
- **Hussain Sagar Reservoir** is built on it

## 76. BHIMA :

- Most important left bank tributary of the Krishna rises near Pune in the Matheron Hills of the Western Ghats , and flows through Maharashtra and Karnataka
- Joins the Krishna 26 km away from Raichur
- **Tributaries** –Mula , Mutha God, Nira , Sina , Bari , Kagna

## 77. KRISHNA :

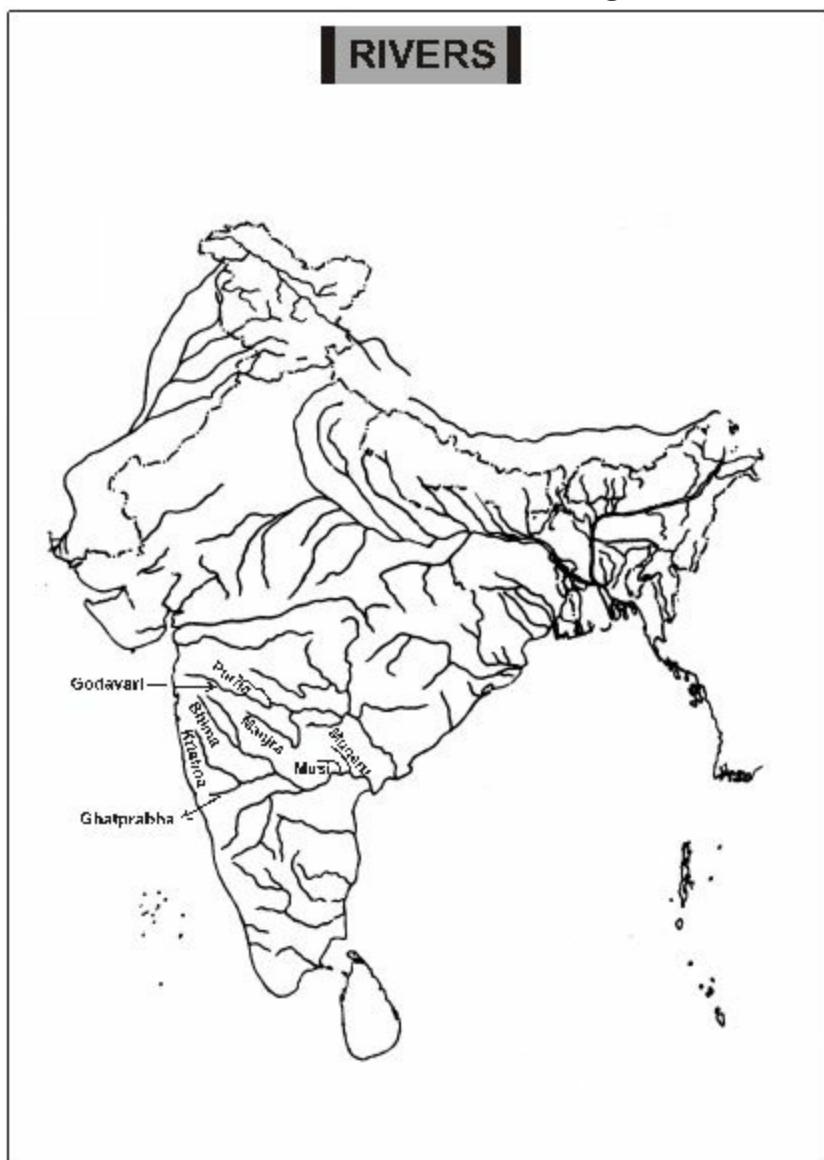
- Second longest river of the Indian Peninsula rises from the Western Ghats near Mahabaleshwar and empties into the Bay of Bengal , forming

joint delta with the Godavari

- **Tributaries** – Koyna, Tungabhadra, Bhima, Musi etc.
- **Dams** – Srisailam , Nagarjunasagar

#### 78. GHATPRABHA :

- A right bank tributary of the Krishna flows in Karnataka
- 283- km long river that originates in the eastern slopes of the Western Ghats and joins the Krishna at Almatti
- Tributaries – Hiranyakeshi , Markandeya
- Ghatprabha Project (at Hidkal ) – A dam and HEP
- **Gokak Falls** is located in the Belgaum district of Karnataka



#### 79. MALPRABHA :

- A right bank tributary of the Krishna in Karnataka rises from the Western Ghats in Belgaum district and joins the Krishna at Kudalasangam in the Balaghat district
- 304 km long
- **Tributaries** – Bennihalla , Hirehalla , Tuparihalla
- **Reservoirs**- Navilatirtha Dam
- Aihole, Pattadakal and Badami are located on its bank

#### **80. TUNGADHADRA :**

- A major right bank tributary of the Krishna, rises from the Western Ghats near the **Baba Budan Hills**, joins the Krishna in Andhra Pradesh, few kms downstream of **Kurnool**
- Formed after the confluence of the Tunga and Bhadra.
- **Tungabhadra Reservoir** near **Hospet**
- **Tributaries:** Varada , Hagari , Chikka Hagari
- Forms a **short boundary** between Karnataka and Andhra Padesh
- **Cities:** Hospet , Hampi , Kurnool

#### **81. PENNERU :**

- Important river of southern AP, rises near Tumkur in Karnataka and empties into the Bay of Bengal near Nellore
- Bifurcates the **Rayalseema** into two almost equal parts.
- Separates Palkonda from the Nallamalla and passes through the Velikonda Range
- **Cities** – Cuddapah , Nellore
- **Tributaries** – Charavati , Papagni , Cheyyaru

#### **82. PALAR :**

- Important river of the northern Tamil Nadu
- Rises from Karnataka near the Kolar gold field region and empties into the Bay of Bengal midway between Chennai and Puducherry
- **Tributaries** – Ponri , Cheyyar
- **Cities** – Vellore , Kancheepuram

#### **83. PONNAIYAR :**

- Important river of northern Tamil Nadu.
- Rises from the **Melagiri Range region** and flows between the **Javadi Hills** and **the Shevroy Hills**.

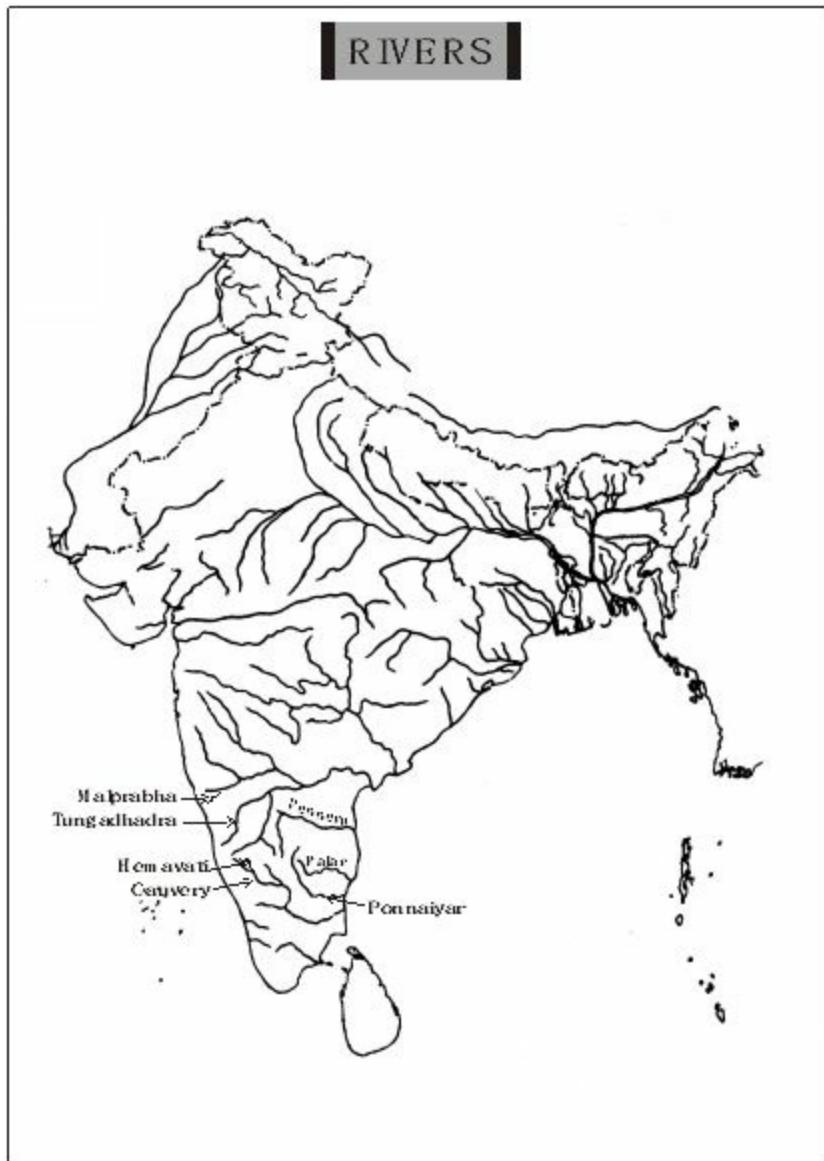
- **Krishnagiri Reservoir** in Tamil Nadu.
- **Tributaries** – Chovrai.
- **Cities**– Krishnagiri , Cuddalore (at the mouth )

#### **84. CAUVERY :**

- Rises from **Taal Cauvery** in the **Brahmagiri Range** of the Western Ghats in Karnataka
- Forms quadrilateral delta
- **Falls**–Sivasamudram and Hogenekkal
- **Reservoirs** – Krishnaraj Sagar , Stanley Reservoir
- **Tributaries**- Hemavati, Shimsa, Arkaveti, Lakshmantirtha, Kabani, Suvarnavati, Noyil and Amaravati
- **Disputed among the riparian states.**

#### **85. HEMAVATI :**

- Left bank tributary of the Cauvery rises **near the Baba Budan Hills** and meets the Cauvery at Krishnarajsagar Reservoir
- Completely found in Karnataka
- **Tributary** – Yagachi



#### 86. SHIMSA :

- Left bank tributary of the Cauvery, completely lies in Karnataka
- Originates in Tumkur district
- Has Shimsha Reservoir
- Meets the Cauvery near the Sivasamudram Falls

#### 87. ARKAVETI :

- Left bank tributary of the Cauvery, lies completely inside Karnataka
- Flows west of Bengaluru
- **Chamraja Sagar** has been built on it

#### 88. NOYIL :

- Right bank tributary of the Cauvery rises from the southern part of

the Nilgiri Hills, near the Pal Ghat

- **Coimbatore** is located on its bank

#### **89. LAKSHMANTIRTHA :**

- Right bank tributary of the Cauvery, rises in the Western Ghats and joins the Cauvery at the **Krishnaraja Sagar**.
- Passes through **Nagarhole national park**

#### **90. KABANI :**

- Right bank tributary of the Cauvery rises from the Western Ghats near the **Wayanad Sanctuary** in Kerala, joins the Cauvery near **Mysore**
- Huge Kabani Dam (696m) near Mysore
- One of the most popular wild-life destinations of Karnataka.

#### **91. MOYAR :**

- Right bank tributary of the Cauvery
- Rises from the **Nilgiri Hills** near Ooty and joins the Cauvery near Erode
- **Bhavani Sagar Reservoir** is located on it
- Forms a short **boundary** between Karnataka and Tamil Nadu.

#### **92. AMARAVATI :**

- Right bank tributary of the Cauvery
- Rises **near Anaimudi** and meets the Cauvery a few kms downstream of Karur
- **Tributaries** – Sanmukta , Nanganji
- City –**Karur**

#### **93. VAIGAI :**

- Most important river of southern Tamil Nadu , rises from the Cardamom Hills and flows between the Varushnad Hills and the Sirumalai Hills.

- Drains near the Pamban Channel.
- **Cities:** Madurai, Ramnathpuram, Theni.

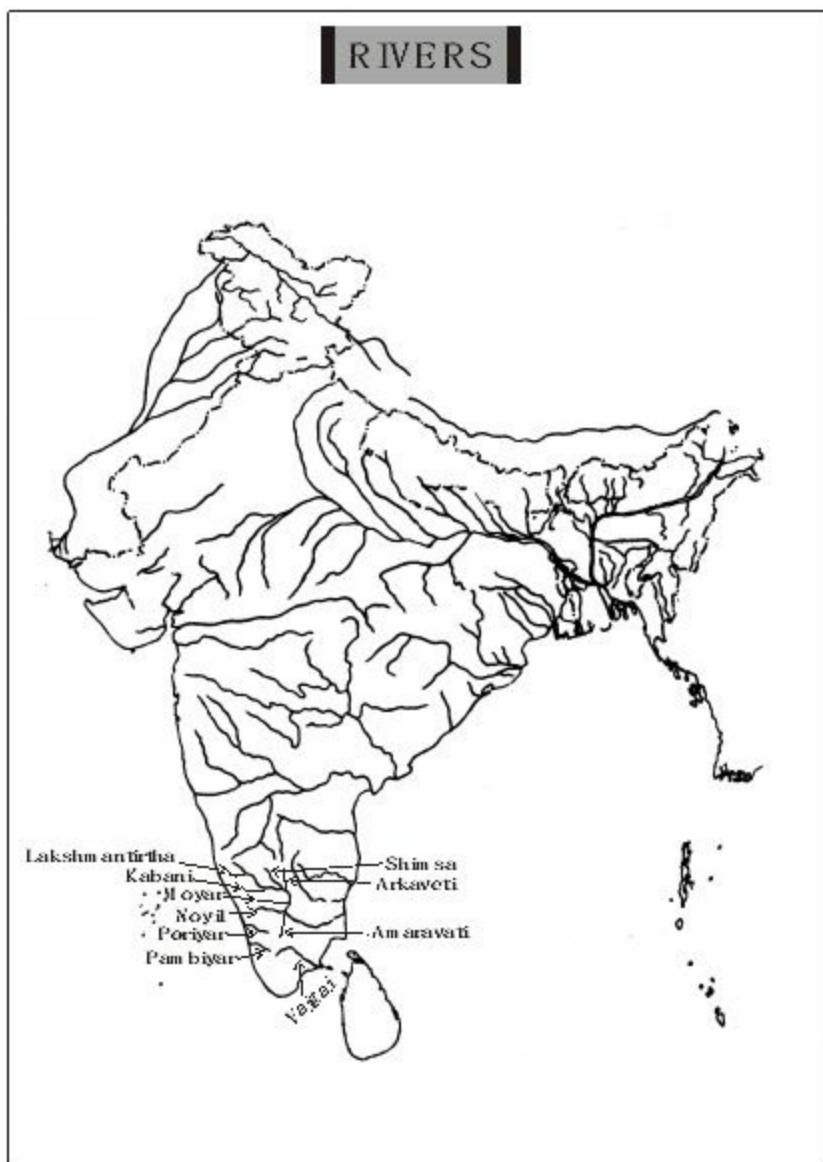
#### **94. PAMBIYAR :**

- Third longest river of Kerala.
- **Sabarimala Temple** is located on its bank. Originates in Pulachimalai Hills of the Western Ghats and empties into the Vembanand Lake.

- It irrigates the rice cultivating region of Kuttanad.
- It is venerated as **Dakshin Ganga**.

#### 95. PERIYAR :

- **Longest river of Kerala** (244 Km), known as '**the life line of Kerala**'
- Perennial river, source of drinking water
- **Idukki Dam** – HEP in large quantity.
- Source – Shivagiri Hills , flows through the Periyar National Park into Periyar Reservoir.
- Its water is diverted from the reservoir into the Vaigai River.



#### 96. KUMARDHAR :

- Small river of S-W Karnataka , rises east of **the Kudremukh** and empties into the Arabian Sea
- **Mangalore** is located at its mouth
- Southernmost river of the western coast of Karnataka

#### 97. SHARAVATI :

- West flowing river of Karnataka , rises in the **Shimoga district** and forms the **Jog Falls**
- Has **Linganamakki Reservoir**
- **HEPs** – Sharavati , Mahatma Gandhi

#### 98. KALINADI :

- Northernmost river of the western coast of Karnataka.
- Rises in the Western Ghats near **Dharwad**.
- Has an **HEP Project**.
- **Karwar** is located just south of its mouth.
- **Konkan Railway** and **NH- 17** pass through it.

#### 99. ZUARI :

- **Largest river of Goa** (34 km long )
- Originates at Hemad – Barshem in the Western Ghats
- Zuari and Mandovi rivers form the backbone of Goa's agriculture
- **Cumbahuem Canal** links the two rivers
- **Vasco da Gama** city is located at its mouth

#### 100. MANDOVI :

- Also known as **Mahadeyi** or **Mahadei**
- **Lifeline of Goa**
- 77 km. long (29 km.in Karnataka and 52km. in Goa )
- It originates at Bhimgad in the Belgaum district of Karnataka
- **Falls** - Dudhasagar Falls , Varapoha Falls
- **Cumbahuem Canal** links it with the Zuari River
- **Cities:** Panaji, Old Goa

#### 101. ULHAS:

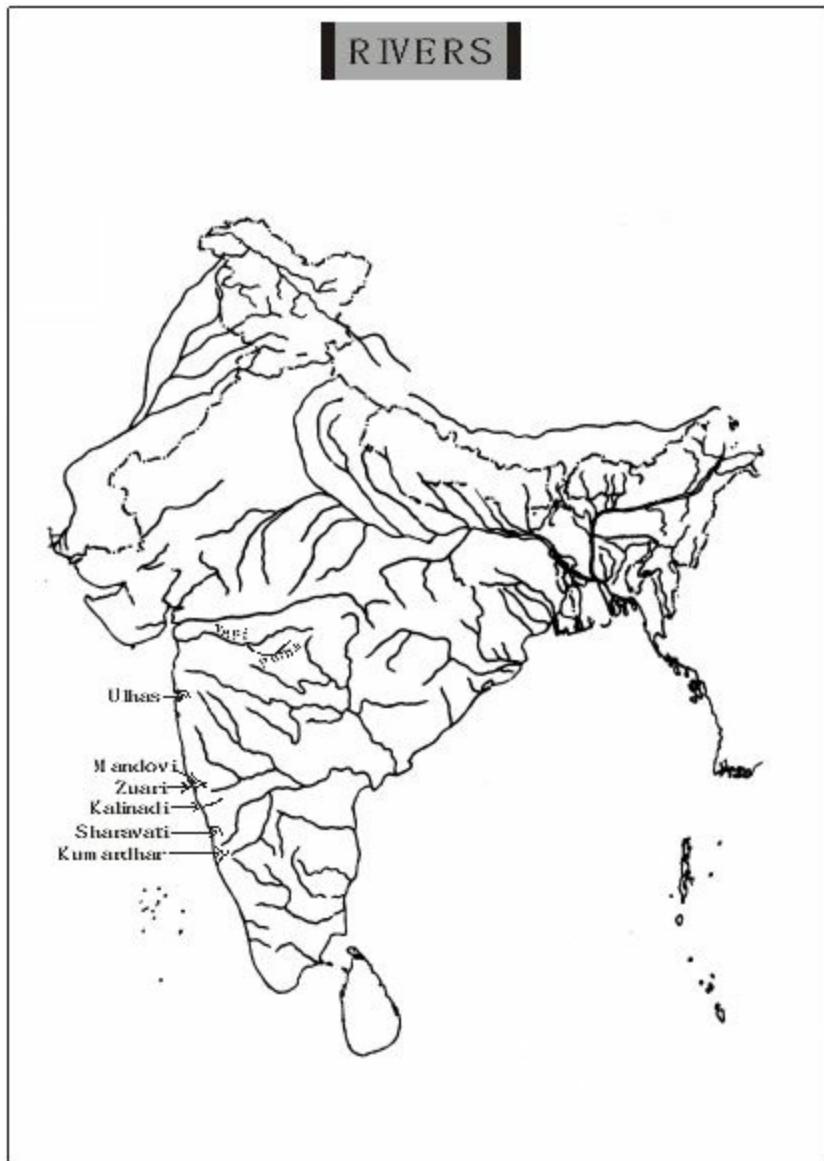
- West flowing river near Mumbai.
- Rises from the Western Ghats and empties into the **Thane Creek**.
- At Thane it branches off into two streams and the main branch empties into the Vasai Creek.

## **102. TAPI :**

- Second longest west flowing river of the Indian Peninsula , rises in the **Betul district** of Madhya Pradesh in **the Mahadeo Hills** and empties into the Gulf of Khambhat near Surat.
- Flows parallel to the Satpura Range
- **Tributaries** – Purna, Girna, Bori, Panjhra
- **Ukai Dam** is located on it.
- **Cities** –Kakrapara, Surat, Jalgaon, Bhusaval, Burhanpur.

## **103. PURNA :**

- Most important tributary of the Tapi , rises from **the Gawilgarh Hills** and joins the Tapi near **Bhusaval**
- Completely inside Maharashtra
- **Tributary** : Mun



#### 104. NARMADA :

- Longest west flowing river of the Indian Peninsula, rises from **the Amarkantak Plateau** and empties into the Gulf of Khambhat
- Flow between the Vindhya and Satpura, through a rift valley.
- **Falls** – Dhuandhar, Kapildhara
- **Dams** – Sardar Sarovar, Omkareshwar, Maheshwar, Indira Sagar
- **Tributaries** – Chota Tawa, Hiran, Shakkar, Burhner.

#### 105. CHOTA TAWA :

- Important left bank tributary of the Narmada , rises from **the Satpura Range** near the Madhya Pradesh – Maharashtra border
- **Khandwa** and **Nepanagar** are located near to it

- **Chota Tawa Project** has been built on it

#### **106. MAHI :**

- It rises from the northwestern part of **the Vindhyan Range** in Madhya Pradesh
- Flows through Madhya Pradesh, Rajasthan and Gujarat before emptying in the Gulf of Khambhat
- **Tributary** – Son , Anas, Panam

#### **107. SABARMATI :**

- The name given to the combined stream of the **Sabar** and **Hathmati**
- Rises from the hills of Mewar in the **southern Aravalli Range**
- Flows through a gorge at Dharoi and falls into the Gulf of Khambhat
- **Tributaries** – Hathmati, Sedhi, Wakrul, Harnav, Meshwa, Vatrak.
- **Cities:** Gandhinagar, Ahmedabad

#### **108. BANAS :**

- Rises from the west of the Abu Hills in the southern Aravalli Range and disappears in the Little Rann
- Forms an inland drainage
- Flows through Rajasthan and Gujarat

#### **109. LUNI :**

- Named so because its water is brackish below Balotara.
- Rises west of Ajmer in the Aravalli Range at an elevation of 550 m.
- Flows south-west through the Thar Desert
- **Disappears in the Rann of Kachchh** ,so forms the most important **inland drainage** of India
- **Tributaries:** Sukai, Sukri, Jawai

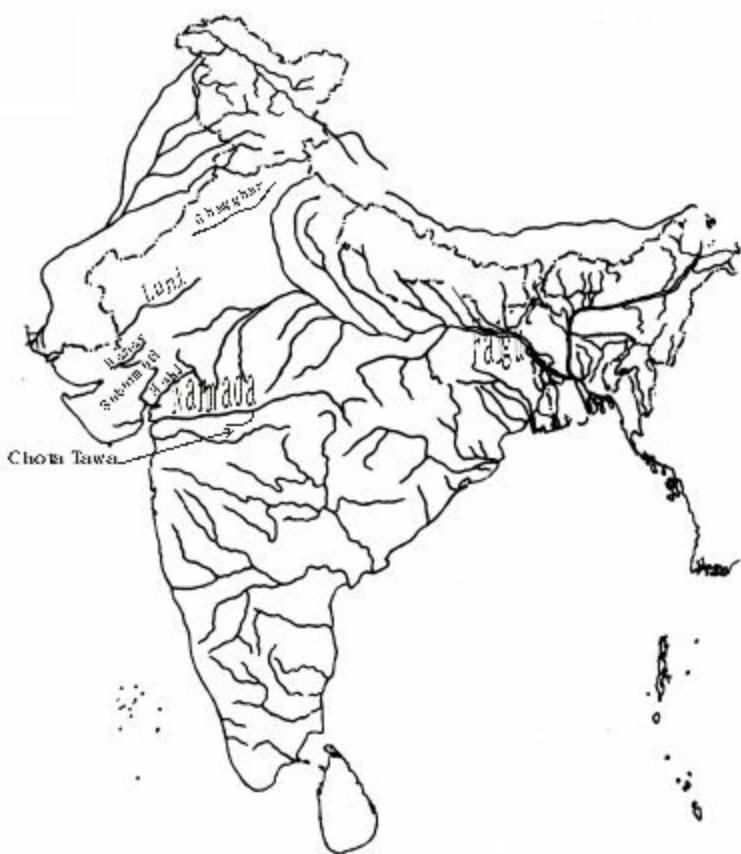
#### **110. GHAGGHAR :**

- Believed to be the remnant of mythical **Saraswati River**, flows between Punjab and Haryana and disappears in the Thar Desert
- Seasonal and inland river, does not reach sea

#### **111. FALGU :**

- It is formed due to the confluence of the Lilajan and Mohana river near Bodh gaya.
- Gaya is located on its bank.
- People do 'Pindadaan' in it near Gaya.

## RIVERS



11

## GLACIERS

### 1. SIACHEN (75 KM) :

- Located over the Karakoram Range in the Nubra Valley , is the largest glacier outside the polar and sub- polar regions
- **Lolofond** and **Teram Shehr** are its main tributaries
- **Disputed** between India and Pakistan
- **Highest battle field of the world**

### 2. FEDCHENKO (74 KM):

- Second largest glacier after the Siachen
- It covers an area of 450 sq. km in **the north western Pamir** and has

nearly 550m deep ice.

### **3.HISPAR (62 KM ) :**

- Third largest glacier of the Karakoram region, occupies a tributary of the Hunza River
- Combines with Biafo Glacier occupying about 65 sq. km area of **Braldoh Valley**
- **Kunyong /Lak (24 km)** is an important tributary of Hispar

### **4. BIAFO (59KM) :**

- Located between Hispar and Baltoro glaciers, occupies the **Braldoh Valley**
- 4<sup>th</sup> largest glacier of the Karakoram region
- Occupies the valley of **the Gori Ganga River**
- Formed by the union of **nine glaciers**

### **5.PINDARI :**

- Located to the south of the Nanda Devi in northeast Uttarakhand
- Source of the Pindar River
- Located in the Upper reaches of the Kumaon Himalayas
- Provides a 90 km round trip trek.

### **6.RONGBUCK (52 KM) :**

- Tibetan side of the Mount Everest
- **Largest glacier outside the Karakoram**
- Famous **Rongbuck Monastery** is located at the northern end of the Rougbuk Valley
- Englishman George Mallory first explored while searching possible routes to the summit of the Mount Everest

### **7.ZEMU (25 KM) :**

- Flows in easterly direction at the head of the Zemu River
- About one kilometre wide and 180m thick
- Largest glacier of the Eastern Himalayas (26 km)
- Found at the base of the Kanchanjunga
- One of the possible sources of the Teesta River

### **8.BALTORO :**

- A 65 km long glacier over the Karakoram range,west of the siachen glacier.

- It gives rise to the shigar river, a tributary of the Indus river.



12

## WATERFALLS

### 1.JOG FALLS :

- The highest untiered (Single Plunge ) falls (253m) of India, located on the Sharavati River in the Shimoga District of Karnataka
- Also called as **Gersoppa** or **Jogda Guindi**
- Famous tourist attraction
- An **HEP Project** has been established near it

### 2.DHUANDHAR :

- Located on the Narmada River at Bheraghat town , just 20 km away

from **Jabalpur**

### **3.RAJRAPPA :**

- Located in the Hazaribagh District where Bhairve (Bhera) joins the river Damodar, falling from a height of 30 ft.
- In vicinity lies a famous temple called **Chinnamasta Temple**
- There are some impressive rock formations in this area

### **4. HUNDOO :**

- Located in the Ranchi district
- Panoramic view of it is enchanting and attracts many tourists
- 320 feet falls on **the Subarnarekha** highest waterfalls of Jharkhand
- 45 km from the city of Ranchi

### **5.HOGENKKAL :**

- Located on the Cauvery in the **Dharampuri District** of Tamil Nadu , near the Karnataka border
- The most beautiful fall in southern India
- Downstream of it we have the **Stanley Reservoir** and **the Mettur Dam**

### **6.KAMTEE :**

- Located in the Mussoorie Valley just 15 kms. from the Mussoorie city.

### **7.CHITRAKOOT :**

- Located near Jagdalpur in Chhattisgarh on the Indravati River
- 29m high
- Called as '**Niagara of India**'
- Falls for the full stretch of the river
- Look majestic in the monsoon season
- A place of Hindu pilgrimage

### **8.TEERATHGARH :**

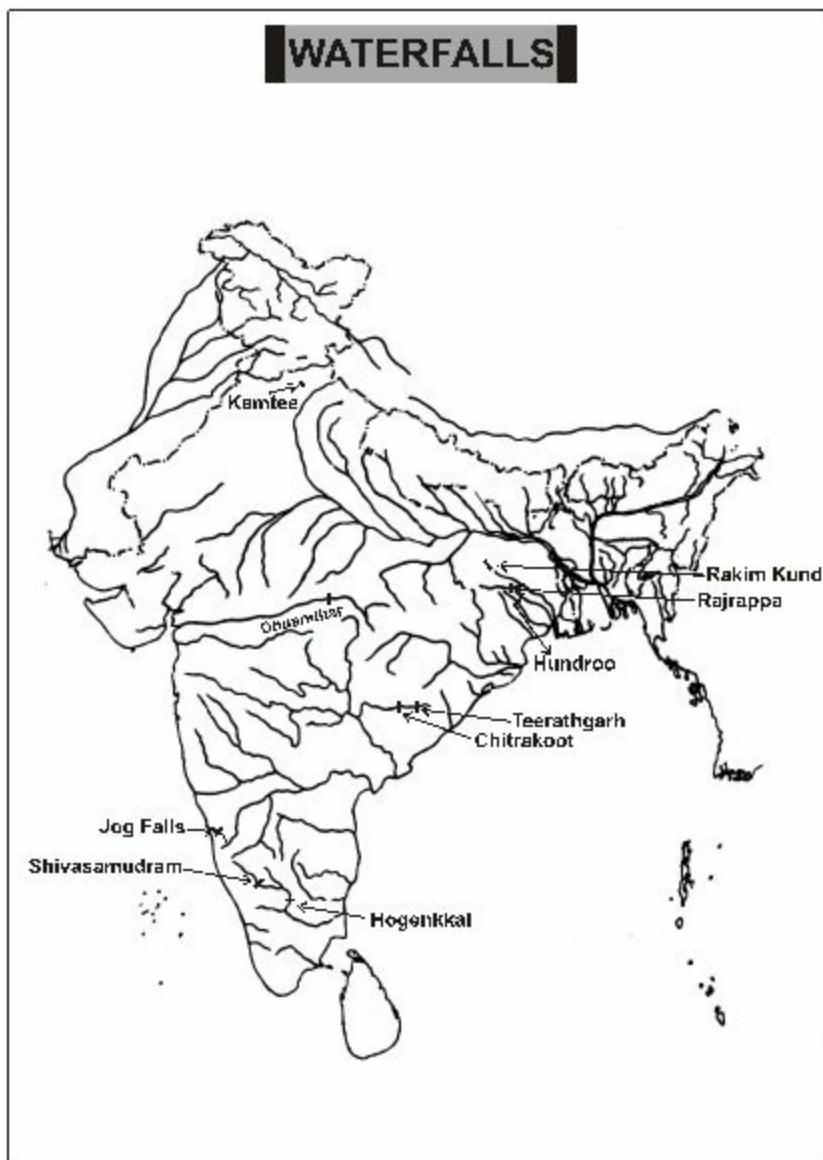
- A waterfall at Kanger Ghati on the Kanger River, just 35 km south – west of Jagdalpur in Chhattisgarh.
- Plunge for 91m in a single drop
- Highest waterfalls of Chhattisgarh

### **9.RAKIM KUND :**

- Located on the Gayghat River, a tributary of the Ausane River
- At the edge of the Rohtas Plateau where a series of waterfalls is formed
- Located in Bihar

#### **10. SHIVASAMUDRAM (CAUVERY FALLS) :**

- Second biggest waterfalls of India
- Located in the **Mandy District** of Karnataka
- Gardens and parks developed in it add to its beauty.
- The falls are surrounded by **the Kaveri Wildlife Sanctuary**



#### **11. KAPILDHARA :**

- Waterfalls located on the Narmada River , in Madhya Pradesh ,

where it descends from the Amarkantak Hill

- A distance of 8 kms from the origin of river Narmada, the river falls from a height of 100 feet creating a fall. It is believed that the **Kapil Rishi** meditated here

## **12. GOKAK :**

- Waterfalls located on the **Ghatprabha** River in **Belgaum** district of Karnataka
- 52m high, resembles the **Niagara Falls** on a smaller scale
- **Horse-shoe shaped** at the crest
- **Power generation** is being done nearby it

## **13. KUTRALAM :**

- Located on the Western Ghats at an elevation of about 167m in **Tirunelveli district** of Tamil Nadu
- It has **nine falls**
- Nicknamed as ‘**the Spa of the South India**’ as its water is believed to have **medical properties**

## **14. KEOTI :**

- Located on the Mahana River , a tributary of the Tons , in the Rewa district of Madhya Pradesh
- It’s a knick point fall at the edge of the Rewa Plateau
- 98m high
- Segmented type of waterfall with a single drop

## **15. JOHNA /GAUTAMDHARA :**

- Situated at the edge of the Ranchi Plateau , it is a hanging valley falls
- The Gunga River hangs over its master stream , Rar River and forms the falls
- Drops from a height of 43 metres
- Example of a nick point falls caused by rejuvenation.

## **16. CHACHAI :**

- Located in the Rewa district of Madhya Pradesh on the Bihad River, a tributary of the Tons
- Comes down from the Rewa Plateau for 130m.
- It is an example of a nick point falls caused by rejuvenation

## **17. DUDMA :**

- 157 m high waterfalls on the **Machhkund River** in Orissa
- Supports a large **hydro electric project**
- An important **place of pilgrimage**
- It is called **Matsya Tirth**

#### **18. DUDHSAGAR :**

- A tired waterfall on the Mandovi River, located in Goa near the border with Karnataka
- 60 km from Panaji
- 310m high – four tiered
- During the monsoon season it forms one of the most spectacular natural scene

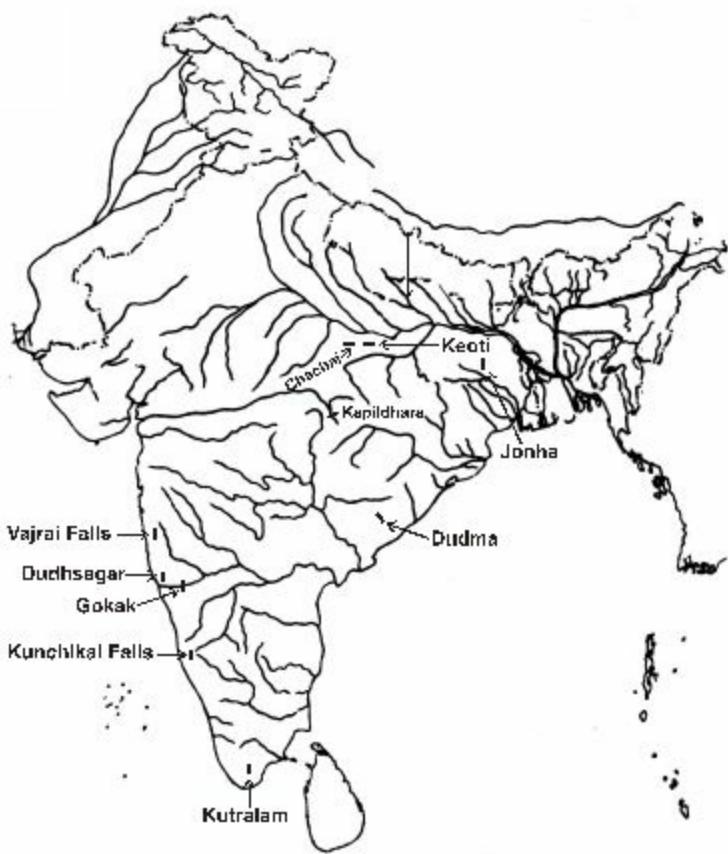
#### **19. VAJRAI WATERFALLS :**

- These are located just 27km away from Satara in Maharashtra, over Sahyadris.
- These are the highest waterfalls in India.

#### **20. KUNOHIKAL FALLS :**

- These are located in the Shimaga district in Karnataka.
- These are the highest waterfalls in India.
- These are the second highest waterfalls in India after Vajrai falls (Maharashtra).

## WATERFALLS



13

PASSES

### 1.AGHIL :

- Lies on the central part of the Karakoram Range over **the Aghil Mountain**
- Joins **Ladakh** with the **Sinkiang** province of China, remains closed from November to May due to snow cover
  - During the medieval time it was linked with the **Silk Road** of the Central Asia

### 2.KARAKORAM PASS :

- Lies on the eastern part of the **Karakoram Range** at the border with

China

- Links Ladakh with the Sinkiang province of China
- In the medieval times, it was linked to **the Silk Road.**

### 3.BURZIL PASS :

- Pass on the Zaskar Range near the Line of Control (LoC)in PoK
- Caravan route between Srinagar and Gilgit
- **Aston River** originates from western slopes of the pass
- In the summer , covered with alpine grass vegetation

### 4. ZOZI LA :

- Located on the Greater Himalayas between **Sonmarg** and **Dras**
- Srinagar –Leh Road passes through
- Link between the **Kashmir Valley** and **Ladakh**

### 5. PIR PANJAL :

- High mountain pass on the western part of the Pir Panjal Range between Rajaouri and Poonch

### 6.BANIHAL PASS :

- Located in the Pir Panjal Range between Ramban and Anantnag
- Links Jammu with the Kashmir Valley
- **Jawahar Tunnel** is the only all weather surface link between Kashmir Valley and the rest of the country

### 7.KHARDUNG LA :

- Located north of Leh on **the Ladakh Range.**
- Road from **Leh to Siachen** base camp passes through it (**world's highest road**).

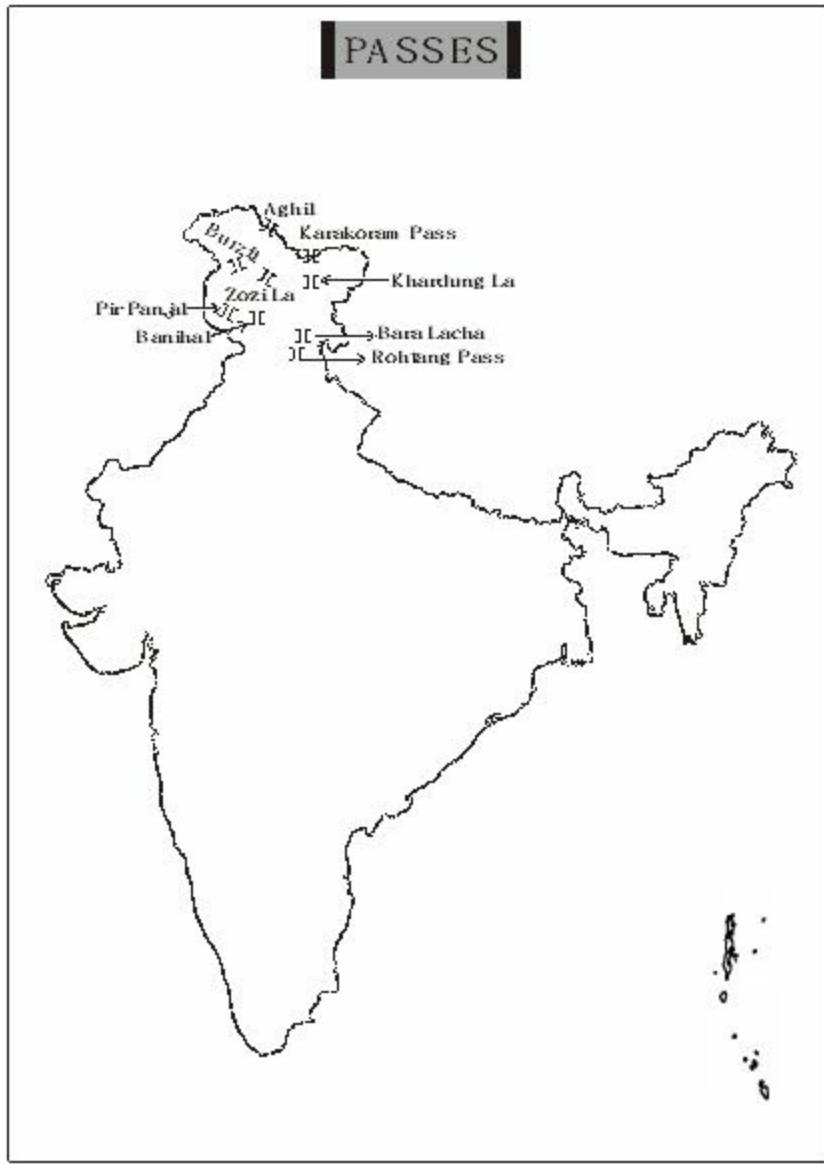
### 8.BARA LACHA :

- Located in HP over the **Greater Himalayas**, near the border with Jammu and Kashmir
- The **World's highest motorable road Manali – Leh Road** , passes through it
- Source of the **Chenab** lies nearby it

### 9.ROHTANG PASS :

- Located in HP on the Greater Himalayas , 51km from Manali
- Connects the **Kullu Valley** with the **Lahul and Spiti Valley**

- Road constructed by the **Border Roads Organisation**
- Sources of the **Ravi** and the **Beas** lie nearby



#### **10. SHIPKI LA :**

- The pass between Himachal Pradesh of India and Tibet through which the **Satluj River** enters India
- **Hindustan – Tibet –Road** passes through it
- Old trade route with Tibet

#### **11. THAGA LA :**

- Pass between India and Tibet over the Greater Himalayas in the northwest corner of Uttarakhand
- Joins the Uttarkashi district with Tibet

- More than 4500m above sea level

## **12. MANA LA :**

- Pass between India and Tibet, in Uttarakhand just northwest of the **Kamet Peak**
- Closed during the winter season
- Cases of landslides and avalanches during the rainy and winter seasons, respectively

## **13. NITI PASS :**

- Pass between India and Tibet on the Greater Himalayas, not far from **Badarinath peak** at the border , in Uttarakhand
- Lies in the Chamoli District , and a broad **metalled road** has been built upto the pass

## **14. LIPU LEKH :**

- Pass between India and Tibet at the border on the Greater Himalayas in the extreme northeast corner of Uttarakhand
- Lies in the **Pithoragarh District**
- Pilgrims to **the Mansarovar Lake** follow this pass

## **15. NATHU LA :**

- Located at the Indio-China border connects Sikkim with Tibet through the **Chumbi Valley**
- Closed during the Indo – China War of 1962 was reopened for the trade in 2006.

## **16. JELEP LA :**

- Located at Indo- China border connects Sikkim with Tibet through the **Chumbi Valley**
- Closed during the Indo- China War of 1962

## **17. BOMDI LA :**

- Located between **Tezpur** and **Tawang** in Arunachal Pradesh
- Captured by the Chinese Army during the **Indo China War of 1962**
- Famous for the **Tawang Monastery**
- Strategically very important

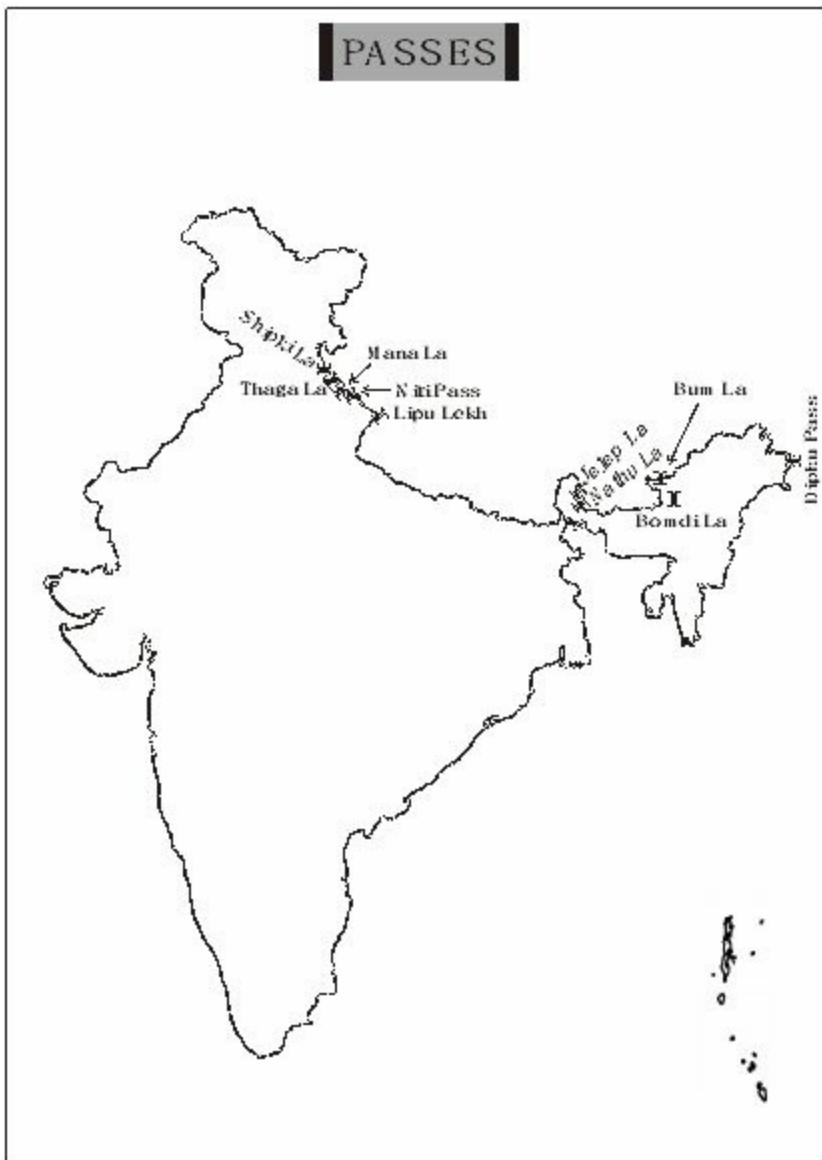
## **18. BUM LA :**

- Pass on the Greater Himalayas, lying at **the border with Tibet** in Arunachal Pradesh very close to Bhutan

- Great strategic significance as China invaded through this pass in 1962
- Links Tawang region with Tibet

#### **19. DIPHU PASS :**

- Pass on the Great Himalayas in Arunachal Pradesh , at **the trijunction of India, China and Myanmar**
- Links Arunachal Pradesh with Mandalay
- Remains opened through out the year



#### **20. PANGSAU PASS :**

- Lies in the southeastern part of Arunachal Pradesh at the border with Myanmar , **in the Patkai Bum Hills**

- Links India and Myanmar

## **21. GORANGHAT :**

- Situated in the southern part of the Aravalli Range , it connects **Udaipur with the Sirohi District (West )**
- Desolate, barren rocks, devoid of natural vegetation
- **NH-14** connects Sirohi, Pali and Udaipur

## **22. HALDIGHATI :**

- Pass lying in the Aravalli Range, 40 km from Udaipur connects **Rajsamand and Sirohi district**
- Named after the turmeric colour soils
- **Battle of Haldighati (1576)** between Rana Pratap and Rana Mansingh

## **23. KHANDWA GAP :**

- In the Satpura Range between **the Rajpipla and the Gawilgarh Hills**
- Located near **Burhanpur** and **Nepanagar**
- Important railway line passes through it

## **24. THALGHAT :**

- Pass in the Western Ghats in Maharashtra between **Mumbai** and **Nasik**
- Rail route between Mumbai and Nasik passes through it
- **NH-3** also passes through it

## **25. BHORGHAT :**

- Pass in the Western Ghats in Maharashtra between **Mumbai** and **Pune**
- **NH-4** and a railway line pass through it

## **26. PAL GHAT :**

- Major pass between the Nilgiri Hills and the Anaimalai Hills
- Believed to be formed of rifting
- Connects **Coimbatore** with **Palakkad**
- **NH-47** and a major rail line pass through it
- Through this **the South – West Monsoon** is able to penetrate east for some distance

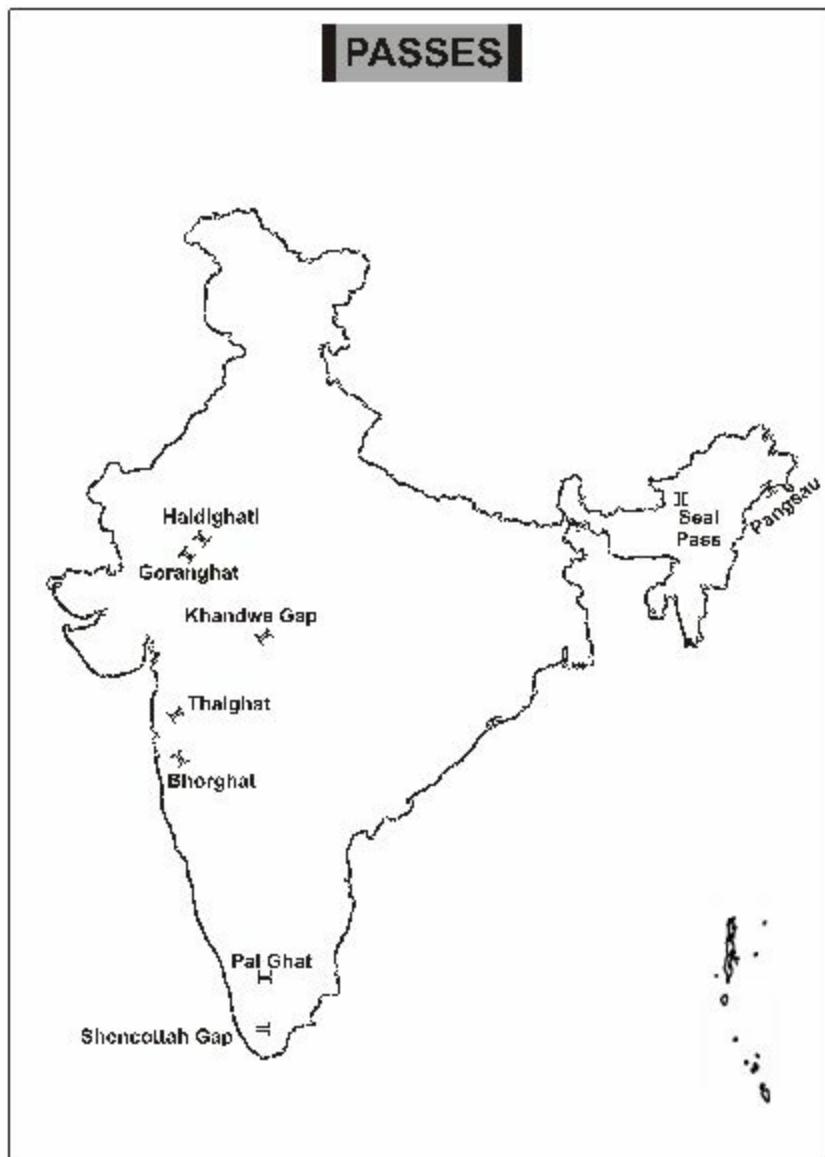
## **27. SHENCOTTAH GAP :**

- Gap in the **Cardamom Hills** connects **Kollam** with **Madurai**

- NH-208 and a major rail route pass through it connecting southern Kerala with southern Tamil Nadu

## 28. SELA PASS :

- It is located in the Tawang district of Arunachal Pradesh.
- It connects Tawang to Tejpur and Guwahati.
- The Road Conneting Tawang passes through it.
- It is strategically very important.



## 1. BLACK SOILS :

- Found in the Deccan Plateau , Kathiawar Peninsula , Malwa Plateau

and in Rajmahal Hills

- Formed due to the basaltic lava of the **Deccan Trap**
- Also called as ‘**the black cotton soil**’ or ‘**Regur**’
- Rich in **titaniferous oxide**
- High clay content and moisture retentive
- During the wet season difficult to plough

## **2.LATERITE SOILS :**

- Western Ghats, Meghalaya Plateau.
- Formed because of leaching.
- Deficient in nitrogen, phosphorous and potassium.
- Not so fertile.
- Excellent for **brick making**

## **3.GREY AND BROWN SOILS :**

- Found in **Gujarat** and **Rajasthan** to the north of the Gulf of Kambhat and along the Aravallis
- Deficient in N.P.K
- Not very fertile
- Coarse texture

## **4. DESERT SOILS :**

- Found in Rajasthan, west of the Aravallis
- Coarse texture
- **Fertile when irrigated**
- Formed due to weathering
- Deficient in Nitrogen
- Susceptible to wind erosion and calcification

## **5.RED SOILS :**

- Found in the peninsular plateau outside the Deccan Plateau
- Coarse in texture
- Not very fertile
- Suitable for the cultivation of coarse grains

## **6.RED AND YELLOW SOILS :**

- Chhattisgarh , Jharkhand
- Develops when the **rainfall is higher than 100cm** and there is

dominance of iron (leads to yellow colour)

- Not very fertile
- Suitable for coarse grain cultivation

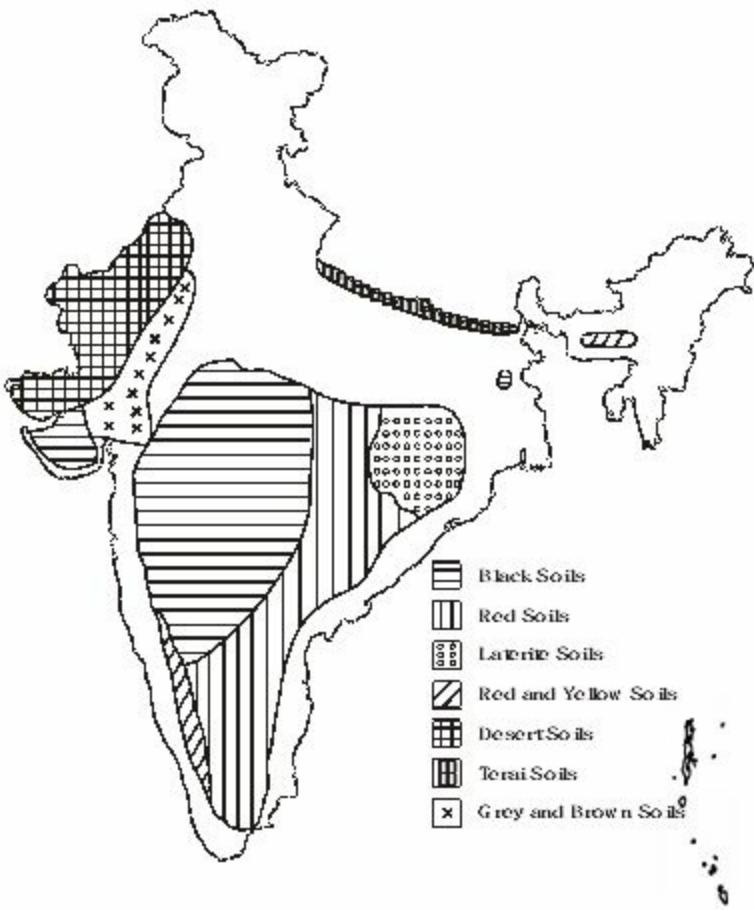
## **7.MOUNTAIN SOILS :**

- Found in the mountainous regions of Jammu and Kashmir, Himachal Pradesh, Uttarakhand, Sikkim, and Arunachal Pradesh etc.
- Thin profile
- Not fertile
- Deficient in potash and phosphorous

## **8.TERAI SOILS :**

- Part of the alluvial soils found **along the Himalayas south of the Shiwalik**
- Develops in the **waterlogging** conditions when the streams emerges after the Bhabar
- Example of the depositional soils
- One of the most fertile soils of the world
- Rich in N but deficient in P&K
- Ideally suited for **rice cultivation**

## ■ SOILS ■



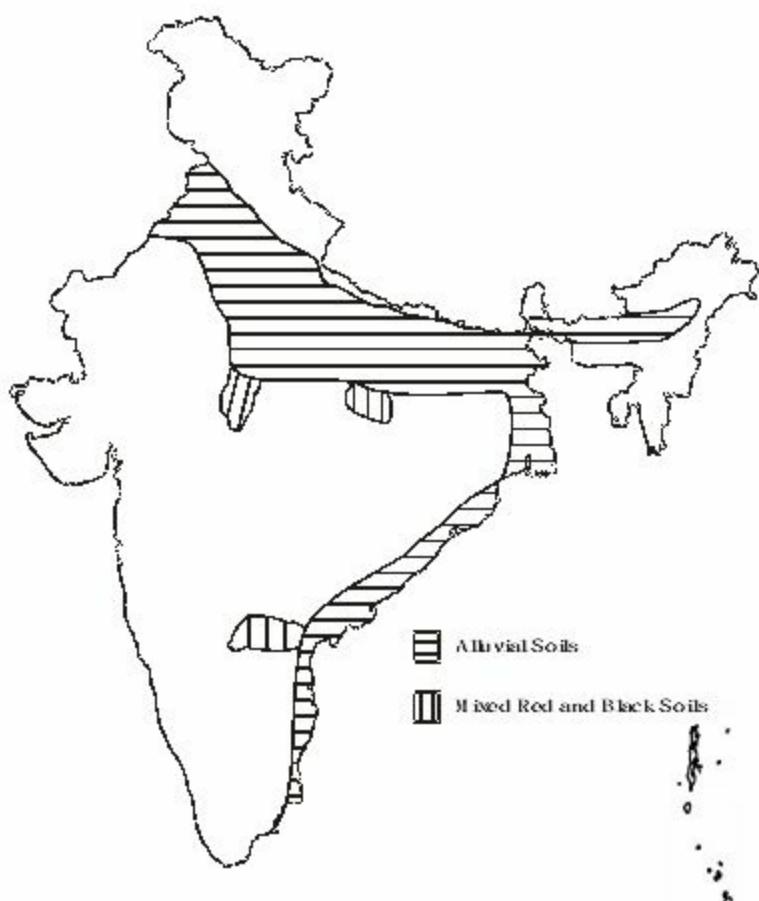
### 9. ALLUVIAL SOILS :

- Great Plains of India, coastal regions,
- Depositional and young soils
- One of the most fertile soils
- Variants – Tarai , Bhabhar , Bhangar , Khadar

### 10. MIXED RED AND BLACK SOILS :

- Found in Madhya Pradesh, Rajasthan, southern parts of Uttar Pradesh, Chhattisgarh, North Karnataka, Andhra Pradesh
- Mainly because of the fluvial actions

## ■ SOILS ■



15

INSTITUTIONS

### 1. IGCAR :

- Indira Gandhi Centre for Atomic Research is located at **Kalpakkam** near Chennai
- Engaged in the atomic research and robotics
- First prototype fast breeder reactor (**PFBR**) was constructed here.

### 2. NEERI :

- National Environmental Engineering Research Institute is located in **Nagpur**
- Engaged in the research in the field of environment

**3.CAZRI :**

- Central Arid Zone Research Institute is located at **Jodhpur**
- Engaged in the research of the crops of the arid regions

**4. UCIL :**

- Uranium Corporation of India Limited is located at **Jaduguda** in Jharkhand
- Engaged in exploration , mining and processing of uranium

**5.ARIES :**

- Aryabhatta Research Institute of Observatory Science is located in **Nainital**
- Pioneer institute for the observatory science

**6.INRSA :**

- Indian National Remote Sensing Agency is located at **Hyderabad**
- Engaged mainly in the application aspects of the remote sensing
- Responsible for the **tsunami warning**

**7.NIOT :**

- National Institute of Ocean Technology is located at **Chennai**
- Engaged in the development and promotion of technology specific for ocean related areas

**8.NCAOR :**

- National Centre for Antarctic and Ocean Research is located at **Goa**
- Set up in 1998
- Expeditions for Antarctica and the Arctic regions start from here
- 1st institute in India completely dedicated to all aspects of polar research

**9.IITM :**

- Indian Institute of Tropical Meteorology is located at **Pune**
- Engaged in applied research in the monsoon metrology of tropics

**10. CLRI :**

- Central Leather Research Institute is located at **Chennai**
- Pioneer institute in India , which is engaged in the leather research

**11. NIAM :**

- National Institute of Agricultural Marketing is located at **Jaipur**

- Set up in 1988
- Engaged in imparting training to farmers and other officials in the marketing management of agriculture



## 12. ICAR :

- Indian Council for Agricultural Research is located at **New Delhi**
- Established in 1929
- Apex body for co-ordinating, guiding and managing research and education in agriculture sciences in the entire country

## 13. INCOIS :

- Indian National Centre for Ocean and Information Service, located at **Hyderabad**

- Provides information regarding potential fishing zones to all maritime states and islands of India

**14. CMLRE :**

- Centre for Marine Living Resource and Ecology is located at **Kochi**
- Engaged in the research of marine ecologies

**15. VECC :**

- Variable Energy Cyclotron Centre is located at **Kolkata**
- It was set up by BARC in 1977
- Produces radioisotopes for various purposes.

**16. NIO :**

- National Institute of Oceanography is located at **Goa**
- Engaged in research, training and promotion related with ocean science
- Premier organization in this field

**17. SHAR :**

- Sriharikota Space Centre is located at **Sriharikota Island** in Andhra Pradesh
- Works under the ISRO
- Main satellite launching station of the country
- Started operation in October 1971

**18. VSSC :**

- Vikram Sarabhai Space Centre is located at **Thiruvananthapuram**
- The leading centre for the development of satellite launch vehicles and associated technologies
- It pursues active research and development in a host of district technology domains like aeronautics, avionics, composites etc.

**19. NDRI :**

- National Dairy Research Institute is located at **Karnal** of Haryana
- it has achieved success in making a **clone of buffalo twice**

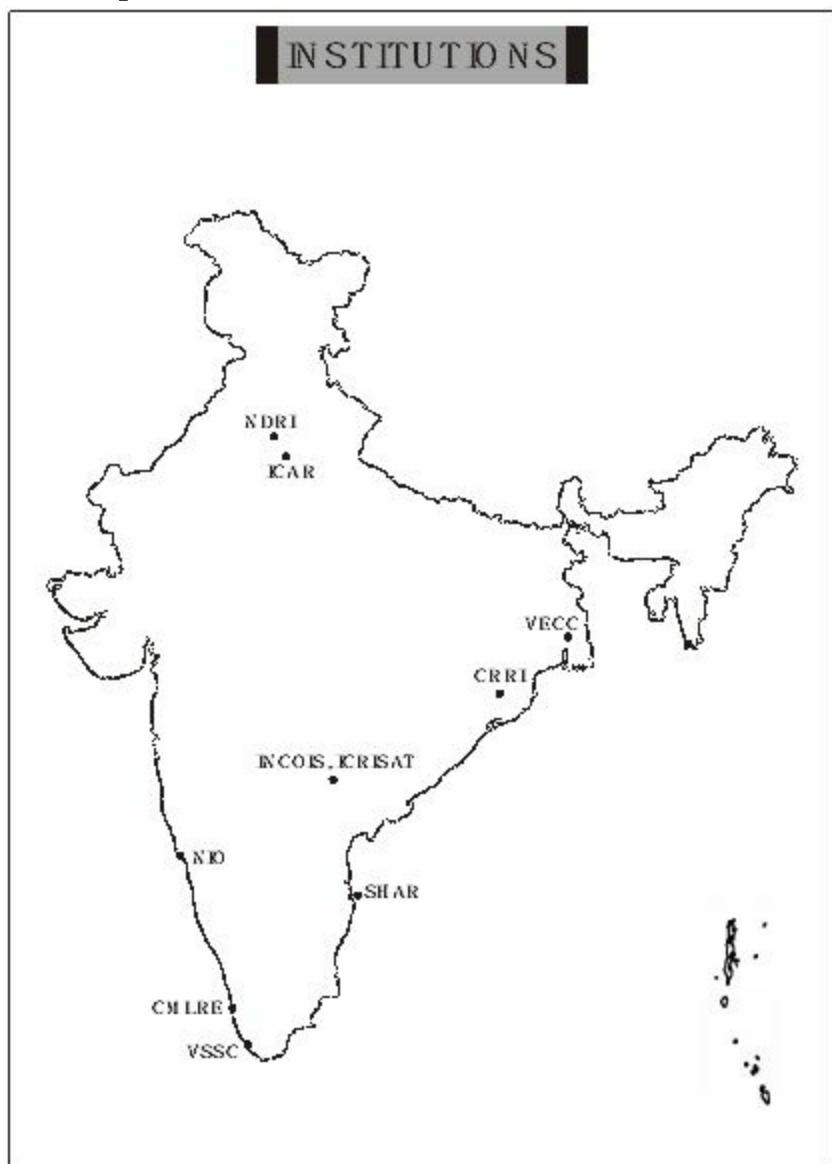
**20. CRRI :**

- Central Rice Research Institute is located at Cuttack
- Set up in 1946
- One of the institutes of ICAR

- Premier organization engaged in the research and development of rice.

## 21. ICRISAT :

- International Crops Research Institute for the Semi-Arid Tropics is located at **Patancheru** near **Hyderabad**
- It is a non-profit , non-political organisation that does innovative agricultural research and capacity building for sustainable development
- Its present Director General is **William Dar**



- From Delhi to Amritsar
- Part of the Grand Trunk Road (Made by Sher Shah Suri )
- Lifeline of Haryana and Punjab
- **Cities** – Ambala, Panipat, Ludhiana, Jalandhar

## 2.NH-1A :

- Extension of the Grand Trunk Road of NH-1
- From Amritsar to Uri via Jammu and Srinagar
- Lifeline of Jammu and Kashmir Valley
- Passes through the Banihal Pass in which the Jawahar Tunnel has been built

## 3.NH-2 :

- Runs from Delhi to Kolkata
- Lifeline of Uttar Pradesh, Bihar , Jharkhand and West Begal
- Part of the Grand Trunk Road
- Part of the **Golden Quadrilateral Project**
- **Cities** :Kanpur , Allahabad , Dhanbad, Asansol

## 4. NH-3 :

- Runs from Agra to Mumbai
- Lifeline of western MP and western Maharashtra
- Passes through the Vindhya and the Satpura ranges
- **Cities:** Agra, Gwalior, Guna, Indore, Nasik

## 5.NH-4 :

- Runs from Mumbai to Chennai
- **Cities:** Pune , Belgaum , Bengaluru , Krishnagiri
- Passes through Maharashtra , Karnataka and Tamil Nadu
- Part of the **Golden Quadrilateral**

## 6.NH-5 :

- Runs from Chennai and finally joins Kolkata along the eastern coast
- Part of the Golden Quadrilateral (Its longest arm)
- **Cities:** Nellore, Guntur, Vijaywada, Vishakhapatnam, Bhubneshwar, Cuttack

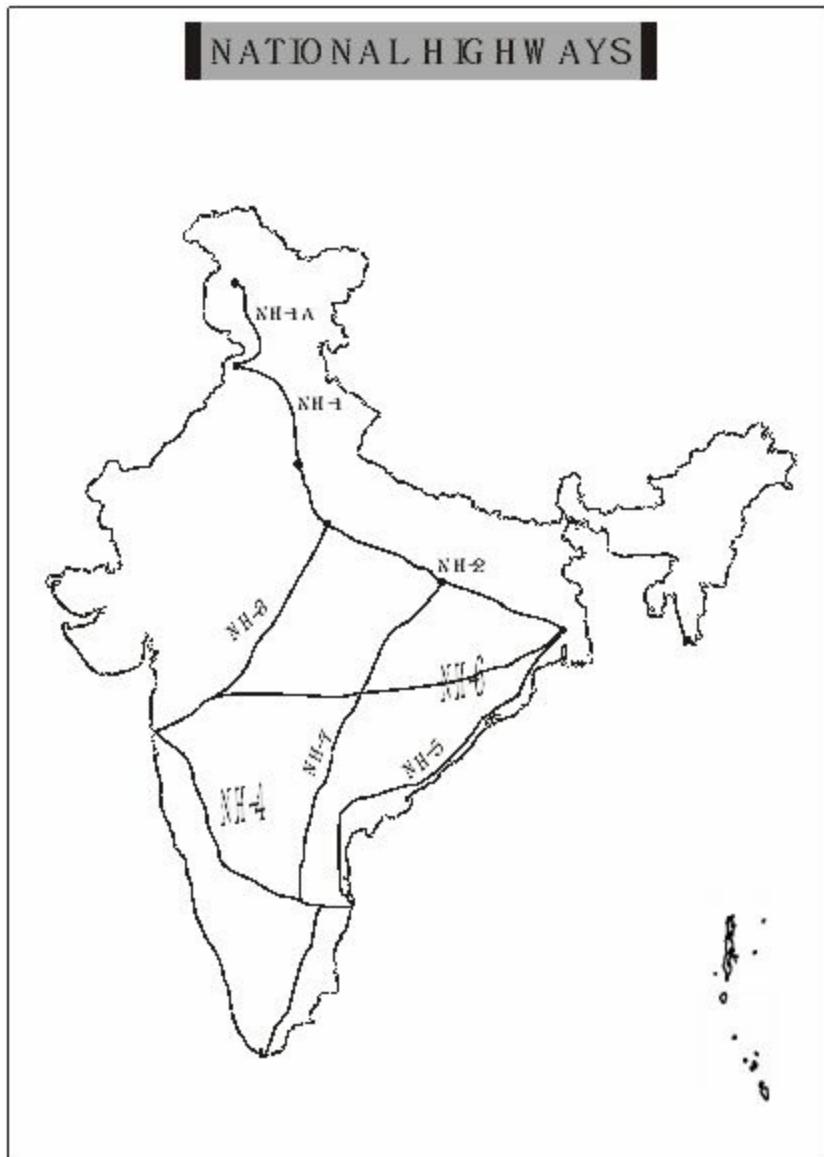
## 7.NH-6 :

- Runs from Haora to Dhule and links Kolkata with Mumbai

- Second longest national highway after NH-7
- Lifeline of Maharashtra and Chattisgarh
- **Cities:** Rourkela, Raipur, Bhilai, Nagpur

#### 8.NH-7 :

- The longest national highway of India
- Runs from Varanasi to Kanyakumari
- Lifeline of the Peninsular Plateau
- Part of the North – South Corridor
- **Cities:** Rewa, Jabalpur , Hyderabad , Bengaluru , Salem , Madurai



#### 9.NH-8 :

- Runs from Delhi to Mumbai via Jaipur

- Part of the **Golden Quadrilateral**
- Lifeline of Gujarat and Rajasthan
- **Cities :**Ajmer, Ahmedabad, Vadodara, Bharuch

#### **10. NH-9 :**

- Runs from Vijayawada to Pune
- **Cities:** Hyderabad, Sholapur
- Links NH -5 , NH-7 and NH-8
- Main road for the Telangana region

#### **11. NH-10 :**

- Runs from Delhi to Fazilka (Punjab )
- **Cities:** Rohtak , Hisar , Sirsa
- Links NH-1 and NH-2 with the NH-15 (the border road )

#### **12. NH-11 :**

- Runs from Bikaner to Agra via Jaipur
- Important road for tourism
- Links NH-8 ,NH-2 and NH-3, with the NH-15 (the border road )

#### **13. NH-12 :**

- Runs from Jabalpur to Jaipur
- **Links** NH-7, NH-3 and NH-8
- Major road crossing the Chambal Valley

#### **14. NH-31 :**

- Links Bakhtiyarpur , Siliguri , Nalbari and Aminagaon , runs for 1125 km.
- Links the Northeastern states with the rest of India , passing through a '**chicken neck'**
- Strategically very important

#### **15. NH-15 :**

- Runs from Radhanpur (Gujarat)to Amritsar
- Lifeline of the Rajasthan desert
- Northwestern border road
- **Cities:** Barmer, Jaisalmer, Bikaner, Ganganagar, Bhatinda

#### **16. NH-17 :**

- Runs from Roha (Near Mumbai) to Kochi

- Lifeline of the Western Coastal Plains
- **Cities:** Ratnagiri, Panaji, Karwar, Uduppi, Bengaluru, Kasargod, Kannur, Kozhikode

### **17. GOLDEN QUADRILATERAL :**

- Launched in 1999 to connect four main cities of the country with fast speed and hassle free riding
- Six – laning of NH-2 , NH-8 , NH-4 , and NH-5 ,
- Total length – 5846 km
- NH-5 is the longest arm

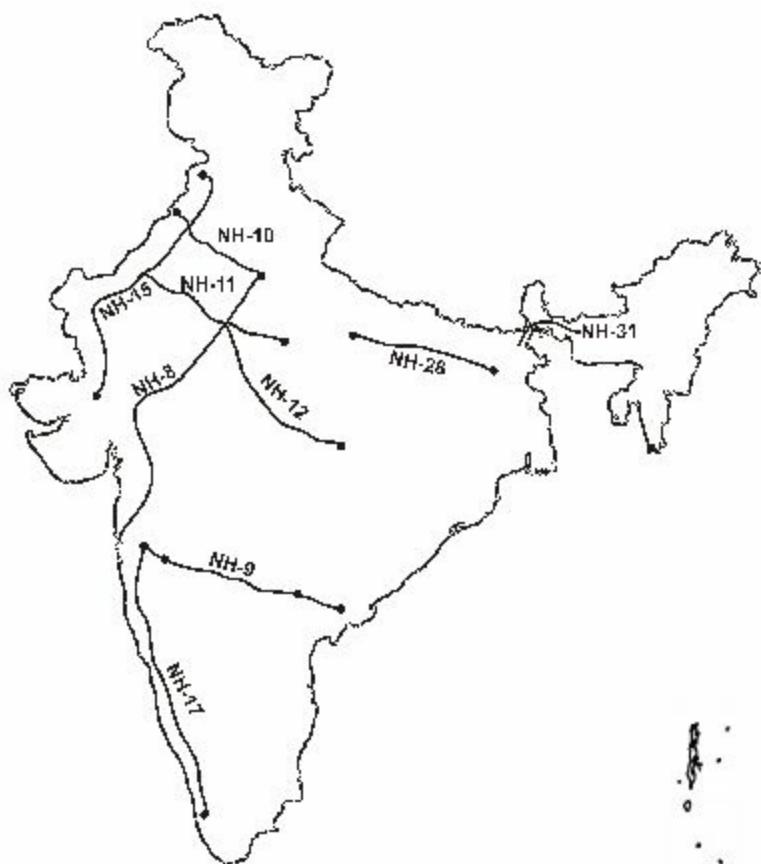
### **18. EW-NS CORRIDORS :**

- For the smooth connection of Srinagar with Kanyakumari (NS) and Silcher with Porbandar (EW)
- EW-3300 km
- NS-4000 km
- The two corridors intersect each other at **Jhansi**

### **19. NH-28 :**

- It links Lucknow with Barauni (Bihar)
- Its total length is 570 km.
- It is important road along with Ganga river.
- **Cities:** Lucknow, Fazabad, Gorakhpur, Muzaffarpur, Barauni.

## NATIONAL HIGHWAYS



17

## NATIONAL WATERWAYS

### 1.NW-1 :

- Stretches from Allahabad to Haldia on the Hoogly – Bhagirathi – Ganga river system
- Established in October 1986
- 1620 km long
- **Terminals** – Haldia , Pakur , Farakka , Patna , Varanasi

### 2.NW-2 :

- On the Brahmaputra River from Dhubri (West) to Sadiya (East)
- Established in September 1982

- Length -891 km
- **Terminals** – Dhubri, Tezpur, Dibrugarh, Sadiya

### **3.NW-3 :**

- Kottapuram – Kollam stretch of the West Coast Canal , Champakara Canal , and Udyogmandal Canal
- Length – 205 km.
- Eastablished in February 1993
- **Terminals** – Aluva , Vaikom , Kottapuram , Allapuzha , Kollam

### **4. NW-4 :**

- Kakinada – Puducherry stretch of canals and the Kaluvelly Tank, Bhadrachalam, Rajahmundry stretch of River Godavari and Wazirabad – Vijaywada stretch of River Krishna
- Established in November 2008
- Length – 1095 km.

### **5.NW-5 :**

- Talcher – Dhamra stretch of river Brahmani , Geonkhali – Charbatia stretch of East Coast Canal , Charbatia – Dhamra stretch of Matai River and Mangalgadi-Paradip stretch of Mahanadi delta rivers
- Established in November 2008
- Length- 623 km.

### **6.NW-6 :**

- Lakhipur to Bhanga of the Barak River
- Proposed at present.
- Length – 121 km.

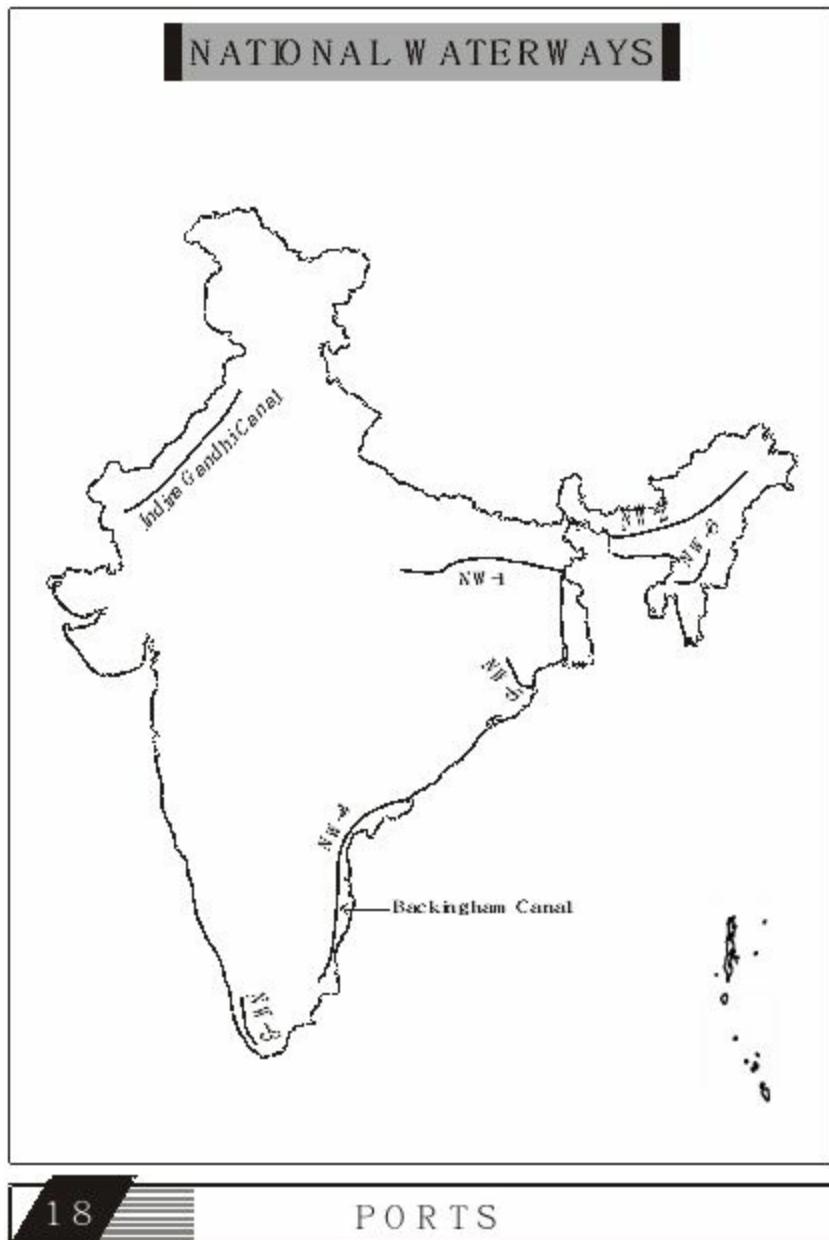
### **7.BACKINGHAM CANAL :**

- 420 km long freshwater navigation canal, running parallel to the Coromandel Coast of south India from Vijaywada to Villupuram district of Tamil Nadu
- Constructed by the British Raj
- Connects Godavari with Cauvery

### **8.INDIRA GANDHI CANAL :**

- 650 m long canal runs from the Harike Barrage upto Ramgarh near Jaisalmer
- Construction started in 1958

- Aim was to convert the Thar Desert into an agriculturally productive land
- Uses water from the **Pong Dam** of the Beas River
- Two sections – Rajasthan Feeder Canal – 204 km.
- Rajasthan Main Canal -445 Km.
- Has brought green revolution in the region



### **1. MANDVI :**

- An ancient port and ship-building centre situated at Mandvi, in the northern coast of the Gulf of Kutch

- Well known for country craft construction from ancient time
- **Export** – Clay, bauxite, cotton, seeds, salt and oil cakes

## **2.MUNDRA :**

- Located between Mandvi and Kandla on the coast of the Gulf of Kutch , is the **largest private port in India**
- Capable of handling more than 100 million tonnes of bulk, liquid and containarised cargo.
- Integral part of a SEZ
- Tata Power is building an UMPP here

## **3.KANDLA :**

- Located in the eastern corner of the Gulf of Kutch, one of the major ports of the western coast
- Constructed in 1950s as the chief sea port serving western India, after the partition of India from Pakistan when port of Karachi went to Pakistan

## **4. OKHA :**

- Located at the western corner of the Kathiawar Peninsula
- It is a minor port
- Has cement plants and an automobile – assembly plant
- Fishing and salt processing

## **5.SIKKA :**

- Located at near Jaunagar in the Kathiawar Peninsula , is a minor port of Gujarat
- It is all weather direct berthing port
- Offers excellent tranquility conditions for the safe opearations of the vessels

## **6.PORBANDAR :**

- An all weather port with direct berthing conveniences , faces the Arabian Sea and located along the west coast of Saurashtra
- Wharfs for streamer are available
- Connected by a broad guage railway

## **7.VERAVAL :**

- Fair weather lighterage port , situated in the south-western coast of Saurashtra

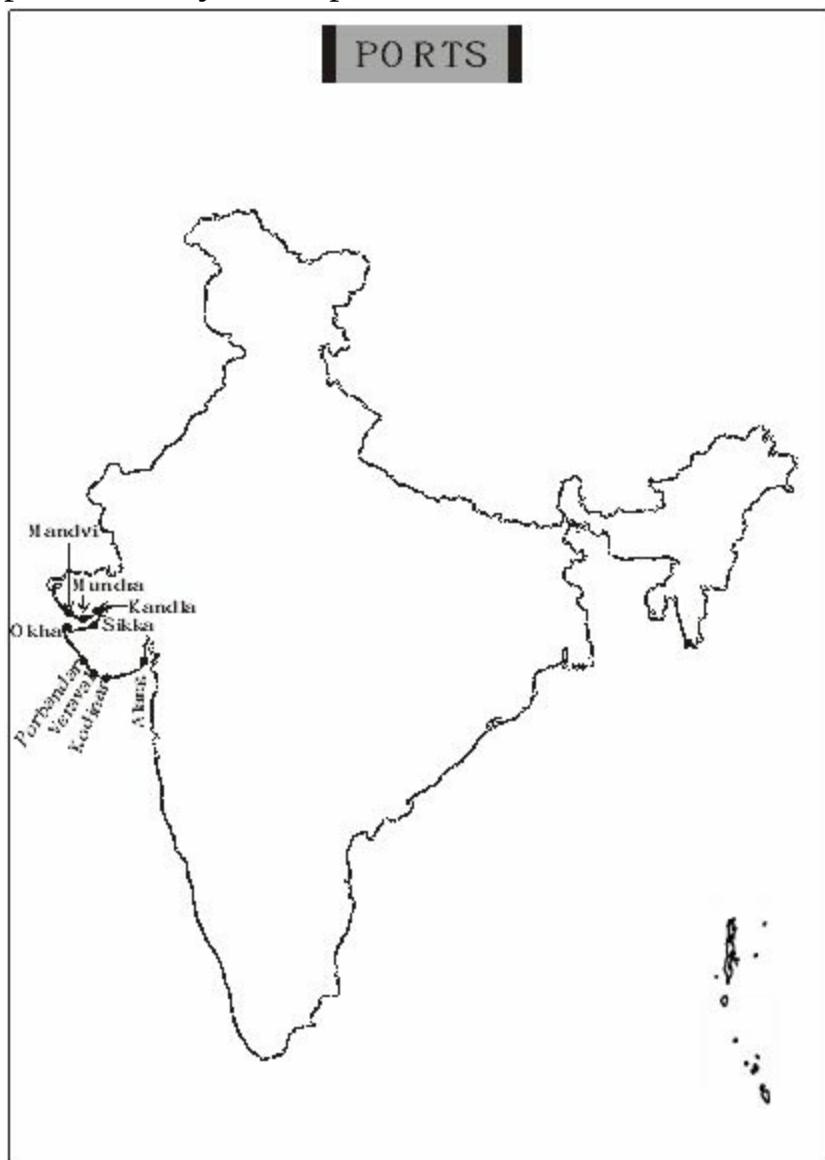
- Designed mainly for fishing
- Developed during the 18<sup>th</sup> century

### **8.KODINAR :**

- City and municipality in the Junagarh district of Saurashtra region
- Located between Somnath (West ) and Diu (East )
- Nearest important port is the Veraval Port

### **9.ALANG :**

- Port city on the eastern coast of Saurashtra , in the Bahvnagar district
- One of the largest shipbreaking yards of the world.
- Shot into news when the French aircraft carrier **Clemenceau** was prohibited by the Supreme Court of India to enter in the port in 2006



## **10. BHAVNAGAR :**

- Located in the west coast of the Gulf of Khambhat in the eastern Kathiawar Peninsula
- 10 km away from the Bhavnagar city
- An all weather berthing port of small vessels
- Vessels jetty must pass through the lock Gate Door

## **11. BHARUCH :**

- Important port of Gujarat , located at the mouth of the Narmada River in the east coast of the Gulf of Khambhat
- Dahej Port is located near to it
- Handle the trade of petrochemicals

## **12. ALIBAG :**

- Located just 19 km at sea from the south Mumbai
- No significant port facility
- Comes under the Raigarh district
- Called as **Mini Goa of Maharashtra**
- Tourism is the mainstay of its economy

## **13. RATNAGIRI :**

- Most important port of the southern coast of Maharashtra
- Handles trade of minerals and other commodities
- Marine Biological Research Station for fishery
- **Bharati Shipyard Limited** is located here.

## **14. KARWAR :**

- Minor port and coastal city of Karnataka
- Located near the mouth of the Kalindi River.
- Headquarters of the Uttar Kannada district.
- Karwar port plays a major role in the sea trade, fishing and maritime services of the nation.
- Located on the NH-17 and the Konkan Railway.
- Mountain towards sea protects it and makes it one of the best ports of the world.

## **15. UDUPPI :**

- A minor port and coastal city of Karnataka to the north of Bengaluru , near the mouth of the Sita River

- Located on the NH-17 and the Konkan Railway
- Has the highest average per-capita income in the state according to a survey by a private firm
- Known for the **Krishna Matt**

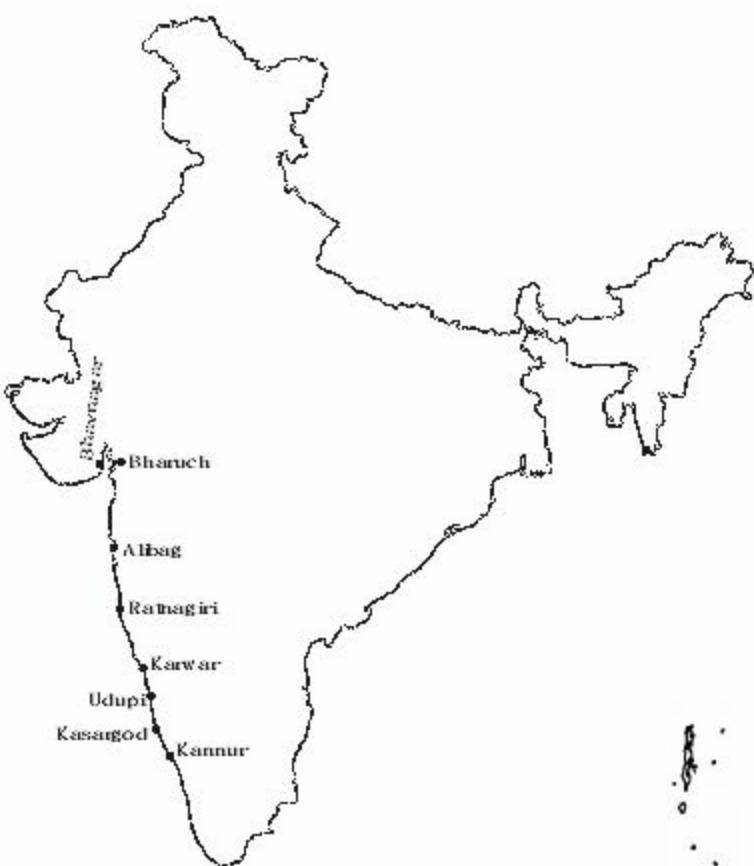
#### **16. KASARGOD :**

- Located near the mouth of the Payaswani River in the northern part of Kerala
- A minor port and the northernmost of the important cities of Kerala
- Agro –based industries are found
- Helped by the NH-17, the Konkan Railway and the West Coast Road

#### **17. KANNUR :**

- Minor port and coastal city of Kerala , located north of Mahe (Puducherry)
- Centre of the Moplah community of Arab descent
- Mainly agri-based industries
- Helped by the NH-17 and the Konkan Railway

## ■ PORTS ■



### 18. MUMBAI PORT :

- A natural deep water harbour and major port located in the eastern edge of the Mumbai City
- Nhava Sheva (on Navi Mumbai ) was created to relieve off its pressure
  - It has been the gateway to India and was the contributing factor in the emergence of Mumbai as the commercial capital of India

### 19. NHAVA SHEVA :

- Also named as **Jawaharlal Nehru Port**
- Lies on the mainland, opposite the city of Mumbai across the Thane Creek

- Located close to the Elephanta Island
- Created to reduce pressure on the Mumbai Port and increase the shipping capacity of Mumbai
- Most modernised and the largest port of India
- The port handles 65% of India's container traffic
- Has three terminals: JNCPT, NSICT, GTI
- NSICT is India's first privately managed container terminal

## **20. MANGALORE :**

- A major port city in the southern part of Canara Coast, located near the mouth of the Kumardhar River
- Upgraded in the Fourth Five Year Plan
- Hinterland – Karnataka , northern Kerala
- Export : Tea, coffee, spices, iron ore
- Import – Petroleum, fertilizers, edible oils
- Petroleum refinery
- Facility of the NH-17 and the Konkan Railway

## **21. MAHE :**

- Exclave of Puducherry , located on the Malabar Coast as an enclave of Kannur district of Kerala
- A minor port
- Agri- based industries, fishing, tourism
- Aided by the NH-17

## **22. KOZHIKODE :**

- Also known as **Calicut**, is the third largest city of Kerala
- Ancient and Middle Ages – '**City of Spices**'.
- Declared the country's first hunger free city
- **Vasco da Gama** reached here in 1498
- Was famous for trade of spices in the old times
- Located on the NH-17

## **23. ALAPUZHA (ALEPPY) :**

- City on the Malabar Coast, to the southwest of the Vembanad Lake
- A minor port on the NH-47
- Centre of coir, coconut, and cashewnut processing.
- Served by an inland waterway system stretching from Kochi to

Kollam

#### 24. ERNAKULAM :

- Located on the shore of the Vembanad Lake, opposite of Kochi
- Seat of the **Kerala High Court**
- An important port, engineering and ship building



#### 25. KOTTAYAM :

- Located in the south-east corner of the Vembanad Lake
- **First tobacco free district in India**
- Hub of inland navigable water system
- Newsprinting, rubber, cement, chemicals
- Headquarter of **Malyalam Manorama**

- In 1989 became **first municipality of India to achieve 100% literacy**

## **26. KOLLAM :**

- Formerly known as **Quilon**, located on the coast of **the Asthamudi Lake**

- Trading port during the Greek and Roman times.
- **Beach sands** are processed for rare earth
- Industries – Aluminium, cashewnut processing, procelain and ceramics

## **27. KOCHI :**

- Major port at the mouth of the Vembanand Lake
- Traditional seaport even during the Roman Period
- Many islands
- Naval Command Centre and Coast Guard District Headquarters
- Natural harbour, shipbuilding, oil refinery
- **Export** : Tea, coffee, spices/ Import-Oil, fertilizers

## **28. KANNIYAKUMARI :**

- Located at the Cape Comorin in Tamil Nadu
- A minor port, and religious and tourist place
- NH-47 and NH-7 terminate here
- Agri –based industries
- Kudankulam Nuclear Reactor is located nearby it

## **29. TUTICORIN :**

- A major port on the coast of the Gulf of Mannar
- A new port has been developed about 8km southwest of the old port
- Handles the traffic of coal, salt, food grains, edible oils, sugar and petroleum products
- Location of a new oil refinery

## **30. VEDARANNIYAM :**

- A minor port near the Point Calimere , the apex of the Kaveri Delta
- **Economy** : salt manufacturing , fishing, salt water prawn, agriculture
- **Salt March** on 30 April 1930-Trichy to Vedaranniyam by Rajgopalchari
- Point Calimere Wildlife and Bird Sanctuary

**31. DHANUSHKODI :**

- A small town located in the eastern part of the Pamban Island
- 1964 cyclone destroyed the railway line that connected India with Sri Lanka
  - According to Hindu scriptures at the request of Vibeeshana, Rama broke the sethu with one end of his bow, so it is named Dhanushkodi
  - It is said that the pilgrimage to Kashi is completed only when followed by a holy bath at Dhanushkodi

**32. NAGAPATTINAM :**

- A minor port on the Kaveri Delta, south of Karaikal (Puducherry)
- Industries – Textiles, leather goods, oil extractions
- Fishing is main industry

## ■ PORTS ■



- One of the best harbours in the country
  - A major pilgrimage centre of Hindus, Muslims and Christians

### 33. YANAM :

- A district and distant territory (exclave) of Puducherry, located in Andhra Pradesh between the deltas of Godavari and Krishna
  - Rice cultivation, agro based industries
  - Tourism is significant
  - A 30 km enclave in the East Godavari district

### 34. SRIKAKULAM :

- A minor port and coastal city of Andhra Pradesh, to north-east of Vishakhapatnam

- Once the capital of the Northern Circar
- Located on the NH-5 and the Chennai-Kolkata main rail line.
- Known for many temples.

### **35. KARAIKAL :**

- Territory of Puducherry on the Coromandel Coast of Tamil Nadu, to the south of Puducherry
- Bounded by the Nagapatnam (north and south)
- Was a French colony and a minor trading hub
- Known for its rich cultural heritage

### **36. CUDDALORE :**

- A minor port on the Coromandel Coast of Tamil Nadu, at the mouth of the Ponnaiyar River.
- A few kms south of Puducherry
- Known for its picturesque beaches, especially the **Silver Beach**
- Neyveli Lignite Corporation is located near to it.
- The city is fast emerging as an industrial city.

### **37. PUDUCHERRY :**

- Main part of the Union Territory of Puducherry, located on the Coromandel Coast midway between Chennai and Point Calimere
- Former French colony still has its imprints
- **Auroville** is world famous

### **38. MACHILIPATNAM :**

- Located in the northeastern part of the Krishna Delta, as a minor seaport and headquarter of the Krishna District
- Port from the old time, has a long history
- It is being developed to reduce the pressure on the Vishakapatnam

### **39. GOPALPUR :**

- Important sea beach and coastal town located in the southwestern part of Orissa
- Its beach with coconut groves is characterised with sand dunes for several kms.
- Often affected by the tropical cyclones
- Has an ancient commercial port, now lying in ruins
- Became prominent port during the British Rule

### **40. KAKINADA :**

- A minor seaport and the headquarters of the East Godavari District, located in the north-western part of the Koringa Bay
- One of the safest ports in the east coast of India due to the presence of a small island called **Hope Island**
- Fourth largest city of Andhra Pradesh
- Most well planned city in Asia after Chandigarh



#### 41. KRISHNAPATNAM :

- Important port of Andhra Pradesh in the Nellore district
- Its port is being upgraded into India's biggest privately owned world-class port
- Being upgraded by the Navyuga Company

- Iron ore and granite are exported
- Site of 4000 MW UMPP (Ultra Mega Power Project) awarded to the **Reliance Power**

#### **42. VISHAKHAPATNAM :**

- The deepest land locked and protected port on the Andhra Coast
- A major port, handles the traffic of iron ore, coal, oil, fertilizers, agri products etc.
- Ship building and repairing facility
- Headquarters of the Eastern Command of the Indian Navy
- Steel, petrochemical and fertilizers plants

#### **43. GANJAM :**

- A minor port and coastal city in Orissa, to the southwest of the Chilka Lake
- Agro –based industries, fishing, salt and fish processing
- NH-5 and Chennai –Kolkata rail line pass through it

#### **44. PARADEEP :**

- A major port located at the northeastern corner of the Mahanadi Delta
- A deep water and all weather port
- Constructed during the Second Five Year Plan.
- Handles the traffic of iron ore, coal, and other dry cargos.
- Iron exported to Japan.

#### **45. DHAMRA :**

- Located to the northeast of Paradeep in Orissa.
- Dhamra Port will become the deepest port of India with a drought of 18 metres, which can accommodate super cape- size vessels upto 180,000DWT.
- Awarded responsibility to the Dhamra Port Company Ltd. A 50:50 joint venture of L&T and Tata Steel

#### **46. CHANDIPUR :**

- A minor seaport in the northeastern part of Orissa
- Its beach is unique in that the water recedes about one to four kms during the ebb and returns at the time of the high tide
- Location of the Indian Army's **Integrated Test Range (ITR)**
- A number of missiles have been launched from the ITR including

Akash, Agni, Shaurya and Prithvi

#### **47. DIAMOND HARBOUR :**

- It is located quite near where the Hooghly river meets the bay of Bengal.
- It was earlier a stronghold of the Portuguese pirates.
- It is minor port as well as a happening tourist spot.



#### **1.RANJIT SAGAR :**

- Also known as **Thein Dam**, is located in the Gurudaspur district of Punjab near Pathankot

- Constructed on the Ravi River
- Project is used for both irrigation and HEP
- It is the biggest HEP project of Punjab (4X150 MW)
- One of the highest Earth Fill Dams of India

## **2.PONG DAM :**

- A 116m high dam at Pong in the Dhaoladhar Range near Pong village (Himachal Pradesh) on the Beas River
- Mainly an irrigation scheme to irrigate about 21 lakh hectares in Punjab, Haryana and Rajasthan
- Total installed capacity of HEP at the Beas complex – 1020MW

## **3.PANDOH DAM :**

- The Beas –Satluj link involves the construction of 61m high diversion dam at Pandoh on **the Beas** in Himachal Pradesh
- Power Plant at **Dehar** -660 MW
- Irrigates about 5.25 lakh hectares in Punjab and Haryana

## **4. GOVIND SAGAR :**

- 88 km long and 8 km wide reservoir formed behind the Bhakra Dam
- Storage capacity – 969.8 crore cubic metres
- Named after the tenth Sikh Guru, Guru Gobind Singh.

## **5.BHAKRA :**

- One of the highest gravity dams in the world on the Satluj at the Bhakra gorge near Rupnagar (Ropar)
- 222 metre high and 518m long
- Formed reservoir called Govind Sagar
- Joint venture of Punjab, Haryana and Rajasthan
- HEP-450MW +600MW

## **6.NANGAL :**

- About 13km downstream of the Bhakra on the Satluj
- 29m high and 305m long
- Serves as balancing reservoir for taking up daily fluctuations from the Bhakra Dam
- HEPs at Ganguwal and Kotla
- Joint venture of Punjab, Haryana and Rajasthan

## **7.MAITHON :**

- Part of the DVC in Jharkhand
- On the Barakar River near the confluence of the Damodar and Barakar
- 49m high and 994m long
- HEP- 60MW

### **8.KONAR :**

- On the Konar River in the Hazaribagh district of Jharkhand
- 3549m long and 49m high
- An earthen dam with a concrete spill-way part of the DVC
- HEP-10MW- Bokaro Steel Plant and Bokaro Thermal Plant receive HEP and water from it
- Irrigation-45000 hectares

## MULTIPURPOSE PROJECTS



### 9.TILAIYA :

- Part of the DVC on the Barakar River in Jharkhand
- 30m high and 366m long
- **Only concrete dam in the area**
- Two power stations of 2000 KW each
- Irrigation -40,000 hectares

### 10. FARAKKA BARAGE :

- On the Ganga River in the Murshidabad district of WB, 10 km away from the Indo-Bangladeshi border
- Built to divert water into the Hoogly, so that during the dry season silt can be flushed out to keep the Kolkata Port navigable

- **Longest Barrage** in the world
- Disputed between India and Bangladesh

#### **11. HIRAKUD :**

- On the Mahanadi in Orissa at Hirakud about 14km upstream off the city of Sambalpur
- 61m high and **4801m long** (one of the longest dams in the world )
- Two other dams at Tikrapara and Naraj near Cuttack
- HEP- 3.5 lakh KW
- Irrigation -1 million hectares

#### **12. BALIMELA :**

- Constructed across the Sileru River at Balimela in Malkangiri district of Orissa
- Both irrigation and HEP(510 Mw)
- It is a joint project of odisha and andhra pradesh.

#### **13. GOVIND VALLABH PANT SAGAR :**

- On the Rihand River behind the Rihand Dam near Pipri in the Mirzapur of Uttar Padesh
- Largest man made reservoir in India (446 sq km )
- Another dam at Obra, 25km north
- HEP and irrigation to Madhya Pradsh, Uttar Padesh and Bihar

#### **14. JAWAHAR SAGAR :**

- On the Chambal River in Rajasthan about 29km upstream of Kota city
- 45m high and 548m long gravity dam
- Also known as Kota Dam
- Three HEP units of 33000 MW each

#### **15. KOTA BARRAGE :**

- On the the Chambal in Rajasthan at a distance less than 1km from Kota
- 36m high and 600m long earthen barrage
- Canals taken from both sides of the barrage irrigates 4.4 lakh hectares in Rajasthan and MP

#### **16. HARIKE BARRAGE :**

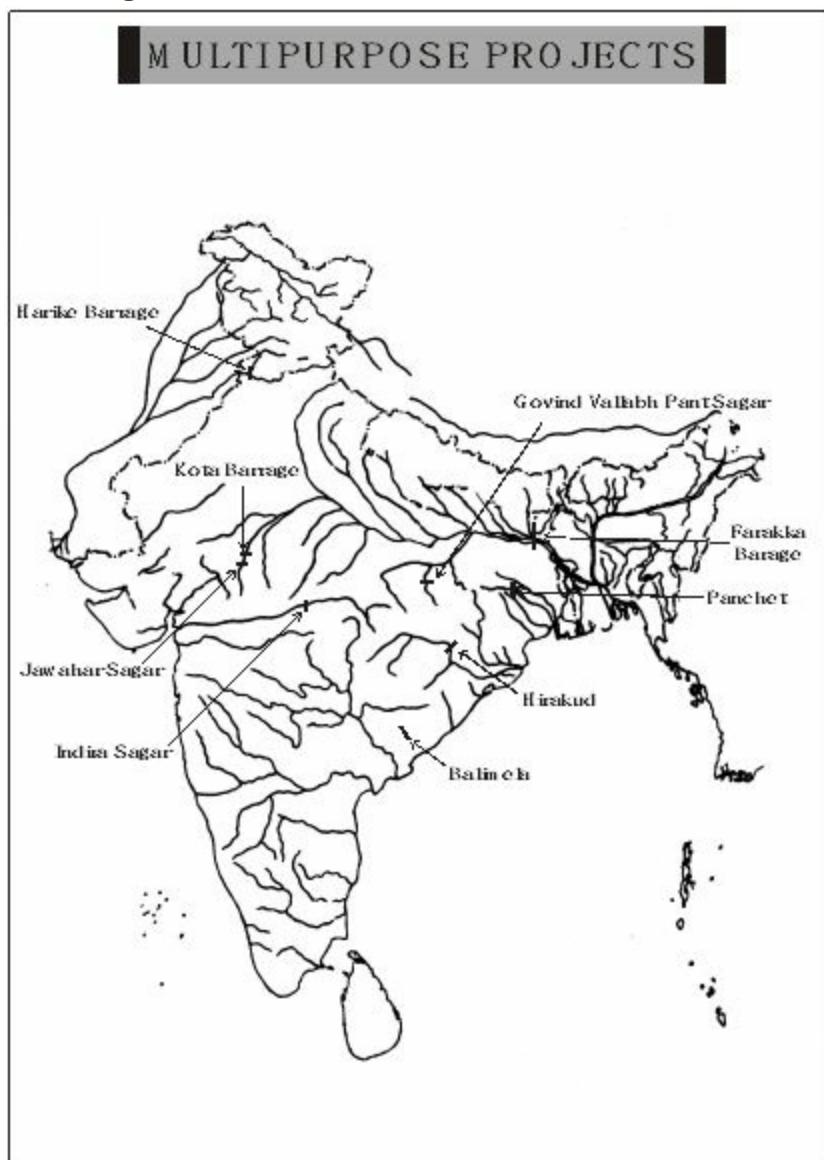
- Located at the confluence of the Satluj and Beas rivers in the Firozpur

district of Punjab

- The Indira Gandhi Canal has been taken out of this barrage

## 17. INDIRA SAGAR :

- The most important project of the Narmada Valley Development Project.
- Omkareshwar , Maheshwar and Sardar Sarovar receive water from it
- **Largest water storage capacity in the country**
- Located in the Khandwa district of Madhya Pradesh
- HEP-8X125= 1000MW
- Irrigation 1.23 lakh hectares



## 18. OMKARESHWAR :

- On the Narmada at Mandhata village in East Nimar (Khandwa) district of Madhya Pradesh
- HEP -8X65=520 MW
- Irrigation -1,46,800 hectares
- Its power generation capacity is directly related with the amount of water released from the Indira Sagar

**19. MAHESHWAR :**

- On the Narmada in Madhya Pradesh downstream off the Omkareshwar
- HEP- 10X40=400MW
- A project which does not affect the forest land
- First privately financed hydroelectric dam in India

**20. CHOTA TAWA :**

- On the Chota Tawa, left bank tributary of the Narmada, at Ranipur village of the Hoshangabad district of Madhya Pradesh
- HEP-13.50 MW
- Irrigation – 24,700 hectares
- Located at the confluence of the Tawa and the Denwa rivers
- Third largest dam of the Narmada Valley Project

**21. SARDAR SAROVAR :**

- Project of MP, Gujarat, Maharashtra and Rajasthan
- On the Narmada at Kevadia village of the Vadodara district of Gujarat
- 121.92 m high can be raised upto 163 m as per the proposal
- HEP-1450MW
- Irrigation – Around 20 lakh hectares.

**22. UKAI :**

- Built on the Tapi River when it enters Gujarat
- Mainly for HEP
- Capacity -300 MW
- Electricity is supplied to Surat and other neighbouring cities

**23. KOYNA :**

- Constructed across the Koyna River in the Satara district of Maharashtra
- Has formed the **Shivaji Sagar**

- Constructed mainly to generate HEP
- HEP capacity -860 MW
- Experienced earthquake in 1967, which proved that the Deccan Plateau is made of several minor plates

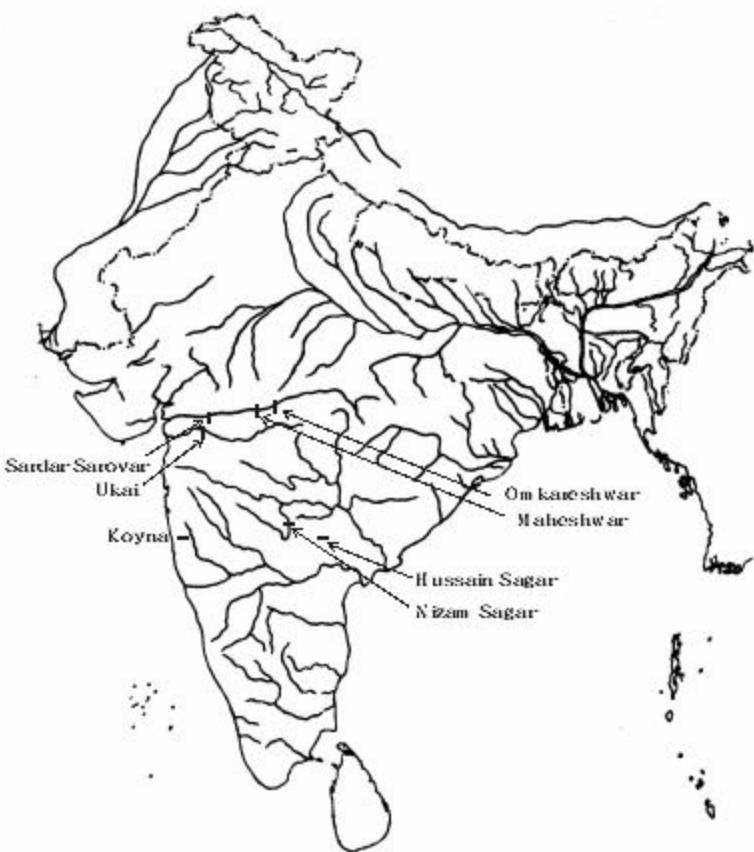
#### **24. NIZAM SAGAR :**

- An irrigation and HEP project on the Manjra River in AP near Nizamabad
- Water is supplied to Nizamabad and Hyderabad
- Constructed in 1923 by Nizam-Ul-Mulk, the then ruler of the erstwhile Nizam state
- A masonry dam over which fourteen feet wide motorable road is present
- Frequented by tourists

#### **25. HUSSAIN SAGAR :**

- An artificial lake in Hyderabad built by Hazrat Husain Shah Wali in 1562 during the rule of Ibrahim Quli Qutub Shah
- Built on a tributary of the Musi River to meet the water and irrigation needs of Hyderabad
- A large monolith statue of the Lord Buddha in the middle of the lake

## MULTIPURPOSE PROJECTS



### 26. NAGARJUNASAGAR :

- On the Krishna River in Nalgonda district of Andhra Pradesh
- 125m high and 1450m long concrete dam
- 2 Canals – Jawahar Canal (349km) and Lal Bahadur Canal (357km)
- Irrigation -7 lakh hectares
- HEP- 100 MW

### 27. TUNGABHADRA :

- Joint venture of Karnataka and Andhra Pradesh on the Tungabhadra River at Mallapur in Bellary district
- 50 m and 2441 m long straight gravity masonry dam

- Two irrigation canals -41.32 lakh hectares
- Three power houses -126MW

**28. ALMATTY DAM :**

- Located on the Krishna River in the Bijapur district of Karnataka
- Main reservoir of the Upper Krishna Project
- HEP – 290 MW
- 52.25 m high and 1565.15 m long.

**29. LINGANAMAKKI :**

- Located on the Sharavati River about 6km upstream from the Jog Falls
- 2.4 km long and 193 feet high
- HEP capacity – 55MW

**30. BHADRA :**

- Located on the Bhadra River, a tributary of the Krishna River, in Karnataka
- The project consists a dam and 2 canals
- Located 50km upstream of the point where the Bhadra River joins the Tungabhadra
- The Bhadra Wildlife Sanctuary is located in the vicinity

**31. KRISHNARAJSAGAR :**

- Irrigation and HEP project on the Cauvery River near Mysore in Karnataka
- The **Vrindavan Park** is located near the dam
- Located in the Mandya district
- Named after the then ruler of the Mysore Kingdom, **Krishnaraja Wodeyar**
- **Mokshagundam Visvesvarayaya** served as the chief engineer

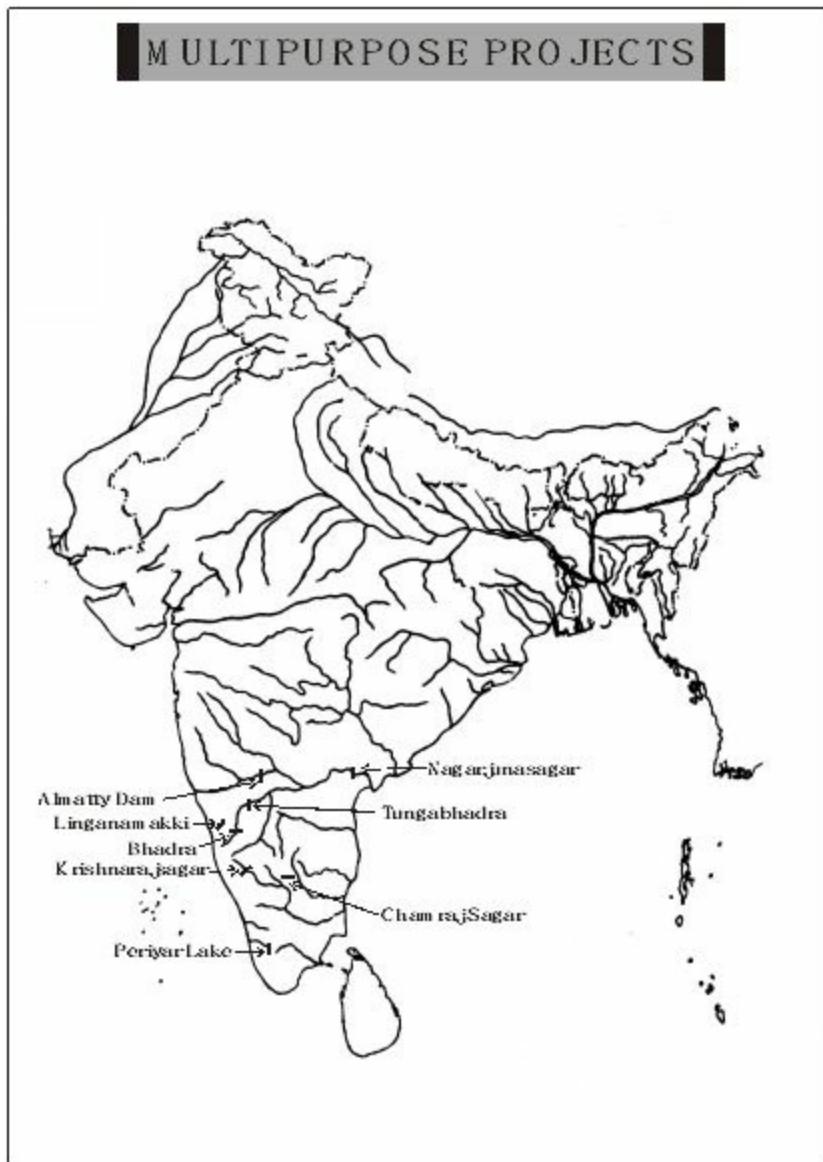
**32. CHAMRAJ SAGAR :**

- Built across the Arkavati River, about 35km from Bengaluru
- Attractive picnic spot for relaxation and fishing
- Supplies water to Bengaluru

**33. PERIYAR LAKE :**

- Formed behind the Mulla Periyar Dam in Kerala inside the Periyar National Park

- Operated by Tamil Nadu Govt according to a 999- year lease agreement made during the erstwhile British Rule
- Area – 26 sq km
- The dam is 1200 feet long and 155 feet high
- Disputed between Tamil Nadu and Kerala
- Located after the confluence of Mullaiyar and Periyar



### **34. STANLEY RESERVOIR :**

- Formed by the Mettur Dam in northwestern Tamil Nadu
- One of the largest fishing reservoirs of India
- Length of the dam – 1700m
- Installed capacity -240 MW

**35. BHAVANI SAGAR :**

- Located on the Bhavani River in the Erode district of Tamil Nadu
- Among the biggest earthen dams of India
- The dam is used to divert water to the Lower Bhavani Project Canal
- 32m high
- Reservoir Capacity -32.80tmc

**36. BANSAGAR PROJECT :**

- Joint venture of Madhya Pradesh, Uttar Pradesh and Bihar on **the Son** on the Rewa- Shahdol way in Madhya Pradesh
- HEP - 405 MW
- Irrigation in Sidhi, Satna, Rewa and Shahdol districts of Madhya Pradesh

**37. MATATILA :**

- On the Betwa River in Madhya Pradesh
- Joint project of Madhya Pradesh and Uttar Pradesh
- Irrigation 1.09 lakh hectares in Uttar Pradesh and 1.16 lakh hectares on Madhya Pradesh
- Famous as **Rani Lakshmibai Project**

**38. RAJGHAT PROJECT :**

- Joint venture of Uttar Pradesh and Madhya Pradesh on the Betwa in Lalitpur of Uttar Pradesh
- Irrigation – cum – HEP project
- HEP capacity – 45 MW (3X15)

**39. GANDHI SAGAR :**

- On the Chambal at the border of Madhya Pradesh and Rajasthan
- 64m high and 514 m long
- Irrigation – 4.44 lakh hectares
- HEP-5 units of 23000 KW each

**40. RANA PRATAP SAGAR :**

- On the Chambal at Rawatbhata
- 54m high and 1143 hectares
- HEP-4units of 43,000 KW each

**41. RAVISHANKAR SAGAR PROJECT :**

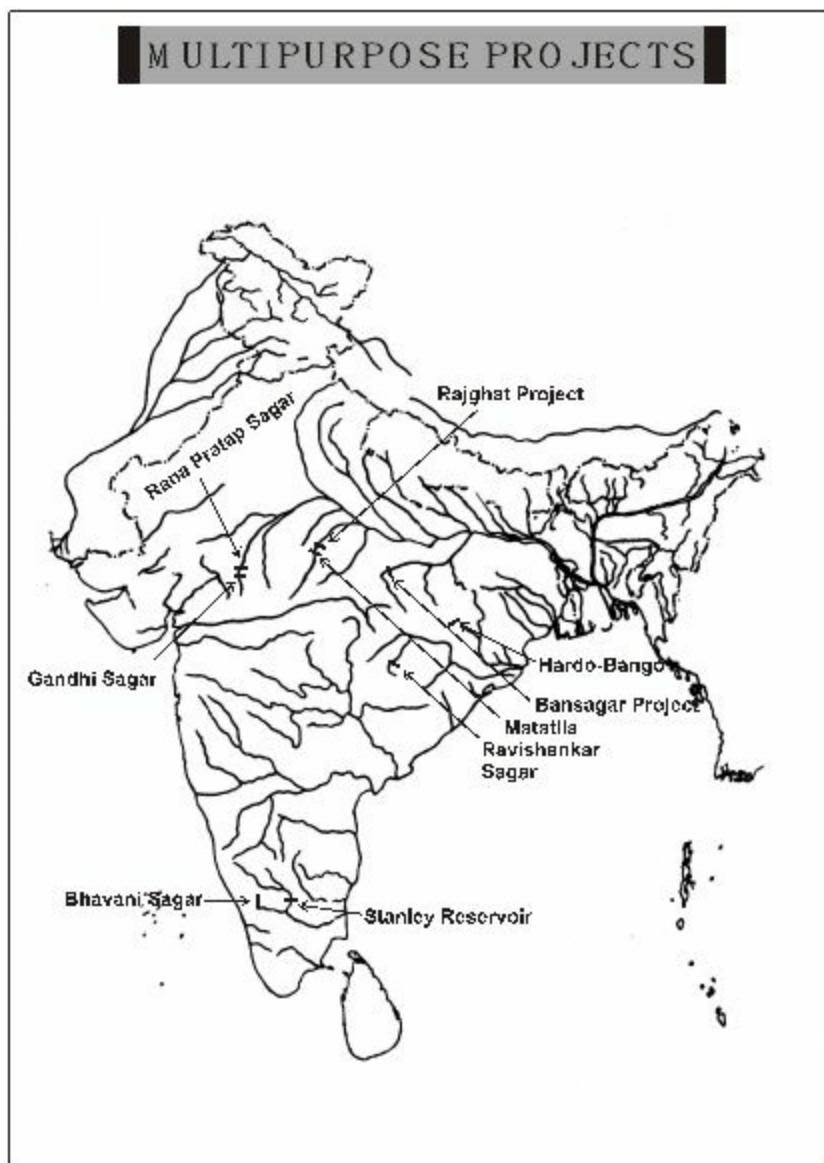
- It is built across the Mahanadi river in the Dhamtari district,

Chhattisgarh.

- It is the longest dam of Chhattisgarh.
- Alongwithtion it produces 10 MW of HEP
- It supplies water to the Bhiai steel plant.

#### 42. HASDO- BANGO PROJECT :

- It is built across the Hasdeo river in the Korba district, Chhattisgarh.
- It is the longest and highest dam of Chhattisgarh.
- Irrigation capacity : 2 ,55000 hectares
- It has three units of hydroelectric plant with the capacity of 40 MW each.



**1.GULF OF MANNAR :**

- Second largest biosphere reserve of India after Kachchh
- Indian part of the gulf
- Included under the network of biosphere reserves of the UNESCO
- Known for coral reefs
- One of the richest costal regions of Asia (3600 species )

**2.GREAT NICOBAR :**

- Biosphere Reserve located on the Great Nicobar Island, the southern-most island of India
- Third smallest biosphere reserve after Dibru Saikhowa and Nokrek
- Covers two National Park – Campbell Bay NP and Galathea National Park

**3.AGASTYAMALAI :**

- Biosphere Reserve located at the southernmost part of the Western Ghats in Kerala
- Includes parts of Neyyar, Peppara and Shenduruny sanctuaries and adjoining areas
- There is Agasthya National Park in the region

**4. NILGIRI :**

- **First biosphere reserve of India** located in the Nilgiri Hills at the trijunction of Kerala, Karnataka and Tamil Nadu
- Includes parts of Wayanad, Nagarhole, Bandipur, Mudumalai, Nilambur, Silent Valley and Siruvani Hills
- Included in the network of biosphere reserves of the UNESCO

**5.SIMLIPAL :**

- National Park, Tiger Reserve and Biosphere Reserve in the Mayurbhanj district of Orissa between the Baitarni and the Burhabalang rivers
- Comes under the network of biosphere reserves of the UNESCO

**6.SUNDARBANS :**

- National Park, Tiger Reserve and Biosphere Reserve in the coastal regions of West Bengal
- A natural **World Heritage Site**

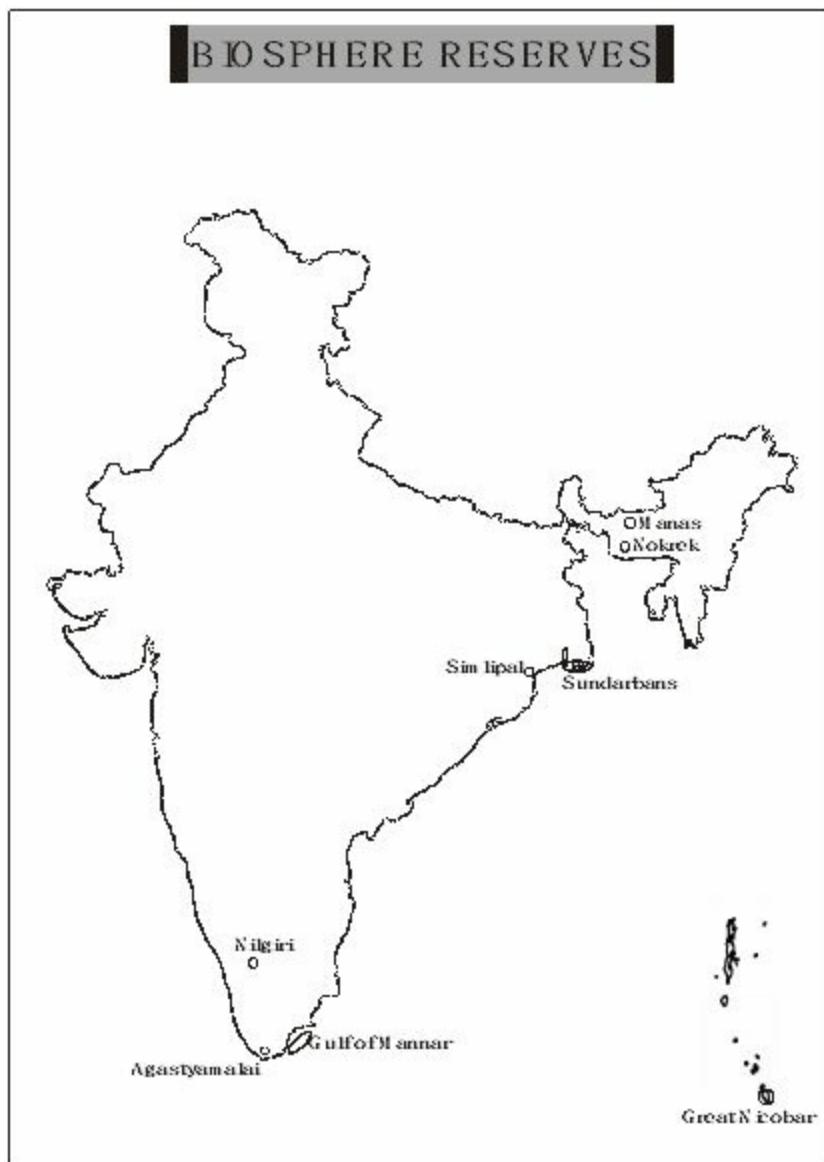
- **Largest single stretch of mangroves in the world**
- Famous for the ‘**sundri trees**’ and the **Royal Bengal Tigers**

#### **7.NOKREK :**

- National Park and Biosphere Reserve in the Garo Hills of Meghalaya
- Few kms from the Tura Peak
- Known for ‘**the Mother of Oranges**’
- Included under the network of biosphere reserves of the UNESCO

#### **8.MANAS :**

- National Park, Tiger Reserve and Biosphere Reserve in the Kokrajhar, Bongaigaon, Nalbari, Kamrup and Darrang districts of Assam in the way of the Manas River
- A natural **World Heritage Site**
- Included under the network of Biosphere Reserves of the UNESCO
- **Endangered and endemic species:** Assam Roofed Turtle, Hispid Hare,Golden Langur, Pygmy Hog.



### **9.DIHANG – DIBANG :**

- Located in eastern Arunachal Pradesh in the valleys of Debang and Siang is a Biosphere Reserve
- Mouling National Park and Dibang Valley Sanctuary are located within the biosphere reserve
- None of its parts is reachable by road
- Constitutes a part of one of the '**Biodiversity Hot Spots**'

### **10. DIBRU – SAIKHOWA :**

- National Park and Biosphere Reserve in the Dibrugarh and Tinsukia districts of Assam
- **Smallest biosphere reserve in India**

- Located in the upper Assam valley between the Brahmaputra and the Burhi Dibing rivers

#### **11. ACHANAKMAR :**

- Biosphere Reserve located in the Maikal Range in Anuppur and Dindori districts of M.P. and the Bilaspur districts of Chhattisgarh
- Declared Tiger Reserve in 2008
- 68% lies in Chhattisgarh

#### **12. PANCHMARHI:**

- Biosphere Reserve and sanctuary in the Betul and Hoshangabad districts of MP
- It comes under the network of biosphere reserves of the UNESCO
- Located in the Mahadeo Hills

#### **13. KACHCHH :**

- The last and the largest biosphere reserve of India (Area – 12454 square km )
- Comprises of two major ecosystems called Rann of Kachchh and Little Rann of Kachchh
- Covers the Kachchh Sanctuary and Wild Ass Sanctuary
- Also covers parts of finest grassland of Asia called ‘**Banni**’.

#### **14. NANDA DEVI :**

- National Park and Biosphere Reserve in the Chamoli, Pithoragarh and Almora districts of Uttarakhand
- A natural **World Heritage Site** along with the **Valley of Flowers**

#### **15. KHANGCHENDJUNGA :**

- National Park and Biosphere Reserve in the North District of Sikkim
- **Fauna** – Leopard, snow leopard, sloth bear, red panda, Tibetan wild ass
- Kangchendjunga Peak lies inside the reserve
- There are many glaciers in the Park including the Zemu Glacier
- Fauna- musk deer, snow leopard , Himalayan Tahr

#### **16. COLD DESERT :**

- It is located in Himachal pradesh, and includes the Pin valley national park, Chadratal and Sarohu of Kibber wildlife sanctuary.
- It Covers about 7770 km<sup>2</sup>

- It is not affected by the Indian Monsoon as it lies in the rain-shadow region of the Himalaya.

### **17. SESHACHALAM HILLS :**

- These are located in the southern Andhra pradesh, and are parts of eastern Ghats.
- Tirupati is located in the hills.
- In 2010 it was declared the 17 th biosphere reserve of India .



### **1.KAZIRANGA :**

- National Park and Tiger Reserve in the Golaghat and Nagaon districts

of Assam in the Mikir – Rengma hills region

- **A World Heritage Site**
- Two – thirds of world's Great One-horned Rhinoceros live in the park
- One of the highest densities of tigers in the world

## **2.NAMERI :**

- National Park and Tiger Reserve in the Eastern Himalayas in the Sonitpur District of Assam (Located near Tezpur (35km away)
- Shares boundary with the **Pakhui WLS**

## **3.NAMDAPHA :**

- Between Lohit and Burhi Dibing rivers close to the border between India and Myanmar )
- First tiger reserve of Arunachal Pradesh
- Also known as the '**botanists' dream'**
- National Park and Tiger Reserve, located in the Brahmaputra Valley in the Chanlang district of Arunachal Pradesh

## **4. PAKHUI :**

- Located in the East Kamang district of western Arunachal Pradesh
- A WLS and Tiger Reserve
- Habitat types – lowland semi – evergreen, evergreen forest and eastern Himalayan broadleaf forests
- Contiguous with the Nameri Tiger Reserve

## **5.NAGARJUNASAGAR – SRISAILAM :**

- **Largest tiger reserve of India** composed of the Nagarjunasagar National Park and Srisailam Sanctuary (Area -3568 square km )
- Districts – Guntur, Prakasam, Kurnool, Maboobnagar and Nalgonda
- Surrounded by the Nallamalai Hills and the Krishna River
- Fauna- Tiger, leopard, hyena, sloth bear

## **6.VALMIKI :**

- National Park and Tiger Reserve in the West Champaram district of Bihar
- The only tiger reserve of Bihar
- Fourth largest population of tigers in India
- Located in the valley of the **Burhi Gandak** in the Terai region

## 7.INDRAVATI :

- Located in the valley of the Indravati River in the Dantewara district of Chhattisgarh
- A National Park and Tiger Reserve
- Home to the rare **wild buffalo** as well as an alternative home for the swamp deer

## 8.UDANTI :

- Located in the Raipur district of Chhattisgarh
- A WLS and Tiger Reserve
- Named after the Udanti River that flows through it, west to east



- Famous for its population of the endangered **Wild Buffaloes**

## **9. SITANADI :**

- Located in the Dhamtari district of Chhattisgarh
- Named after the Sitanadi River, a small tributary of the Mahanadi, that originates in the middle of the sanctuary
- A WLS and Tiger Reserve
- Known for its lush green flora and rich and diverse fauna

## **10. PALAMAU :**

- Located in western Jharkhand in the Palamau district is a National Park and Tiger Reserve
- Also known as the **Belta NP** with an area of 232 square km out of 1026 sq km its total area
- The **North Koel River** flows through it

## **11. BANDIPUR-NAGARHOLE :**

- National Parks and Tiger Reserves of Karnataka near Mysore
- Fauna – Tiger, leopard, elephant, crocodile
- Under consideration for the World Heritage Site
- Bandipur forests were once the Mysore Maharaja's personal game preserve

## **12. BHADRA :**

- Located in the Chikmaglur and Shimoga districts of Karnataka near the Bhadra Reservoir
- A WLS and Tiger Reserve
- **Fauna** –Bison (gaur) , elephant, tiger, leopard
- Ecological degradation and human encroachment

## **13. DANDELI :**

- WLS and Tiger Reserve
- Fourth tiger reserve of Karnataka
- Situated in the Uttara Kannada district of Karnataka near Maharashtra border
- Tiger Reserve comprises of the Dandeli WLS and Anshi National Park

## **14. ANSHI :**

- National Park and Tiger Reserve, located in the Uttar Kannada district of Karnataka bordering the State of Goa

- **Fauna** – Tigers, leopards, elephant, neelgai
- Forms a tiger reserve along with the Dandeli WLS

#### **15. PERIYAR :**

- National Park and Tiger Reserve in the Idukki and Pathanamthitta district.
- **Fauna** – Tiger, elephant, leopard, Indian hornbill.
- The park is often called as **Thekkady**
- Lies in the middle of a mountainous area of the Cardamom Hills
- Periyar River, Periyar Lake, and Mullaperiyar Dam are found inside the park

#### **16. BANDHAVGARH :**

- A national park and tiger reserve in Madhya Pradesh east of the Katni city
- An excellent habitat of tiger known for **the highest density of tigers in the world**
- Eco- development works implemented to reduce pressure from surrounding villages



#### **17. BORI- SATPURA :**

- Satpura National Park and Tiger Reserve is situated in the Hoshangabad district of Madhya Pradesh
- Dhupgarh is located in the park
- Located over the **Mahadeo Hills**
- Bari is a WLS and Satpura is a National Park

#### **18. KANHA :**

- National Park and Tiger Reserve in Mandla and Balaghat districts of Madhya Pradesh, in the Maikal Range
- Source of inspiration for the "**Jungle Book**" written by **Rudyard Kipling**

- Formed a National Park in 1955
- **Largest National Park of Madhya Pradesh**
- **First National Park of Madhya Pradesh**

#### **19. PANNA :**

- National Park and Tiger Reserve in Panna and Chhatarpur districts of north-eastern Madhya Pradesh
- Recently in news because of the disappearance of tigers , just like Sariska
- **Other Fauna :** Chital, chinkara, sambhar, sloth bear.

#### **20. PENCH :**

- National Park and Tiger Reserve in Seoni and Chhindwara districts of southeast Madhya Pradesh
- Named after the Pench River that flows through it
- Declared Tiger Reserve in 1992

#### **21. SANJAY NP:**

- Located in the Sidhi district of MP
- After partition of the state some portion went to Chhattisgarh, where it is named **Guru Ghasidas National Park**
- Mostly composed of the sal trees
- Fauna : Tiger, leopard, chital, sambhar, deer, Nilgiri wild boar
- **A National Park and Tiger Reserve**

#### **22. SANJAY DUBRI :**

- One of the most important wildlife sancturies of Madhya Pradesh located near Rewa
- Total area – 1471 sq km
- **Flora :** Sal, saja , tendu, haldu
- **Fauna :** Tiger, panther, sambhar, Nilgai
- Also a tiger reserve

#### **23. MELGHAT :**

- National Park and Tiger Reserve in the Amaravati district of Maharashtra.
- Number of tigers is increasing.
- In the Gawilgarh Hills region.
- Tropical deciduous forests.

#### **24. PENCH :**

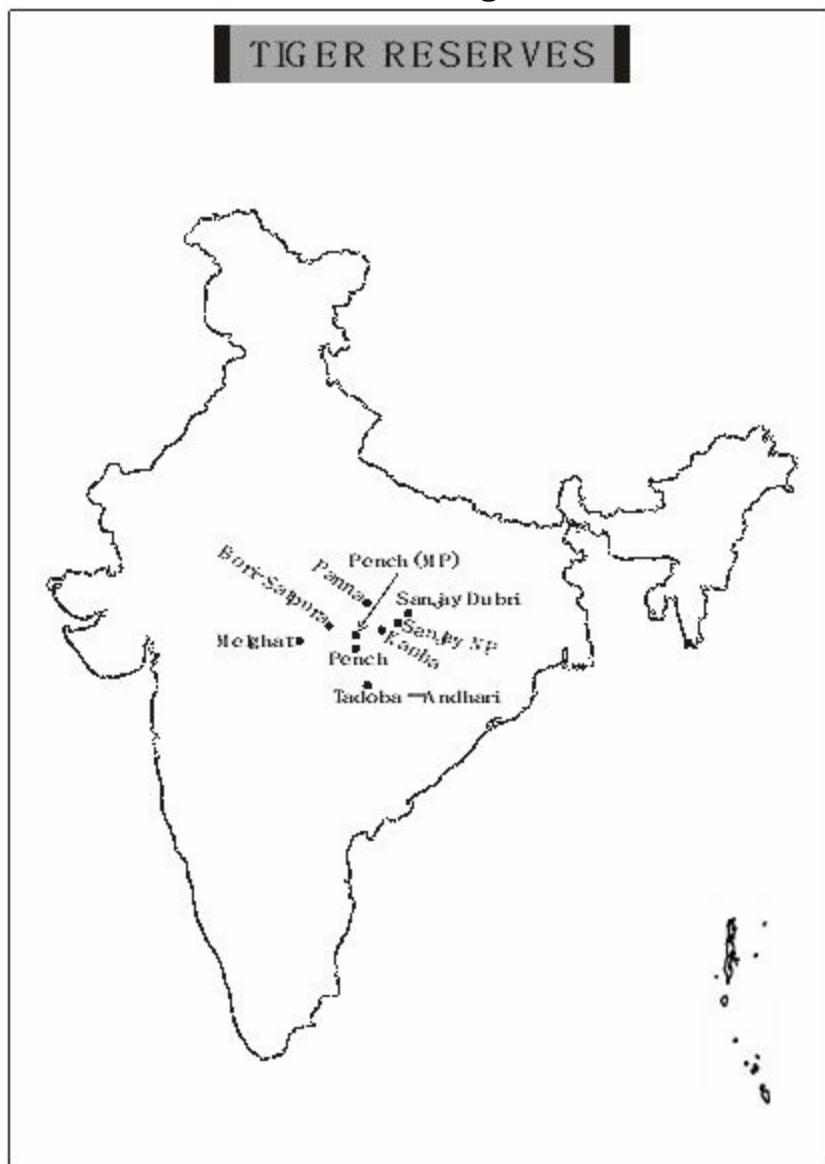
- National Park and Tiger Reserve in northeast Maharashtra near the

border with Madhya Pradesh

- Declared Tiger Reserve in 1974
- Named after the Pench River which flows through it
- The core area of the reserve is called the **Gugarnal National Park**.

## 25. TADOOBA – ANDHARI :

- Tadoba NP and Andhari WLS constitute the tiger reserve , located in the Chandrapur district of Maharashtra
- **Tadoba is the oldest National Park of Maharashtra** formed in 1955
- Tadoba reserve covers the Chirmur Hills, and the Andhari Sanctuary covers Moharli and Kolsa ranges



**26. DAMPA :**

- Dampa WLS is located in the Kolasib District of Mizoram
- Surrounded with the lush green vegetation
- Declared a Tiger Reserve
- Counter Insurgency and Jungle Warfare School is located nearby the sanctuary

**27. SATKOSIA :**

- Located in Orissa , covers parts of Angul, Budh, Cuttack and Nayagarh districts
- A WLS and Tiger Reserve
- Drained by the Mahanadi and it has formed 22km long **Satkosia Gorge** inside the sanctuary.
- Fauna: Tiger, leopard, elephant, Alligator

**28. RANTHAMBORE :**

- A National Park and Tiger Reserve in the Sawai Madhopur district of Rajasthan
- Renamed as the **Rajiv Gandhi Park**
- Tigers have been relocated from here into the Sariska National Park.

**29. SARISKA :**

- A National Park and Tiger Reserve in the Alvar district of Rajasthan
- In the past it lost all its tigers owing to the poaching
- Tigers have been reintroduced from the Ranthambore National Park.

**30. KALAKAD – MUNDATHURAI :**

- Kalakad is a wildlife sanctuary and Mundathurai is also a wildlife sanctuary in Tamil Nadu in the Cardamom Hills
- Both sanctuaries are clubbed together to form a Tiger Reserve.

**31. MUDUMALAI :**

- Northwestern side of the Nilgiri Hills, in the Nilgiri district of Tamil Nadu about 80km northwest of Coimbatore
- Visited by tourists , educationists and nature lovers throughout the year

**32. ANAMALAI – PARAMBIKULAM :**

- Anamalai is a national park and Parambikulam a wildlife sanctuary located in the Coimbatore district of Tamil Nadu
- Both are included under a Tiger Reserve

- **Fauna :** Tiger, leopard , elephant

### **33. DUDHWA :**

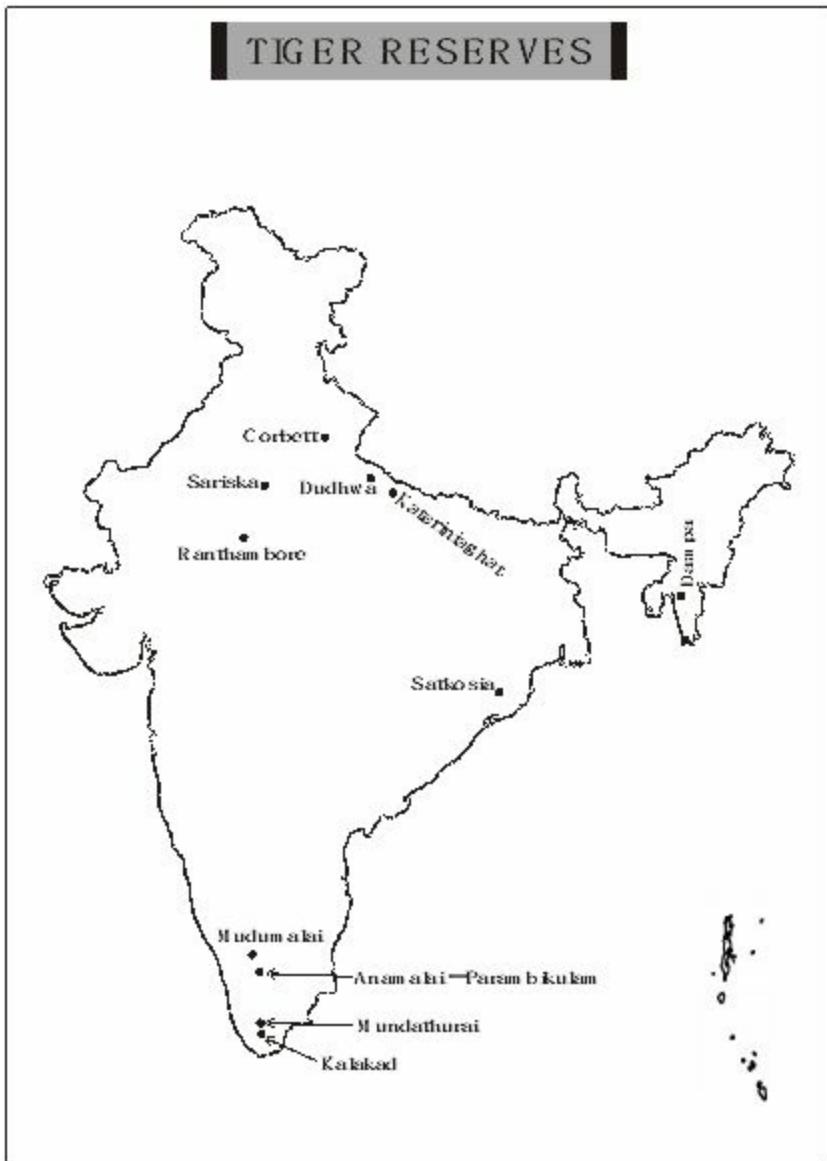
- National park and tiger reserve in the Lakhimpur – Kheri district of Uttar Pradesh
- Located in the Terai Region
- Main attractions are tigers , leopards and swamp deers
- It has large sal trees

### **34. KATERINIAGHAT :**

- Located to the east of the Dudhwa National Park in Uttar Pradesh in the Terai Region
- It is an extension of the Dudhwa Tiger Reserve

### **35. CORBETT :**

- Named after **Jim Corbett**
- **First national park and tiger reserve of India**
- Also an Elephant Reserve
- Located in the Nainital district
- A tourist complex has been developed here to accommodate the tourists



### 36. BUXA :

- Located In the Buxa Hills of West Bengal near Bhutan
- National park cum tiger reserve
- Also the habitat of Civet and red jungle fowl

### 37. SUNDERBANS :

- In the coastal region of West Bengal
- A biosphere reserve and national park
- A World Heritage Site
- Densely covered with mangrove forests
- Famous for the Royal Bengal Tigers

**38. ACHANKMAR TIGER RESERVE :**

- The Achankmar wildlife sanctuary was established in 1975, and it was made a tiger reserve in 2009.
- It forms a part of Bilaspur forest division, Chhattisgarh.
- It is linked to the Kanha national park by the hilly Kanha-Achankmar corridor.

**39. BILIGIRIRANGA TIGER RESERVE :**

- It is located in the south-eastern Karnataka.
- Being at the confluence of the western Ghats, it is the home to ecosystems that are unique to both the mountain ranges.
- It was declared a tiger reserve in December 2010.

**40. KUDRENMUSK TIGER RESERVE:**

- It is located in the Chikkamangaluru district of Karnataka.
- The Tunga, Bhadra and the Netravati rivers are said to have their origins here.
- It has the beautiful Kadoribi Water falls.
- It was declared as part of the Bhadra Tiger Sanctuary

**41. RATAPANI TIGER RESERVE:**

- It is located in the Raisen districts of Madhya Pradesh.
- It was established as a wildlife sanctuary in 1976, and given in principle status of a tiger reserve in 2008.
- Bhimbetka rock shelters are located within the sanctuary.

## TIGER RESERVES



22

OTHERS → NP, WLS, BS

### 1.CORINGA NP :

- It is located in the East Godavari district of Andhra Pradesh near Kakinada Port
- The habitat is suitable for saltwater crocodile
- It was declared a sanctuary in 1979 to conserve mangroves in the region
- Over 120 species of birds are reported

### 2.PAKHAL WLS :

- Established in 1952 is located in Andhra Pradesh 50km away from

Warangal city.

- Named after a person who built Pakhal Lake
- Area – 869 square km
- Fauna : Leopard, sambhar, Nilgai, sloth bear

### **3.PABITORA :**

- A WLS located about 60km east of Guwahati in Assam, in the Morigaon district
- Declared sanctuary in 1971 to protect one-horned Rhinoceros
- Vegetation varies according to height and has animals like Aquatic Buffaloes, Wild Bear, Leopard etc.

### **4.KANGER GHATI NATIONAL PARK :**

- Located in the Bastar district of Chhattisgarh
- Home to rare mouse deer
- Located 25 km southeast of Jagdalpur
- The Kanger River flows through it
- Has limestone caves like **the Kutumsar Cave**

### **5.BHAGWAN MAHAWIR WLS :**

- Bhagwan Mahaveer Sanctuary and Mollem NP is located in the Western Ghats in Goa , 57km east of Panaji
- NH-4A divides it into two parts
- The core of the sanctuary (107 square km) is called the **Mollem NP**

### **6.BONDLA WLS :**

- Located in the northeastern Goa
- Area: 8 square km
- Popular destination for both tourists and school children

### **7.SALIM ALI BS :**

- Located in the North Goa district of Goa
- Named after the famous Indian ornithologist **Dr. Salim Ali**
- Located on the western tip of the **Island Of Chorao** along the river Mandovi
- Covered with a thick layer of mangroves

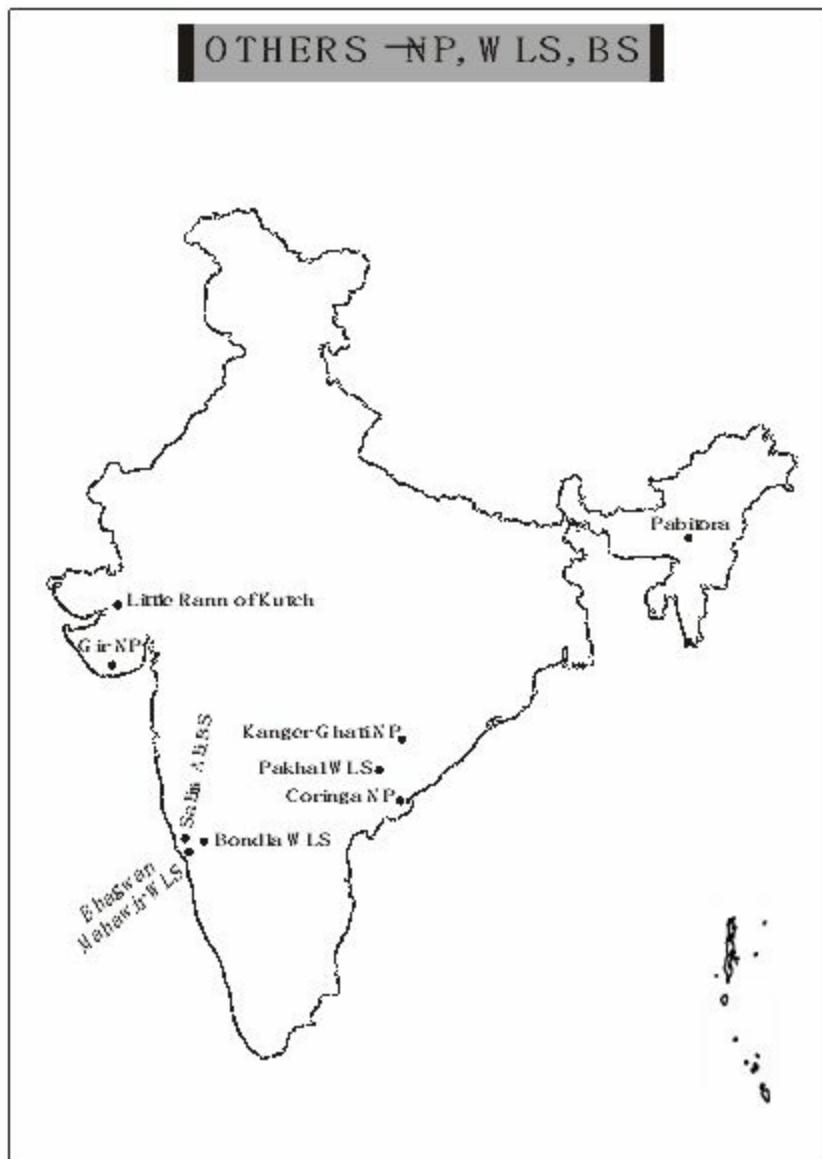
### **8.GIR NP :**

- Located in the southern part of Kathiawad Peninsula in the Gir and Girnar Hills region

- Famous for **the Asiatic Lions**
- The sole home of the pure Asiatic lions
- Junagarh district forms its major area

### **9. LITTLE RANN OF KUTCH :**

- 93 km away from Ahmedabad in the Little Rann area
- Forms part of the Kachchh Biosphere Reserve
- Only abode of Asiatic Wild Ass in India
- Other fauna: Gazelle, Blue Bull
- Birds- Laggar Falcon, Flamingoes, Eagles



### **10. MARINE NP :**

- Located in the Jamnagar district

- Declared as the **first marine park of the country** in 1982
- Includes an archipelago of **42 islands**
- Has coral reefs

#### **11. NAL SAROVAR BS :**

- 64 km southwest of Ahmedabad
- Largest wetland bird sanctuary in Gujarat
- Hosts migratory birds like Rosy Pelicans, Flamingoes, White Storks, Brahminy Docks and Herons
- **Nal Sarovar Lake** is located inside the sanctuary
- It is proposed as a “**Ramsar Convention Site**”

#### **12. VANSDA NP :**

- Located in southern Gujarat in the Navsari district of Gujarat
- Located on the bank of Ambika River
- It has a botanical garden, Gria falls and a conversation centre.
- The Vansda-Waghai state highway and narrow-gauze raiway pass through it.

#### **13. WILD ASS SANCTUARY :**

- Located in the Rann of Kutch Gujarat
- **Only home to Wild Ass in India**
- Other fauna – Chinkara, Nilgai, blackbucks

#### **14. SULTANPUR NP :**

- Located in the Gurgaon district of Haryana , near to Delhi
- Has more than 250 species of birds
- Known for migratory and local birds
- Popular picnic spot for people from the NCR

#### **15. GREAT HIMALAYAN NP :**

- In the Kullu district of Himachal Pradesh
- Home to more than 375 fauna species
- Main faunas : Musk- deer, leopard, flying squirrel, scrow, bharal
- Area -1171 square km
- Established in 1984

#### **16. SALIM ALI NP :**

- Located in the Valley of Kashmir, formerly known as the City Forest National Park

- Only 12 km away from the Srinagar Airport
- Named after the famous ornithologist Dr. Salim Ali

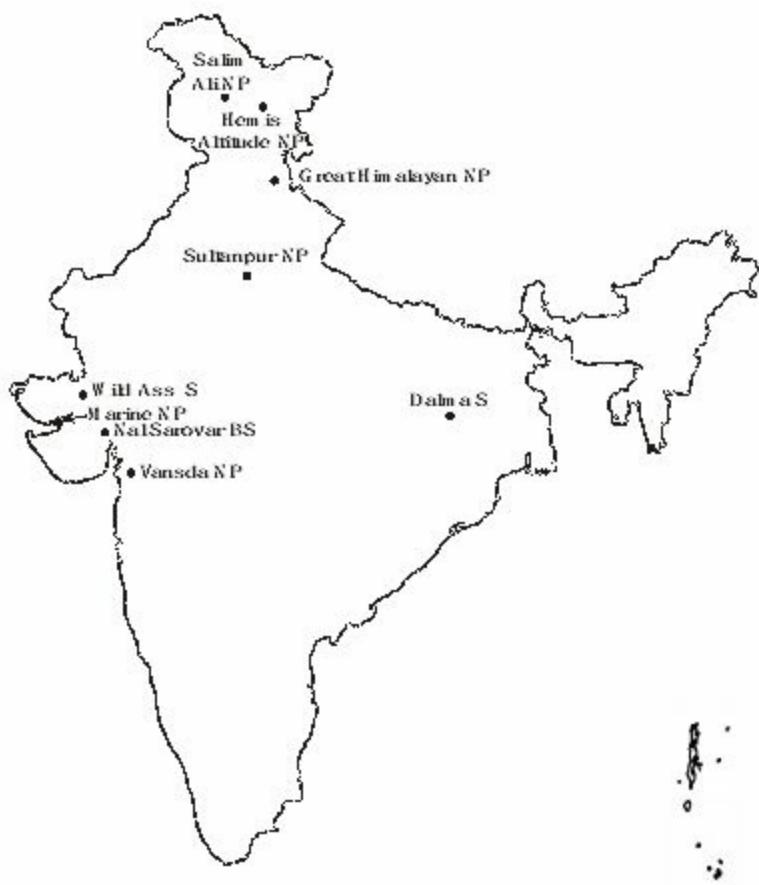
**17. HEMIS ALTITUDE NP :**

- Located in the eastern part of Ladakh
- Home of large numbers of mammals many of which are endangered
- Largest high –altitude reserve in India
- Placed near the bank of the Indus River
- **Fauna :** snow leopard, Tibetan antelope
- Trekking facility in the late summer

**18. DALMA S :**

- Located near the border of Jharkhand and West Bengal, to the northeast of Jamshedpur
- Main attraction – elephants
- Located over the Dalma Mountain Range
- Steep slopes provide excellent trekking facility

## OTHERS -NP, WLS, BS



### 19. BANNERGHATTA NP :

- Located in Karnataka near Bengaluru (22 km south )
- Famous for **butterflies**
- Other fauna : Elephant, sloth bear, chital, barking deer
- Country's first Butterfly Park 200 km away from Ahmedabad

### 20. DACHIGAM NP :

- Located about 20 km to the east of Srinagar
- Habitat of musk deer, leopard, wild cat and numerous birds
- Initially created to ensure clean drinking water supply for Srinagar

### 21. KISTWAR NP :

- Located in the Kistwar district of J&K
- Fauna – Himalayan snowcock, brown bear
- Area – 42,500 hectares
- Establishment – 1981

**22. RANGANTHITTU NP :**

- Located in the Mandya district of Karnataka, on the bank of the Kaveri
- Mainly a bird sanctuary with spoon bill and water fowls
- A tourist complex has been developed to accommodate tourists
- Six isles on the river are also its part

**23. ERAVIKULAM NP :**

- Established to protect the **Nilgiri Tahr**, an endangered species of the wild goat
- Located in the Idukki district of Kerala
- Under consideration for the World Heritage Site
- Anaimudi peak is located inside it

**24. IDUKKI WLS :**

- Located about 40 km from Thodupuzha in the Idukki district of Kerala
- Area – 77 square km
- Between the Chesuthori and the Periyar rivers
- Idukki Dam is located nearby it

**25. NEYYAR WLS :**

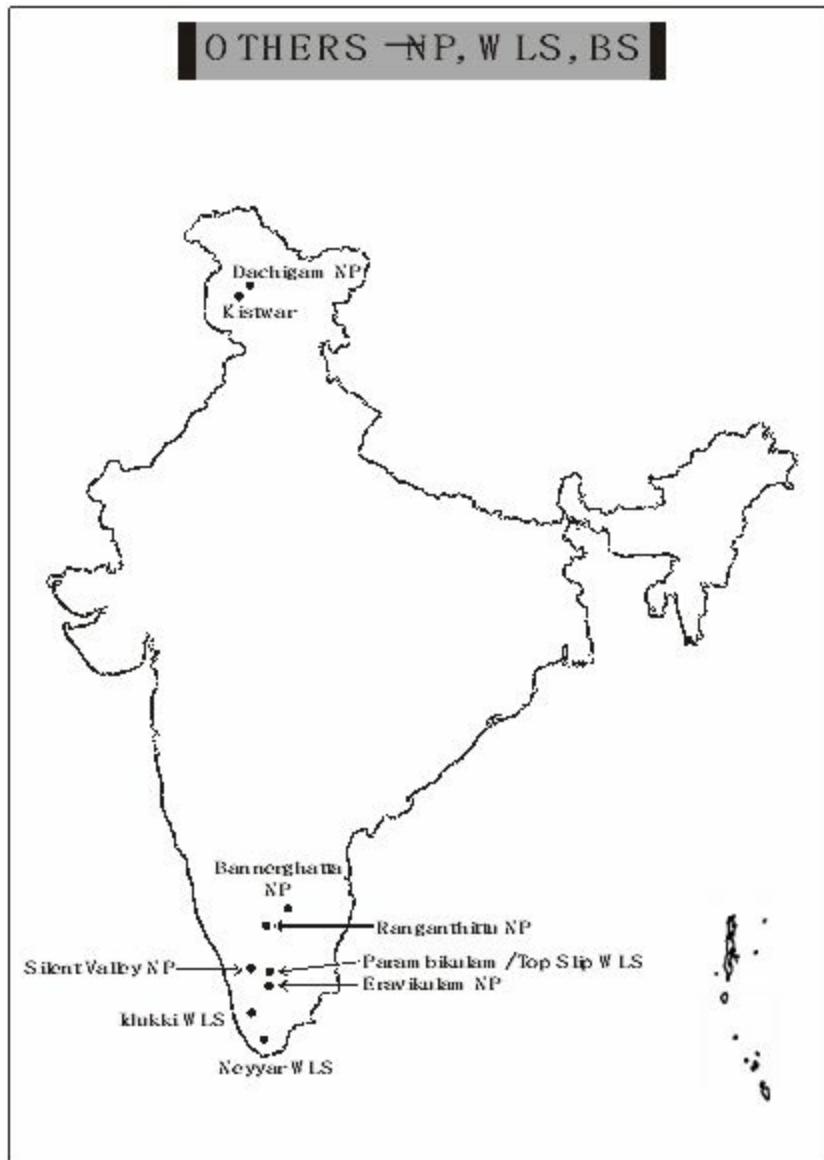
- Located in Kerala around the Agastyamalai Peak
- In the drainage basin of the Neyyar River
- Fauna– Tiger, leopard, elephant
- Located in the Thiruvananthapuram district

**26. PARAMBIKULAM /TOP SLIP WLS :**

- Located in the Coimbatore district of Tamil Nadu
- Fauna- Tiger, Nilgiri Tahr, elephant, leopard
- Largest and well preserved sanctuary of Tamil Nadu
- Source of many rivers
- Area – 958 sq. km
- Home of many tribes

## 27. SILENT VALLEY NP :

- Located in the Kundali hills of the Nilgiri Hills in the Palakkad district of Kerala
- Core of the Nilgiri Biosphere Reserve
- One of the last undisturbed tracts of the Western Ghats forests
- **Save Silent Valley Movement** in 1970s against an HEP project
- It is home to the largest population of lion-tailed Macaques.



## 28. WAYANAD WLS :

- Also known as Muthanga WLS
- Established in 1973, Area – 344 sq km
- In Cannanore and Calicut districts of Kerala

- A part of the Nilgiri Biosphere Reserve

#### **29. BORI WLS :**

- Situated in the southern slopes of the Satpura Range in the Hoshangabad district of Madhya Pradesh
- Bordered by the Satpura National Park
- Backwater of Tawa Reservoir is the habitat of many aquatic lives
- Tiger Reserve along with the Satpura National Park

#### **30. FOSSILE NP :**

- Located in the southeastern part of Madhya Pradesh in the Mandla district
- Has plants in fossil forms that existed in India about 40 million and 150 million years ago

#### **31. MADHAV NP :**

- Located in the northern part of Madhya Pradesh in the Shivpuri district
- Has a varied terrain of forested hills and flat grasslands around a lake
- The hunting grounds of **the Mughal Emperors**

#### **32. VANVIHAR NP :**

- Located at the heart of **Bhopal city** in Madhya Pradesh
- Area -4.45 sq km
- Managed as a Modern Zoological Park
- Situated on the fringe of Upper Lake

#### **33. KEIBUL LAMJAO NP :**

- Located in the south – eastern region of the Loktak Lake, Manipur
- Known for floating decomposed plant materials , locally called '**phoomdis**'
- Presently threatened by the Loktak HEP
- Home of the endangered Bro Entlard dear
- A Ramsar Convention Site

#### **34. PHAWANGUI BM NP :**

- Located in the Blue Mountains in southeast Mizoram close to the Myanmar border
- Clouded leopards are found
- Numerous species of bamboo and pine trees

**35. BHITARKANIKA NP :**

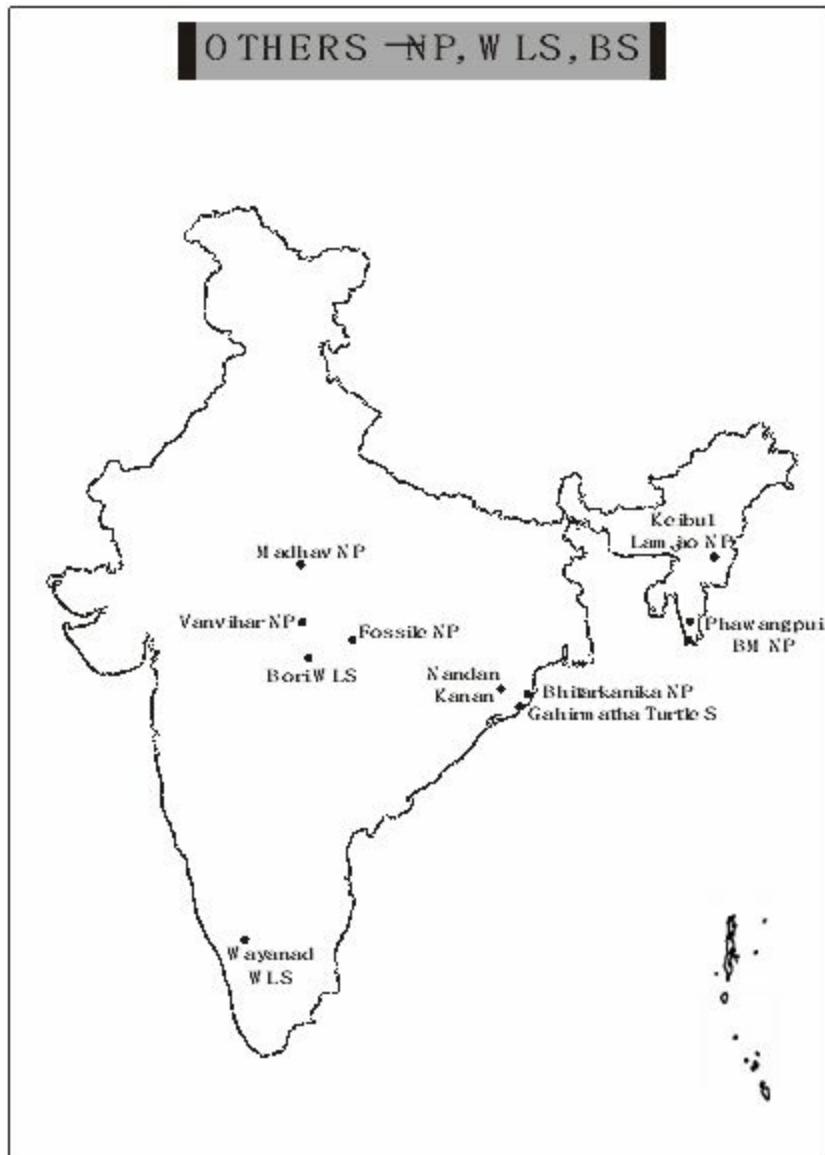
- Located in the Kendrapada district of Orissa, in the coastal region
- 145 sq km of the Bhitarkanika Mangroves in the delta of Brahmani River
- Surrounded by the Bhitarkanika WLS
- Gahirmatha Beach separates the mangroves from the Bay of Bengal
- Ramsar Convention Site
- Fauna- salt water crocodiles, white crocodile, python

**36. GAHIRMATHA TURTLE S :**

- Located at the coast of Kendrapada district of Orissa
- Nesting ground of the **Giant Olive Ridley Turtle**
- **A World Heritage Site**

**37. NANDAN KANAN :**

- Located near Bhubneshwar in Orissa
- Kanjia Lake adds to its beauty
- Known for the rare **white tigers**
- Breeding zone of crocodile
- Asiatic lions are also found



### 38. DESERT NP :

- Located in the Jaisalmer district of Rajasthan
- Funal- Chinkara, blackbuck, **Great Indian Bustard**
- Presence of eagles, falcon and vultures
- Famous for large lizards and snakes

### 39. BHARATPUR/ KEOLADEO BS :

- Located in the Bharatpur district of Rajasthan
- Famous for its indigenous and migratory birds
- **Ramsar Convention Site** and **World Heritage Site**
- Siberian Cranes come in the winter

**40. CALIMERE WLS :**

- Situated near the Point Calimere (Kaveri Delta) in the Nagapattinam district of Tamil Nadu
- Ramsar Convention Site
- Created to conserve Blackbuck Antelope
- Famous for large congregates of waterbirds especially Flamingoes
- 8<sup>TH</sup> smallest National Park in India

**41. GUINDY NP :**

- Located in the city of Chennai (2.82sq km)
- Lies in the vicinity of the Raj Bhawan
- Formed in 1977
- Guindy Snake Park and Childrens Park are located nearby it.

**42. VEDANTHANGAL BS :**

- Located in the Kancheepuram district of Tamil Nadu
- Home to migratory birds
- Oldest BS in India formed in 1936

**43. GUMTI WLS :**

- Located in the South Tipura district
- A vast reservoir nearby the sanctuary attracts large number of birds
- Fauna: Elephant, Bison, Barking deer
- Several herbal plants are found around it

**44. RAJAJI NP :**

- Located in the Haridwar, Dehra Dun and Pauri Garhwal district of Uttarakhand
- Fauna : Elephant, tiger, leopard, kingfisher
- Migratory birds visit during the winter

**45. VALLEY OF FLOWERS NP:**

- Located in the Greater Himalayas in the Uttarkashi district of Uttarakhand
- With Nanda Devi NP forms a natural **World Heritage Site**
- Known for different types of flowers

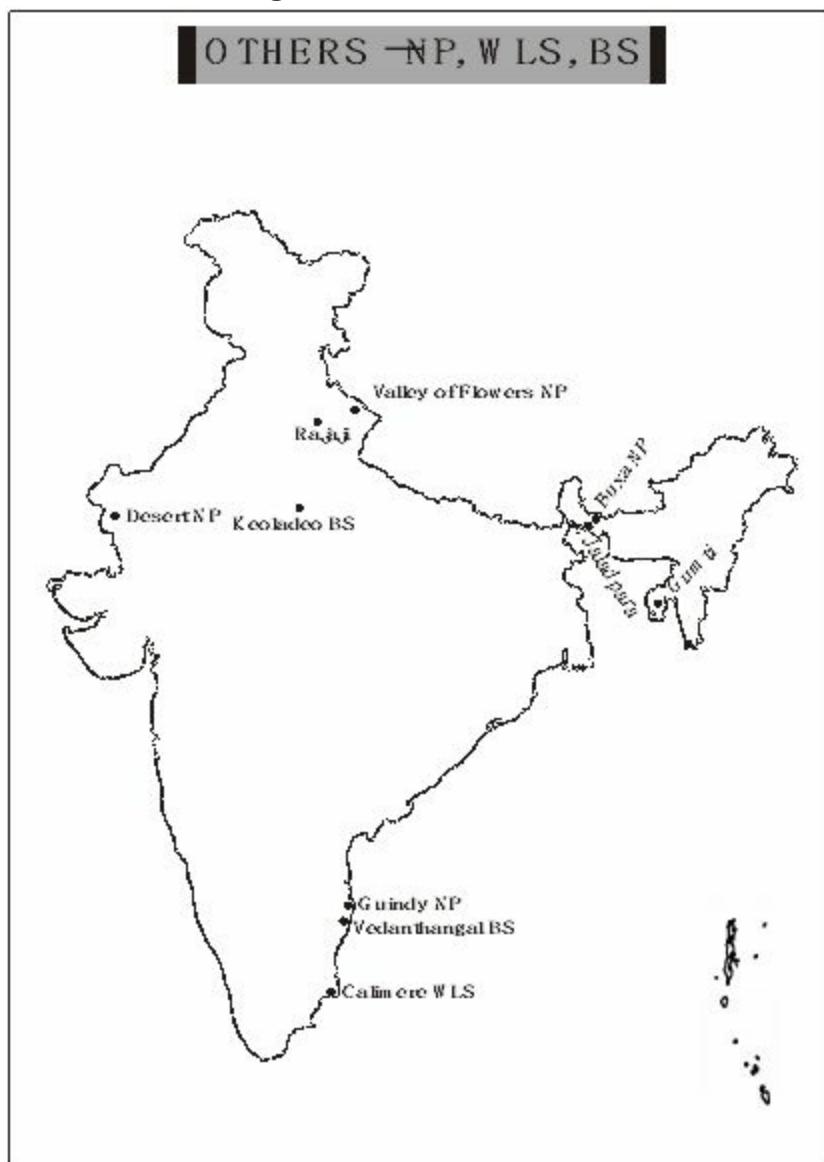
**46. BUXA NP :**

- Located in the Buxa Hills in West Bengal in the vicinity of Bhutan
- A tiger reserve

- Other fauna- Civet, red jungle fowl

#### **47. JALDAPARA NP :**

- Located at the foothills of Eastern Himalayas in the Jalpaiguri district of West Bengal
- Located on the bank of **the River Torsa**
- Declared sanctuary in 1941
- Main attraction **Asiatic one- horned rhinoceros**
- It has the largest number of rhinoceros in West Bengal.



#### **48. MG MARINE NP :**

- Located at Wandoor on the Andaman Islands
- About 29km from Port Blair

- It has coral reefs, fish turtles, wild boar, sea snakes

**49. BUTTON ISLAND NP :**

- There are North, Middle and South Button Island National Parks in the vicinity of Port Blair
- **Fauna** – Dugong, dolphin, salt water crocodile and water monitor lizard

**50. MOUNT HARRIET :**

- Located in Ferraganj Tehsil in Andaman and Nicobar Islands
- Area-47 sq km
- Fauna: Andaman wild pigs, saltwater pigs, turtles, robber and crab
- Inhabited by the Negrito people

**51. SATHYANANGALAM WLS :**

- It is located in the Erode districts of Tamil Nadu.
- It is the largest wildlife sanctuary of the state.
- It has been proposed as the fourth tiger reserve of the state.
- It is an important wildlife corridor for the animals of the Western Ghats and the Eastern Ghats.

**52. SUNABEDA WLS:**

- It is located in the Nuapada district of Odisha.
- It has a total area of 591.75 km<sup>2</sup>.
- It has been proposed to be a tiger reserve.

**53. BOR WLS:**

- It is located in the Wardha district of Maharashtra.
- Some of its adjacent area will be merged with Pench Tiger Reserve as a 'satellite core area'.
- It is centrally located among several other Bengal Tiger habitats.

**54. BALPHAKRAN NP:**

- It is located in the Garo Hills in Meghalaya.
- It is often referred to as the "abode of perpetual winds" as well as the "land of spirits"
- It is the home of **barking deer** and the **golden cat**.

**55. BETLA NP:**

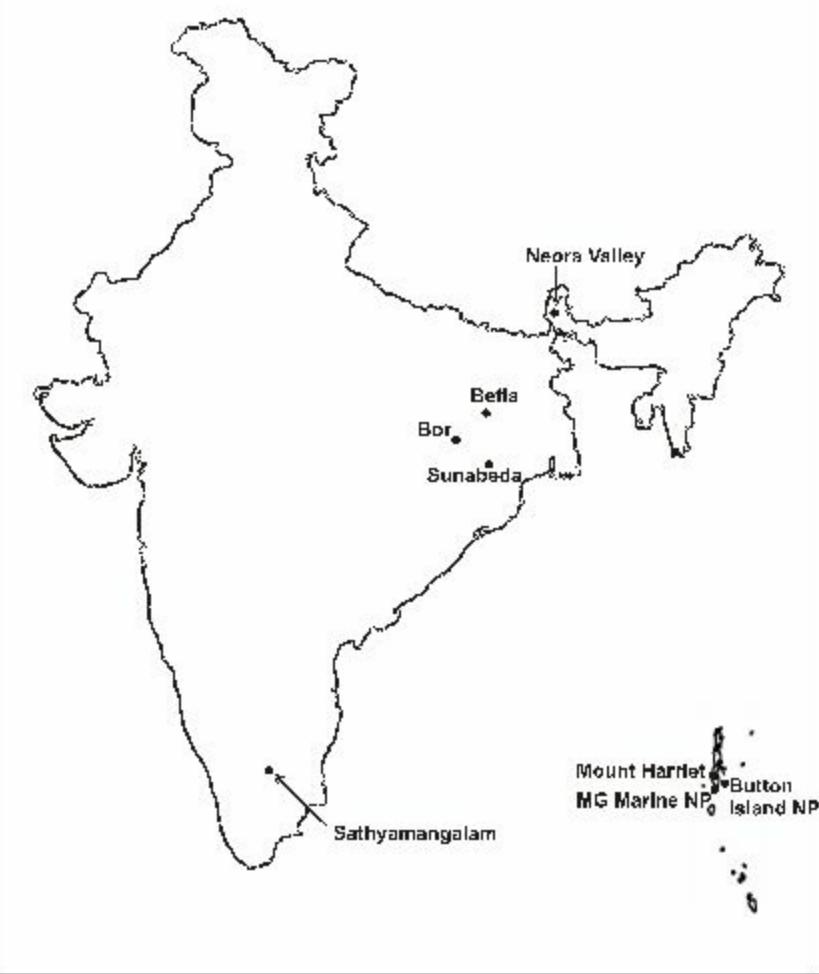
- It is located in the Palamau district of Jharkhand.
- It part comes under the Palamau Tiger Reserve.

- It has waterfalls, hotsprings and forts.

## **56. NEORA VALLEY NP:**

- It is situated in the Kalimpong subdivision under the Darjeeling district in West Bengal.
- It has good population of Red Panda.
- It has such a luxurious growth that even sunlight finds it difficult to touch the ground.
- The Neora River is the major water source for Kalimpong town.

### **■ OTHERS –NP, WLS, BS**



- A hill station in the Baramulla district of J&K
- 50 km from Srinagar at the elevation of 2690 m
- Hill stations of emperors like Yousuf and Jahangir
- **Gulmarg Gondola** – Asia's highest cable car project

## 2. SONMARG :

- Situated along the left bank of the Sindh-Nala, a tributary of the Jhelum
- 84 km from Srinagar on the Srinagar-Leh Road, just 10 km from the Zozila Pass
- Pilgrimage to Amarnath via Baltal route proceeds through it
- A popular hill station and tourist place
- **Thajwas Glacier** is only 2 km away

## 3. DALHOUSIE :

- A popular hill station in Chamba district of Himachal Pradesh
- Established in 1854 by the British as a summer retreat for its troops and bureaucrats
- Located on the western edge of the Dhauladhar Range
- Repository of ancient Hindu culture, art, temples and handicrafts

## 4. DHARMSHALA :

- City that is a popular hill station of Himachal Pradesh is **the winter seat of the state government** and also the district headquarters of the Kangra district
- Mcleod Ganj, a village within Dharmshala is the home of **the Dalai Lama** and the exiled Tibetan Government

## 5. SHIMLA :

- Capital and popular hill station of Himachal Pradesh in the Lesser Himalayas
- Built by the British as their **summer capital of India**
- Industries- handicrafts, artifacts and woodworks
- **Kalka – Shimla Railway** – World Heritage Site
- NH- 22 connects it with Kalka and Chandigarh

## 6. MUSSOORIE :

- Located 34 km from Dehradun in Uttarakhand
- Known as **the Queen of the Hills**
- A hill station at the height of 1880m

- The Dalai Lama established the Tibet government here in April 1959 before shifting to Dharmshala

- **Lal Bahadur Shastri National Academy of Administration is situated here**

## 7. ALMORA :

- Lies to the southern side of the Nanda Devi in eastern Uttarakhand
- Important hill station
- Cultural capital of Kumaon where the Gorkhas built a fort in 1790
- It is a cantonment town.
- It is the native place of Govind Ballabh Pant, Sumitranandan Pant, Rolland Ross.



## **8.NAINITAL :**

- Located around the Naini Lake in eastern Uttarakhand
- Built by the British as **the summer capital of Uttar Pradesh**
- Divided into the upper and the lower parts locally known as Mallital and Tallital
- A famous hill station and tourist place

## **9.MT. ABU :**

- Only hill station of Rajasthan, located in southern Aravallis
- Famous for **the Dilwara Jain Temple**
- Located near the Guru Shikhar
- It is referred as 'an oasis in the desert'.
- The Mount Abu Wildlife Sanctuary is established here.
- The Nakki lake and the Achalgarh Fort are located in the vicinity.
- It is the headquarters of the Brahma Kumari International.

## **10. PACHMARHI :**

- A hill station of central India located in the Satpura Range in the Hoshangabad district of Madhya Pradesh
- Located near to the Dhupgarh Peak
- Has an army cantonment
- Has Pachmarhi NP near to it which has been declared Biosphere Reserve

## **11. DARJEELING :**

- Important hill station in the northern part of West Bengal
- Established by the Britishers as a military sanatorium
- Famous for **the Darjeeling Tea**
- **Mahakal Temple** on the Observatory Hill is sacred to Hindus and Buddhists

## **12. KALIMPONG :**

- A hill station of West Bengal, located in the Darjeeling district
- The Indian Army's Mountain Division is located on the outskirts of the town
- Located on a ridge overlooking the Teesta
- Was a gateway for the trade with Tibet before the Sino-Indian War of 1962

## **13. TURA :**

- Located in western Meghalaya in the West Garo Hills, right below

the Tura Peak

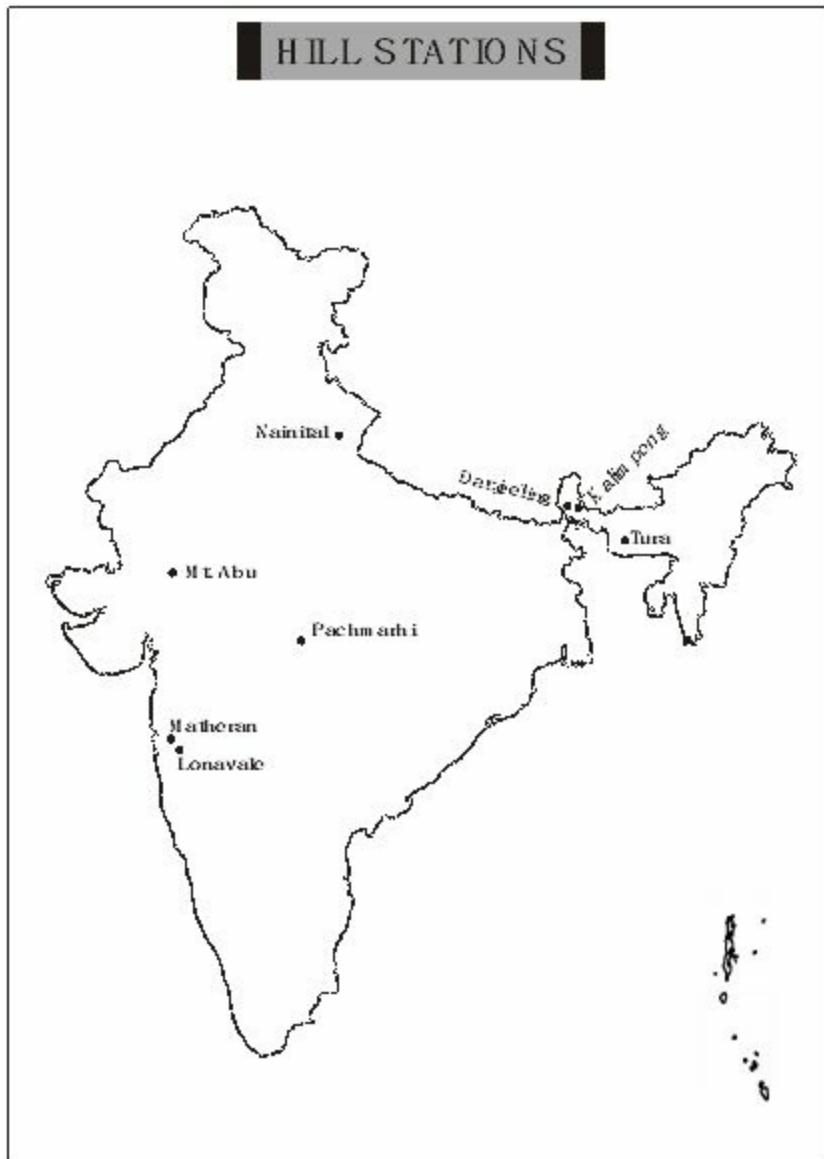
- Cultural and administrative centre of the Garo tribes
- Tourist places around – Nokrek Biosphere Reserve, Balpakram, Siju Cave
- In 1973, the town was made the seat of the Roman Catholic Diocese of Tura

#### **14. MATHERAN :**

- Hill station of Maharashtra on the Western Ghats in the Raigarh district
- **Smallest hill station of India**
- 90 km from Mumbai and 120 km from Pune
- One of the few places in the world where vehicles are not allowed
- Developed by the British
- Connected by a toy train to the mainline rail route at Neral junction

#### **15. LONAVALA :**

- Hill station in the Pune district (64 km away) on the Western Ghats
- Known for hard candy sweet known as '**Chikki**'
- Comes to life during the monsoon season
- Along with **Khandala**, forms a **twin hill station**



#### **16. MAHABALESHWAR :**

- Hill resort and the source of the Krishna River in the Satara district of Maharashtra, on the Western Ghats
- Situated at a height of 1372m, has historical association with Shivaji

#### **17. OOTY :**

- Beautiful, health promoting hill station in the Nilgiri Hills in Tamil Nadu
- Also called as '**Ootacamund**' or **Udhagamandalam**
- Headquarters of the Nilgiri district
- Served as **the summer capital of the Madras Presidency** and other small kingdoms around it

- British named it '**Queen of Hill Stations**'

## **18. KODAIKANAL :**

- Important hill station located in the Palani Hills in Tamil Nadu
- **Kodai Lake**- an artificial lake is very famous
- Open for tourism throughout the year
- Located in the Dindigul district
- Referred as '**the Princess of Hill Stations**'
- Meadows, grasslands, Eucalyptus and shola forests cover the hill

## **19. MAINPAT :**

- It is located in the western Chhattisgarh in the Sarguja district.
- The Tibetan refugees are living here for the last four-five decades.
- It has **Dhakpo Monastery**.
- There are there waterfall, notably the Fish Fall and the Tiger Points water fall.

## **20. NETARHAT :**

- It is located in the Latehar district of Jharkhand.
- It is referred as the "Queen of Chhotanagpur".
- It is famous for its glorious sunries and sunsets during the summer months.
- It has Netarhat Vidyalaya set up in 1954

## **21. PALAMPUR :**

- It is located in the Kangra Valley in Himachal Pradesh.
- It is often referred as "the tea capital of northwest India".
- The town has desired its name from the local word '**pulum**', meaning lots of water.
- The combination of greenery and water gives Palampur a distinctive look.

## **22. PAVAGARH :**

- It is located in the Panchmahal district in the eastern Gujarat.
- It is known for famous Mahakali Temple.
- The Champaner- Pavagarh Archeo logical Park was inscripted by UNESCO as a world Heritage site in 2004.

## **23. PATNITOP:**

- It is located in the Udhampur district in Jammu and Kashmir.
- It is located near the Chenab River.

- The name, is derived from 'Patan da Talab' meaning 'Pond of the princes'.



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RELIGIOUS PLACES

### **1. AMARNATH :**

- Situated in the Greater Himalayas in the Anantnag district of J&K
- Amaranth Cave has limestone topography and naturally formed 'Shivling'
- Known for '**the Amarnath Yatra**'
- Accessible by the Pahalgam and the Baltal (Sonmarg) routes

### **2. PAHALGAM :**

- A hill resort located in the Anantnag district, at the altitude of about 2130m
- Lies on the banks of Lidder River, a tributary of Jhelum
- Main route to Amarnath passes through it

### **3.VAISHNO DEVI :**

- Located near Katra town in the Reasi district of Jammu and Kashmir
- One of the holiest Hindu temples dedicated to Shakti
- Second most visited religious shrine in India after Tirumala Venkateswara Temple
- A rail link from Udhampur to Katra is being built to facilitate pilgrimage

### **4. ANANDPUR SAHIB :**

- Located in the Rupnagar district of Punjab
- Known as “**the Holy City of Bliss**”
- One of the most sacred places of Sikhs
- Located on the bank of the Satluj near the Govind Sagar
- Founded in 1665 by 9<sup>th</sup> Sikh Guru, Guru Tegh Bahadur

### **5.YAMUNOTRI :**

- Source of the Yamuna River in the Uttarkashi district of Uttarakhand
- The seat of the Goddess Yamuna (Temple)
- It is one of the four sites in India’s Chhota Char Dham pilgrimage, the others being Gangotri, Kedarnath and Badrinath
- The Temple of Goddess Yamuna was built by Maharaja Pratap Shah of Tehri Garhwal

### **6.GANGOTRI :**

- Source of the Ganga , lying in the Uttarkashi district of Uttarakhand
- Has **Gangotri National Park**
- Hindu pilgrimage town, one of the four Chhota Char Dhams
- Has a temple of the Goddess Gangotri which was built by the Nepalese General, Amar Singh Thapa in early 18<sup>th</sup> century

### **7.BADRINATH :**

- Situated in the Gangotri Mountain Range in Chamoli District of Uttarakhand
- Located in the Greater Himalayas is an important pilgrimage centre

of Hindus

- It is the '**Abode of Lord Vishnu'**
- Opened from May to October
- One of the **Char Dhams** of Hindus



## 8.KEDARNATH :

- Located in the Greater Himalayas to the west of Badrinath and south of Gangotri in the Chamoli district of Uttarakhand
- Has twelfth century temple of Shiva
- There is a musk deer sanctuary in the region

## 9.HARIDWAR :

- Located at the foot hills of the Shivaliks on the bank of the Ganga in Uttarakhand
- The Ganga debauches into the plains here
- Kumbh Fair is held after every twelve years
- Sacred city and pilgrimage site for Hindus

#### **10. RISHIKESH :**

- Important Hindu pilgrimage place, located very near to Haridwar (just north of it) in Uttarakhand , on the Ganga River
- Located in the Dehradun district
- Known as **the gateway to the Himalayas**
- According to legends Lord Rama did penance here after killing Ravana
- Sometimes nicknamed as '**the World Capital of Yoga**' has numerous Yoga centres

#### **11. SOMNATH :**

- Located along the southern coast of the Kathiawar Peninsula between Veraval and Kodinar
- Temple is dedicated to Shiva, and was one of the richest, that is why looted and destroyed by the Muslim rulers
- It is the most sacred of the twelve Jyotirlingas shrines of the God Shiva

#### **12. KUSHINAGAR :**

- Located in the northeastern part of Uttar Pradesh near the border with Nepal and Bihar
- Important Buddhist pilgrimage where **Gautam Buddha died**
- At the time of Buddha, it was the capital of the Mallas
- **Mahaparinirvana Stupa** is built on the place of Buddha's Mahaparinirvana

#### **13. AYODHYA :**

- Old capital of Awadh located in the Faizabad district of Uttar Pradesh, on the bank of the Sarju River
- Known as the birth place of **the Lord Rama**
- **Babri Masjid** demolished by Hindus claiming it to be the site of the Ram Janma bhoomi

#### **14. NALANDA :**

- Old educational and cultural city located a few kms away to the southwest of Bihar Sharif
- Ruins of the old **Nalanda University**
- Has the **Nalanda Open University**
- In 2006, Singapore , China, India, Japan and other nations announced a proposed plan to restore and revive the **Nalanda International University**



#### **15. GAYA :**

- Historical and cultural centre, located in the southern part of Bihar, 100 km south of Patna on the bank of the Falgu River

- Sanctified by both Hindus and Budhists
- Most popular temple – Vishnupad Temple
- At Brahmayoni Hills- Buddha preached his **First Sermon**
- Shrine of Hazrat Makhdoom Syed Shah Durwesh
- Will host the second Officers Training Academy(OTA). The first OTA is in Chennai

#### **16. BODH GAYA :**

- Famous religious and historical town in Bihar to the south of Gaya, near the border with Jharkhand
- Place of the **attainment of enlightenment** by Buddha
- **Mahabodhi Temple Complex –World Heritage Site**

#### **17. RAJGIR :**

- Old historical town, located between Nalanda and Gaya, in the Nalanda district
- The first capital of the **kingdom of Magadha**
- **Jarasandha** belonged to this place in the Mahabharata
- Has been developed into a health and winter resort due to its warm water ponds

#### **18. SHANTI NIKETAN :**

- A small town in Birbhum district of West Bengal
- **Vishwa Bharati University** was established by Rabindranath Tagore in 1921
- Shanti Niketan was named by Maharshi Debendranath Tagore, Rabindranath Tagore's father
- Indira Gandhi, Satyajit Ray, Amartya Sen studied here

#### **19. TAWANG :**

- Located in the western part of Arunachal Pradesh
- Famous for the **Tawang Monastery**, founded in accordance to the wishes of the 5<sup>th</sup> Dalai Lama, Nagwang Lobsang Gyatso
- It is the largest monastery in India as well as outside Lhasa

#### **20. PARASURAM KUND :**

- Located 13 miles north – east of Tezu, is the district headquarters of Lohit district of Arunachal Pradesh
- Large number of pilgrims visit every year during **Parasuram Mela**

held in the month of January

- Believed that in the kund (lake) Parashuram washed away all his sins

## 21. PALITANA :

- Located 50km southwest of Bhavnagar city, is a major pilgrimage centre for Jains
- Is the place where millions of Jain sadhus and munis got salvation
- Palitana temples (1300) are considered to be the most sacred pilgrimage place of Jains
- Main temple is dedicated to 1<sup>st</sup> thirthankar Lord Adinath (Rishabhdeva)



## **22. UJJAIN :**

- Located on the Malwa Plateau on the bank of Sipra River
- It was an important centre of learning and the capital of Avanti
- Important pilgrimage centre **Mahakaleshwar Temples.**
- Junction of five railways and NH-3 passes
- Cotton textiles, soyabean processing

## **23. SANCHI :**

- Historical place located in the Raisen district of Madhya Pradesh, to the northeast of Bhopal
- A stupa here dates back to the 3<sup>rd</sup> century BC, **Largest stupa in India**
- **A World Heritage Site**
- Located on the bank of the Betwa

## **24. KHAJURAHO :**

- Located in the Chhatarpur district of Madhya Pradesh in the northern part of the state in the Bundelkhand
- Famous for its numerous temples with excellent architecture with sexual appeals built by the Chandela rulers in the 10<sup>th</sup> and 11<sup>th</sup> centuries, from the sandstones of Panna
- **A World Heritage Site**

## **25. MANDU :**

- Located in the Dhar district of Madhya Pradesh near the NH-3 had been centre of many Hindu and Muslim rulers
- Famous for the last Sultan of Malwa, Baj Bahadur and his wife Rupmati
- **Attractionas** – Rupmati Palace, Mandu Fort, Jahaz Mahal, Hindola Mahal, Asharfi Mahal etc.

## **26. KONARK :**

- Located on the coast of Bay of Bengal in the centre of the Mahanadi Delta
- Famous for the magnificent thirteenth century **Sun Temple – World Heritage Site**
- Some of the temples are adorned with erotic sculptures

## **27. PURI :**

- Located on the coast of the Bay of Bengal in the southwestern part of

the Mahanadi Delta.

- Famous for the **Jagannath Temple**, where **the Rathyatra** is held every year

## **28. AJANTA :**

- Located in the Ajanta Range of Maharashtra
- Has a series of **29 caves** containing Buddhist frescoes and sculpture from the first century BC to 7<sup>th</sup> century AD
- Caves are cut on the gorge of the Waghore River, a tributary of Godavari
- **A World Heritage Site**

## **29. ELLORA :**

- Located in the southwestern part of the Ajanta Range in Maharashtra near Aurangabad
- Famous for the rock caves and paintings of the ancient period
- **A World Heritage Site**

## **30. NANDED :**

- Located between the Penganga and the Godavari rivers in Maharashtra
- Sikh pilgrimage – Gurudwara built to commemorate the assassination of the tenth Guru, Guru Gobind Singh in 1708
- Industries- cotton textile, leather



### 31. SHIRDI :

- Located in the Ahmadnagar District of Maharashtra
- Best known as the late 19<sup>th</sup> century home of the popular guru **Shirdi Sai Baba**
- Shani Shingnapur, a holy place located near Shirdi, is famous for temple of **Lord Shani**

### 32. BADAMI :

- Formerly known as **Vatapi**, is located in the Bagalkot district of Karnataka
- It was the regal capital of the Badami Chalukyas from 540 to 757 AD
- Famous for rock cut and other structural temples

### **33. HAMPI :**

- Located within the ruins of Vijayanagara, the former capital of the Vijayanagara Empire
- Has **Virupaksha Temple** and several other monuments
- The ruins are a **UNESCO's World Heritage Site**, listed as the **Group of Monuments at Hampi**
- Located on the bank of the Tungabhadra near the Tungabhadra Dam

### **34. HALEBIDU :**

- Located in the Hassan district of Karnataka
- Earlier called as **Dwarasamudra**, was the regal capital of the Hoysala Empire in the 12<sup>th</sup> century
- Known for the Hoyasalewara and Kedareswara temples. The former temple is now being proposed for the World Heritage Site

### **35. AIHOLE :**

- A temple complex in the Bagalkot district of Karnataka
- Located east of Pattadakkal, along the Malprabha River
- Very popular tourist spot of north Karnataka
- Has the potential to become a World Heritage Site
- Known for **the Aihole Inscription**

### **36. TIRUPATI :**

- Situated in the Chittoor district of Andhra Pradesh near the border with Tamil Nadu
- Has Tirumala Hill Temple
- The temple of **Venkateshwaram** attracts thousands of pilgrims
- **Most visited religious shrine of India**

### **37. KANCHIPURAM :**

- Located to the southwest of Chennai, is also called as '**the Varanasi of the South**'
- Located on the bank of the Palar River
- Founded in the third century BC
- 'Sarees' made here are well known.

### **38. MAMALLAPURAM :**

- Also known as **Mahabalipuram**, is located to the south of Chennai.
- Ancient port, famous for its monuments of the Pallav dynasty (6-9

centuries AD).

- Rock – cut temples at the sea coast
- **A World Heritage Site.**



### 39. RAMESWARAM :

- Located on the central part of the Pamban Island
- Has ancient Lingam and sixteenth and seventeenth century Shiva and Vishnu temples
  - One of **the four dhams** of Hindus, the others being Badrinath, Dwarka and Puri

### 40. MADURAI :

- A million plus city located on the bank of the Vaigai River
- It was the capital of the Pandya Kingdom
- Known for **the Minakshi Temple**
- **Oldest continuously inhabited city in the Indian Peninsula**
- Known as ‘**the City of Temples**’ and ‘**the Cultural Capital of Tamil Nadu**’

#### **41. SHRAVANABELAGOLA :**

- Located in the Hassan district of Karnataka
- Known for the statue of **Gomteshwara** or **Bahubali**, is one of the most important Jain pilgrimage centres
- The last shrutakevali, **Bhadrabahu Swami** and **Chandragupta Maurya** meditated here

#### **42. FATEHPUR SIKRI :**

- A medieval city , 35 km west of Agra in Uttar Pradesh
- Built by Akbar in honour of **Salim Chisti**
- Has the **Buland Darwaja**, largest gate in India

#### **43. AJMER :**

- Situated along the Ana- Sagar artificial lake, created by the damming of the Luni River in the twelfth century
- Known for the **Dargah of Khwaja Moinuddin Chisti**
- NH-8 and a railway pass through it
- **Pushkar Lake** is located nearby it where the Pushkar Fair is organised

#### **44. RAJIM :**

- It is located at the confluence of the Mahanadi, Pairi and Sonpur rivers, called Triveni Sangam.
- It is known as 'the Pryag of Chhattisgarh'
- It has many temples of them famous are Sri Rajiv Lochan Mandir (Lord Vishnu) and Kulesvara Mahadeva Mandir.
- The annual Rajiv Mela is promoted as 'the Panchava Kumbha Mela'.

#### **45. MAIHAR :**

- It is a municipality in the Satna district of Madhya Pradesh.
- It is known for the temple of revered mother goddess Sharda situated on Trikuta hill.
- The town was formerly the capital of the princely state of Maihar.

- It is believed that Alha and Udal are associated with this place.
- People believe that Alha performs puja daily at 4 am, even today.

#### **46. MEHANDIPUR BALAJI :**

- It is located in the Dousa district of Rajasthan.
- The temple is located 3 km towards the right on the Jaipur- Agra national highway.
- The temple is dedicated to Lord Hanuman.
- It is believed that the divine power cures any persons possessed by evil spirit.



#### **1. LOWER JHELUM :**

- 905MW
- Located upstream of the Uri Project on the Jhelum River in the Kashmir Valley at Baramula

## **2.SALAL :**

- On the **Chenab River** in the Reasi district
- Commissioned in 1987 (Stage-I)
- Installed capacity – 690 MW
- **Beneficiary states** : J&K, Punjab, Haryana, Delhi, UP, Rajasthan etc.

## **3.DUL HASTI :**

- Located on the Chandra River, a headstream of the Chenab in the Kishtwar district of J&K
- Concrete gravity dam at village **Dul** and the power house at the village **Hasti**
- Installed Capacity – 390 MW
- It was undertaken in collaboration with five French partners

## **4. BAGLIHAR :**

- A run – of- the – river power project on the Chenab River in the southern Doda district of J&K
- Installed capacity is 900 MW
- On June 1,2010 India and Pakistan resolved the dispute
- Pakistan agreed not to raise the issue further

## **5.TULBUL :**

- Located at the edge of the Wular Lake on the Jhelum River
- Pakistan calls it **the Wular Barrage**
- It is a ‘navigation lock-cum-control structure’
- India has decided to seek international arbitration.

## **6.NIMOO BAZGO :**

- It is a run-of-the –river scheme to harness the hydropower potential of the Indus River in the Leh district
- Capacity – 45 MW.
- Pakistan has dropped its Objections.

## **7.NANGAL :**

- **Ganguwal** (about 19km downstream from Nangal )
- **Kotla** power house (29km from Nangal)
- Both of the above have 2 units of 24 MW each and one unit of 29 MW

## **8.CHAMERA :**

- On the Ravi River in the Chamba district of HP
- Utilizes the hydro power potential available after the confluence of the Siul River with the Ravi River
- Installed capacity – 1071 MW

## **9.NATHPA-JHAKRI :**

- On the Satluj near the **Nathpa** village in Kinnaur district of Himachal Pradesh
- Power house 40km downstream at the village **Jhakri** in Shimla district
- Commissioned in 2004
- Installed capacity – 1500MW

## **10. BHAKRA :**

- Located on the Satluj , has created a huge reservoir called the Govind Sagar near Rupnagar (Ropar )
- One of the highest straight gravity dams
- Two power houses at **left (450 MW)** and **right (600 MW)** banks



### **11. PONG :**

- On the Beas River in Himachal Pradesh, in Dhaoladhar Range near Pong village
- Irrigates Punjab, Haryana and Rajasthan
- Total installed capacity – 1020 MW

### **12. RIHAND :**

- Straight gravity concrete dam on the Rihand in the southeastern Uttar Pradesh
- Forms **the largest man made reservoir of India**, Gobind Ballabh Pant Sagar
- Power house has 6 units, with a 50 MW capacity each. (Total 300

MW)

- Supplies power to UP, Bihar and MP

**13. CHIBRO (TONS) :**

- Located on the River Tons in Uttarakhand
- Installed capacity -240 MW

**14. TEHRI :**

- Dam situated at the confluence of the Bhagirathi and the Bhilgana rivers in Garhwal district of Uttarakhand
- 2160.5m high dam is said to be the **highest dam of Asia**
- Expected to generate 2400 MW

**15. RANAPRATAP SAGAR :**

- On the Chambal River at Rawatbhata in Rajasthan
- Power station is located on the left bank just at the toe of the dam
- 4 units of 43,000 KW each
- Installed capacity – 172 MW

**16. JAWAHAR SAGAR :**

- On the Chambal River 29 km upstream of Kota city in Rajasthan
- 3 units of 30,000 KW each
- Completed in 1971-72
- Installed capacity – 99 MW

**17. KOTA BARRAGE :**

- Constructed in 1960, on the Chambal River, at a distance of less than 1 km from Kota city in Rajasthan
- 36m high and 600m long earthen barrage

**18. GANDHI SAGAR :**

- On the Chambal at the border of Madhya Pradesh and Rajasthan constructed in 1960
- 5 units of 23,000 KW capacity each
- Total installed capacity – 115 MW

**19. BARGI :**

- On the Narmada at Bijaura village near Jabalpur in Madhya Pradesh
- Irrigated 1.57 lakh hectares
- HEP. 90 MW

**20. NARMADA SAGAR :**

- On the Narmada in Madhya Pradesh near Khandwa

- HEP-1000 MW (8x125)

## 21. BANSAGAR :

- On the Son River in Madhya Pradesh between Rewa and Shahdol
- HEP- 405 MW
- Joint venture of Uttar Pradesh, Madhya Pradesh and Bihar

## 22. OMKARESHWAR :

- On the Narmada in MP at Mandhata village in the East Nimar district
- HEP-5X65 = 520MW
- Located near Khandwa



## 23. MAHESHWAR :

- On the Narmada, downstream off the Omkareshwar Dam in Madhya Pradesh
- HEP –  $10 \times 40 = 400$  MW

#### **24. MATATILA :**

- Joint project of Madhya Pradesh and Uttar Pradesh on the Betwa River near the border of the two states, located in Lalitpur Tehsil of Uttar Pradesh

- Installed Capacity- 45MW

#### **25. TAWA :**

- On the Chota Tawa, a left bank tributary of the Narmada River
- At the Ranipur village of Hoshangabad district
- HEP – 13.50 MW

#### **26. KOSI :**

- On the Kosi River at the Indo-Nepal border
- Power station with the installed capacity of 20 MW is located on the Eastern Kosi Canal
- Electricity is shared by India and Nepal in the 50 per cent basis

#### **27. MAITHON :**

- On the Barakar River near the confluence of the Damodar and the Barakar in Jharkhand
- Installed capacity – 60 MW

#### **28. PANCHET :**

- On the Damodar River in Jharkhand
- Installed capacity – 40 MW
- Part of the DVC
- **India's first underground HEP station**

#### **29. TILAIYA :**

- On the Barakar River in Jharkhand
- Only concrete dam of the area
- Two power stations of 200 KW each

#### **30. KONAR :**

- On the Konar River in the Hazaribagh district in Jharkhand
- HEP- 10 MW

#### **31. GUMTI :**

- Located in Tripura
- Has 3 units with 5 MW capacity each
- A small hydro power station in south Tripura
- Lack of water during the summer season

### **32. UMIUM :**

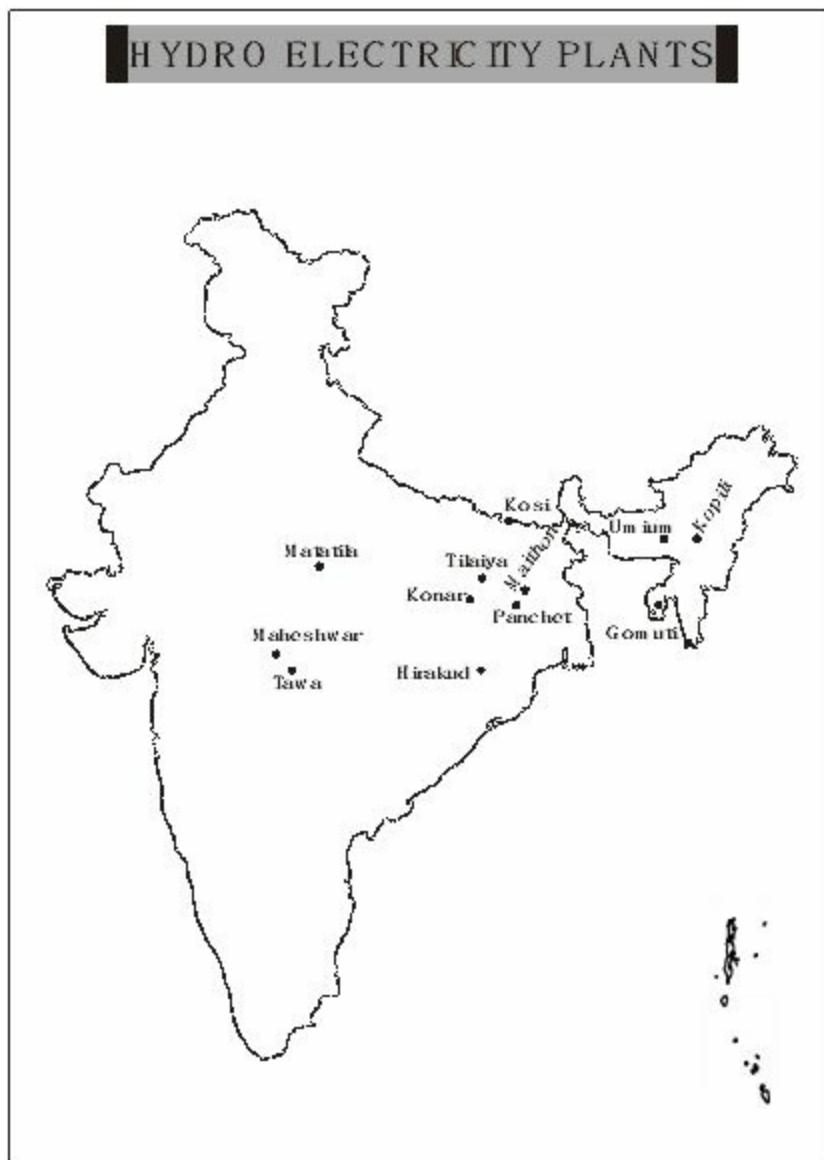
- 50 MW
- Forms **the Umium Lake** (15 km from Shillong)
- Biggest artificial lake of **Meghalaya**
- First hydel power project of the North-East

### **33. KOPILI :**

- Located on the River Kopili in the North Cachar Hills district of Assam
  - It was the first venture of NEEPCO when the project came into existence in 1976
    - Total installed capacity along with the Khangdong HEP Project – **275 MW**

### **34. HIRAKUD :**

- Located at Hirakud on the Mahanadi River about 14km upstream off the city of Sambalpur in Orissa.
- 3.5 lakh KW electricity generation
- Supplies electricity to the Rourkela Steel Plant
- Installed Capacity – 307.5 MW
- Largest man-made dam in the world (25.8 km)



### 35. BALIMELA :

- An earth – cum rock fill dam at **Chitrakonda**
- Joint project of Orissa and Andhra Pradesh
- Located 35 km from Malkangiri on the Sileru River, downstream of the Machhkund Reservoir
- Total installed capacity- 510 MW.

### 36. UKAI :

- On the Tapi River in Gujarat, upstream from Surat
- HEP – 300 MW
- Electricity to Surat and neighbouring cities
- Largest reservoir of Gujarat

**37. SARDAR SAROVAR :**

- Located on the Narmada River at the **Kevadia village** of Vadodara district of Gujarat
- HEP – 1450 MW

**38. KADANA (MAHI ) :**

- Located on the Mahi River in Gujarat in Panchmahal district.
- Installed capacity 240 MW

**39. KOYNA :**

- A Major HEP across the River Koyna, a tributary of the Krishna River
- Located in the Western Ghats region in Maharashtra near Satara
- Installed Capacity- 1920 MW
- Largest dam of Maharashtra

**40. BHIVPURI ( TATA ) :**

- Managed and built the Tata Power in Maharashtra at Bhivpuri in 1915
- India's first large HEP

**41. KHOPOLI :**

- Site of the first large HEP in India by Tata Power in 1915
- Located in Maharashtra
- Capacity – 3 X 24 MW

**42. PURNA :**

- On the Purna River, a tributary of the Godavari in the Parbhani district of Maharashtra
- Power station at Yeldari Dam

**43. BHIRA :**

- Third HEP of the Tata Power installed in 1927 located in Maharashtra
- Capacity – 6 X 25 MW
- It gets water from the Mulsi Dam located in the Pune district

**44. SILERU :**

- Installed Capacity - 530 MW
- Lower Sileru Dam is built across the Sileru River near the border of Orissa and AP

**45. MACHHKUND :**

- Installed capacity – 120 MW
- On the Duduma River in the Koraput district of Orissa
- Joint project of AP and Orissa
- Displaced large number of people

**46. NIZAM SAGAR :**

- Located n the Manjra River, a tributary of the Godavari River, in the Nizamabad district of Telangana

- Installed capacity – 10 MW

**47. SRISAILAM :**

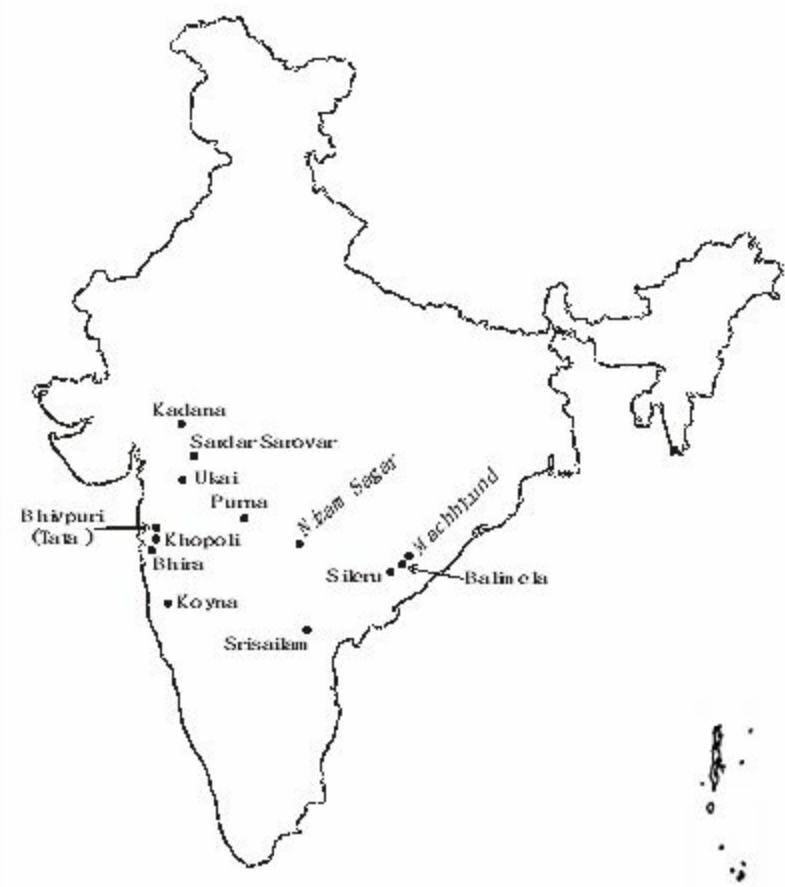
- On the Krishna River in Andhra Pradesh upstream of the Nagarjunasagar Reservoir

- Installed capacity – 1670 MW

- Located in the Kurnool district of Andhra Pradesh

- 2<sup>nd</sup> largest capacity HEP project in India

## **HYDRO ELECTRICITY PLANTS**



### **48. NAGARJUNA SAGAR :**

- Located on the Krishna River in Nalgonda district of Telangana
- A power house with two units of 50 MW each was set up at the toe of the dam in 1970
- Installed capacity – 816 MW

### **49. TUNGABHADRA :**

- Located on the Tungabhadra River at Mallapur in Bellary district of Karnataka
- Three power stations have a potential of 126 MW

### **50. SHARAVATI :**

- 1035 MW
- Located in Karnataka on the Sharavati River in the Shimoga district

#### **51. KALINADI :**

- Hydel power project on the Kalinadi River in the Uttar Kannada district of Karnataka
- Installed capacity – 910 MW

#### **52. MAHATMA GANDHI (JOG FALLS) :**

- 240 MW
- Located on the Sharavati River in the Shimoga district of Karnataka
- Operational since 1948

#### **53. BHADRA :**

- 33.2 MW
- Located on the Bhadra River in Karnataka
- Power stations are built on both sides of the Bhadra Dam

#### **54. SIVASAMUDRAM :**

- **IInd HEP of India**, on the Kaveri river in Karnataka at the site of the Sivasamudram Falls
- Supplies power to the Kolar Gold Mines
- HEP – 42 MW

#### **55. LINGANAMAKKI :**

- Located 6 km from the Jog Falls in Karnataka on the Sharavati River in the Shimoga district
- Has two units.
- HEP – 55 MW capacity
- Run by bertical axis Kalpan turbines

#### **56. IDUKKI :**

- Located in Idukki district of Kerala on the Periyar River
- Installed capacity – 780 MW
- 6 units of 130 MW each
- **Largest HEP of Kerala**
- **Idukki Dam – Largest arch dam in Asia**

#### **57. SABARIGIRI :**

- 335 MW
- Located in Kerala

- Established in 1965
- Located 56 km from Pathanamthitta district
- Second largest HEP of the state after the Idukki

**58. SHOLAYAR :**

- 54 MW
- Sholaiyar Dam is the second deepest dam in Asia
- Located in the Coimbatore district of Tamil Nadu

**59. KALLADA :**

- Small hydro – electric project of Kerala located on the Kallada River that drains into the Asthamudi Lake
  - Installed capacity – 15 MW
  - Kallada Project forms the largest reservoir of the state

## **HYDRO ELECTRICITY PLANTS**



### **60. PARAMBIKULAM ALIYAR :**

- 185 MW
- Located in Palakkad district of Kerala on the Parambikulam River
- Irrigates Kerala and Tamil Nadu

### **61. PYKARA :**

- 70 MW
- Located near Ooty in Tamil Nadu on the Pykara River
- Pykara River is the largest river of the Ooty district of Tamil Nadu
- Pykara Dam is located at the Pykara Falls

### **62. METTUR :**

- Located on the Kaveri River in Tamil Nadu
- Partly facilitated the shift of the cotton textile industry towards South India
- Installed capacity – 240 MW

**63. KODAYAR :**

- 100 MW
- Located in the Kanyakumari district of Tamil Nadu
- Has two power houses

**64. ALIYAR :**

- 60 MW
- Located in the Coimbatore district of Tamil Nadu
- It's a micro hydel project located at the toe of the Aliyar Dam
- Located on the Aliyar River

**65. PAPNASAM :**

- 24 MW
- Located in the Tirunelveli district of Tamil Nadu
- Has four units with 8 MW capacity each
- Also known as Tambiraparani River Project

**66. TANAKPUR :**

- It is located in the Champawat district of Uttarakhand.
- It is located near the Kali River, close to Nepal.
- A hydroelectric plant of 120 MW is established at Bankasa.

**67. DHAULIGANGA -I :**

- It is located in the Chamoli district of Uttarakhand.
- A hydroelectric plant with the installed capacity of 280 MW is built here.

**68. BAPSA :**

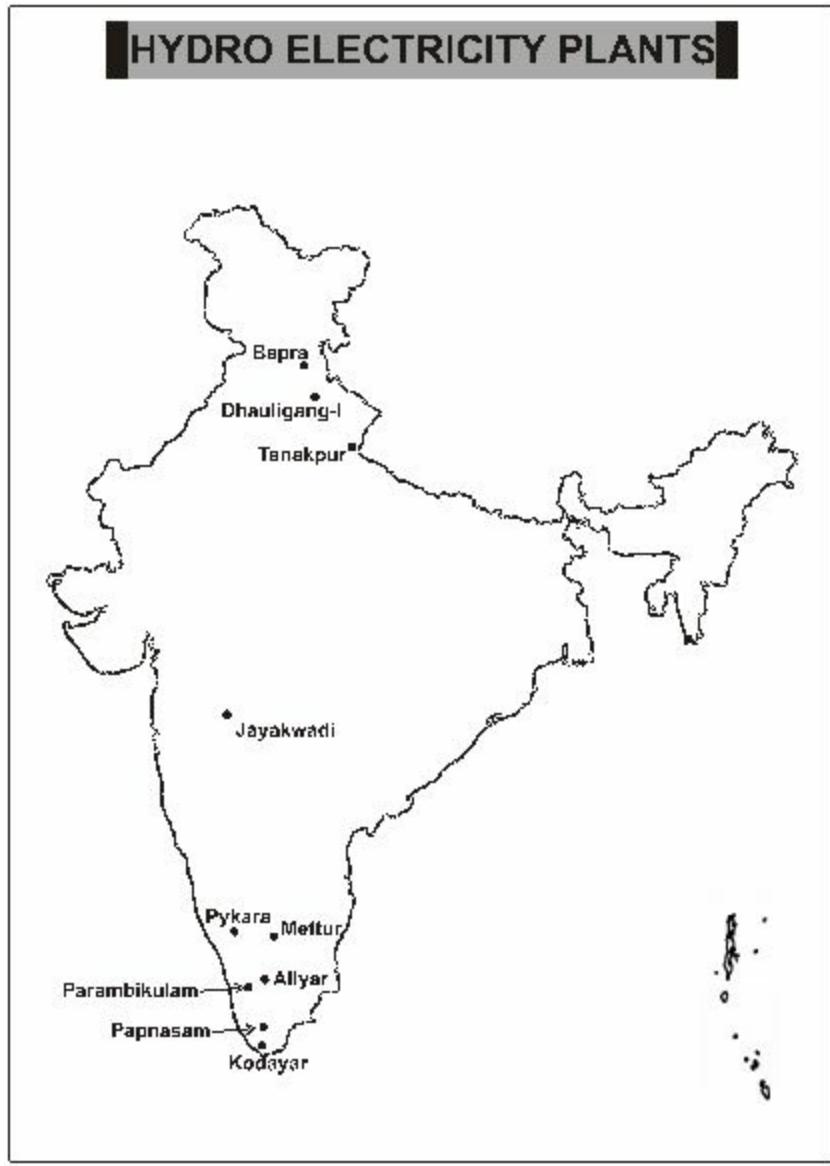
- It is built across the Bapsa River, a tributary of the Sutlej.
- It is located in Himachal Pradesh.
- Its installed capacity is 300MW.

**69. JAYAKWADI :**

- It is located in the Godavari River in the Aurangabad district of Maharashtra.
- It is a multipurpose project and 80% of its water is used for

irrigation.

- It has small hydroelectric power plant (12 MW).



## 1. URAN :

- Installed Capacity - 852 MW
- Uran is part of the Navi Mumbai, lying in the Raigarh district near Panvel
- Uran Electric Project is **Asia's first power plant that runs on gas**
- A SEZ has been developed here

## 2.DABHOL :

- 2150 MW- petroleum based plant
- Located at Anjanwel, Ratnagiri district of Maharashtra
- The plant was built by the **Dabhol Power Company**
- Due to political controversy its operation has been interrupted on several occasions.

### **3.TROMBAY :**

- Located on the Trombay Island, to the southeast of the Salsette Island
- **BARC** is located here.
- Thermal power plant – 837.5 MW

### **4. KAWAS :**

- **Gas based** 645 MW power plant, located in the Surat district of Gujarat
- Started power generation in 1992
- Uses gas from South Bassein Gas Field and water from Hazira Branch Canal
- Beneficiaries –Madhya Pradesh, Gujarat, Maharashtra, Goa

### **5.SIKKA :**

- 2 units of 120 MW each
- Located near Jamnagar
- Coal based power station

### **6.UTRAN :**

- 640 MW
- **Gas based** power station located on the bank of Tapi River near Surat
- India's first 370 MW gas –based combined cycle power station

### **7.DHUVARAN :**

- 534 MW (Oil and Gas)
- First power plant of Gujarat Electricity Board (GEB)
- Located near Khambhat in the Anand district
- All the units are built by the General Electric of USA

### **8.RAMAGUNDAM :**

- **NTPC** power plant -2600 MW
- Industrial town in the Karimnagar district of Telangana in the northern part of the state between the Godavari and the Maher rivers
- Known as '**the City of Energy'**

- Currently **the largest power station of S. India**
- First ISO 14004 certified super thermal power plants in India.

### **9.KOTHAGUNDAM :**

- Located to the east of Singareni in the Khammam district of Telangana
- Thermal power plant – 1680 MW
- Producer of low quality coal used for the thermal power generation
- Known as the **Coal Town of S. India**



### **10. BHADRACHALAM :**

- Located on the bank of the Godavari in the Khammam district of AP

- **Bhadrachalam Temple** devoted to the Lord Rama is a famous Hindu pilgrimage site

#### **11. KOLAGHAT :**

- 1260 MW installed capacity
- Located on the bank of the Rupnarayan River in Midnapore East district of West Bengal
- Has the largest state sector power plant of West Bengal
- Located on the NH-2

#### **12. BAKRESHWAR :**

- Thermal power plant located in the Birbhum district of WB, on the bank of the Bakreshwar River
- Installed Capacity - 1050 MW

#### **13. GAURIPUR :**

- 413 MW
- Located on the bank of the Brahmaputra River in the Dhubri district, in western Assam

#### **14. NEYVELI :**

- 2300 MW
- Located in the Cuddalore district of Tamilnadu, west of Puducherry
- Uses the locally mined lignite coals for power generation
- Managed by the Neyveli Lignite Corporation

#### **15. OBRA :**

- Located in the Sonbhadra district in the southern UP, on the bank of the Son River
- The coal-powered thermal power station has 13 units with the total capacity of 1550 MW

#### **16. HARDUAGANJ :**

- Located in the Aligarh district in western Uttar Pradesh
- Coal based power plant has 7 units and the total capacity of 665 MW
- The place is also known as **Kasimpur Power House**

#### **17. UNCHAHAR :**

- Owned and operated by NTPC, is located in the Rae Bareli district of Uttar Pradesh
- Coal is supplied from the Jharia and North Karanpura coal fields

- Produces about 1050 MW of power from its 4 units of 210 MW each

#### **18. TUNDLA :**

- Located in southwestern Uttar Pradesh in the Firozabad district, 24km away from Agra
- Important town of the British period
- Bollywood actor **Raj Babbar** belongs to this place

#### **19. SINGRAULI :**

- Largest coalfield of Madhya Pradesh in the eastern part of the state
- Thermal power plant of NTPC – 2000 MW
- The power plant is located in the Singrauli district of UP.



#### **20. SATPURA :**

- 1142 MW
- Located at Sarni in the Betul district of Madhya Pradesh
- One of the largest power plants of MP
- Satpura Dam is built specifically for the power plant

## 21. AMARKANTAK :

- Located near the border of Madhya Pradesh and Chhattisgarh
- Source of the Narmada, Son and tributary of Mahanadi
- Forms radial drainage pattern
- Famous tourist and pilgrimage centre
- Has a thermal power plant (**450 MW**) nearby it

## 22. KORBA :

- Located on the bank of the Hasdo River in Chhattisgarh
- Coal producing region
- Aluminium plant (**BALCO**)
- Thermal power generation
- NTPC Plant – 2600 MW

## 23. FARIDABAD :

- A million plus city of Haryana, a suburb of Delhi to its southeast
- An industrial city and container depot
- Thermal power plant -60 MW
- Located on NH-2
- Gas based thermal power plant – 430 MW

## 24. PANIPAT :

- Located between Karnal (N) and Sonipat on the NH-1
- Site of the historical battles (**3 famous wars**)
- Thermal power plant – 440 MW + 920 MW

## 25. BADARPUR :

- Located in the southern part of Delhi near the city of Faridabad (Haryana )
- Thermal power plant – 705 MW

## 26. KOTA :

- Located in the valley of the Chambal
- Named after **Koteah Clan** of the Bhils
- Kota Barrage and Rawatbhata are very close to it

- Located on the NH-12
- Famous for **Kota stones (marbles )**
- Thermal power plant – 1241 MW

## **27. PALANA :**

- Located in Rajasthan
- Palana is known for lignite mines near Bikaner, which will be used in the plant
- The installed capacity - 120 MW (2X60 MW)

## **28. ANTA :**

- Located to the north of Kota
- Important solar energy producing centre
- Thermal power plant -413 MW
- It is a **gas based power plant**

## **29. SAWAI MADHOPUR :**

- Located in the eastern part of Rajasthan, close to the confluence of the Banas and the Chambal
- Ranthambore National Park in the vicinity
- Thermal power plant is also located

## THERMAL POWER PLANTS



### 30. NAMRUP :

- Located in the Dibrugarh district, in the extreme northeastern part of Assam
- First place in India where a heavy natural gas based fertilizer factory was established
- Thermal power plant – 111.5 MW
- Has substantial coal mining activities
- Petro-chemical industry
- Surrounded by large tea - gardens

### 31. BONGAIGAON :

- Located in the western part of Assam on the NH-31

- Has a petroleum refinery receiving oil from Digboi
- A thermal power plant -120 MW

**32. BARAUNI :**

- Located along the left bank of the Ganga in the Begusarai district of Bihar
- Important industrial town – Oil refinery, fertilizers, thermal power
- Thermal power capacity – 255 MW
- Linked by a pipeline to the oilfields of Assam

**33. KAHALGAON :**

- NTPC thermal power plant – 1840 MW
- Located in the Bhagalpur district, on the banks of the Ganga
- The final capacity will be 2340 MW

**34. CHHABRA :**

- It is located in the Baran district of Rajasthan.
- It is a coal fired power plants.
- The planned capacity of power plant will be 2650 MW at the end of 12th Five Year Plan.

**35. SURATGARH :**

- It is located in the Ganganagar district of Rajasthan.
- It is the first super thermal power station of the state.
- It has 6 units of 250 MW each.

**36. GIRAL :**

- It is located in the Barmer district of Rajasthan.
- It is a lignite based power plant and it has 2 lignite fired turbines.
- Its total installed capacity is 250 MW.

**37. PARICHHA :**

- It is located in the Jhansi district of Uttar Pradesh.
- It gets coal from Jharkhand.
- It has five units and its total installed capacity is 890 MW.
- The sixth unit is in progress.

**39. ROSA :**

- It is located in the Shahjahanpur district of Uttar Pradesh.
- It is a private power plant, owned by a subsidiary company of the Reliance Power.

- It is a coal based power plant and its total installed capacity is 1200MW.



27

NUCLEAR REACTORS

#### 1. KALPAKKAM :

- Located 80 km south of Chennai on the Coromandel Coast
- Known for MAPS and IGCAR
- India's first fully indigenously constructed nuclear power station
- Has two indigenously built CANDU type PHWRs called MAPS-1 and MAPS-2

#### 2. KAIGA :

- Nuclear power station located in the Uttar Kannada district in Karnataka
- Has four units with one still under construction
- All of the four are small sized CANDU plants of 220 MW

### **3.KAKRAPARA :**

- Located near Surat on the bank of the Tapi in Gujarat
- It consists of two 220 MW PHWRs
- There is also a plant for producing heavy water in the area
- In January 2003 the CANDU Owners Group (COG) distinguished KAPS-1 as the worldwide best PHWR of its class

### **4. RAWATBHATA :**

- Located on the bank of the Chambal River about 65 km from Kota, just 3 km from the Rana Pratap Sagar
- RAPS is India's first pressurized water reactor of the CANDU type
- Installed capacity of 6 reactors – 1190 MW

### **5.TARAPUR :**

- Located in Maharashtra to the north of Mumbai
- First nuclear reactor of India
- With a total capacity of 1400 MW Tarapur is **the largest nuclear power station in the country**
- First reactors were BWR which were the first of their kind in Asia

### **6.NARORA :**

- Located in the Bulandshahar district of Uttar Pradesh on the bank of the Ganga
- Its twin reactors are Indianised version of the Canadian CANDU type which operate on natural uranium as fuel and heavy water as the moderator cum primary coolant

### **7.KUDANKULAM :**

- Located in the Tirunelveli district of TN
- Under construction with the Russian assistance
- Two 1000 MW reactors of the VVER- 1000 model are being constructed
- Both are water cooled water moderated power reactors
- When completed they will become the largest nuclear power

generation complex of India

#### **8.CHAVAMITHI VIRDI :**

- A proposed new nuclear site to be located in Gujarat near Alang Port
- It will be established with the help of the USA



#### **9.KOVVADA :**

- Proposed 2000 MW nuclear plant in Ranasthalam mandal in the Srikakulam district of AP
- It will be established with the assistance from the USA
- The Ministry of Environment and Forest has refused to give it the environmental clearance

#### **10. HARIPUR :**

- A coastal village of East Medinipur district of West Bengal
- It will be established with the Russian assistance
- Proposed Capacity – 10,000 MW
- People are protesting against the reactor

## **11. JAITAPUR :**

- Located in Maharashtra
- It is proposed to construct 6 European Pressurized Reactors designed and developed by Areva of France
- Each reactor will be of 1650 MW totaling 9900 MW
- Controversial as it comes under the Zone- V (earthquake )



**1.JHARKHAND :**

- Jaduguda, Bhatin, Narwapahar, Bagjata, Turamdihi, Banduhurang, Mohuldihi

**2.MEGHALAYA :**

- Kylleng,Pyndeng-Shahiong (Domiasiat), Mawthabah, Wakhym

**3.ANDHRA PRADESH :**

- Lambapur- Peddagattu, Tummalapalle

**4. JADUGUDA :**

- Located in the Singhbhum district of Jharkhand
- First uranium mine opened by UCIL in 1968
- Ores are treated in a mill located a Jaduguda itself
- UCIL is located here itself

**5.TUMMALAPALLE :**

- It is located in the YSR district of Andhra Pradesh.
- The combined reserve in 49000 tonnes of uranium. It can be increased three times, which will make it the mine with the largest uranium deposits in the world.

**6.LOONKAPUR :**

- It is located in the Nalgonda district of Andhra Pradesh.
- UCIL is in the process of obtaining clearances for construction of there underground and one open pit mines in area.
- A processing plant at **Seripally**, 52 km away will be set up.

**7.MOHULDIH :**

- It is located in the Seraikella - Kharsawan district of Jharkhand.
- It was commissioned by UCIL on 17 April 2012.
- The ore produced here were be sent to Turamdihi Processing Plant.

**8.TURAMDIH :**

- It is located in the East Singhbhun district of Jharkhand.
- It has 7.6 million tonnes of uranium about are reserves.
- A new uranium procession plant has been constructed here.

## URANIUM MINES



29

UMPPs

### 1. MUNDRA :

- Located on the coast of the Gulf of Kachchh in the Kachchh region
- Obtained by the Tata Power in a bid
- Imported coal, especially from Australia will be utilized in this coast – based UMPP

### 2. SASAN :

- Pithead based UMPP located in eastern Madhya Pradesh
- Given to the **Reliance Power**

### 3. TILAIYA :

- Located in the Hazaribagh district of Jharkhand
- A pithead based UMPP awarded to the **Reliance Power**
- Third UMPP for the company

#### **4. KRISHNAPATNAM :**

- A coastal based UMPP at Krishnapatnam, a port city of AP, 24km from Nellore
- 2<sup>nd</sup> UMPP awarded to the **Reliance Power**
- It is mandatory to import coal for it.

#### **5.SARGUJA (SALKA – KHAMERIA) :**

- A pithead based UMPP to be located in the Sarguja district in northern Chhattisgarh
- The Ministry of Environment and Forests has refused to give environmental clearance for the proposed Hasdo coal block, which was awarded to it

#### **6.GIRYE :**

- A proposed site of a UMPP in the Sindhudurg district of Maharashtra, the southern most district of the state
- It will be a coastal based project with mandatory imported coal

#### **7.TADRI :**

- A coastal – based UMPP to be located in Karwar district of Karnataka
- Imported coal and sea water will be used

#### **8.SUNDERGARH :**

- Bedabahal in Sundergarh district of Odisha
- Coal block of Ib Valley will be used
- A pithead based UMPP
- In the process of bidding at present

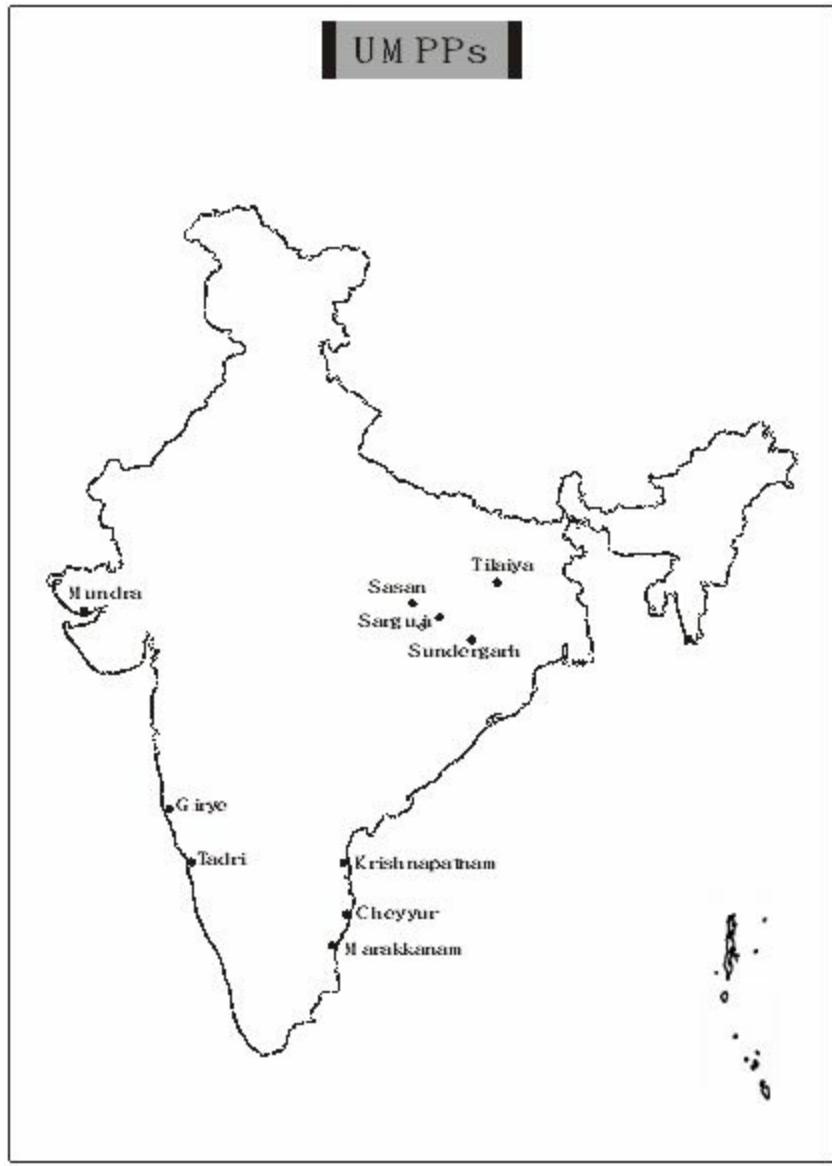
#### **9.CHEYYUR :**

- A coastal –based UMPP located 100km south of Chennai in Tamilnadu
- Imported coal will be used
- The project is presently at pre-bid stage

#### **10. MARAKKANAM :**

- Located near village Murukheri, Villupuram district of Tamilnadu

- Will use sea water and imported coal
- There is no ecologically sensitive area here



### **1.MUPPANDAL :**

- Located near Kanyakumari in Taminadu
- With an aggregate capacity of about 425 MW this represents one of the largest concentrations of wind farm capacity at a single location next only to that of California (USA)

### **2.KAYATTAR :**

- Wind farm located in the southern part of Taminadu

- Located in the Thoothukudi district
- Has Wind Turbine Testing Station (WTTS) of C- WET

### **3.MANDVI :**

- Wind farm near the Gulf of Kutch in Gujarat
- Capacity – 28 MW
- The wind farm is near the Wind Farm Beach

### **4. LAMBA :**

- Located in the southwestern coast of the Kathiawar Peninsula in Gujarat near Porbandar
- Capacity -60 MW
- 50 wind turbines machines of 200 KW capacity

### **6.SATARA :**

- A wind farm in the Satara district of Maharashtra
- Capacity- 200 MW

### **7.JOGIMATTI :**

- Located in Karnataka, Chitradurga district
- It has achieved the highest capacity utilization factor of 39%
- Installed approximately at 800m above sea level on a hilly terrain

### **8.PURI :**

- A wind farm has been set here located at the coast of the Bay of Bengal in the Mahanadi delta also known for the Jagannath Temple and the Rathyatra.

### **1.MANIKARAN:**

- Located in the Kullu district of Himachal Pradesh
- A five KW geothermal pilot power plant has commissioned.

### **2.PUGA VALLEY:**

- Located in the Ladakh Region
- A potential of 45 MW geothermal power has been estimated
- Plan to exploit this potential has been finalized

### **3.TATAPANI :**

- Located in the eastern part of the Sarguja district in the northeastern

## Chhattisgarh

- Sanction for the installation of a geothermal power plant has been granted



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W AVE ENERGY

## 1. VIZHINJAM :

- Located near Thiruvananthapuram in Kerala
- A wave energy plant of 150 KW (maximum) has been installed here
- There is a large sea port
- Kovalam beach is just 3km from here

## 2. ANDAMAN AND NICOBAR :

- 1 MW wave energy plant has been set up here

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OTEC

## 1.CHENNAI :

- Proposal of OTEC with 100 MW
- It will work on the principle of Rankin Cycle
- Developed by the NIOT
- A 1 MW capacity floating water OTEC plant is under the testing off the Tuticorin coast

## 2.KAVARATTI :

- A pilot –scale desalination plant of 10,000 litre per day capacity using OTEC technique has been operating successfully in Kavaratti

## WAVE ENERGY & OTEC



### 1.JHARIA :

- Located to the southwest of Dhanbad city and covers an area of 453 sq km
- Recognized as the best metallurgical coal in the country
- Supplies coal to Jamshedpur, IISCO, Bokaro, Rourkela

### 2.BOKARO :

- In Hazaribagh district lies within 32 km of western end of the Jharia coal field
- Long but narrow strip in the catchment area of the Bokaro River

- Divided into **West Bokaro** and **East Bokaro**

### **3.GIRIDIH :**

- Also known as Karharbari, lies to the southwest of Girdih in the Hazaribagh district
  - Has three main seams of varying thicknesses- lower Karharbari, upper Karharbari, Badhua
  - Lower Karharbari gives one of the finest coking coals in India

### **4. KARANPURA :**

- Lies to the west of Bokaro in Jharkhand, has two sections- North Karanpura and South Karanpura
  - Total reserve - 1059 million tonner
  - Coal is believed to be of **inferior quality**
  - According to ONGC, these fields have good reserves of coal-bed methane (CBM)

### **5.RAMGARH :**

- Situated about 9 km south of the Bokaro field in Jharkhand
  - It has 22 seams

### **6.DALTENGANJ :**

- Lies in the Palamau district of Jharkhand covers a total area of about 51 sq km
  - Gondwana type bituminous coal is mined

### **7.KORBA :**

- Covers an area of 515 sq km in the valleys of Hasdo (a tributary of Mahanadi )
  - Most of the coals are sent to the Korba thermal power plant and Bhilai steel plant

### **8.BISRAMPUR :**

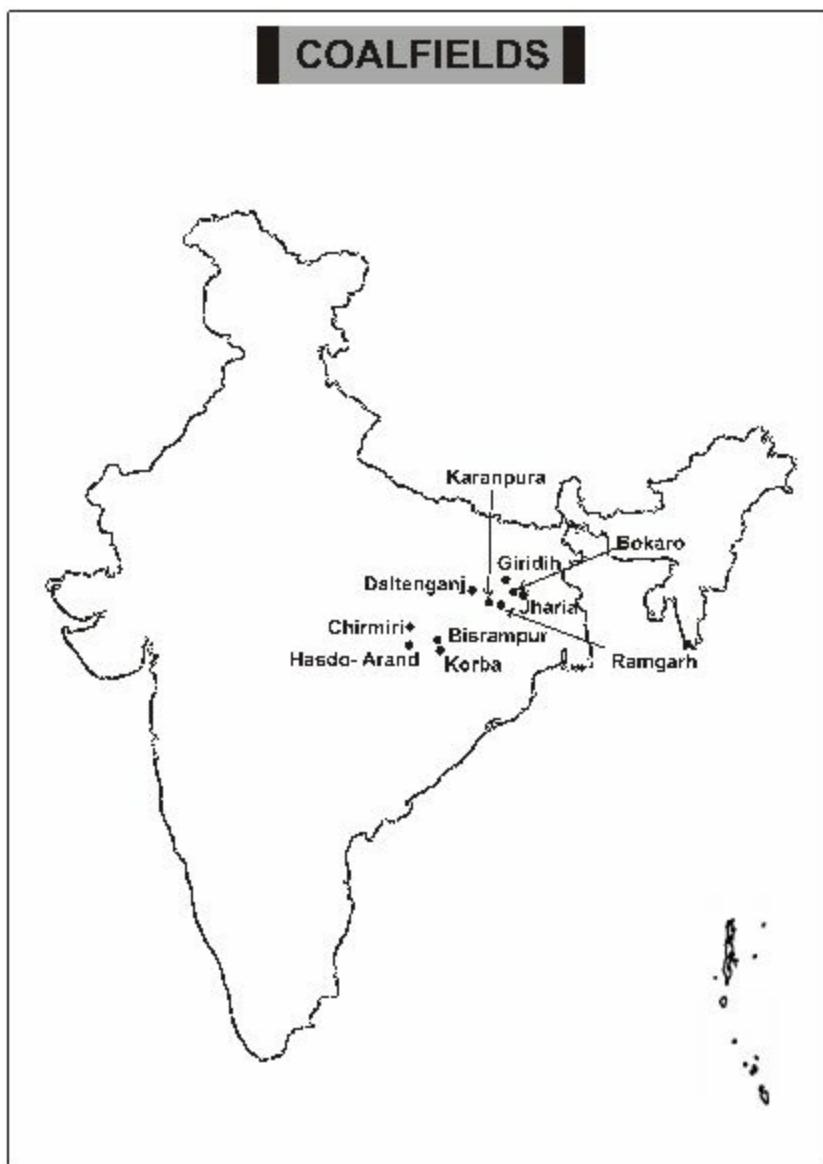
- Lies in the Sarguja district of Chhattisgarh
  - Total reserves- 542 million tonnes
  - Gondwana type bituminous coal is mined

### **9.HASDO- ARAND :**

- Extends from Rampur in Sarguja district to Arand Valley in Bilaspur district
  - Covers an area of about 1004 sq km
  - Total reserves – 4321 million tonnes

## **10. CHIRMIRI :**

- Lies in the Sarguja district of Chhattisgarh, in the northern part of the state
- Area- 128 sq km
- Reserves - 362 million tonnes



## **11. TATAPANI – RAMKOTA :**

- Lies between Kanhar and Rehar in the north – eastern part of the Sarguja district of Chhattisgarh
- Coals of Tatapani coalfields belong to the Damuda series

## **12. JHILMILI :**

- Lies in the northwestern part of Chhattisgarh in the Koriya district

- Total area – 106 sq km
- Extension of Sohagpur coalfield of the Shahdol district of Madhya Pradesh
- 5 coal seams belonging to Talcher and Barakar measures

### **13. JOHILLA :**

- Lies the Johilla Valley, a tributary of the Son, in the northwestern part of Chhattisgarh

### **14. SONHAT :**

- Lies in the Sarguja region of Chhattisgarh
- Has high quality coal

### **15. TALCHER :**

- Lies near the Talcher town of Odisha
- Second largest reserve after Raniganj
- Total reserve- 24,374 million tonnes
- Coal is utilized in thermal power and fertilizer plants at Talcher

### **16. IB RIVER :**

- 512 sq km in Sambalpur and Gangpur districts
- Coal belongs to middle and lower Barakar systems
- Much of the coal is of inferior quality with about 50 per cent fixed carbon

### **17. RAMPUR-HIMGIR :**

- Belongs to the Ib River system
- Coal of the middle and lower Barakar systems
- Contains 30.48 million tonnes coal reserves
- Bulk of the coal is inferior

### **18. SINGRAULI :**

- Largest coalfields of Madhya Pradesh in Sidhi and Shahdol districts
- Total area – 2337 sq km
- Reserves- 9207 million tonnes

### **19. JHINGURDA :**

- With total thickness of 131 m is the richest coal seam of the country
- It is a seam of the Singrauli coal field
- Supplies coal to thermal plants at Singrauli and Obra

**20. SOHAGPUR :**

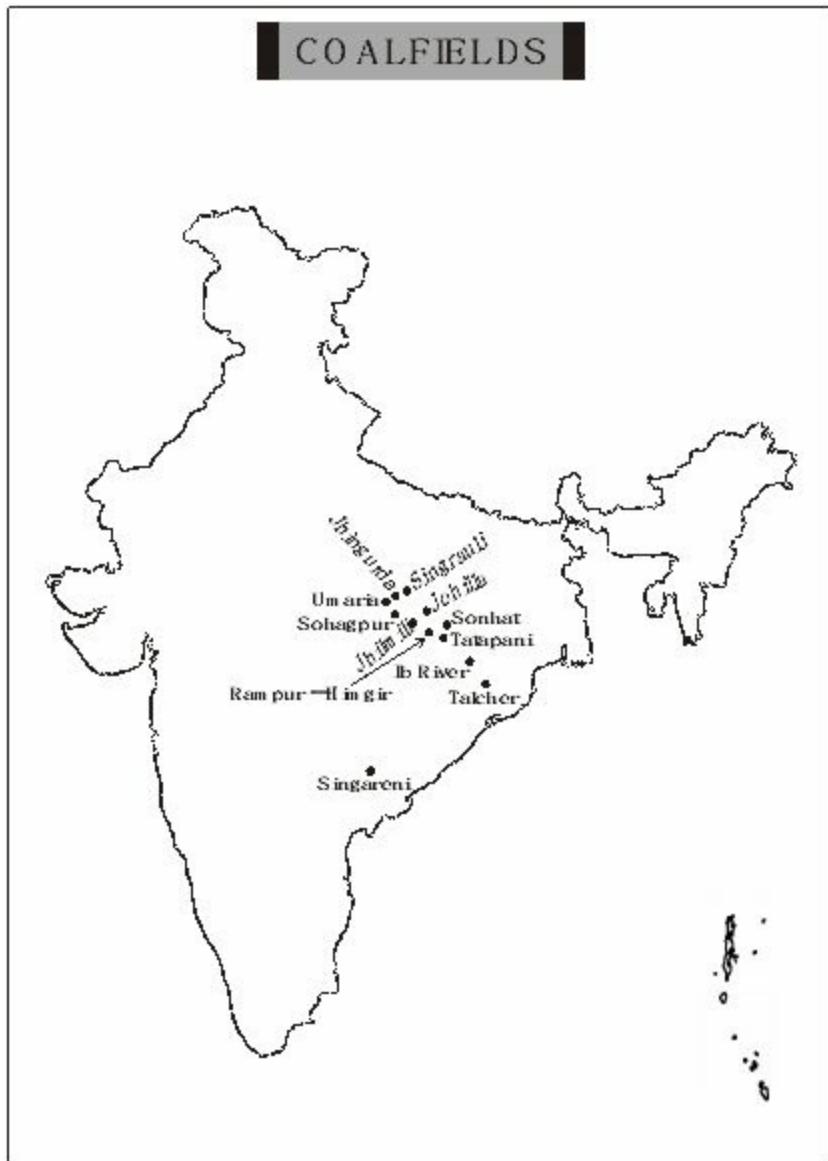
- Lies in the Shahdol district of Madhya Pradesh
- **Reserves-** 2284 million tonnes

**21. UMARIA :**

- Situated at a distance of 58 km to the south of Katni in the eastern Madhya Pradesh
- Contains 6 seams
- Total reserves- 58 million tonnes
- Coal is inferior with high percentage of moisture and ash

**22. SINGARENI :**

- 185 km east of Hyderabad in the Godawari Basin
- 4 coal seams have been identified
- Contains 56.5 % fixed carbon
- Although it is a non-coking coal but its quality is improved by the Regional Research Laboratory at Hyderabad



### **23. KOTHAGUNDAM :**

- Located east of Singareni in Telangana
- Has nine coal seams in which Anandghani seam contains A grade coal
- Used for the thermal power generation in the region

### **24. RANIGANJ :**

- The largest coal field of West Bengal, is the continuation of Jharia in Jharkhand
- Coal mining started in India at Raniganj in 1774
- It produces mainly non-coking steam coal, mainly used for power generation

**25. MAKUM :**

- Lies in the Sibsagar district of Assam
- Total reserves – 235.6 million tones
- **Tertiary coal** is produced
- Part of the Upper Assam coal belt

**26. NAZIRA :**

- Located in Assam
- Produces the tertiary coal
- Part of the Upper Assam coal belt
- Northern flank of the Naga Patkai ranges facing Sibsagar

**27. LAKHUNI :**

- Located in Assam
- Produces the tertiary coal
- Part of the Upper Assam coal belt

**28. NAMCHICK NAMRUP (TIRAP DIST):**

- Lies in the Tirap district of Assam
- Eastward extension of the Upper Assam Coal belt
- **Tertiary coal** is produced

**29. KALAKOT :**

- Tertiary coal field located in Jammu and Kashmir, in Jammu Province
- Similarly to other **tertiary coal** deposits in the world, the angiosperm flora contributed chiefly to the development of coal facies in the area

**30. NICAHOM :**

- Lignite coalfield located in Nandwara region of Baramula district of Jammu and Kashmir
- Poor quality lignite
- Reserve in the region-90 million tonnes

**31. UMARSAR :**

- Lignite coalfield located in the Kuchchh district of Gujarat
- Better lignite than other fields of the state

**32. PALANA :**

- Lignite coalfield located in the Barmer district of Rajasthan
- 4 km long and 0.8 km wide

- Will supply coal to 250 MW thermal plant of Bikaner

### 33. NEYVELI :

- Lies in the Cuddalore district of Tamilnadu
- **Largest deposits of lignite in the country** and can sustain power generation for more than hundred years
- 4150 million tonnes reserves over an area of 480 sq km
- Used for thermal power generation in the region

### 34. JAYAMKONDACHOLAPURAM :

- Lies in the Trichy district of Tamilnadu
- Reserves- 1168 million tonnes



**1.DIGBOI :**

- Located in the Dibrugarh district of Assam, is **the oldest oilfield of India**
- Over 800 oil wells have been drilled so far
- Most of the oil is sent to an oil refinery at Digboi

**2.NAHARKATIA :**

- Located at a distance of 32 km southwest of Digboi at the left bank of Burhi Dihing river
- Out of the 60 successful wells drilled so far 56 are producing natural gas
- Oil is sent to Noonmati (Assam) and Barauni (Bihar)

**3.MORAN -HUGRIJAN :**

- Located about 40 km southwest of Naharkatiya
- Discovered in 1953 and started production in 1956
- As many as 20 wells have been drilled which yield oil as well as gas

**4. RUDRASAGAR :**

- Located in the Upper Assam Valley
- Discovered by ONGC and OIL in 1961
- Oil deposits are found in the Barail rocks
- Annual production- 10 lakh tonnes

**5.SIBSAGAR :**

- Located in the Upper Assam Valley on the bank of the Brahmaputra
- Once the capital of the Ahom rulers
- In Sibsagar district oilfields are located at Lakwa, Lakhmani, Rudrasagar, Geleki and Moran

**6.ANKALESHWAR :**

- Located 80 km south of Vadodara in Gujarat was discovered in 1958
- Ankleshwar anticline is about 20km long and 4 km wide
- Pandit Nehru called it '**the Fountain of Prosperity**'
- Oil is sent to Trombay and Kalol refineries

**7.KALOL :**

- 25 km north of Ahmedabad

- Here ‘pools’ of heavy crude are trapped in chunks of coal at a depth of 1400 m
- Production of oil started in 1961

#### **8.NAWGAM :**

- 24 km south of Ahmedabad in Gujarat
- Yields both oil and gas

#### **9.MEHSANA :**

- North of Ahmedabad
- Famous for milk production and petroleum
- **Dudhsagar Dairy** is well known
- Established in 1967, the Mehsana fields have grown into the highest onshore-producing asset of the ONGC

#### **10. SANAND :**

- 16 km west of Ahmedabad
- Produces both oil and gas
- **Tata Nano** and **Ford** car plants are located here



### **11. LUNEZ :**

- First drilled in 1958 by the ONGC
- Located 60 km west of Vadodara
- Produces both oil and gas
- Drilling operation started in 1958
- Estimated reserves – 30 million tonnes oil
- Production
- Oil - 15 lakh tonnes / year
- Gas- 8-10 lakh cubic m / year

### **12. KOSAMBA :**

- Located between Narmada and Tapi rivers in the Surat district of Gujarat
- ONGC produces oil here

### **13. KATHANA :**

- North Kathana is a 7 sq. km oil field located near Khambhat town in Gujarat
- Oilfields are managed by the GSPC

### **14. ALIABET :**

- Located in the Gulf of Khambhat on the Aliabet Island about 45 km off Bhavnagar
- Huge reserves have been found

### **15. BASSEIN :**

- Located to the south of the Mumbai High
- Recently discovered which may prove to be higher than those of the Mumbai High
- Production has already been started

### **16. MUMBAI HIGH :**

- Located 176 km north- west of Mumbai on the continental shelf
- Reserves – 330 million tonnes oil and 37,000 million cubic metres of natural gas
- **Sagar Samrat**- specially designed platform for oil extraction
- Produces about two -third crude oil of India

### **17. RAWA :**

- Located in Krishna – Godawari off – shore basin is expected to produce 1 to 3 million tonnes of crude oil annually
- Developed by **Cairn India** in partnership with ONGC, Videocon and Rawa Oil.
- It produces both oil and gas.
- Average daily production - 1. Oil - 27,165 barrels 2. Gas - 55 monsef.

### **18. K-G BASIN :**

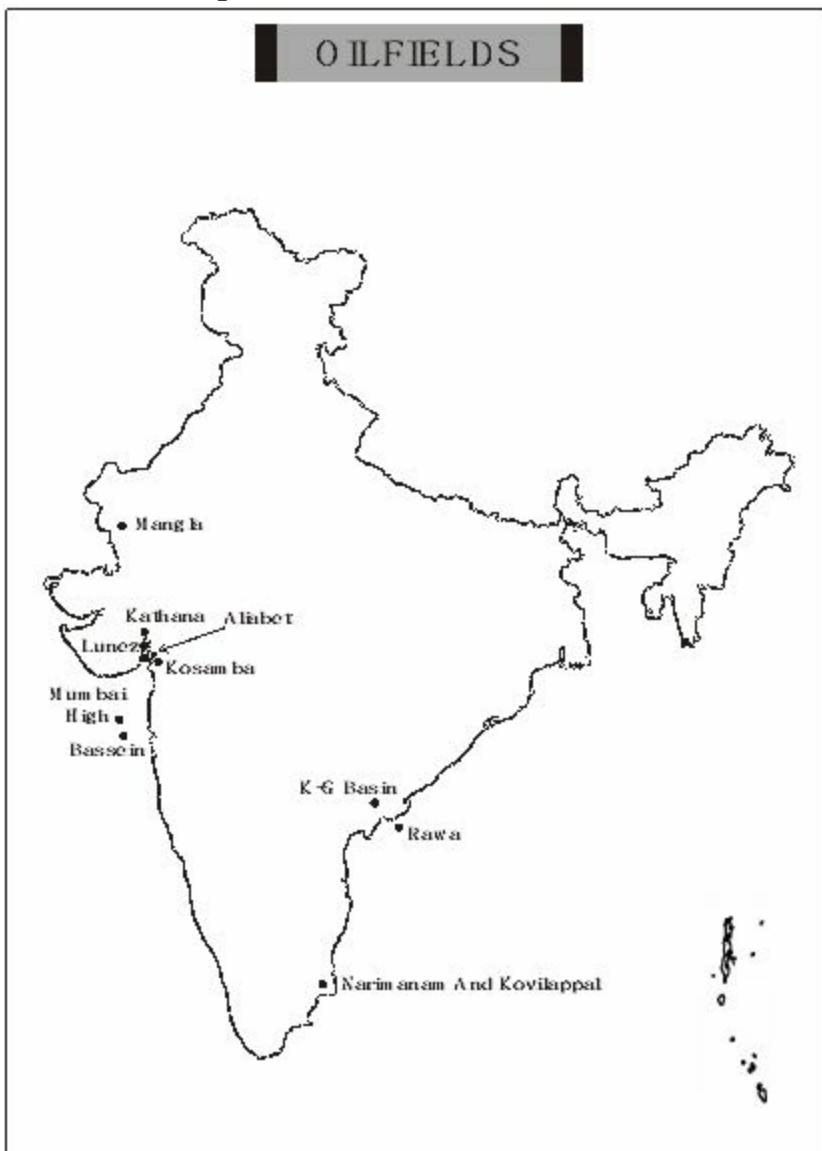
- The basin and delta of Krishna and Godawari hold great potential of oil and gas
- Rawa field, Reliance's gas field
- Extensive exploration work is going on in the region

## **19. NARIMANAM AND KOVILAPPAL :**

- Located in the Cauvery on – shore basin, expected to produce about 4 lakh tonnes of crude oil annually. Oil will be refined at Panaigudi refinery near Chennai

## **20. MANGLA :**

- Major oilfields located in Rajasthan in the Barmer district
- It consists of over 16 separate oil and gas fields of which the major three are **Mangla, Bhagyam and Aishwarya**
- Current operator of the fields is **Cairn India**



## **1.BAILADILA :**

- Located in the southern part of Chhattisgarh, is **the largest mechanized iron mines of Asia**
- Haematite type of iron ore is mined
- Slurry pipe has been constructed up to Vishakhapatnam to transport the ore
  - Its ore is used by the Vizag plant and exported to Japan
  - NMDC manages these mines

## **2.DALLI- RAJHARA :**

- Located in the Durg district of Chhattisgarh
- Produces haematite iron ore (68-69%)
- Supplies iron ore to the Bhilai Steel Plant
- It has reached at the verge of extinction

## **3.RAOGHAT :**

- Located in the Kanker district of Chhattisgarh in the Bastar region
- A new broad guage rail line is being planned connecting Dalli – Rajhara, Raoghat and Jagdalpur
- It will supply ore to the Bhilai Steel Plant

## **4. NOAMUNDI :**

- Located at Kotamati Buru in the Singhbhum district of Jharkhand
- It has good quality haematite ore
- Utilized in Jamshedpur steel plant (TISCO)

## **5.GUA :**

- The iron ore belt of the Singhbhum district of Jharkhand extending for about 50 km long from Gua to Pantha (Bonai ) in Odisha
- Morangpong, Penchhat and Lipunga are important mines
- Utilized in the IISCO (West Bengal )

## **6.BARAJAMDA :**

- Lies in the Pashchimi Singhbhum district of Jharkhand
- Known for iron and manganese mines
- Most mines are in forest area
- Presence of big companies like SAIL, Jindal, Sesa Goa, Essel Mining etc

## **7.KIRIBURU :**

- Located in the Pashchimi Singhbhum district of Jharkhand
- Mainly known for iron ore mines operated by the SAIL
- Also a famous hill station situated in the core of Saranda forest
- Located very close to the Odisha border

#### **8.KEMMANGUNDI :**

- Located in the Baba Budan Hills in Karnataka in the Chikamanglur district
- It has high grade haematite iron ore
- Supplies ore to the VISCO, Bhadravati

#### **9.KUDREMUKH :**

- Located in the Chikmangalur district of Karnataka, has quartz – magnetite deposits with ferrous contents between ranging from 30.70 to 39.18 per cent
- Its deposits were developed under an export agreement with **Iran**
- Exported to Iran through the Mangalore Port



#### **10. GURUMAHISANI :**

- Located in the Mayurbhanj district of Odisha
- Developed by the TISCO, Jamshedpur
- Gurumahisani is a ridge with three peaks
- Reserves -55 million tonnes
- Supplied to TISCO, IISCO and Durgapur

#### **11. SULAIPAT :**

- Lies 19 km southwest of Gurumahisani in the Mayurbhanj district of Odisha
- Produces haematite ore
- Its ore is of low phosphorus content and one of the finest in quality

## 12. BADAMPAHAR :

- Lies 14 km southwest of Sulaipat in the Mayurbhanj district of Odisha
- Reserves- 30 million tonnes
- Produces haematite ore (66% iron )



## 1.PANNA :

- Located in northern Madhya Pradesh east of Khajuraho
- **The largest diamond mines of India**
- Panna National Park is located nearby

- Diamond mines are managed by the NMDC

## **2.KHETRI :**

- Most important copper mines of Rajasthan located in the Jhunjhunu district
- Annual output of ore – 1.8 million tonnes
- Khetri Copper Complex- an integrated copper mining- cum – metallurgical plant
- Ores from Malanjkhand is also brought

## **3.MALANJKHAND :**

- Lies in the Balaghat district in southeastern Madhya Pradesh
- Most important copper mines of India
- Sent to the Khetri Copper Complex
- **Largest base metal mine in India**
- It is an open – pit copper mine

## **4. MAKRANA :**

- Located in the Nagaur district of Rajasthan
- Famous for marble mining
- It is said that the **Taj Mahal** was built from Markana Marble
- Markana marble has 90 to 98 percent Ca CO<sub>3</sub>

## **5.ZAWAR :**

- Located in southern Rajasthan near Udaipur
- Produces more than 99 percent of zinc in India
- Also produces lead concentrates
- It has a cement plant
- There is one Kendriya Vidyalaya here

## **6.KOLAR :**

- Most important gold mines of India
- Mining started in 1871 and still the largest supplier
- The main gold mine at Kolar is one of the deepest mines in the world and the production is decreasing day by day due to heavy cost of extraction

## **7.HUTTI :**

- Located in the Raichur district of Karnataka

- Has six auriferous quartz reefs
- Irregular production operation
- The main problem with it is the low grade of ore

#### **8.MANDI DIST :**

- Located in Himachal Pradesh
- Produces the rock salt
- Mandi is located on the bank of the Beas River
- Rock is mined by dry mining method
- Produced by the Hindustan Salt Mines

#### **9.KHO DARIBA (ALWAR) :**

- Copper mines located 48 km southwest of the Alwar city
- Supplies ore to the Khetri Copper Complex

## OTHER IMPORTANT MINES



### 10. RAKHA :

- Old copper mines located in the Singhbhum district of Jharkhand
- These mines have been developed by the Hindustan Copper Limited which produces about 3,500 tonnes of copper annually

### 11. DHOBANI :

- Copper mine located in the Singhbhum district of Jharkhand
- Ore is used by the Ghatsila copper smelter

### 12. MOSABANI :

- Copper mine located in the Singhbhum district of Jharkhand
- A concentrator is located here

- Ore is used by the Ghatsila copper smelter

### **13. LOHARDAGA :**

- Located between the Damodar (N) and the South Koel (S) rivers in Jharkhand
  - High grade bauxite is mined and the ore is sent to Muri in the Ranchi district for processing

### **14. DEBARI :**

- Located in the Udaipur district of Rajasthan
  - Famous for its Debari Zinc Smelter where lead-zinc ore from the Zawar mines is smelted

### **15. RAMAGIRI :**

- Gold mines in the Anantpur district of Andhra Pradesh
  - These mines are almost exhausted
  - Now known for wind electric generation

### **16. KODARMA :**

- Mica mines located in Jharkhand near Hazaribagh
  - The belt in the region contains the richest deposits of high quality ruby mica
  - It has the **Mining Institute** established in 1958

### **17. GAWAN :**

- Mica mines located in Jharkhand in the Giridih district
  - The belt in the region contains the richest deposits of high quality ruby mica

### **18. BIRMITRAPUR :**

- Dolomite mines in Odisha
  - Reserves 256 million tonnes
  - Supplies dolomite to steel plants in the neighboring region

### **19. NELLORE :**

- Important city of southern Andhra Pradesh, located on the bank of the Penneru River
  - On the NH-5 and Chennai- Kolkata rail line
  - It is a major producer of mica.
  - Known as the '**Shrimp Capital of India**'
  - Known for aquaculture and known as the '**Acquaculture Capital of**

## India'



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INDUSTRIAL CITIES

## IRON AND STEEL

### 1. JAMSHEDPUR :

- Location of TISCO, which was established by Jamshedji Tata at **Sakchi** in the Singhbhum district of Jharkhand
- Obtains iron ore from Noamundi and Gurumahisani
- Coal is obtained from Jharia and Raniganj

- Produces about 3 million tonnes of saleable steel

## **2.KULTI :**

- Located in western West Bengal in the Kolkata-Asansol railway line
- Part of the IISCO
- Produces steel from the pig iron obtained from Burnpur and Hirapur plants.

## **3.HIRAPUR :**

- Located in western West Bengal on the Kolkata Asansol railway line
- Part of the IISCO, has rolling mills

## **4. BURNPUR :**

- Part of the IISCO, located in the Kolkata Asansol railway line
- Produces pig iron which is sent to Kulti for making steel

## **5.DURGAPUR :**

- Located in the Bardhaman district of West Bengal, was set up in 1956 with the help of United Kingdom
- Total capacity – 35 lakh tonnes
- Obtains iron ore from Bolani and Mayurbhanj
- Jharia and Raniganj supply coal

## **6.BHADRAWATI :**

- Located at Bhadrawati on the bank of the Bhadrawati River in the Shimoga district of Karnataka
- Established in 1923 as MISCO
- Capacity- 1.38 lakh tonnes of steel
- Obtains iron ore from Kemmangundi
- HEP is supplied from the Sharavati Power Project

## **7.BHILAI :**

- Set up in the Durg district of Chhattisgarh in 1957, with the help of the erstwhile Soviet Union
- Capacity – 52 lakh tonnes
- Obtains iron ore from Dalli- Rajhara
- Coal is supplied from Korba coalfields

## **8.BOKARO :**

- Located near the confluence of the Bokaro and the Damodar in the

## Hazaribagh district

- Established in 1964 with the help of the erstwhile Soviet Union
- Capacity- 40 lakh tonnes
- Iron ore from Kiruburu and coal from Jharia



## 9.SALEM :

- Located in the Salem district of Tamil Nadu
- Has the advantage of rich iron ore and limestone
- Facilities of cheap power, charcoal and vast market
- Iron ore has low sulphur and phosphorous content which is suitable for high grade iron and steel
- A major producer of world class stainless steel and helps in coin

making of the country

#### **10. VIJAYNAGAR :**

- Set up at Torangal near Hospet in Bellary district of Karnataka
- Installed capacity – 30 lakh tonnes
- Iron from Hospet region
- Coal from Kanhan Valley (Chhattisgarh) and Singareni (AP)
- HEP from Tungabhadra Project

#### **11. VISHAKHAPATNAM :**

- Located in Vishakhapatnam managed by Rashtriya Ispat Nigam Limited (RINL)
- Most sophisticated modern integrated steel plant in the country
- Second largest producer of iron and steel
- Iron from Bailadila, coal from Australia and the Damodar Valley

#### **12. DAITARI :**

- Located near Paradeep in Odisha
- Responsibility given to the **Tata Group**
- Proposed capacity – 2.6 million tonnes

#### **13. KALINGANAGAR :**

- Tata Steel will set up a 6 million tonnes steel plant at Kalinganagar in Odisha
  - Along with the project, the Tata Steel will build a port at Dhamra in Odisha

#### **14. DOLVI :**

- Located in the Ratnagiri district in Maharashtra
- Set up by the Ispat Industries Ltd.
- Will use new technology in steel making
- Annual capacity – 3 million tonnes

#### **15. POSCO (PARADEEP):**

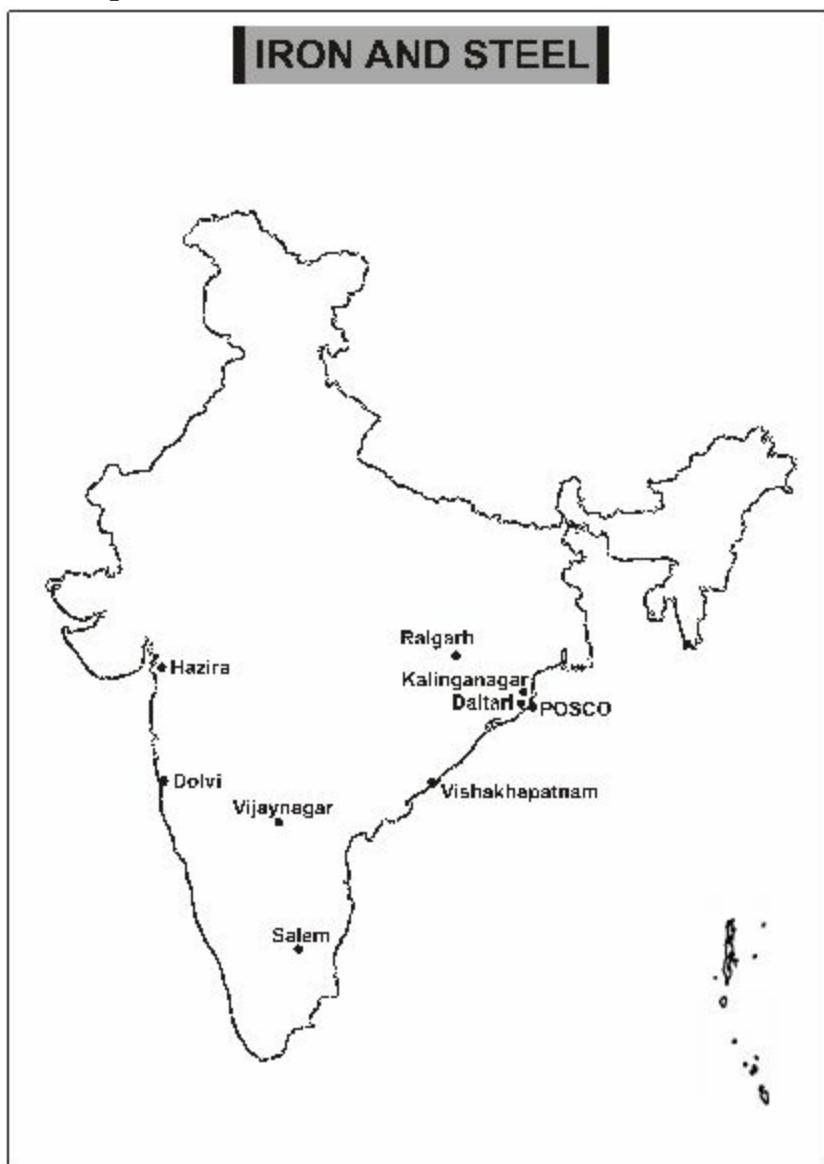
- Pohang Steel Company (POSCO) of South Korea has signed MoU to build a plant at Paradip
  - With total capacity of 12 million, tonnes it may be completed by 2016
  - It is billed as the biggest FDI in India
  - It has come under the grip of controversy

## **16. RAIGARH :**

- It is located at the outskirt of Raigarh City in Chhattisgarh.
- Its total installed capacity is 3 million tonnes per annum.
- It has 358 MW captive power plant.
- This plant is managed by **Jindal Steel and Power Limited**.

## **17. HAZIRA :**

- It is located in Gujarat
- It produces 6.8 MTPA sponge iron, making it the world's largest gas-based sponge iron plant in a single location.
- It is equipped with modern facilities and a township has been developed.



# **ALUMINIUM**

## **1.HIRAKUD (INDAL) :**

- Located near the Hirakud Dam in Odisha
- Utilizes locally available bauxite and HEP from the Hirakud Dam
- Has plan to expand the current capacity of 30,000 tonnes to 57,000 tonnes

## **2.RENUKUT (HINDALCO) :**

- Located in the Sonbhadra district of southeastern UP
- Just 1.5 km from the Rihand Dam
- Has **the largest fully integrated aluminium plant in Asia**
- HINDALCO (Birla Group ) is **the largest aluminium company of India**
- The plant utilizes HEP from Rihand Dam Project

## **3.KORBA (BALCO) :**

- Aluminium smelting plant located at Korba of Chhattisgarh
- Capacity – 1 lakh tonnes
- Disinvested with a lot of controversy
- Purchased by **the Sterlite** company
- Recently a big chimney collapsed killing many labours

## **4. RATNAGIRI (BALCO) :**

- Second plant of BALCO in the Ratnagiri district of Maharashtra
- Capacity – 50,000 tonnes

## **5.METTUR (MALCO) :**

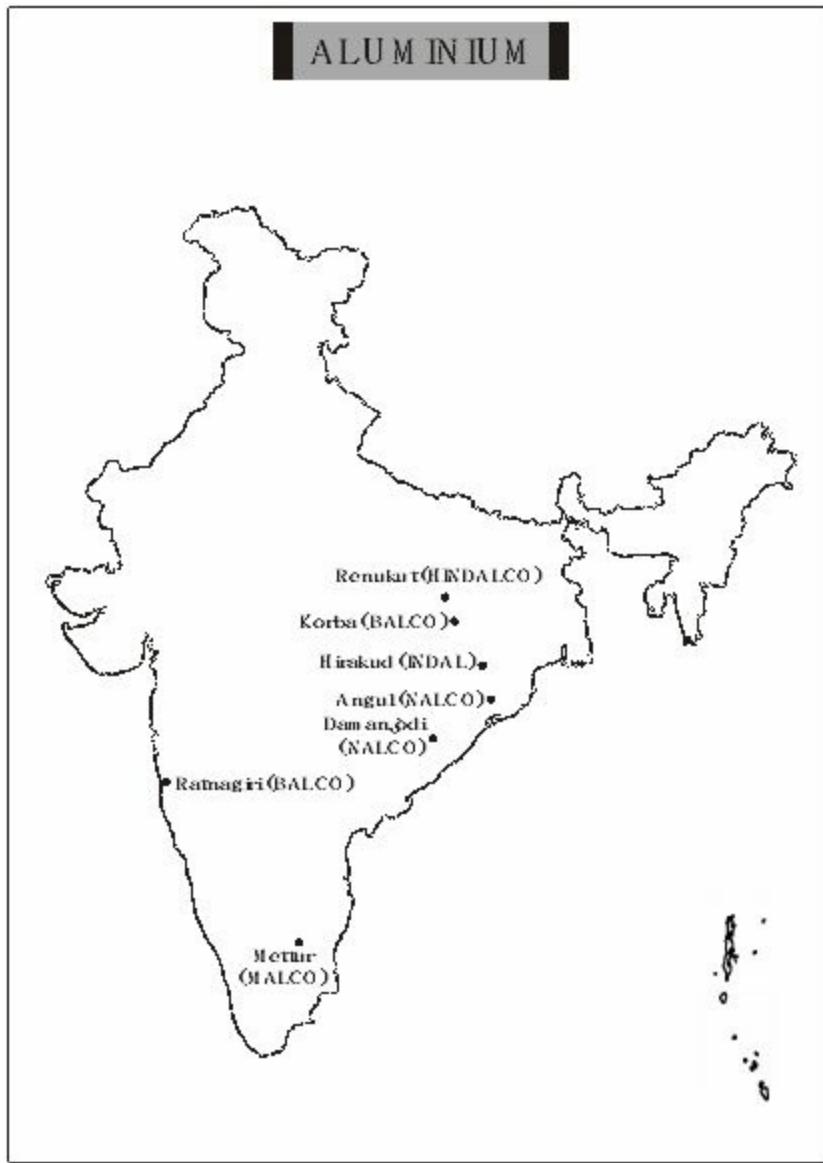
- Madras Aluminium Company Ltd. (MALCO) went into operation in 1965
- Its plant is situated at Mettur in the Salem district of Tamil Nadu
- Comes under the **Vedanta Group**

## **6.DAMANJODI (NALCO) :**

- An integrated aluminium plant of NALCO near Jeypore in the Koraput complex in India
- Capacity – 15.75 lakh tonnes
- **NALCO is the lowest cost producer of aluminium in the world**

## **7.ANGUL (NALCO) :**

- Located in Dhenkanal district of Odisha, second plant of NALCO
- Capacity – 3.45 lakh tonnes
- Has a captive power plant with the capacity of 960 MW



## COPPER

### **1. KHETRI :**

- Khetri Copper Complex at Khetri has been erected by Hindustan Copper Ltd.
- It is an integrated copper mining – cum – metallurgical plant
- Capacity -31,000 tonnes

- Receives copper from Khetri, Kolihan, Chandmari, Dariba, Malanjkhand

## **2.MAUBHANDAR :**

- Located near Ghatsila in Singhbhum district of Jharkhand
- Receives copper ore from Mosabani, Rakha, Dhabani, Rajdah, Tamapahar and Turamdihi
- It was the only producer of copper till 1971
- Managed by HCL
- Capacity – 30,000 tonnes

## **3.GHATSILA :**

- Copper smelting region located in the Singhbhum district of Jharkhand
- Managed and operated by the Hindustan Copper Ltd. (HCL)

## **4. DEBARI :**

- Zinc smelter in Rajasthan
- Started production in 1968
- Installed capacity – 45,000 tonnes
- It also produces sulphuric acid, cadmium, phosphoric acid and super phosphate
- Ore supplied from Balaria and Rajpur Dariba mines as well as imported

## **5.TUTICORIN (STERLITE) :**

- Private sector copper smelter which uses imported copper concentrates to produce cathodes
- Installed capacity- 1.5 lakh tonnes
- Commissioned in 1997-98

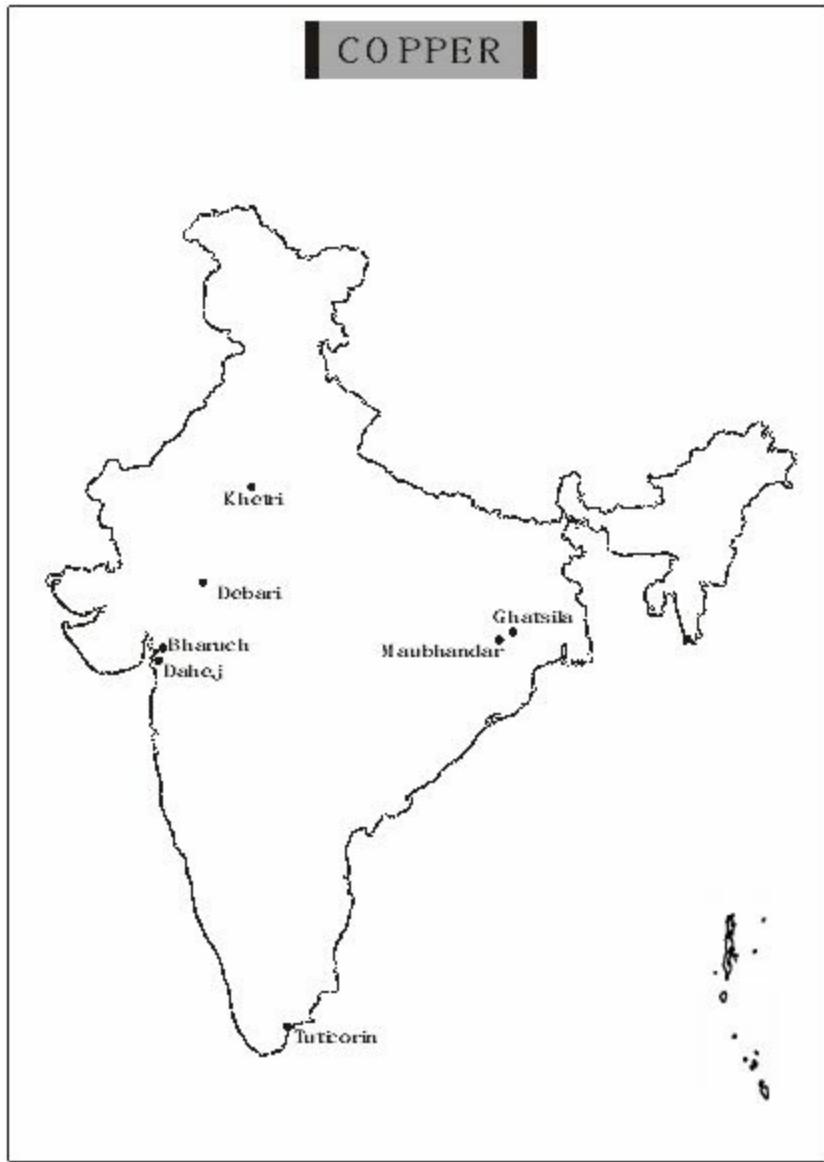
## **6.BHARUCH (SWIL COPPER) :**

- Plant set up at Bharuch by the Swil Copper under the technical assistance from Boliden of Sweden
- Annual capacity – 50,000 tonnes
- Based mainly on the imported **copper scraps**

## **7.DAHEJ (BIRLA) :**

- A division of Indo- Gulf Fertilizers which has set up a copper project at Dahej in Gujarat

- Installed capacity – 1.5 lakh tonnes
- Based on imported copper concentrates



## LEAD

### **1. TUNDOO :**

- Near Dhanbad in Jharkhand
- First lead smelting plant set up in 1942-43
- Lead concentrates supplied from the **Zawar** and **Rajpur- Dariba** areas of Rajasthan
- Installed capacity – 8740 tonnes per day

### **2. CHANDERIYA :**

- A lead-zinc complex constructed in 1991 under **the British aid programme**
- Annual capacity – 35,000 tonnes of lead, 70000 tonnes of zinc and 74 tonnes of silver
- Zinc ore from Bhilwara and Chitaurgarh

## ZINC

### **1. ALWAYE :**

- Located in Kerala
  - Wholly dependent upon imported supplies of zinc concentrates
  - Started production in 1967
  - Installed capacity – 50,000 tonnes per annum
- Other zinc plants at **Debari, Chanderia** and **Vishakhapatnam**

## RAILWAYS

### **1. CHITARANJAN :**

- Located in the Burdwan district of West Bengal, has the **locomotive plant**
- Coal from Raniganj
- HEP from the DVC
- At present produces only electric locomotives

### **2. VARANASI :**

- Diesel Locomotive Works is located here
- Located on the left bank of the Ganga
- Most famous Hindu religious centre
- Known for **Banarasi Sarees** made of silk

### **3. PERAMBUR :**

- Located near Chennai in Tamilnadu
- Has the **Integral Coach Factory**
- Started production of railway coaches with Swiss collaboration in 1955
- Produces almost all types of coaches
- Installed capacity – 1150 coaches per annum

### **4. KAPURTHALA :**

- Set up in March 1988 in Punjab has the **Rail Coach Factory**

- Installed capacity – 1000 coaches per annum
- It was the capital of the Kapurthala princely state
- **JCT Mills Phagwara**, one of the most successful textile mills in India, is located in the vicinity



## AUTOMOBILES

### 1. GURGAON :

- Located in the southwest of Delhi on the NH-8 in Haryana, comes under the NCR
- **Maruti Udyog Ltd (MUL)**, **Hero Honda** (Manesar)
- Centre of BPOs, real estates

- Home of many MNCs

## **2.SURAJPUR :**

- Located in western UP not far from Delhi
- Production plant of **Daewoo** cars of Korea and **Yamaha** motorbikes

## **3.PIMPRI :**

- Located within the Pune metropolitan area in Maharashtra
- Assembling unit of TELCO, Bajaj, Mahindra
- Antibiotics and vaccines
- Home to the **Hindustan Antibiotics Ltd**

## **4. CHAKAN :**

- Located in the Pune district
- Has a SEZ
- Known for automobiles- Volkswagen Polo
- Tourist place – **Bhueekot Killa** - A fort built by Shivaji

## **5.PITHAMPUR :**

- Referred to as ‘**the Detroit of India**’
- Located near Indore in the Dhar district of MP
- Second largest industrial area in Asia
- Hub for the automobile manufacturing industry
- It has a dry port facility

## **6.BHEL :**

- Bhopal, Tiruchirapalli, Ramchandra-puram (Hyderabad), Jammu, Bengaluru, Haridwar

## **7.HMT :**

- Bengaluru (2units), Pinjore (Haryana), Kalamassery (Kerala), Hyderabad, Srinagar, Ajmer

## **8.SANAD :**

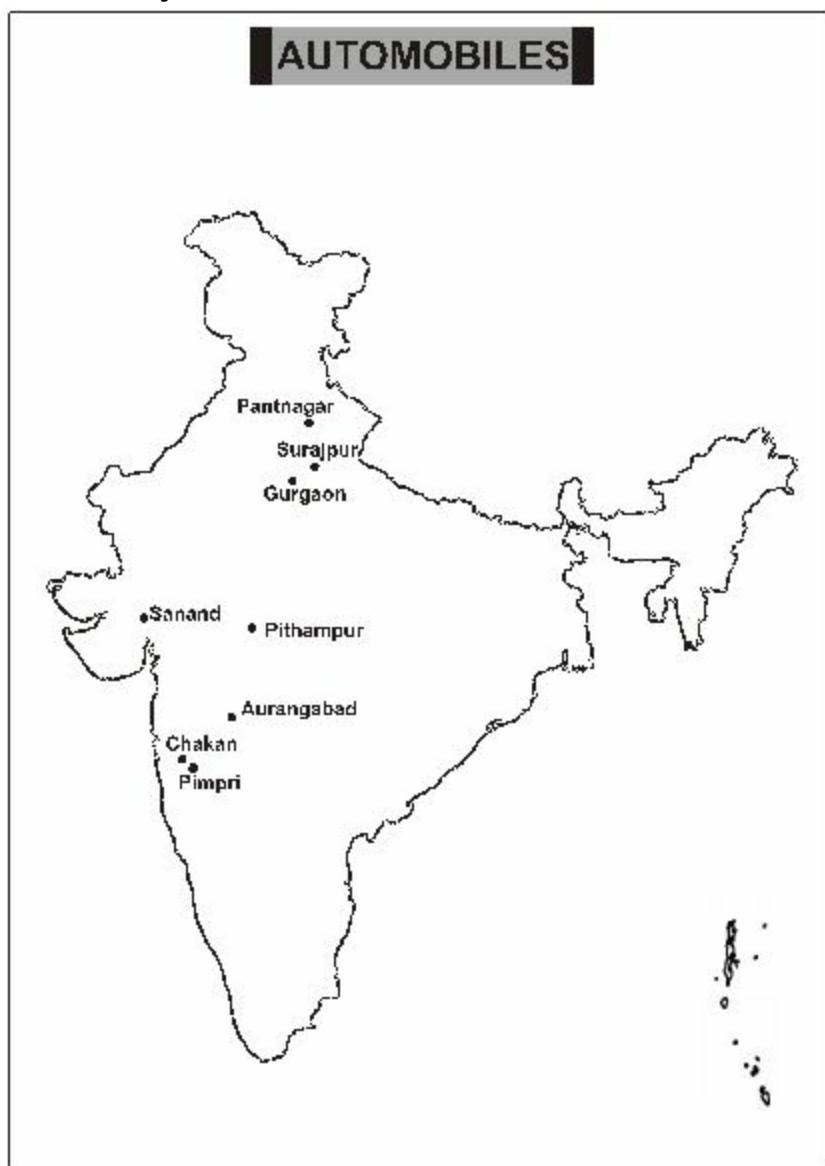
- It is located in the Ahmedabad district.
- It has a palace built by the Vaghelas.
- It has become the automobile hub of Gujarat - Tata Nano, Ford, CSA Peugeot
- During Industry - Codila Healthcare

## **9.AURANGABAD :**

- It has founded in 1610 in by Malik Ambar.
- It has many tourist places in its Vicinity - Ajanta, Ellora, Bibi ka Makbara.
- The city has become an automobile hub - Audi, Skoda, Volkswagen, Bajaj Auto, Diesel.

#### **10. PANTNAGAR :**

- It is located in the Udhampur district of Uttarakhand.
- The first agriculture university of India was established here in 1960.
- It has industrial units, like Tata Motors (Ace, Nano), Bajaj Auto, Ashok Leyland etc.



**1.RANIPET :**

- Located in Tamil Nadu near Vellore
- Modest beginning of chemical fertilizer industry in India began here in 1906, when a super-phosphate factory was set up here
- Victim of serious groundwater pollution

**2.SINDRI :**

- Located in the Dhanbad district of Jharkhand
- Known for a large chemical fertilizer plant set up by the Fertilizers Corporation of India (FCI) in 1951
- It also has a cement plant
- First fertilizer plant in India to produce Ammonium Sulphate, Urea and Ammonium Nitrate Sulphate

**3.AONLA :**

- Located near Bareilly in the Rohilkhand Division of UP
- Known for the production of chemical fertilizers from gas
- Gas pipeline laid from Ankaleshwar to Aonla

**4. KALOL :**

- Located in the Panchmahal district of Gujarat
- Known for oilfields and fertilizers plant based on gas
- Kalol and Halol are parts of a SEZ

**5.BIJAPUR :**

- Located in the northwestern part of Karnataka, is a historical and industrial city
- **Gol Gumbaz:** world's second largest dome unsupported by pillars
- Industry- sugar, textiles, cement
- Gol Gumbaz is the mausoleum of Mohammad Adil Shah

**6.JAGDISHPUR :**

- Located in the Sultanpur district of UP
- **Industries** –Gas-based fertilizers, BHEL, paper
- HBJ pipeline provides it the gas
- There is a plan to connect it with Haldia through a gas pipeline

**7.DALMIAPURAM :**

- Located in the Tiruchirapalli district of Tamilnadu, 40 km away from Trichy
  - Hometown of the renowned Dalmia Cements
  - The region is rich in limestone deposits

#### **8.KATNI :**

- Industrial city of eastern MP, located on the NH-7 between Rewa and Jabalpur
  - Cement factory, ordnance factory
  - Located on the bank of the Katni River
  - One of the largest railway junctions in India
  - Famous for its abundance in lime and bauxite
  - Has the largest Rail Yard and biggest Diesel Loco Shed in India

#### **9.CHURK :**

- Located in the Sonbhadra district of UP
  - Owing to its limestone hills a cement factory was established here in 1956

## OTHER IMPORTANT CITIES



### 10. DALMIANAGAR :

- One of the oldest and biggest industrial towns in India, located on the bank of the Son River in the Rohtas district of southwestern Bihar
- City was founded by **Ramkrishna Dalmia**, the founder of the Dalmia group

### 11. JAPLA :

- Industrial town of Jharkhand in the Palamau district, near the border with Bihar
- Known for the production of cement
- Factory is located at Deori

### 12. SHAHABAD :

- A town in the Gulbarga district in Karnataka
- Known for the **Shahabad Stones**
- Cement companies- Alstom Projects India Ltd. and Jaypee Cements

#### **13. CHAIBASA :**

- Located in the West Singhbhum district of Jharkhand near the Orissa border
- Known for the cement industry
- India's first entirely indigenous cement plant was established in 1947 here itself operated by the ACC

#### **14. JAMUL :**

- Industrial town located near Bhilai in the Durg district of Chhattisgarh
- Most important cement plant of the state
- Established in 1965
- Operated by the ACC

#### **15. SIJU :**

- Located in Meghalaya
- Famous for the Siju Caves
- Also has a cement plant

#### **16. FIROZABAD :**

- Industrial city of UP located to the east of Agra on the NH-2 and Delhi – Kolkata
- Known for its **glass factories** and **bangle making**
- Founded by Firoz Shah Tughlug
- During ancient periods, invaders brought many glass articles in India

#### **17. MIRZAPUR :**

- Industrial city of UP in its southeastern part on the NH-7 just south of Varanasi
- Located on the right bank of the Ganga
- Known for carpets, blankets, brassware, pottery
- Located on the Delhi- Kolkata rail line

#### **18. MORADABAD :**

- Industrial city of UP located in the Rohilkhand Division west of Rampur on the NH-24

- Founded in 1625 by Rustam Khan, a Mughal general
- Known for its inlaid brass work and electro-plated non-silver cutlery
- Because of brass industries, it is known as **Peetalnagri (Brass City)**

#### **19. BHADOHI :**

- Small industrial town of UP, located west of Varanasi
- Headquarters of a new district
- Known for '**Carpet-making**'
- Other industries : sari-making, agro-based industries



#### **20. KHURJA :**

- Industrial town of western Uttar Pradesh, located south of

Bulandshahr

- Known for ceramic industry and pottery
- Known as **the Ceramic City**
- Lot of air pollution due to coal based Chimneys

**21. SIVAKASHI :**

- Located in the Virudhnagar district of Tamilnadu
- Capital of India's firecracker industry
- Also known for printing and match making
- Ill-famous for employing children

**22. AHMADNAGAR :**

- Industrial city of Maharashtra located on the bank of the Sina River, a tributary of the Godawari
- Industries- sugar, cotton, textile
- Largest sugar producing centre of Maharashtra

**23. SAKARWADI :**

- Industrial city of Maharashtra located north of Ahmadnagar
- Sugar producing plant
- Located in the Satara district
- **Mr. Apte** from Pune established first private sugar factory of Maharashtra in the 1930s here

**24. RAWALGAON :**

- Industrial town of Maharashtra near Nasik
- Known for the sugar industry

**25. CHANDAONAGAR :**

- Industrial city of Maharashtra to the north of Ahmadnagar, known for the sugar industry

**26. MANDYA :**

- Industrial city of southern Karnataka located between Mysore and Bengaluru
- Industries- **sugar**, silk, match, fertilizers
- Hoysala and Somnathpura temples are great attractions
- The Mysore Sugar Factory is located at the city

**27. SAKKARNAGAR :**

- Industrial city of the Telangana Plateau near Nizamabad, known for the sugar industry as the name suggests
  - Nizam Sugar Factory- Once it was one of the largest sugar factories in Asia

## **28. MODINAGAR :**

- Industrial city of western UP just 30 km away from Delhi
- Industries: sugar, textiles, petrochemicals
- Located in the Ghaziabad district
- Best known as the home of **Modi Mills**

## **29. ANKAPALLI :**

- Industrial city of Andhra Pradesh, located near Vishakhapatnam known for the sugar industry
  - Located on the bank of River Sarada
  - **Largest source of jaggery in southern India** and the second largest in India

## OTHER IMPORTANT CITIES



### 30. SOLAPUR :

- Industrial and historical city of southern Maharashtra, located on the NH-9
- Seat of Chalukya and Yadava dynasties
- Known for **bedsheets**

### 31. KOLHAPUR :

- Industrial city of southern Maharashtra located on the NH-4, on the bank of the Panchganga
- Was a centre of Buddhism
- Industries- cotton textiles, leather goods, chemicals
- Location of the Temple of Mahalakshmi

- Was a princely state

### **32. SATARA :**

- Industrial and historical city of southern Maharashtra located on the NH-4
- Industries- cotton textile, sugar, scooter
- Mahabaleshwar and Panchgani are located near the city
- Shivaji Sagar and Koyna Dam are few km west of it

### **33. VADODRA :**

- Located between the Mahi and the Narmada rivers
- Old capital of Maratha Gaekwar family
- Jawaharnagar Refinery produces feed- stock for pharmaceuticals
- A million plus city

### **34. SURAT :**

- A million plus city and industrial and historical city of Gujarat located on the bank of the Tapi River
- Has old tradition of trading through its port
- Known for diamond – cutting and jewellery

### **35. RAJKOT :**

- The main city of Saurashtra in the centre of the Kathiawar Peninsula
- A million plus city
- Industries –sugar, textile, pharmaceuticals
- Located on the banks of the Aji and Niari rivers
- Was the capital of the then Surashtra State

### **36. INDORE :**

- Largest city in MP located in the Malwa Plateau on the NH-3
- Known as '**Mini Bombay**'
- A million plus city
- Old capital of Holker Maratha family
- Industries: Cotton textile, soya, pharmaceuticals
- Located on the bank of the Sipra River

### **37. DEWAS :**

- Important industrial city of MP, located between Indore and Ujjain on the NH-3

- Industries- Cotton textile, soya processing
- Seat of two princely states during the British Raj
- Known for **the Bank Note Press**

### **38. HOSHANGABAD :**

- Important industrial town of MP, located on the southern bank of the Narmada to the south of Bhopal
- **Industries-** Paper, pulp, textiles
- Earlier called as **Narmadapur**
- Known for **the Security Papers Mill**
- Famous for beautiful **Sethani Ghat** along the banks of the Narmada

#### **OTHER IMPORTANT CITIES**



### **39. JABALPUR :**

- Important industrial city of eastern Madhya Pradesh, located on the bank of the Narmada
- A million plus city, **seat of the High Court of Madhya Pradesh**
- Mainly known for defence related industries
- Located on the NH-7 and NH-12 starts here
- Headquarters of **the West Central Railway**

#### 40. SATNA :

- Important industrial city of eastern Madhya Pradesh
- Known for cement industry
- A border city touching Uttar Pradesh
- **Asia's biggest cement factory** known as '**Prism Cement**' is in Satna

#### 41. COIMBATORE :

- Important industrial city of Tamilnadu located in the Palghat region on the bank of the Noyil River
- Known as '**the Manchester of South India**'
- A million plus city
- Has the **Salim Ali Centre for Ornithology**

#### 42. TITAGARH :

- Important industrial city of West Bengal on bank of the Hoogly River
- Known for jute and paper industries
- Has 9 mills of jute

#### 43. BUDGE BUDGE :

- Industrial city of West Bengal on the bank of the Hoogly River near Haldia
- Known for jute textile industry and paper and pulp
- Has 8 mills of jute

#### 44. RISRA :

- Industrial town in the Hoogly Valley of West Bengal, near Titagarh
- **Modern jute industry started here in 1855**
- Petrochemical industry

#### 45. SERAMPORE :

- Industrial town of West Bengal on the bank of the Hoogly River, near Titagarh
- Known for jute industry

**46. KAKINARA :**

- Industrial town of West Bengal on the bank of the Hoogly River, near Titagarh
- Known for jute textile and paper industries

**47. NAIHATI :**

- Industrial town of West Bengal on the bank of the Hoogly River
- Known for jute textile and paper industries

**48. CUTTACK :**

- Important industrial city of Odisha located at the apex of the Mahanadi Delta
- Industries – jute textile, sugar, handicrafts
- **Central Rice Research Institute (CRRI)**
- The former capital and the **commercial capital of Odisha**
- Has famous **Katak Chandi Temple**

**49. TUMKUR :**

- Industrial town of Karnataka, located northeast of Bengaluru
- NH-4 and NH-48 pass through it
- Industries- silk, cotton and woolen textiles

## OTHER IMPORTANT CITIES



### 50. BELGAUM :

- Important industrial and historical city located in northwestern Karnataka near the border with Maharashtra
- Located on the NH-4
- Industries- cotton and woolen textiles,

### 51. KODAGU :

- Important commercial and historical city of southern Karnataka
- Known for trade of coffee, cardamom
- Largest coffee producing region of India
- Tourists are attracted to this former princely state of Coorg and pilgrims come here to bathe in the Hemavati River

**52. MURSHIDABAD :**

- Important industrial and historical city of West Bengal located along the border of Bangladesh
- Once it was made capital of Bengal by its Nawab, has a palace of the Nawab
- Industries: Cotton, woolen and silk textiles

**53. ANANTNAG :**

- Situated along the bank of the Liddar River
- Second largest city of the Kashmir Valley
- Industries: silk, carpet, gabbas
- Sulphur springs are known for medical value
- Route to Amarnath passes through it

**54. BARAMULA :**

- City of Kashmir Valley, situated on the bank of the Jhelum River near the LoC
- Third largest city of Kashmir Valley after Srinagar and Anantnag
- Industries: woolen, silk, gabba, namada

**55. UDHAMPUR :**

- City of Jammu and Kashmir just north of Jammu city
- Headquarters of the **Indian Army's Northern Command**
- Located on the NH-1A
- Also has the Forward Base Support Unit (FBSU) of the Indian Air Force

**56. DHARIWAL :**

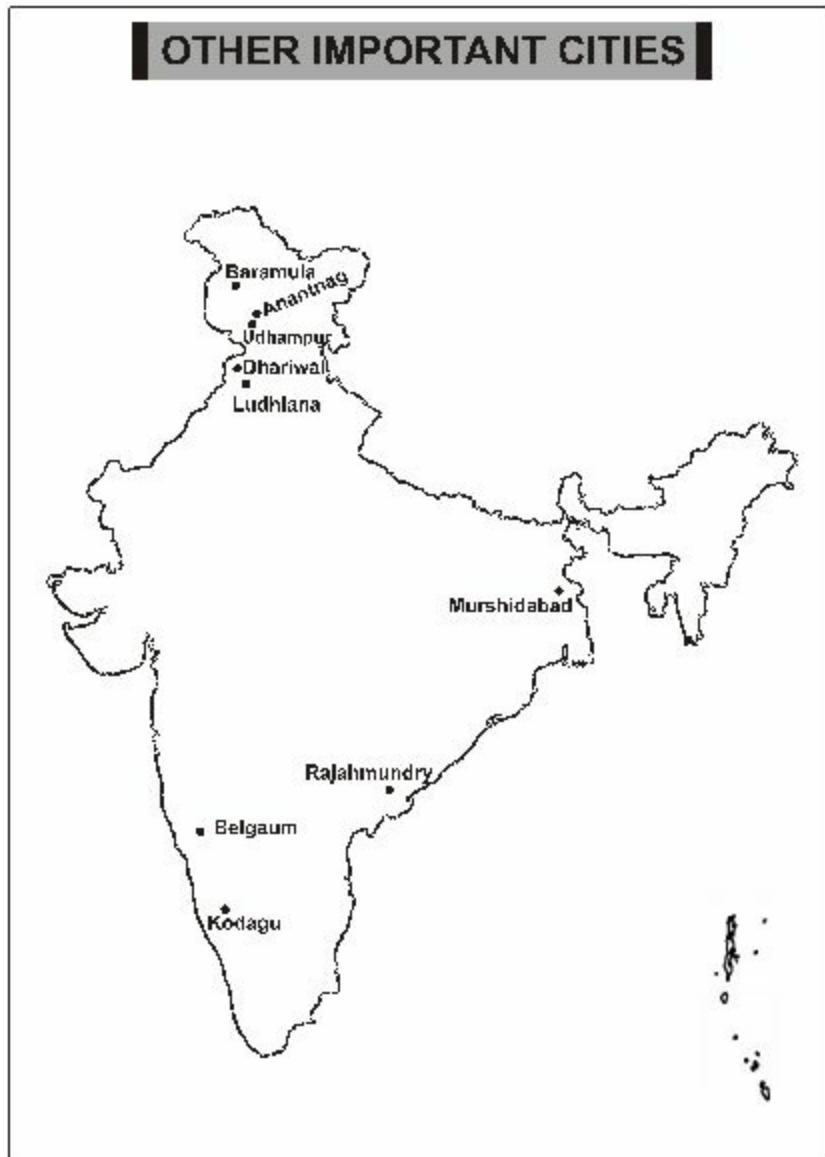
- Industrial city of Punjab near Amritsar, in the Gurdaspur district
- Largest centre of woolen textile in the state
- Main station on the Amritsar- Pathankot rail line
- **Gurudwara Burj Sahib** is just 1 km away from the station

**57. LUDHIANA :**

- Important industrial city of central Punjab on the NH-1
- A million plus city
- **Industries** – Cotton, woolen and silk textiles and hosiery
- Largest centre of hosiery manufacturing in India

**58. RAJAHMUNDY :**

- Main city of the East Godawari district of Andhra Pradesh
- Central Tobacco Research Institute is located
- Located on the NH-5 and the Kolkata-Chennai railway line
- A collection centre of rice and salt



#### **59. BELLARY :**

- Historical and industrial city of Karnataka near border with Andhra Pradesh & Telangana
- Bellary region has good reserve of iron ore
- Has a sixteenth century fort
- Industries – sugar, textiles

#### **60. HASSAN :**

- Important city of Karnataka located on the NH-48 between Bengaluru and Mangalore

- It has the **Master Central facility (MCF)** of ISRO
- Belur, Halebidu and Shravanbelagola are located in the vicinity

#### **61. ANJAR :**

- Important town of the Kachchh region of Gujarat, near Kandla
- Capital of Kachchh thrice in the past
- Badly affected the earthquake of 2001, in which the old fortified town was shattered

#### **62. LAVASA :**

- Located near Pune, is the first hill station of independent India
- The river has been dammed to create scenic lake
- Built principally for tourism, hospitality and leisure
- Only pollution – free industries will be allowed

#### **63. MUNABAO :**

- A village in the Barmer district bordering Pakistan
- **Thar Express** runs through it and connects Khokrapar town in Pakistan
- Reopened in February 2006

#### **64. AVADI :**

- Located in Thiruvallur district of Tamilnadu
- Avadi is an acronym for '**Armoured Vehicles and Ammunition Depot of India**'
- About 23 km northwest of Chennai
- Has divisions of IAF, Indian Army, CRPF, Navy etc.
- T-72 tanks are produced

#### **65. ALWAR :**

- Located in the northeastern part of Rajasthan between Delhi and Jaipur
- Comes under the NCR of Delhi
- Known for the **Sariska NP** and Tiger Reserve
- Kho- Dariba copper mines are located nearby it

#### **66. GORAKHPUR :**

- Located on the bank of the Rapti River, is an important city of northeastern Uttar Pradesh

- Headquarters of the North- Eastern Railway Zone
- Industries- fertilizers, sugar, printing press

#### 67. HUBLI :

- Important industrial city of western Karnataka located on the NH-4 between Dharwad and Gadag
- Headquarters of the South- Western Railway
- Industries- cotton and woolen textiles
- Twin city of Dharwad- Together they form the second largest urban agglomeration of Karnataka



#### 68. SECUNDERABAD :

- Twin city of Hyderabad, located on the NH-7, just north of Hyderabad
- Established by the British as their cantonment on the outskirt of Hyderabad
- Headquarters of the South-Central Railway Zone

#### **69. BILASPUR :**

- Second most important city of Chhattisgarh located on the Mumbai-Kolkata railway line
- Headquarters of **the South-East Central Railway Zone and the seat of the High Court of Chhattisgarh**

#### **70. UDAIPUR :**

- Located on the NH-8 and Delhi -Mumbai rail line is the most important city of southern Rajasthan
- Old capital of a princely state
- Known for palaces, lakes and luxury hotels
- Industries- Zinc smelting, fertilizers, cement, marble

#### **71. POKHRAN :**

- Located in the Thar Desert on the NH-15 between Phalodi and Jaisalmer
- **Nuclear testing site** of 1974 and 1998, conducted by India
- Pokhran means '**the place of five mirages'**
- Located between Jodhpur and Jaisalmer

#### **72. GANGANAGAR :**

- Northernmost city of Rajasthan located near the border with Pakistan and Punjab, on the NH-15
- Known as '**the Granary of Rajasthan**'
- Main industries- cotton textile, sugar
- Benefited by the Indira Gandhi Canal

#### **73. DIMAPUR :**

- Main commercial hub of Nagaland
- A gateway to Nagaland and Manipur
- Important military centre
- Only city of Nagaland which is connected by both rail and air

#### **74. PINJORE :**

- A unit of **HMT** is located here
- Tractor production
- **Breeding centre of vultures**
- Located in the Panchkula district of Haryana
- Yadvindra Gardens are great attraction

#### 75. **MAWSYNRAM :**

- Located in the Khasi Hills, 22 km west of Cherrapunji
- Receives **highest average rainfall in the world** due to its funnel shaped topography
- Inhabited by the Khasi tribes
- The region is ecologically degraded due to shifting cultivation

#### 76. **CHEERRAPUNJI :**

- Located in the southern part of the Khasi Hills in Meghalaya
- Receives one of the highest rainfalls in the world
- Inhabited by the Khasi tribes and shifting cultivation has degraded the ecology

## OTHER IMPORTANT CITIES



### 77. KARGIL :

- Located near the LoC on the NH-1D that connects Srinagar to Leh
- Kargil district is the only Muslim majority district of the Ladakh region
- Known for the **Kargil War, 1999**

### 78. DRAS :

- Border town located in the Kargil district
- Often called as '**the gateway to Ladakh**'
- NH-1D passes through the town
- The **coldest inhabited place in India**

- Has the Dras War Memorial

#### **79. MANDSAUR :**

- Located in western MP near the border with Rajasthan to the southwest of the Gandhi Sagar

- **Largest amount of opium production in India**

• Tourist places: Pashupatinath Temple, Gandhi Sagar Sanctuary, Mandsaur Fort

#### **80. ANAND :**

• Important industrial city of Gujarat located between Vadodara and Ahmedabad on the NH-8

- Birth place of the **White Revolution in India**

- Known for the **Anand Milk Union Ltd. (AMUL )**

#### **81. LEH :**

• Largest city of the Ladakh region located on the bank of the Indus River

- Represents a typical culture of Ladakh and Buddhists

- Has so many Buddhist monasteries

- Attracts large number of tourists

#### **82. AMARNATH CAVES :**

• Located on the Greater Himalayas in the Anantnag district of Jammu and Kashmir

- The cave has limestone topography and a natural **Shivling** is formed

- Accessible by the Pahalgam and Baltal (Sonmarg) routes

- Thousands of pilgrims visit to have a **Darshan of the Shivling**

#### **83. BHATINDA :**

• Important industrial city of southwestern Punjab, located in the Malwa region

- Named after the Bhati Rajput kings

• **Attractions :** Two thermal power plants, a fertilizer plant, a large oil refinery, the Qila Mubarak Fort

#### **84. NANGAL :**

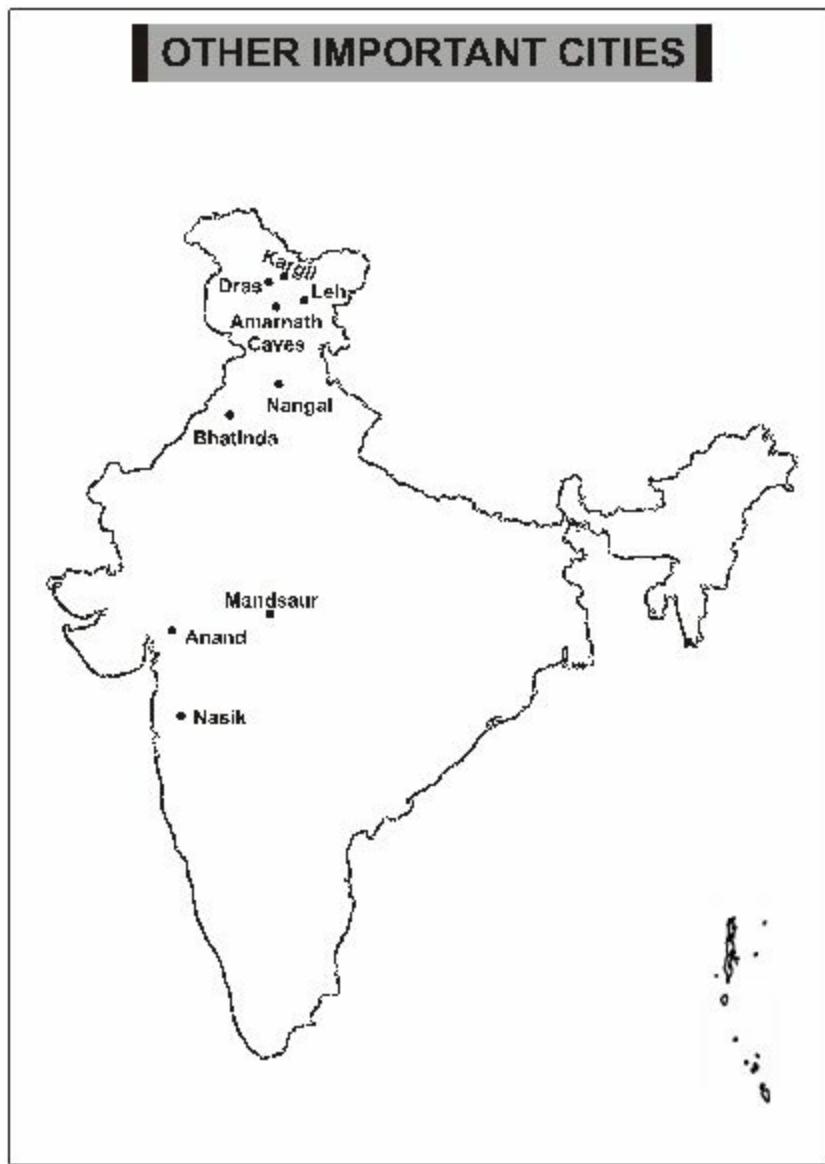
• Small city of Punjab located on the bank of the Satluj, downstream of the Bhakra Dam

- The Nangal Dam and an HEP plant are located

- Has a nitrogenous fertilizer plant

#### **85. NASIK :**

- A million plus city of northwestern Maharashtra the NH-3
- Maha Kumbh Mela
- Indian Army School of Artillery
- **Printing and Security Press**



#### **86. DIAMOND HARBOUR :**

- Located on the bank of the Hoogly River in the South 24 Parganas district
- It was a stronghold of Portuguese pirates
- A minor port, to which the West Bengal is considering to upgrade

and expand

- A popular tourist destination

#### **87. ASANSOL :**

- **Second million plus city of WB** located along the Damodar River on the NH-2
- Raniganj, Kulti, Burnpur , Durgapur, Chitranjan and Jayknagar, all lies in its vicinity
- An important industrial centre
- Also known as an important educational and Bengali cultural centre

#### **88. MALEGAON :**

- Located in the Nashik district of Maharashtra at the confluence of the Girna and Mausam rivers
- A major textile producing centre
- Shot into news because of a serial bomb blasts that took place on 8 September 2006

#### **89. ITARSI :**

- Located to the south of Hoshangabad in MP
- One of the star railway junctions of India
- **Geographical centre of the country**
- Tawa Dam and Bori Wildlife Sanctuary are located in the vicinity
- Economic activities: Ordnance factory, soya oil mills, plywood

#### **90. GUNTUR :**

- Important industrial city of AP, located at the head of the Krishna Delta, just south of Vijaywada
- Located on NH-5 and the Chennai-Kolkata main rail line
- Known for sugar, cement and leather goods
- **Largest market (mandi ) of chilly in Asia**

#### **91. VIJAYWADA :**

- Located at the head of the Krishna Delta where the NH-9 meets the NH-5
- A million plus city –Second largest city of Andhra Pradesh after Vishakhapatnam
- Often referred as '**the Business Capital of Andhra Pradesh'**
- 3<sup>rd</sup> largest railway junction in the world

- **Industries :** Automobile body building, garment

## **92. JALANDHAR :**

- Third largest city of Punjab after Amritsar and Ludhiana, located on the NH-1 midway between Ludhiana and Amritsar
  - Has big cantonment and military air base
  - Known for **sport goods**, musical and surgical equipments

## **93. MEERUT :**

- A million plus city of western UP, to the northeast of Delhi
- **History** – Start of 1857 Freedom Struggle, Meerut Conspiracy
- Located on the Delhi- Saharanpur rail line
- Known for **sports goods**

## OTHER IMPORTANT CITIES



### 94. JAMNAGAR :

- Important industrial city of Gujarat near the Gulf of Kachchh
- Industries – Oil refinery, petro- chemicals, textiles
- Jamnagar Refinery of the Reliance Industries is **the largest refinery of India**

### 95. KOYALI :

- Located near Baroda (Vadodara) in Gujarat
- **Largest public sector refinery of India**, operated by the IOC
- Most efficient oil refinery of IOCL
- Present day capacity is 13.70 MMTPA

### 96. BINA :

- Important industrial town of MP near Sagar, located at the right side of the Betwa River

- Important railway junction of central India
- An oil refinery is being developed

#### **97. MATHURA :**

- Important historical, religious and industrial city of western UP, located on the bank of the Yamuna on the NH-2
- Reputed as the birth place of the Lord Krishna, Vrindavan just north of it
- Has an oil refinery

#### **98. KANPUR :**

- Largest city of UP located on the bank of Ganga on the NH-2
- Known as '**the Manchaster of North India'**
- **Industries**- cotton, woollen textiles, leather, sugar
- A million plus city

#### **99. KHARAGPUR :**

- Located near Medinipur in West Bengal on the NH-6
- Known for its IIT
- **Largest railway platform in India**
- Chennai-Kolkata and Kolkata- Mumbai main rail lines pass through it

#### **100. LATUR :**

- Important city of Maharashtra, located on the Balaghat Range, on the bank of the Manjira River
- Suffered the earthquake of 1993
- Industries- sugar, cotton textiles

#### **101. LOTHAL :**

- Ancient city of the Indus Valley Civilization, located in the Kheda district of Gujarat near the Gulf of Khambhat
- It was a port city and a trading centre
- Famous tourist destination

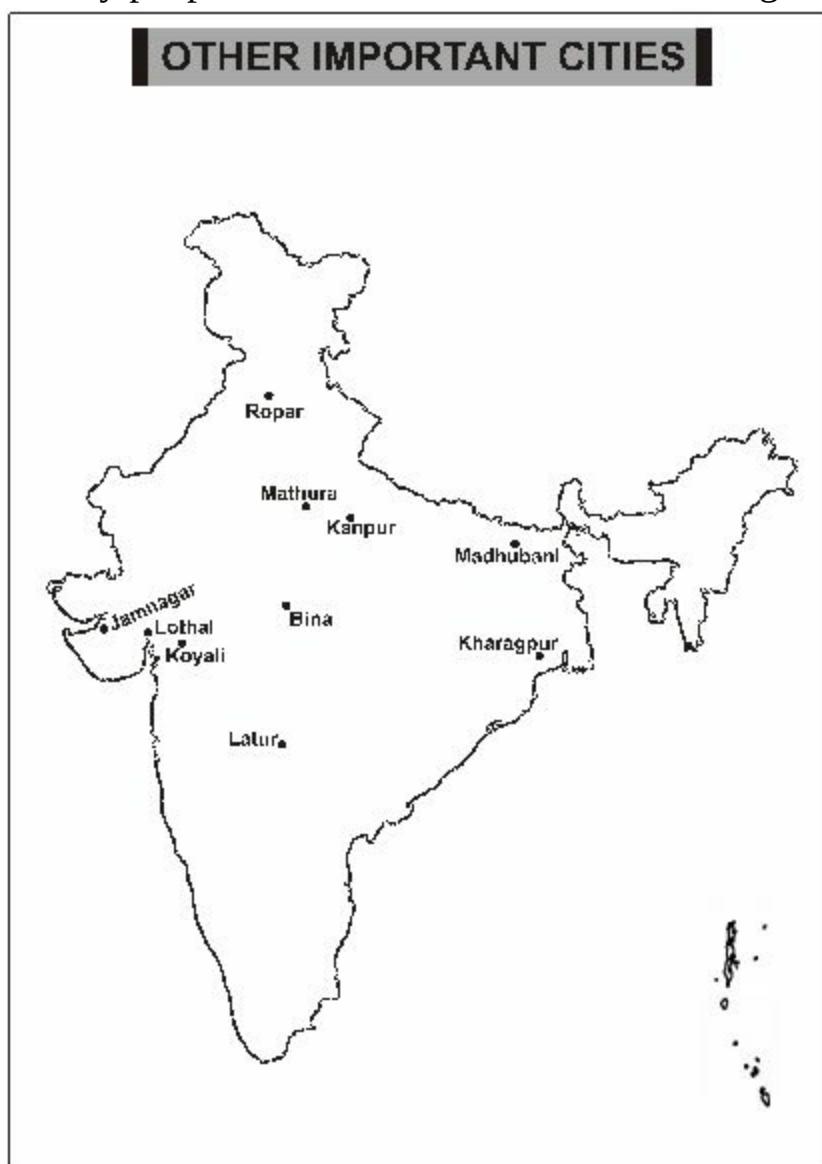
#### **102. ROPAR :**

- Also known as **Rupnagar**
- Located in eastern Punjab on the bank of the Satluj
- Ancient city during **the Harappan Civilization**

- Nangal city and dam are located near to it

### **103. MADHUBANI :**

- Located in the northern Bihar near the Nepal border, west of the Kosi River
- Known for the famous **Madhubani Paintings**
- It is the cultural heart of Mithilanchal, being the birth place of many literary people and home to Madhubani Paintings.



### **104. NIZAMABAD :**

- Important industrial and historical city of northern AP, located on the NH-7
- Industries- sugar, paper, cotton textile

- **Nizam Sagar** is located in the vicinity

#### **105. NAGPUR :**

- **Winter session of Maharashtra Legislature**
- Most important city of the Vidarbha region of Maharashtra, located north of **the Nag River**, a tributary of the Wainganga where the NH-6 and the NH-7 intersect each other
- **Site of the NEERI**
- A million plus city
- Known for **Nagpur oranges** and bananas

#### **107. PAMPORE :**

- Located on the NH-1A, just 30 km southeast of Srinagar
- Known for **saffron**, almond, walnut and apricot
- Has a solar energy centre

#### **108. RAICHUR :**

- Important industrial and historical city of Karnataka located between the Krishna and the Tungabhadra rivers
- Famous for the wars during the time of **the Vijaynagar Empire** in the Raichur Doab

#### **109. RANCHI :**

- Capital and industrial city of Jharkhand, located on the bank of the Subarnarekha River
- HMT and other heavy engineering industries
- A million plus city according to the census -2011
- Known for the hospital of mentally disturbed people
- Often called as **the Manchester of the East**
- Referred as the '**City of Waterfalls**' - Dasham, Hundru, Jonha, Hirni, Panchghat falls are near to it.

#### **110. DHANBAD :**

- Industrial city of Jharkhand, located on the NH-2 between the Barakar and the Damodar
- **Industries** : Iron and steel, fertilizers, cement, heavy engineering goods
- A million plus city
- Coal mining centre and zinc smelter

- **Jharia coal mines** lie very close to it
- Sites of Indian School of Mines and Central Fuel Research Institute

### **111. ALIGARH :**

- Important industrial, historical and educational city of western UP in the Ganga- Yamuna Doab
- Known for the **Aligarh Muslim University**
- Famous traditionally for **lock – making** and printing

### **112. SILCHAR :**

- Important city of southern Assam located in **the Surma Valley**
- The region is agriculturally productive and has tea plantations
- Headquarters of the Cachar district
- About 90% resident are Sylhetis
- Trading and processing of tea, rice and other agricultural products

## OTHER IMPORTANT CITIES



### 113. SOLAN :

- Important city of southern HP, located between Kalka and Shimla
- Kalka- Shimla Railway passes through it
- Has diversified industries
- Known as '**the mushroom city of India'**
- Also known for brewery – Mohan Meakin Brewery (**India's oldest brewery**)

### 114. DEHRADUN :

- Capital of Uttarakhand located in the southwestern part of the state
- An academic and learning centre
- **Institutions :** Forest Research Institute, ONGC, Indian Petroleum

Research Institute, Wadia Institute of Himalayan Geology

- Also has **Indian Military Academy and the Doon School**

#### **115. SURENDRANAGAR :**

- Industrial city of Gujarat, located between Ahmedabad and Rajkot, west of the Nal Sarovar Bird Sanctuary
- Called as the **Gateway to Saurashtra**
- Industries – cotton textiles, groundnut processing

#### **116. UTTARKASHI :**

- City of northwestern Uttarakhand, located on the bank of the Bhagirathi River
- Routes to Gangotri and Yamunotri pass through it
- Had suffered a major earthquake
- Located on the Great Himalayas

#### **117. JUNAGARH :**

- Important industrial and historical city of southern Saurashtra
- **Gir NP** lies in the vicinity
- Located at the foot of the Girnar Hills
- Earlier it was a princely state
- Favourite place for tourists

#### **118. KASAULI :**

- Located in the Solan district of HP
- A small cantonment town
- Home of the **Kasauli Brewery** – the highest brewery and distillery in the world
- Established in 1842 as a hill station by the British
- Has **Central Institute for Medical Research (CIMR)**

#### **119. SAHARANPUR :**

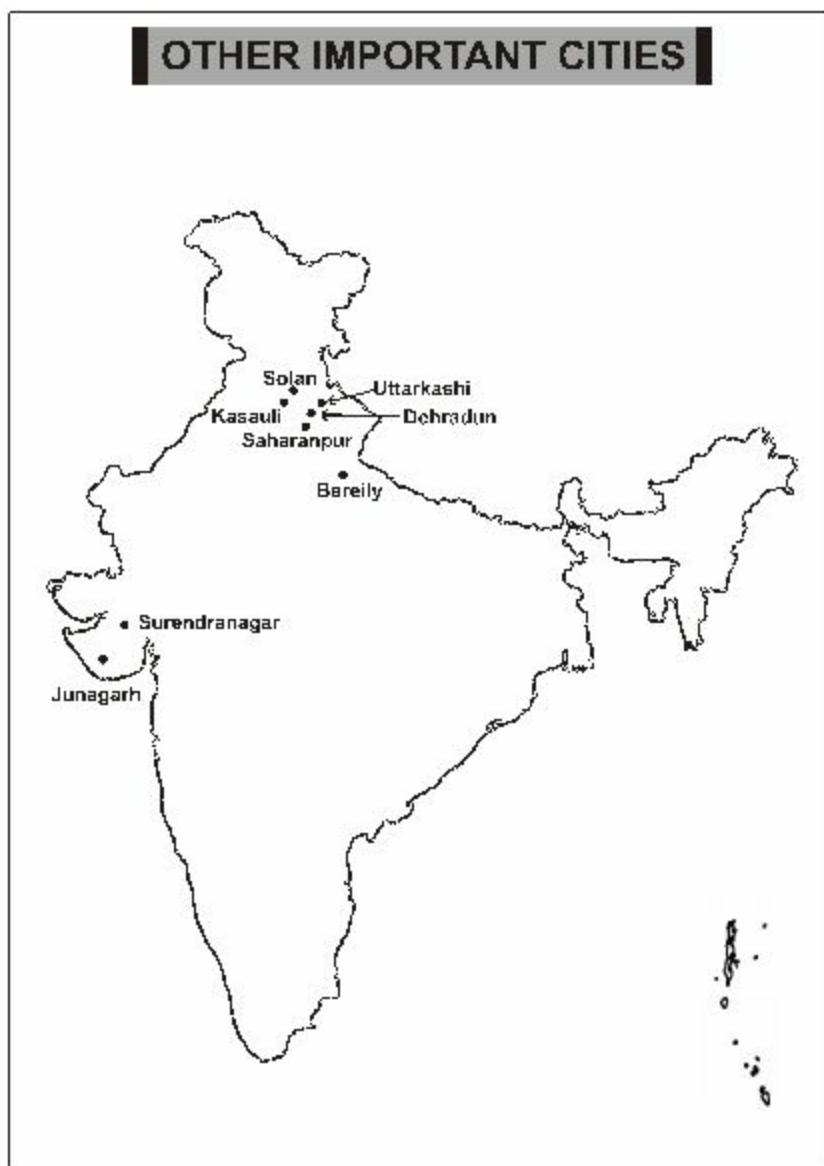
- Important industrial and religious city of northwestern UP
- Founded in 1340 and named after **Sufi Saint Shah Haroon Chisti**
- Industries – paper, sugar
- Has Institute of Paper Technology, Sericulture Research and Fruit Research Institute and Aviation Training Centre

#### **120. BAREILY :**

- Important city of UP located on NH-24 between Delhi and Lucknow

in the Rohilkhand

- Founded in 1537 by the Mughal governor Makrand Ray, later became capital of Rohillas
- Involved in the 1857 uprisings
- Industries- sugar, gas- based fertilizer



### **121. RAE BARAELI :**

- Important industrial and historical city of UP, in the Ganga- Gomati Doab
- Situated on the bank of the Sai River
- Has many architectural features
- Nearby town **Lalganj** will host a new **Railway Coach Factory**

## **122. NAINI :**

- A satellite town of Allahabad
- Has the **Naini Jail** – Nehru was jailed here
- Located on the bank of the Yamuna
- Has many educational institutions and some important companies

## **123. RATLAM :**

- Important industrial town and railway junction on the Delhi-Mumbai railway line
- Has a railway workshop
- Located few kms south of the Tropic of Cancer

## **124. JORHAT :**

- Important city of the Upper Assam Valley, located south of the Majuli Island
- The last capital of the Ahom Kingdom
- Known as '**the Cultural Capital of Assam**'
- Has been the principal place of pilgrimage of Vaishnovites

## **125. TINSUKIA :**

- Important city of the Upper Assam Valley, northwest of Digboi
- The region is rich in oil and coal
- There is an oil refinery

## **126. KANGRA :**

- Located on the Dhauladhar Range in HP, north of the Pong Reservoir
- Has a number of temples visited by large number of devotees

## **127. GWALIOR :**

- Most important northern city of MP located on the NH-3
- A million plus city
- Old capital of the Sindhias
- Has the Gwalior Fort, Tomb of Tansen, Saas Bahu Temple etc

## **128. BIKANER :**

- Important industrial and historical city of the northern Thar Desert, located on the NH-15, and the NH-11 terminates here
- Named after the founder of the city, **Rao Bika**, a Rajput chief,
- Has **Rajasthan Agricultural University**
- Wool collecting and camel breeding centre

## **129. JODHPUR :**

- Second largest city of Rajasthan, is a famous historical city on the Thar Desert
- **Central Arid Zone Research Institute (CAZRI) is located here**
- Seat of a princely state with same name and the capital of the Marwar
- Tourism for forts, palaces and temples
- Known as **the Sun City** as well as **the Blue City**
- A million plus city according to the census -2011

#### **130. JAISALMER :**

- Important historical city in the western Rajasthan, located on the NH-15
- **Desert National Park** is situated in the vicinity
- Nicknamed as '**the Golden City**'
- Tourism is the major industry

## OTHER IMPORTANT CITIES



### 131. MYSORE :

- Most important city of southern Karnataka
- Second largest city of the state
- It was the capital and princely state till 1917
- Industries : Silk, sandalwood crafts
- Tourist attractions :Royal Palaces, Giant Nandi, Krishnaraj Sagar Dam, Brindaban Gardens
- Famous for the **Dussehra Festival**

### 132. BELUR :

- Located on the right bank of the Hugli River, about 20 km to the north of Haora, in WB

- An important suburb of Kolkata
- Well known for **the Belur Math**, the headquarters of the Ramakrishna Math and Mission

### **133. THANJAVUR:**

- Important city in the Kaveri Delta in TN
- **Brihadeswara Temple**
- Known for the craft industries
- Dates back to the Sangam Age
- Rose into prominence during the Later Cholas
- **Great Living Chola Temples** – World Heritage Site

### **134. YERCAUD :**

- A hill station near Salem in TN, on the Shevroy Hills
- Tourism, agriculture (coffee)
- Sandalwood, teak and silver oak are abundant
- Summer Festival is held in May annually and is a cantonment town

### **135. RANIKHET :**

- A hill station and cantonment town west of Almora in Uttarakhand
- Home of the **Kumaon Regiment** and **Naga Regiment**
- The British established here in 1869, the headquarters of the Kumaon Regiment

### **136. RAJAURI :**

- Border city of J&K near the LoC
- Industry – silk
- Strategically located
- Part of Kambojas during the Mahabharata time

### **137. POONCH :**

- Important border city along the LoC
- Part of Kambojas during the Mahabharata time
- Pir Panjal separates the Poonch Valley from the Kashmir Valley
- The Mughal Road connects it with the Kashmir Valley

### **138. AKHNOOR :**

- Important border city along the LoC in the Jammu district
- Located at the foot hills of the Himalayas

- On the bank of the Chenab
- Has caves, which were believed to be place of hiding for the Pandavas
- Related story with cleaning of eye of Janhvir

### **139. KUPWARA :**

- Important border city along the LoC
- Tourist place – Lolab Valley, Sogam
- **Sogam** is known for meadows, mountains, gushing waters and fresh air



### **140. URI :**

- Important border city along the LoC, located on the bank of the

Jhelum, in the Baramulla district of J&K

- Suffered the Earthquake of 2005

#### **141. GULBARGA :**

- Formerly part of Hyderabad state
- Founded by the **Bahmani Sultans** in the 14<sup>th</sup> century as their capital
- The Sharana Basaveshwara Temple is a major attraction to both Hindu and Muslim devotees

#### **142. JAYAK NAGAR :**

- An industrial city of West Bengal located in the vicinity of Kolkata
- Aluminium Corporation of India Ltd was formed here in 1937 which accelerated the growth of aluminium industry in India

#### **143. AMRITSAR :**

- A million plus city of Punjab located at the Pakistan border
- Founded in 1577 by Ram Das, the fourth Guru of Sikhs
- **Golden Temple**
- **Jallianwala Bagh Massacre, 1919**

#### **144. BHUJ :**

- Most important city of the Kachchh region
- **Earthquakes – 1819-** Allah Bund formed
- ♣ and in 2001- 30,000 people died
- Established by Rao Hamirji in 1510
- Capital of an old princely state

#### **145. PUNE :**

- A million plus city of Maharashtra located on the NH-4 on the eastern side of the Sahyadris
- Shivaji's home and Maratha capital in 1750
- Industries- Cotton textiles, automobiles
- Hub of research and educational institutions
- **Indian Institute of Tropical Meteorology**

#### **146. PUSHKAR :**

- Located at 14 km northwest of Ajmer
- One of the five sacred dhams of Hindus
- Often called as **the Tirth Raj**

- Lies on the shore of the Pushkar Lake
- Home of many temples
- Known for the **Pushkar Fair**

#### **147. TRICHY :**

- Important city of TN located at the start of the Kaveri Delta
- **Chola fortified town** in the second century and known to Greek geographer **Ptolemy**

#### **148. ITANAGAR :**

- Capital of Arunachal Pradesh
- Has a fourteenth century fort, a Buddhist temple and **Arunachal University**

#### **149. DISPUR :**

- Capital of Assam, located 5 km to the south of Guwahati
- University of Guwahati
- **Industries:** paper, tea, coal marketing

#### **150. KOHIMA :**

- Capital and historical city of Nagaland
- Inhabited mainly by the Angami tribes
- NH-39 connects it with Dimapur and Imphal
- Burial place of the British soldiers died in the World War –II

## OTHER IMPORTANT CITIES



### 151. AIZAWL :

- Capital and primate city of Mizoram, located on the Mizo Hills
- Known for the Lushai Culture
- **Dampa WLS** is located in the vicinity

### 152. AGARTALA :

- Capital of Tripura located near the Bangladesh border on the Haroa River, a tributary of the Meghna
- Industries: Rice processing, tea
- The Jagannath Temple has a shape of four storeyed shikhara

### 153. GANGTOK :

- Capital and the largest city of Sikkim

- Located on the Siwalik Hills
- Centre of Buddhist culture
- Centre of Sikkim's tourism industry
- Has the **Enchey Monastery** built in 1840

#### **154. PORT BLAIR :**

- Capital and the largest city of Andaman and Nicobar located in the southeastern part of the South Andaman Island
- Base of the Indian Navy and the Indian Coast Guard
- Has the famous **Cellular Jail**

#### **155. KAVARATTI :**

- Capital of Lakshadweep on the Kavaratti Island
- A favourite tourist place
- India's first low temperature desalination plant (LLTD) was opened here in May 2005
- Has an OTEC plant
- Population – 11,221

#### **156. SILVASSA :**

- Capital of Dadra and Nagar Haveli
- Has a number of factories and industries
- Population – 98,265
- Home of the **Warli Culture**
- Naturally a beautiful place

#### **157. PANAJI :**

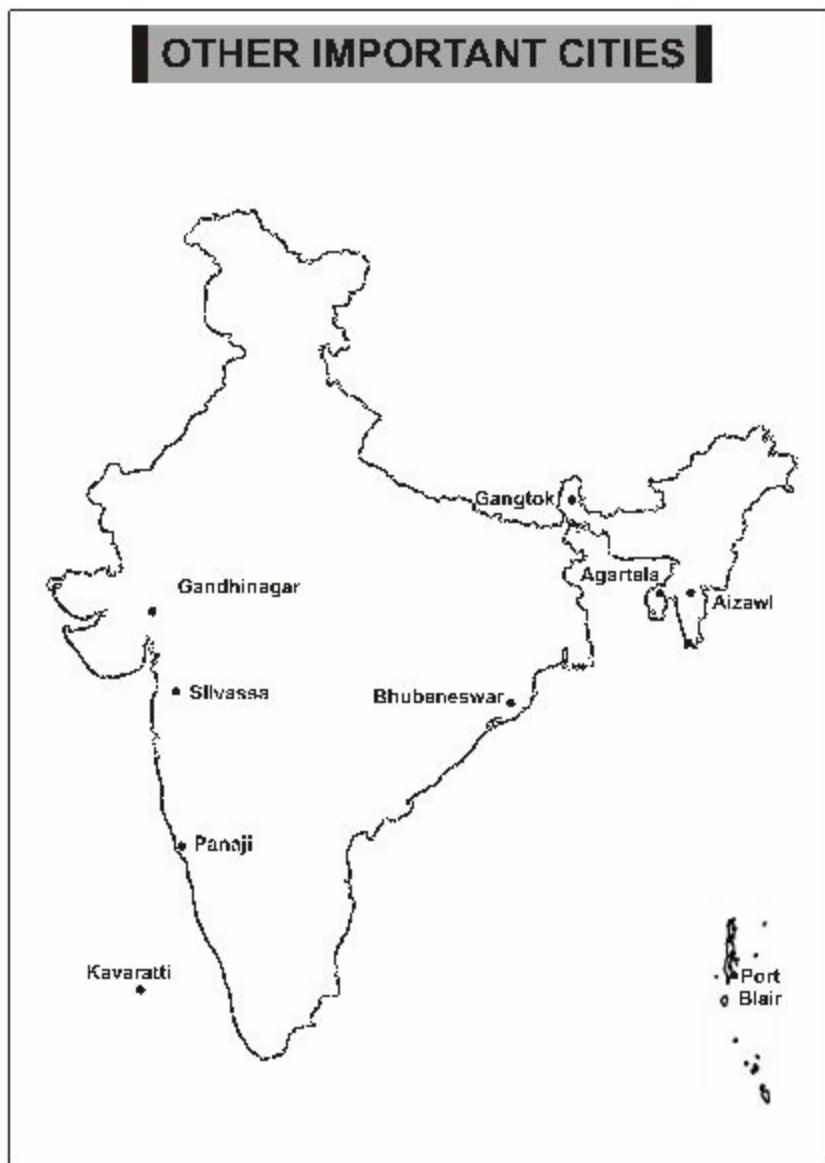
- Capital of Goa, located on the bank of the Mandovi River on the Tiswadi Island
- **NIO** is located here
- Population – 70,991
- Panaji means “**land that never floods**”

#### **158. GANDHINAGAR :**

- Located on the bank of the Sabarmati, north of Ahmedabad
- Capital of Gujarat
- Home to MNCs, thermal power plant, the **Akshardham Temple**
- Planned by **H.K. Mewada** and **Prakash Apte**

### **159. BHUBANESWAR :**

- Located on the Mahanadi Delta,
- The capital and a religious city of Odisha
- Famous for the temple architectures
- Dates back to the third century BC, when it was the **capital of the Kalinga Empire**
- Has University of Agriculture and Technology , Utkal University , Tribal Research Institute



### **160. RAIPUR :**

- Capital and the largest city of Chhattisgarh located on the bank of the **Kharun River**, a tributary of the Mahanadi

- Founded in the fourteenth century by **Rai Brahma Deo of the Ratanpur Dynasty**

- Located on the NH-6 and Mumbai-Kolkata main rail line

#### **161. JAMMU :**

- Largest city in the Jammu region and **the winter capital of the state**
- Known as '**the City of Temples**'
- **Vaishno Devi** is located in the vicinity

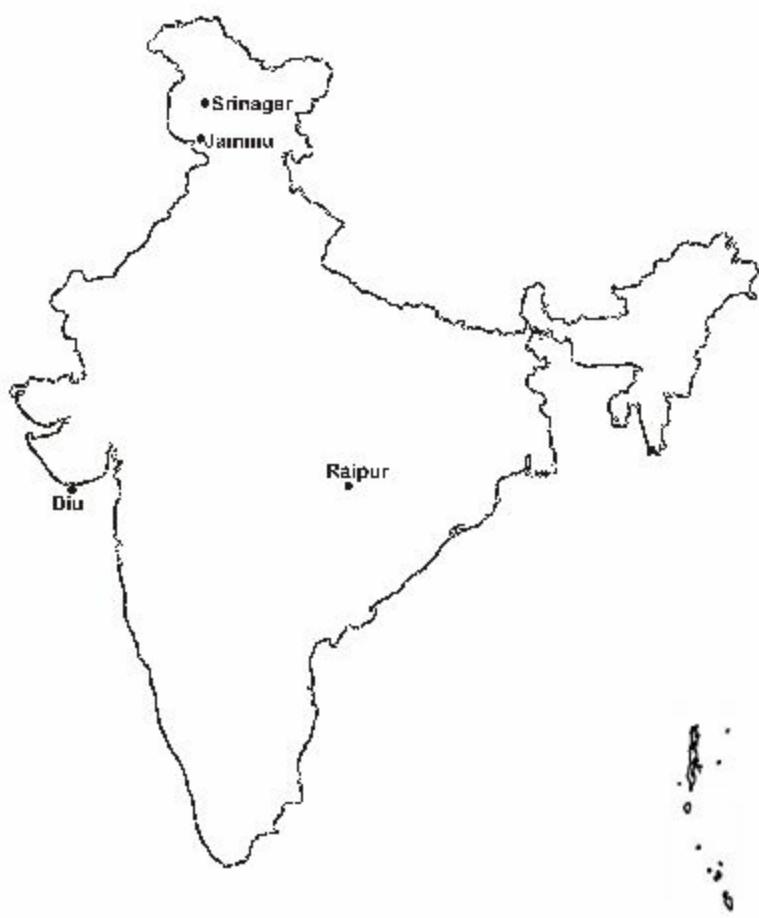
#### **162. SRINAGAR :**

- Largest city and capital of J&K
- Located on the bank of the Jhelum
- **Largest city in India without a Hindu majority**
- Famous for lakes, house boats, handicrafts, gardens,dry fruits etc

#### **163. DIU :**

- Located on the Diu Island's eastern edge
- Site of the Battle of Diu in 1509
- Known for fortresses and Portuguese Cathedral
- Population – 52074
- Tourist destination

## OTHER IMPORTANT CITIES



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## APPENDIX

### Minor Hill Stations

	Name	District	State
1.	Along	West Siang	Arunachal Pradesh
2.	Khonsa	Tirap	Arunachal Pradesh
3.	Ziro	Lower Subansiri	Arunachal Pradesh
4.	Haflong	North Cachar Hills	Assam

5.	Maibong	Dima Harao	Assom
6.	Saputara	Dang	Gujarat
7.	Kasauli	Solan	Himachal Pradesh
8.	Kufri	Shimla	Himachal Pradesh
9.	Solan	Solan	Himachal Pradesh
10.	Yusonarg	Badgam	Jammu & Kashmir
11.	Agumbe	Shimoga	Karnataka
12.	Madikeri	Kodagu	Karnataka
13.	Charalkunau	Pathanan thitta	Kerala
14.	Kapletta	Waynad	Kerala
15.	Kunily	Idukki	Kerala
16.	Munnar	Idukki	Kerala
17.	Nelliampathi	Palakkad	Kerala
18.	Peeronade	Idukki	Kerala
19.	Ponmudi	Thiruvananthapuram	Kerala
20.	Ranipuram	Kasargod	Kerala
21.	Sultan Bathery	Wayanad	Kerala
22.	Vagamon	Idukki	Kerala
23.	Panchgani	Satara	Maharashtra
24.	Amboli	Sindhudurg	Maharashtra
25.	Panhala	Kolhapur	Maharashtra
26.	Taranonal	Nardurbar	Maharashtra
27.	Igatpuri	Nashik	Maharashtra
28.	Karjat	Raigarh	Maharashtra
29.	Jowai	Joyantia Hills	Meghalaya
30.	Daringibadi	Kandhamal	Odisha
31.	Coonoar	Nilgiris	Tamil Nadu
32.	Yercaud	Salem	Tamil Nadu
33.	Kalinpong	Darjeeling	West Bengal

## Waterfalls

Name	District	Height	State	
1.	Barehipani	Mayurbhanj	399 m	Odisha
2.	Langshiang	West Khasi Hills	337 m	Meghalaya
3.	Nohkalikai	East Khasi Hills	335 m	Meghalaya
4.	Nohsngithiang	East Khasi Hills	315 m	Meghalaya
5.	Meenmeetty	Wayanad	300 m	Kerala
6.	Jhalaiyar	Dindigul	297 m	Tamil Nadu
7.	Barkana	Shimoga	259 m	Karnataka
8.	Kune	Lonavla	200 m	Maharashtra
9.	Soochipara	Wayanad	200 m	Kerala
10.	Khandadhar	Sundargarh	244 m	Odisha
11.	Magod	Uttara Kannada	198 m	Karnataka
12.	Hebbe	Chikkamangaluru	168 m	Karnataka
13.	Lodh	Latehar	143 m	Jharkhand
14.	Bishop	Shilong	135 m	Meghalaya
15.	Pandargad	Thane	107 m	Maharashtra
16.	Rajat Pratap	Hoshangabad	107 m	Madhya Pradesh
17.	Gatha	Panna	91 m	Madhya Pradesh

### Hydro-electric Projects

Name	State	
1.	Tato-II	Arunachal Pradesh
2.	Siyom	Arunachal Pradesh
3.	Urthing Sobla	Uttarakhand
4.	Kalai	Arunachal Pradesh
5.	Amulin	Arunachal Pradesh
6.	Emini	Arunachal Pradesh
7.	Mihundon	Arunachal Pradesh
8.	Bapsa-II	Himachal Pradesh
9.	Chamera-II	Himachal Pradesh
10.	Parbati	Himachal Pradesh

11.	Kol Dam	Himachal Pradesh
12.	Larji	Himachal Pradesh
13.	Holi	Himachal Pradesh
14.	Dhamwari	Himachal Pradesh
15.	Budhil	Himachal Pradesh
16.	Baira Suil	Himachal Pradesh
17.	Kishenganga	Jammu & Kashmir
18.	Mulshi	Maharashtra
19.	Rangeet	Sikkim

### Gas or Liqud Fuel Based Power Plants

	Name	State	Installed Capacity (MW)
1.	Indraprasth	Delhi	270
2.	Pragati Gas	Delhi	330.40
3.	Pragati-III	Delhi	1000
4.	Panpore	Jammu & Kashmir	175
5.	Ramgarh	Rajasthan	113.5
6.	Dholpur	Rajasthan	330
7.	Anta	Rajasthan	413
8.	Auraiya	Uttar Pradesh	652
9.	Faridabad	Haryana	430
10.	Dhuvaran-I	Gujarat	106.62
11.	Utran	Gujarat	363
12.	Vadodara	Gujarat	310
13.	Uran	Maharashtra	672
14.	Kawas	Gujarat	645
15.	Jhanor-Gandhar	Gujarat	648
16.	Vatva	Gujarat	100
17.	SUGEN	Gujarat	1147.5

18.	Essar (Hazira)	Gujarat	515
19.	GSEG (Hazira)	Gujarat	156
20.	GPED (Paguthan)	Gujarat	655
21.	Trombay	Maharashtra	180
22.	Basin Bridge	Tamilnadu	100
23.	Basin Bridge	Tamilnadu	108.88
24.	Kuttalam	Tamilnadu	101
25.	Valathur	Tamilnadu	187.10
26.	Karaikal	Puducherry	32.50
27.	Rajiv Gandhi	Kerala	359.58
28.	Jegurupadu	Andhra Pradesh	216
29.	APGPCL	Andhra Pradesh	100
30.	Spectrum	Andhra Pradesh	209
31.	Gautami	Andhra Pradesh	464
32.	Konaseema	Andhra Pradesh	445
33.	Lanco Kondapalli	Andhra Pradesh	734.13
34.	Vemagiri	Andhra Pradesh	370
35.	Samarlakot	Andhra Pradesh	220
36.	Aban	Tamilnadu	113.21
37.	Kochi	Kerala	157
38.	Lakwa	Assom	157.2
39.	Namrup	Assom	111

### Thermal Power Plants (Coal)

	Name	State	Installed Capacity
1.	Rajiv Gandhi (Khedar)	Haryana	600
2.	Guru Nanak Dev (Bathinda)	Punjab	440

3.	Guru Hargovind (Bathinda)	Punjab	920
4.	Guru Govind Singh (Ghanauli)	Punjab	1260
5.	Anpara	Uttar Pradesh	1630
6.	Panki	Uttar Pradesh	210
7.	NTPC Dadri	Uttar Pradesh	1820
8.	Tanda	Uttar Pradesh	440
9.	Wanakbori	Gujarat	1470
10.	Akrimota	Gujarat	250
11.	Sanjay Gandhi (Birsinghpur)	Madhya Pradesh	1340
12.	Koradi	Maharashtra	620
13.	Bhusawal	Maharashtra	420
14.	Paras (Akola)	Maharashtra	500
15.	Parli (Beed)	Maharashtra	1130
16.	Khaperkheda (Nagpur)	Maharashtra	1340
17.	Sipat (Bilaspur)	Chhattisgarh	2320
18.	Mundra (Adani Power)	Gujarat	4620
19.	Tamnar (Jindal)	Chhattisgarh	1000
20.	Lanco (Pathadi)	Chhattisgarh	600
21.	Dahanee (Thane)	Maharashtra	500
22.	Amravati	Maharashtra	2700
23.	Dr Narla Tata rao	Andhra Pradesh	1760
24.	Rayalseema (Cuddapah)	Andhra Pradesh	840
25.	Kakatiya (Chelpur)	Telangana	500
26.	Simhadri (Vishakhapatnam)	Andhra Pradesh	2000
27.	Patratu (Ramgarh)	Jharkhand	770
28.	Tenughat	West Bengal	420
29.	Bandel (Hooghly)	West Bengal	450
30.	Santaldih	West Bengal	730

31.	Sagardigi	West Bengal	600
32.	Mejia (Durlanpur)	West Bengal	2340
33.	Jojobera (Tata)	Jharkhand	427.5
34.	Essar Power (Salaya)	Gujarat	1200
35.	Vedanta (Jharsuguda)	Odisha	1215

### **Minor Lakes in India**

	Name	District	State
1.	Durgam Cheruvu	Rangareddy	Telangana
2.	Chandubi Lake	Kamrup	Assom
3.	Hamirsar Lake	Kutch	Gujarat
4.	Narayan Sarovar	Kutch	Gujarat
5.	Thol Lake	Mehsana	Gujarat
6.	Nako Lake	Kinnaur	Himachal Pradesh
7.	Suraj Lake	Lahul & Spiti	Himachal Pradesh
8.	Surajkund	Faridabad	Haryana
9.	Manasbal Lake	Srinagar	Jammu & Kashmir
10.	Sheshnag Lake	Anantnag	Jammu & Kashmir
11.	Bellandur Lake	Bengaluru	Karnataka
12.	Hebbal Lake	Bengaluru	Karnataka
13.	Kukkarahalli Lake	Mysore	Karnataka
14.	Vellayani Lake	Thiruvananthapuram	Kerala
15.	Powai Lake	Mumbai	Maharashtra
16.	Tulsi Lake	Mumbai	Maharashtra
17.	Vihar Lake	Mumbai	Maharashtra
18.	Salim Ali Lake	Aurangabad	Maharashtra
19.	Venna Lake	Mahabaleshwar	Maharashtra
20.	Pashan Lake	Pune	Maharashtra
21.	Uniam Lake	Shillong	Meghalaya
22.	Ansupa Lake	Cutack	Odisha

23.	Lunkararsar	Bikaner	Rajasthan
24.	Ana Sagar Lake	Ajmer	Rajasthan
25.	Talwara Lake	Hanumangash	Rajasthan
26.	Sholavaram Lake	Thiruvallur	Tamilnadu
27.	Berijam Lake	Dindigul	Tamilnadu
28.	Kaliveli Lake	Viluppuram	Tamilnadu
29.	Veeranam Lake	Cuddalore	Tamilnadu
30.	Bhimtal	Nainital	Uttarakhand
31.	Sattal	Nainital	Uttarakhand

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