

## Map Class 01

### INTRODUCTION (5:08 PM)

#### PYQ ANALYSIS (5:13 PM)

- Out of 100 questions in prelims, nearly about 8-10 questions can be solved through mapping.
- 2022 UPSC prelims- 13 questions.
- Number of map-based questions asked in UPSC from 2015- 2022 = 71
- **Mountain Peaks asked in UPSC 2022:**
- Namcha Barwa-Arunachal Pradesh.
- Nokrek-Meghalaya
- **Types of questions asked based on mapping:**
- National/State borders and locations.
- Regions in the news.
- International groupings.
- Mountains, peaks, and volcanoes.
- Glaciers.
- Rivers and water bodies (national and international-specially lakes which are important from an environmental perspective).
- Reservoirs.
- National parks and wildlife sanctuaries.

#### ASIA (5:45 PM)

- Connected with Europe, Africa, and Oceania continents.
- **Border with Europe:** Ural mountains(Russia), Caucasus mountains.
- **1) WEST ASIA:**
- **Turkey:**
- Turkey is an important country, recently an earthquake happened here. The European plate and Anatolian plate, African plate collided here.
- The capital of Turkey is **Ankara**. In the European Turkey region **Istanbul** is located, It was famous for its trade in medieval times. It is one of the largest cities in Europe.
- **Iran:**
- Iran only has critically endangered species of **Asian Cheetah**.
- **Borders:**
- Caspian Sea, Gulf of Oman, etc.
- **Iraq:**
- It is a comparatively more fertile region in West Asia.
- Two major rivers are Euphrates and Tigris.
- It is rich in petroleum and gas.
- **Kuwait:**
- It is rich in oil and gas.
- 70% of Kuwait's population lives in one city, i.e. Kuwait.
- **Saudi Arabia:**
- It is famous for its dunes.
- Two important pilgrimage sites **Mecca** and **Madina** are near the Red Sea.
- It is the only country that has a coast both in the Persian Gulf and the Red Sea.
- Jeddah port is in the Red Sea.
- **Qatar:**
- Recently FIFA World Cup took place in Qatar.
- **U.A.E:**
- The Capital is **Abu Dhabi**.
- **Oman:**
- Muscat is the capital of Oman, It is located on the tropic of cancer.
- **Duqm port** is important in Oman, India has been granted access to this port for military and strategic purposes.
- Yemen:
- Yemen is in civil war, The rebel group is **Houthi**.
- The capital of Yemen is Sana'a.

- Yemen has a port of call named **Port of Aden**
- **Jordan-Israel-Lebanon-Syria:**
- Asia is connected with Africa through the Sinai Peninsula.
- **Sharm el-Sheikh** is located on the Sinai Peninsula.
- Three water bodies surrounding the Sinai Peninsula are the Mediterranean, the Gulf of Aqaba, Gulf of Suez.
- Suez is the port in Egypt.
- Aqaba is a port in Jordan.
- Israel has a coast in both the Mediterranean Sea and the Gulf of Aqaba.
- Sea of Galilee and the Dead Sea are two large water bodies in the rift valley in West Asia.
- The Golan Heights is the elevated region bordering Israel.
- The Jordan River originated on Golan Heights passes through the Sea of Galilee and ends in the dead sea.
- **Israel:**
- It is the land of Jews.
- Jerusalem is the capital.
- **Lebanon:**
- Its capital is **Beirut**.
- The huge explosion occurred recently in Beirut due to **Ammonium nitrate**.
- **Syria:**
- Golan Heights majorly belong to Syria but it is occupied by Israel.
- ISIS is a militant organization that operates primarily in Syria and Iraq.
- **Kurdistan Region:**
- Kurdistan is a geographic and cultural region in the Middle East that spans parts of Turkey, Iraq, Iran, Syria, etc.
- It is home to the Kurdish people, who are an ethnic group with their language, culture, and history.
- **Gulf Cooperation Council (GCC):**
- It is a political and economic alliance of six countries in the Arabian Gulf region.
- The member countries of the GCC are Bahrain, Kuwait, Oman, Qatar, Saudi Arabia, United Arab Emirates (UAE).
- **2) CENTRAL ASIA:**
- The Central Asian countries are located in the heart of the Asian continent and include the following countries: Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan, and Uzbekistan.
- **Wakhan Corridor:** The Wakhan Corridor is a narrow strip of land in northeastern Afghanistan that extends to the borders of Pakistan, China, etc.
- The capital of **Kazakhstan** is **Noor Sultan** and that of **Turkmenistan** is **Ashgabat**
- **The Ashgabat Agreement** is a multimodal transport agreement signed by the governments of Kazakhstan, Uzbekistan, Turkmenistan, Iran, India, Pakistan, and Oman.
- The agreement aims to create an international transport and transit corridor that would connect Central Asia with the Persian Gulf and the Gulf of Oman through the use of road, rail, and sea transport.
- **Bishkek** is the capital of **Kyrgyzstan** and the **Bishkek Declaration** is important for Snow leopard Conservation
- **Aral Sea** is between Kazakstan and Uzbekistan.
- Georgia, Armenia, and Azerbaijan are three countries located in the **South Caucasus region**, which is at the intersection of Eastern Europe and Western Asia.
- **Uzbekistan** is a doubly landlocked country.
- Armenia is Landlocked.
- **Azerbaijan** is known for its oil and gas reserves, the capital city is **Baku**.
- **Tashkent** is the Capital of **Uzbekistan**.
- The five countries that surround the Caspian Sea are Russia, Iran, Azerbaijan, Turkmenistan, and Kazakhstan.
- **3) SOUTH ASIA:**
- The countries in South Asia along with their capitals:
- Afghanistan - Kabul
- Bangladesh - Dhaka
- Bhutan - Thimphu
- India - New Delhi
- Maldives - Male

- Nepal - Kathmandu
- Pakistan - Islamabad
- Sri Lanka - Sri Jayawardenepura Kotte (administrative capital) and Colombo (commercial capital)
- **4) SOUTH EAST ASIA:**
- The countries in Southeast Asia:
- **Brunei:**
- Its capital is Bandar Seri Begawan.
- **Cambodia:**
- Its capital is Phnom Penh, World's largest temple is the Angkor Wat temple complex.
- **Indonesia:**
- Largest Muslim-populated country in the world.
- Sumatra is the nearest Island to India.
- Capital: Jakarta (Java Island) but the Indonesian government has announced plans to move the capital city from Jakarta to a new location in **East Kalimantan**, on the **island of Borneo**.
- **Laos:**
- Its capital is Vientiane.
- **Malaysia:**
- Its capital is Kuala Lumpur.
- **Myanmar (also known as Burma):**
- It is the only country in South East Asia that has a land boundary with India.
- The capital city of Myanmar (also known as Burma) is Naypyidaw. However, Yangon (formerly known as Rangoon) is the largest city and was the capital until 2006, when the government moved the capital to Naypyidaw.
- **Rakhine State** is a region in Myanmar. The people who belong to this region are **Rohingya**.
- **Philippines:**
- Its capital is Manila.
- **Singapore:**
- It is the world's busiest port.
- It is also called an **Entrepot port**, An entrepôt port is a trading post where merchandise is imported, stored, and then re-exported.
- These ports act as a hub for trade between different regions and countries, serving as a transit point for goods to be bought, sold, and distributed.
- The Strait of Malacca is between Indonesia, Malaysia, and Singapore. It connects the Indian Ocean to the South China Sea.
- **Thailand:**
- Its capital is Bangkok.
- **Vietnam:**
- Its capital is Hanoi.
- **Timor-Leste (East Timor):**
- Its capital is Dili.
- **5) EAST ASIA:**
- The countries with capital in East Asia are:
- China - Beijing
- Japan - Tokyo
- North Korea - Pyongyang
- South Korea - Seoul
- Mongolia - Ulaanbaatar
- Taiwan - Taipei
- North and South Korea is separated by the 38th parallel North.

**THE TOPIC FOR THE NEXT CLASS: THE POLITICAL MAP OF THE WORLD.**

**Map Class 02**

**THE CLASS STARTED WITH A BRIEF OVERVIEW OF THE PREVIOUS CLASS (5:10 PM)**

**EUROPE (5:27 PM)**

- Europe is broadly divided into two parts i.e. **Western Europe and Eastern Europe**.
- Western Europe is a subregion of Europe that includes the following countries:

- Austria, Belgium, France, Germany, Ireland, Liechtenstein, Luxembourg, Monaco, Netherlands, Switzerland, United Kingdom, etc.
- Eastern Europe countries include Belarus, Bulgaria, the Czech Republic, Hungary, Moldova, Poland, etc.
- The United Kingdom is made up of two main islands, **Great Britain and Ireland**.
- Great Britain is the largest of the two and is made up of England, Scotland, and Wales.
- **Glasgow** is in Scotland, It is famous for the **UNFCCC COP-26**.
- Norway, the UK and Ireland, France, Spain, and Portugal are having coastlines in the Atlantic.
- **North Sea:**
- North Sea is famous for the Brent Crude.
- Norway, the UK, Denmark, Germany, Netherlands, Belgium, and France are bordering countries along the North Sea.
- **Baltic Sea:**
- The bordering countries of the Baltic Sea are Finland, Sweden, Denmark, Germany, Poland, Russia, Estonia, Latvia, and Lithuania.
- The Kiel Canal connects the North Sea and the Baltic Sea.
- **Adriatic Sea:**
- The Area along the coast of the Adriatic Sea comes under the karst topography.
- **The following countries have a coastline along the Adriatic Sea are:**
- Albania
- Bosnia and Herzegovina
- Croatia
- Montenegro
- Slovenia, etc.
- **The countries surrounding the Black Sea are:**
- Ukraine
- Russia
- Georgia
- Turkey
- Bulgaria, etc.
- **Sea of Azov:**
- The Sea of Azov is bordered by two countries:
- **Russia** to the north and east and **Ukraine** to the west and south
- The Capital of Ukraine is Kyiv.
- Donetsk is a natural resource-rich region in Ukraine
- **Important Landlocked countries of Europe:**
- Switzerland.
- Moldova
- Austria (Vienna is an important city, Vienna Convention- Protection of the Ozone layer.)
- **Liechtenstein** is the doubly landlocked country in the world.
- Luxembourg,
- Kosovo (Recently formed country in the Europe), etc.

#### **NORTH AMERICA (6:12 PM)**

- **CANADA:**
- Canada is called as Land of Lilies.
- Capital: Ottawa
- Montreal city is famous for Montreal Protocol which is aimed at reducing Ozone-depleting substances.
- **UNITED STATES OF AMERICA:**
- Total of 50 States.
- Natural Resources are very rich, coal, petroleum, Gas, etc.
- Moderate population.
- Capital: Washington D.C
- **MEXICO:**
- Capital: Mexico City.
- It is part of Latin America.

#### **CENTRAL AMERICA (6:23 PM)**

- **Countries in Central America are:**

- Belize
- Costa Rica
- El Salvador
- Guatemala
- Honduras
- Nicaragua
- Panama, etc.
- **Caribbean Island Group:**
- The larger grouping of islands in the Caribbean is called the **Greater Antilles**.
- The Greater Antilles include the islands of Cuba, Jamaica, Hispaniola (Haiti and the Dominican Republic), and Puerto Rico.
- **Bahamas:**
- The Bahamas is known for its white sandy beaches, crystal clear waters, and vibrant marine life, making it a popular tourist destination.
- The Bahamas is a country in the Caribbean region, located to the southeast of the United States and the northeast of Cuba.
- It is an archipelago consisting of more than 700 islands, bays, and islets in the Atlantic Ocean.
- **Bermuda Triangle:**
- It is generally considered to cover an area between Miami, Bermuda, and Puerto Rico.
- The Bermuda Triangle, also known as the Devil's Triangle.
- It is a region in the western part of the North Atlantic Ocean where ships and airplanes have disappeared under mysterious circumstances.

#### **SOUTH AMERICA (6:57 PM)**

- The countries in South America are Argentina, Bolivia, Brazil, Chile, Colombia, Ecuador, Guyana, Paraguay, Peru, Suriname, Uruguay, Venezuela, etc.
- **Brazil**
- The capital of Brazil is Brasília.
- Rio de Janeiro is a city located in southeastern Brazil on the Atlantic coast.
- **Brazil is bordered by many countries, including:**
- Argentina
- Bolivia
- Colombia
- Guyana
- Paraguay
- Peru
- Suriname
- Uruguay
- Venezuela, etc.
- **Lithium Triangle:**
- The "Lithium Triangle" is a region in South America that includes parts of Argentina, Bolivia, and Chile, which are known to have the world's largest reserves of lithium
- **Argentina:**
- The capital of Argentina is Buenos Aires.

#### **AFRICA (7:12 PM)**

- **Five African countries border the Mediterranean Sea:**
- Morocco
- Algeria
- Tunisia
- Libya
- Egypt
- **Arab Spring:**
- The Arab Spring led to the overthrow of several authoritarian regimes, including those in Tunisia, Egypt, Libya, Yemen, etc.
- **Libya:**
- The capital of Libya is Tripoli.
- **Egypt:**

- Sharm El Sheikh is a city located in the southern part of the Sinai Peninsula in Egypt.
- Nile River is the longest river.
- **four African countries border the Red Sea:**
- Egypt
- Sudan:
- Darfur is a region located in western Sudan
- Eritrea
- Djibouti:
- Lake Assal is the lowest point in Africa, located in Djibouti
- Djibouti's code of conduct is famous for Maritime security.
- India joined this as Observer.
- **Horn of Africa:(S-E-E-D)**
- **Somalia**
- **Eritrea**
- **Ethiopia:**
- Ethiopia is a landlocked country.
- Famous for the Coffee.
- There is a conflict going on in the Tigray region.
- **Djibouti**
- **African countries bordering the Indian Ocean:**
- Somalia
- Kenya
- Tanzania
- Mozambique
- South Africa

#### **OCEANIA (7:40 PM)**

- The countries in the Oceania region are:
- Fiji
- Papua New Guinea
- Solomon Islands
- Vanuatu
- Samoa
- Kiribati
- Marshall Islands
- Micronesia, etc.
- **Papua New Guinea:**
- The Bougainville Island wanted to separate it from Papua New Guinea
- **Australia:**
- Some important cities in Australia include:
- Sydney
- Melbourne
- Brisbane
- Perth
- Adelaide
- Gold Coast
- The capital of Australia is Canberra.

#### **POLAR REGION (7:45 PM)**

- **ARCTIC COUNTRIES:**
- The Arctic region consists of parts of several countries, including:
- Canada
- Denmark (Greenland)
- Finland
- Iceland
- Norway
- Russia

- Sweden
- United States (Alaska)
- These are Members of the **Arctic Council**.
- India is the observer of the Arctic Council.
- **IndARC** is the underwater observatory developed by India.

## THE TOPIC FOR THE NEXT CLASS: PHYSICAL MAP OF THE WORLD

### Map Class 03

#### A BRIEF OVERVIEW OF THE PREVIOUS CLASS- 5:10 PM

##### WORLD MAPPING- 5:22 PM

- **Countries through which ToC, Equator, and ToCp pass-**
- 

	<b>North &amp; South America</b>	<b>Africa</b>	<b>Asia &amp; Oceania</b>
<b>Tropic of cancer (ToC).</b>	Mexico, Bahamas, USA (Hawaii island)	Male, Algeria, Libya, Egypt, West Sahara	Myanmar, Oman, Bangladesh, India, Saudi Arabia, China, UAE, Taiwan
<b>Equator</b>	Ecuador, Columbia, Brazil	Gabon, DR Congo, Uganda, Congo, Kenya, Somalia	Kritbati island, Indonesia and Maldives
<b>Tropic of Capricorn (ToCp)</b>	Paraguay, Chile, Argentina, Brazil	Madagascar, Mosambia, S.Africa, Namibia, Botswana	Australia

- **Prime Meridian-** UK, France and Spain, Mali, Burkina Faso, Algeria, Ghana, and Togo.

##### WORLD GEOGRAPHICAL MAPPING- 5:37 PM

- **1. Precambrian Mountains-** example - Launrantia plateau.
- **2. Caledonian Mountains-** Old fold mountains ex. Aravalis, Appalachian.
- **3. Hercynian Mountains-** Block mountains form rift valleys example- Urals, black forest, Tian Shan, Altai, etc.
- **4. Alpine mountains-**
- **Asia:**
- Pamir Knot (Tajikistan), Himalayas, Trans Himalayas, Kunlun Shan, Arakan Yoma, Suleiman, Pass-Khyber Pass, Bolan Pass.
- El burg Zagros.
- **Europe:**
- Apennines mountains- Italy-- Karst topography.
- Alps- Europe- the highest peak- Mount Blanc.
- Matterhorn Peak.
- **Africa:**
- Atlas Mountains (Morroco), Kilimanjaro, Mount Kenya (situated on the Equator)
- **North America:**
- Rocky Mountains, Cascade Mountains, Coast Range, Sierra Nevada, Sierra Madre.
- Alaska Range, Mt. Denali, the highest peak is the Rockies Mountains.
- **South America:**
- Andes, Cordillera, Mt. Acouncagua (highest point).
- The Andes pass through- Venezuela, Columbia, Ecuador, Peru, Chile, and Bolivia, Argentina (except- Brazil, Paraguay, and Uruguay).

##### PLATEAU AND PLAINS OF THE WORLD- 6:27 PM

- **North America:**
- Great Plains- a wheat belt of North America
- Columbia Plateau- Volcanic plateau.
- Colorado Plateau-Desert Area.
- Canadian shield.
- **South America:**
- Gyana highlands
- Brazilian highlands-Coffee Production.
- Bolivian Plateau-Alti Plano.
- Pantanal- World's largest tropical wetland.
- Selvas- tropical rainforests of Amazon.

- Llanos- venezuela, Matto Grasso- Brazil.
- Gran Chaco, Pampas.
- Pampas- ranching.
- Alfa- Alfa grass in Pampas.
- **Africa:**
- Katanga Plateau- Copper and Diamond.
- Drakensberg in South Africa.
- Ethiopian Highlands- coffee.
- **Asia:**
- Anatolia Plateau.
- Plateau of Tibet- highest and largest plateau.
- Manchurian plains
- **Australia:**
- Kimberley Plateau in Northern Australia, Dawns.
- Uluru rock-- world's largest monolith of sandstone.

#### **VOLCANOES OF THE WORLD- 7:09 PM**

- **South America:**
- Ojos del Salado- the highest active volcano in the world.
- Cotopaxi and Chimborazo.
- **North America:**
- Popocatepetl in Mexico.
- Hawai islands:
- Mouna Loa, Mouna Kea.
- Shield Volcanoes-- formed by Basaltic magma.
- **Europe:**
- Mount Vesuvius.
- Mount Stromboli.
- **Japan:** Mount Fuji.
- **Indonesia:**
- Krakatoa Volcano.
- Mt. Merapi in Jawa island.
- Mt. Sinabung.
- Volcano in Narcondam Island in Andaman sea.
- Volcanoes erupted in recent times:
- White Island volcano in New Zealand in 2019.
- Semeru volcano in Indonesia.
- Erupted in 2021.
- UNESCO biosphere reserve.
- Mt. Aso in Japan.
- Hunga Tunga erupted in Jan 2022.
- Mount Bezimiyanny in Russia- erupted in 2022.
- Mount Cumbre Veja in Spain-erupted in Dec 2021.

#### **DESERTS OF THE WORLD- 7:36 PM**

- **Australia:**
- Great Victoria Desert, Gibson Desert, Great sandy desert, Tanami Desert, Simpson Desert.
- **North America:**
- Mojave desert near California, death valley
- Arizona desert (Sonoran)
- **South America:**
- Atacama desert- Copper mines, Driest desert in world, Nitrates.
- Patagonian desert.
- **Africa:**
- Sahara desert.
- Erg, Libyan desert, Nubian desert, Eastern desert, Sahel desert.
- Namib desert.



- Kalahari desert (Botswana), Bushmen tribe.
- **Asia:**
- Rub-Al-Khali.
- Dasht-e-Kavir- salty.
- Dasht-e-Lut.
- Sahara is the largest desert in the world.
- Thar desert.
- Takla Makan-cold desert.
- Gobi desert- the cold desert.

#### **RIVERS OF THE WORLD- 7:52 PM**

- **North America:**
- Yukon River- gold placer deposits.
- Mackenzie River drains into the Arctic Ocean.
- Colombia River- Pacific Ocean and Colorado River- Gulf of California.
- St Lawrence River-Niagara waterfalls.
- Drains into the Atlantic Ocean.
- Hudson River- New York is located at its mouth.
- Mississippi River- Bird's foot delta.
- Rio Grande River.
- **South America:**
- Orinoco River, Angel Fall.
- Amazon River largest river by volume, and the widest river.
- Parana River tributaries are Uruguay river+ Paraguay River to form the La plate river.
- Parana River- Ikwaku waterfalls.

**Topic for the next class- Continuation of the topic of World Mapping( rivers, Lakes, etc).**

**Map Class 04**

#### **PREVIOUS CLASS TOPICS REVISED:**

- Mountains of the world and Volcano of the world.
- Plateaus of the world (Columbia and Colorado, Lanos).
- Grasslands of the world and deserts of the world (Sahara, Sub Sahara, Gobi, Patagonia).
- Rivers of the world (Columbia, Colorado, Great Lake, Hudson Bay, Parana River).

#### **RIVERS OF AFRICA (05:27 PM)**

- Nile River crosses both tropics of cancer and the equator.
- Tributaries of Nile River- White, Blue, and Atbara.
- Millennium Dam or Grand Ethiopian Renaissance Dam.
- Niger River, its delta in Nigeria.
- Congo River crosses the equator twice.
- Zambezi River between Zambia and Zimbabwe.
- Victoria waterfalls.
- Limpopo River.

#### **EUROPE RIVERS (05:41 PM)**

- Tagus River- from Spain to Portugese and enters into the Atlantic Ocean.
- Seine River- Paris is located on this river.
- Thames River- London is located on this river and it drains into the North Sea.
- The Rhine River- comes from the Alps and touches 6 countries (Switzerland, Austria, Germany, France, and Netherlands).
- Vistula River- drains into the Baltic Sea, Warsaw is located on this river.
- Rhone River- in France.
- Tiber River- Rome is located on the banks of the Tiber River.
- Black Sea-three rivers drain into it- the Danube (from the black forest), the Dnieper, and the Dniester.
- The Dnieper, and the Dniester in Ukraine.
- Volga River- longest river in Europe.
- It drains into the Caspian Sea.
- Don River drains into a sea of Azov.

#### **ASIA RIVERS (06:00 PM)**

- Lena River originates from Lake Baikal.
- Ob River draining in the Arctic Ocean (Lena River too).
- Syr Darya and Amudarya.
- Euphrates and Tigris.
- **Rivers of China:**
- Amur River is the northernmost river in China.
- Yellow River/ Huang He River.
- Yangtze River ends in the East China Sea.
- Shanghai is located at the mouth of this river.
- The Xi River or Si-Kiang.
- Macaou and Hongkong located on Pearl river.
- **Indo- China:**
- Irrawaddy River drains into the Andaman Sea.
- Salween River.
- Chao Phraya
- Mekong River.
- Australia- Darling River.

#### **IMPORTANT LAKES OF THE WORLD (06:16 PM)**

- **North America:**
- Great lakes.
- Great Bear Lake of Canada, Arctic circle passes through Great Bear Lake.
- Great Salt Lake in the USA in the Rockies.
- Lake Tahoe.
- 5 Great Lakes- Superior, Michigan, Huron, Erie, and Ontario.
- The largest one is Superior Lake (a freshwater lake).
- Michigan is the largest lake located in one country.
- Niagara fall between Erie, and Ontario.
- **South America lakes: (06: 27 PM)**
- Lake Maracaibo.
- Lake Titicaca ( highest commercial navigational lake)
- **Africa:**
- Majorly present in the rift valley.
- Nile River.
- Lake Chad.
- Lake Asaal in Djibouti- the lowest point in Africa.
- Lake Tana in Ethiopia.
- Lake Turkana.
- Lake Victoria is the 3rd largest lake in the world.
- The Equator passes through it.
- Lake Tanganyika is the second-longest river in the world and second largest by volume.
- Lake Nyasa or Lake Malawi.
- **Europe:**
- Lake Garda is the largest lake in Italy.
- The water level has decreased to very low levels.
- **Asia (06:40 PM)**
- **Lake Baikal-** the clearest, oldest and deepest lake in the world.
- Largest freshwater lake by volume.
- It carries more amount of water than all 5 lakes combined.
- 23 % of fresh water is present in this lake.
- Aral Sea between Kazakhstan and Uzbekistan.
- Caspian Sea- largest lake and 5 times bigger than a superior lake.
- The Dead Sea is the most saline part.
- The Sea of Galilee.
- Lake Van- saltiest lake.
- Lake Caldera.

- Crater Lake.
- Lake Eyre- the lowest part of Australia.
- Lake Kaji Sara/ Singar- the highest lake in the world.

#### **OCEANIC LOCATIONS (07:06 PM)**

- **Isthmus:**
- The Isthmus of Panama connects South America to Central America.
- Isthmus of Kra in Thailand.
- Isthmus of Suez.
- The Isthmus of Perekop.
- **Peninsular:**
- Yucatan Peninsula.
- Florida Peninsula.
- The Iberian Peninsula.
- Alaska Peninsula.
- Korean Peninsula.
- Kamchatka Peninsula.
- Somali Peninsula.
- Scandinavian Peninsula.
- Cape York Peninsula (richest deposit of bauxite).
- Cape is the tip of the land.
- Cape Comorin.
- Cape of Good Hope.
- Cape Horn.
- Cape Canaveral (John F Kennedy space).
- **Island (07:20 PM)**
- The green land is the biggest island in the world.
- New Guinea.
- Borneo.
- Madagascar.
- Baffin Island.
- Newfoundland.
- Long Island/ New York.
- Galapagos Island (UNESCO's first heritage site).
- Tierra Del Fuego- the southernmost city in the world.
- Falkland Island.
- North to South- Saint Helena Island (U.K), Ascension Island, Cape Verde, Canary Island, Azores, Iceland.
- Balearic island (Spain).
- Sardinia Island (Italy).
- Corsica Island (Napoleon was born).
- Sicily Island.
- Malta is an independent country.
- Cyprus.
- The Aegean Islands.
- **Asian Islands (07:38 PM)**
- Socotra (Yemen).
- Lakshadweep.
- Seychelles (Assumption Island- naval base India making at this place).
- Comoros.
- Madagascar.
- Mauritius (Agalega Island).
- Reunion Island.
- The Chagos Archipelago (Diego Garcia- USA naval base present).
- Cocos Island.
- **Islands of South East Asia (07:44 PM)**
- The Paracels and Spratlys.

- Scarborough Shoal.
- Natuna.
- **Gulf and Bay:**
- Gulf of Alaska, Gulf of California, Gulf of Mexico.
- Bay of Fundy (highest tidal range recorded at around 16 meters).
- Bay of Pigs Invasion.
- Guantanamo Bay.
- The Gulf of Guinea.
- The Gulf of Thailand.
- Encounter Bay, The Gulf of Carpentaria (Australia).
- The Great Australian Bight.
- Hawk Bay (Newzealand).
- Bay of Scarcity and Bay of Plenty.
- **Strait:**
- Bering strait.
- Denmark strait.
- Yucatan channel (between Mexico and Cuba).
- Magellan Strait.
- Drake passage.
- Strait of Gibraltar.
- Strait of Dardanelles.
- Stait of Kutch.
- English Channel.
- The Bab-el-Mandeb.
- The Strait of Hormuz.
- Palk strait.
- Great Channel.
- Strait of Malacca.
- Johor strait.
- Sunda strait.
- Taiwan Strait/ Formosa starit.
- Korea Strait.

**NEXT CLASS TOPIC: World Economic Related Location and Current Related Locations.**

**Map Class 05**

**A BRIEF REVIEW OF THE PREVIOUS CLASS (5:14 PM)**

**RIVERS AND WATERBODIES (5:19 PM)**

- Kaladan river
- Rhone River
- Dneiper River
- Trubizh River
- Titicaca lake
- Pantanal Wetland

**ISLANDS (5:30 PM)**

- Socotra
- Sicily
- Reunion Island
- Seychelles
- Assumption Island
- Agalega Island
- Vanilla Islands
- Chagos Island
- Diego Garcia Island
- Senkaku Island - It is under Japan's control. It is located in the East China Sea. It is renamed to Tonoshiro Senkaku.
- Kuril Island

- Sakhalin Islands

#### **LOCATIONS OF ECONOMIC GEOGRAPHY (5:35 PM)**

- Highways
- Highways in India, Freeway in the USA, Motorways in England, Autoroutes in France, Autobahns in Germany, etc.
- (a) Pan American Highway
- It connects North America to South America.
- (b) Trans-African Highway Network
- (c) Asian Highway Network
- It connects Japan to Turkey.
- AH1 passes through India.
- This project is implemented by UNESCAP with Asian Development Bank.
- (d) International North-south Transport Corridor
- It connects St Petersburg to Mumbai.
- It includes a multimodal network of roads, railways, and waterways.
- (e) Three Seas Initiative
- It connects the Baltic, Adriatic, and Black Seas.
- (f) One Belt One Road Initiative
- It includes Silk Road Economic Belt and Maritime Silk Route.
- (g) China-Pakistan Economic Corridor
- (h) Global Gateway Project
- (i) China-Myanmar Economic Corridor
- (j) IMT- Trilateral Highway
- Railways
- (a) Canadian Pacific Railway:
- It connects New Foundland to Vancouver.
- (b) Northern Transcontinental Railway
- (c) Southern Transcontinental Railway
- (d) Trans-Siberian Railway
- It crosses seven time zones.
- (e) Trans-Australian Railway
- It connects Perth and Sydney. It passes through Kalgoorlie and Coolgardie.
- (f) Iron Silk Road

#### **WaterWays (6:09 PM)**

- (a) Suez Canal
- It connects the Gulf of Suez to the Mediterranean Sea.
- There are two lakes here Great Bitter Lake and Little Bitter Lake.
- (b) Panama Canal
- It runs for 65 km.
- (c) Rhine-Main-Danube Canal
- (d) Volga Waterways

#### **Pipeline (6:21 PM)**

- (a) Power of Siberia 2 Pipeline
- It passes through Siberia, Mongolia, and China.

#### **Ports (6:23 PM)**

- Different types of ports are Entrepot, Oil Port, Naval Port, Port of Call, and Riverine Port.
- (a) Colombo- Port of call
- (b) Kolkata- Riverine port
- (c) Aden- Port of Call
- (d) Karachi- Riverine Port
- (e) Cape Town- Port of Call
- (f) Asuncion- Port of Call
- (g) London- Riverine Port
- (h) Rotterdam- Entrepot
- (i) Tripoli- Oil Port

- (j) Vizag- Naval Port
- (k) Karwar- Naval Port
- (l) Hono Lulu- Port of call
- (m) Shanghai- Riverine Port
- (n) Singapore- Entrepot

#### **LOCATION IN NEWS (6:29 PM)**

- (i) Bandar Abbas
- It is located in the Strait of Hormuz.
- (ii) Chahbahar Port
- (iii) Chittagong Port
- (iv) Sittwe Port
- (v) Hambantota Port
- (vi) Mongla Port
- (vii) Sakteng Wildlife Sanctuary
- (viii) Mustang
- It is located in Nepal. Uranium deposits were discovered here.
- (ix) New Caledonia
- It belongs to France and is located in the Pacific Ocean.
- (x) North European Enclosure Dam (NEED)
- NEED North- It will connect Scotland and Norway.
- NEED South- It will connect France and UK.
- (xi) Lake Sawa in Iraq
- It is drying up.
- (xii) Lake Garda in Italy
- (xiii) Lake Manchar in Pakistan
- (xiv) Lake Khuvsgul in Mongolia
- (xv) Lake Chad
- Chad, Niger, Nigeria, and Cameroon.
- (xvi) Shamal Winds
- (xvii) Gorno-Badakhshan Region
- It was in the news for the earthquake.
- (xviii) Darwaza Gas Crater
- This is in Turkmenistan.
- (xix) Aegean Islands
- (xx) Odesa
- It is a city in Ukraine.
- (xxi) Khersen
- (xxii) Zaporizhzhia
- (xxiii) Remember the member countries of the Shanghai Cooperation Organization, BIMSTEC, and Southern Africa Development Community.
- (xxiv) Bagram city in Afghanistan

#### **INTERNATIONAL BORDERS (7:09 AM)**

- Land boundary with Pakistan, Bhutan, China, Nepal, Myanmar, Bangladesh, and Afghanistan.
- Marine boundary: Pakistan, Sri Lanka, Indonesia, Maldives, Myanmar, Bangladesh, and Thailand.
- Pakistan and Afghanistan are separated by the Durand line.
- India and Pakistan are separated by Radcliffe Line.
- MacMahon line separates Tibet and India.
- Johnson Line separates India and Tibet. It is recognized by India.
- McDonald's Line separates India and Tibet, as recognized by China.
- BSF guards the India-Pakistan border.
- ITBP guards the India-Tibet border.
- CRPF is for internal security.
- CISF is for the security of the urban infrastructure.
- The northmost point of India is Indira Col. The southernmost point is Indira Point (Great Nicobar).
- The highest point is Godwin Austin (K2). The second highest point is Kanchenjunga.
- The lowest point is Kuttanad (Kerala).

- West Bengal, Sikkim, Arunachal, and Ladakh have three international borders.
- Mumbai, Surat, Ahmedabad, and Jodhpur lie close to each other on longitude.
- Sri Nagar, Jammu, Amritsar, Ajmer, Belgavi, and Mangaluru lie close to each other on longitude.
- Manali, Shimla, Delhi, Bhopal, Bengaluru, and Kanyakumari lie close to each other on longitude.
- Kanpur and Chennai are on the same longitude.
- Lucknow and Vijaywada are on the same longitude.
- Varanasi and Vishakhapatnam are on the same longitude.
- Gangtok and Kolkata are on the same longitude.
- Dispur and Shillong are on the same longitude.
- Aizwal and Port Blair are on the same longitude.
- Jaisalmer, Jaipur, Agra, Lucknow, Gorakhpur, and Tezpur are almost on the same latitude.
- Surat, Nagpur, and Raipur are almost on the same latitude.
- Mangaluru, Bengaluru, and Chennai are almost on the same latitude.
- Bhuj, Gandhinagar, Ujjain, Bhopal, Jabalpur, and Ranchi lies below the tropic of cancer.
- The line which demarcates India and POK is called LOC.
- The line which demarcates India and China-occupied territory is called LAC.
- Western POK is called Azad Kashmir by Pakistan.
- Aksai Chin is between the McDonald line and the Johnson line. It is the land of the white river.
- Sakhsgam Valley is a part of Jammu and Kashmir. Through this silk route passed. **(8:00 PM)**
- Siachen Glacier is the second largest non-polar glacier.
- Pangong Tso Lake extends from India to Tibet. The exact position of both countries is not demarcated.
- Daulat Beg Oldi has an airstrip.
- China wants to occupy the Chusul Valley.
- Demchok is the region where the Indus River enters India.
- Umling La is the highest motorable road in the world. Previously it was Khardung La.
- Kalapani is the tributary of the Ghagar River.
- Doklam plateau is a disputed plateau between Bhutan and China.
- Sir Creek marks the boundary between India and Pakistan. It lies in the Kutch region.
- India wants to have a boundary in the middle of the water body. Pakistan doesn't accept it.

## **THE TOPIC FOR THE NEXT CLASS: PHYSICAL FEATURES OF INDIA**

### **Map Class 06**

### **INDIA PHYSICAL MAPPING: (1:40:45 PM):**

#### **IMPORTANT PEAKS OF THE HIMALAYAS:**

- **Trans Himalayas:**
- Made up of multiple different ranges.
- Karakoram range extends from Pamir to Pangong Tso.
- Earlier called Krishnagiri.
- Karakoram anomaly.
- Siachen Glacier here.
- Nanga Parvat:
- Mount Godwin Austin or K2.
- In POK.
- Depsang plains, soda plains.
- Ladakh Range is located between Indus and Shyok Rivers.
- Nubra valley between Ladakh and karakoram.
- Khardung la on Ladakh range.
- Kargil is located between Ladakh and Zaskar ranges.
- Mount Rakaposhi peak on Ladakh inside POK.
- Zaskar range.
- Chantang Plateau, Tso moriri, Tso kar lake-- Ramsar sites.
- Breeding ground for Black neck crane.
- Chang pa tribe-- Chnagtangi goats--Pashmina wool.
- Hanle-- Dark sky reserve in India.
- **Great Himalayas:**
- Nanga Parvat and Namcha Barwa in the east.

- Peaks like Nandadevi, Kamet.
- Divided into Kumaon and Garhwal Himalayas.
- Kanchenjunga in Sikkim.
- The second-highest peak in India.
- **Nepal:**
- **Great Himalayas:**
- Himadri.
- Mountains like Dhaulagiri, Annapurna, Manasalu, Mt Everest, and Makalu from west to east.
- **Middle Himalayas or lesser Himalayas:**
- Himachal ranges.
- Multiple ranges with avg height = 4000 Mtrs.
- Pir Panjal Range extent would be Kashmir and Himachal.
- Extends between Jhelum and Ravi rivers.
- Kashmir Valley is located here.
- Jhelum River meanders here.
- Lacustrine deposits here are called Karewa deposits>> saffron cultivation.
- Dhauladhar range extends between J and K and Himachal.
- Kullu and Kangra valley.
- Dharamshala and McLeodganj are in Kangra Valley.
- Mussoorie range below Dhauladhar range.
- Dehradun is also present here.
- Nagtibba range.
- **Important Hill stations:**
- Dalhousie.
- Dharamshala, Manali.
- Shimla.
- Mussoorie.
- Darjeeling, Gangtok.
- Udampur, Kota, Chumbi, etc are examples of duns.
- The lesser Himalayas in Nepal is called Mahabharat Ranges.
- Arunachal Pradesh- DMAM.
- Dafla, Miri, Abhor, and Mishmi ranges.
- Duars.
- Bhugyals--Summer Grasslands, Transhumance.
- Tribes like Bakarwals, Gaddis, etc.
- **Shivaliks:**
- Avg height- 1000 meters.
- Arunachal --Shivaliks merge with lesser Himalayas.
- Purvanchal in Northeast.
- Patkai range.
- Naga Hills.
- Manipur hills.
- Mizo Hills or Lushai Hills.
- Loktak lake in Manipur.
- Also called rolling mountains.
- Deposition or unconsolidated sediments along the valley is called Molasses Basin.
- Tripura hills-- ridge and Valley topography.
- Meghalaya:
- Part of a plateau.
- Garo, Khasi, and Jaintia Hills.
- Barail range between Meghalaya and Purvanchal hills.
- Mikir hills.

#### **IMPORTANT PASSES IN THE HIMALAYAS AND OTHER RANGES: (2:46:41 PM):**

- Khyber and Bolan pass in Pakistan.
- **Karakoram Pass** in Ladakh between India and China on the Karakoram mountain range.



- The highest pass in India.
- 5600 meters in height.
- **Khardung La:**
- Located in Ladakh Range.
- Connects Leh with Nubra Valley.
- **Umling La:**
- Ladakh Eastern province.
- Highest motorable road.
- **Zoji La:**
- On Zaskar Mountain range.
- Connects Srinagar to Leh.
- Zoji La tunnel was constructed near Dras.
- Longest Bidirectional tunnel at 14 Km.
- **Burzil Pass:**
- Located in Great Himalayas.
- Connects Srinagar to Gilgit.
- **Banihal Pass:**
- To the east of Pir Panjal.
- Connects Jammu and Srinagar.
- Chenani Nashri is now the longest tunnel in India at 9.28 Km.
- Rehang La in J and K.
- Pir Panjal Pass.
- Bara Lacha La.
- Shipki La.
- Rohtang pass.
- Atal tunnel:
- The longest tunnel in the world.
- Uttarakhand--Thaga La, Mana pass, Niti pass, Dharma Pass, Lampya Dhura pass, Lipu Lekh pass, etc.
- Darchula- lipulekh road has been recently inaugurated.
- **Sikkim:**
- Nathu La and Jelep La, Naku La.
- **Arunachal Pradesh:**
- Bum La, Tunga pass.
- Dipu Pass.

**IMPORTANT GLACIERS: (3:34:14 PM):**

- Fedchenko glacier:
- largest nonpolar Glacier.
- Baltoro Glacier.
- Siachen Glacier-- second largest nonpolar glacier.
- Hispar Glacier-- Longest glacier.
- It is in PoK.
- **Himachal Pradesh:**
- Bara Shigri glacier-- near Lahaul Spiti valley.
- Largest Glacier of Himachal.
- Chandra River originates.
- Sona Pani Glacier:
- Near Rohtang Pass.
- **Uttarakhand Glaciers:**
- Gangotri Glaciers.
- Bander Poonch.
- Yamuna originates from here.
- Chora Bari glacier.-- Mandakini River originates.
- Milam Glacier.
- Nanda Devi.
- Pindari glacier.

- Satopanth glacier- Origin of Alaknanda river.
- **Sikkim:**
- Kanchengunga Glacier.
- Zemu Glacier-- Teesta River originates from here.

#### **PENINSULAR PART OF INDIA: (3:48:39 PM):**

- **IMPORTANT MOUNTAINS:**
- **Aravallis:**
- Cover 4 states.
- Caledonian mountains.
- The south side is taller.
- Highest peak-- Mt Guru Shikhar.
- Gir range in Gujarat.
- Gir National Park.
- **Vindyas:**
- Block mountains.
- Gujrat and Madhya Pradesh.
- Kaimur hills-- Eastern extension of Vindhya.
- **Satpuras:**
- Gujrat, Maharashtra, and Madhya Pradesh.
- Rift Valley and Block Mountains.
- Maikala Range.
- Mahadeo Hills-- an extension of Satpura Hills.
- Rajmahal hills.
- Rajmahal Garo gap or Malda Gap.
- **Maharashtra:**
- Ajanta Hills, Satmala Hills, Harish Chandra Hills.
- Deccan traps.
- Western Ghats start from the South of Tapi to Cape Comorin.
- Covers 6 states.
- Rich diversity.
- **Myristica swamps.**
- Marshy regions of Western Ghats.
- Freshwater swamps.
- Sahayadri-- Western Ghats of Maharashtra.
- Deccan traps are present here.
- Kalsu Bai Peak, Mahabaleshwar Peak, Kudremukh, Mulaingiri, Baba Budan hills.
- Coorg Hills-- Southern Sahaydris.
- Origin of Kaveri River-- Tala Kaveri (Hank of South India)-- Brahmagiri hills.
- Nilgiri hills-- extends from Coorg to Pallakad.
- Ooty hill station.
- Merging of Eastern Ghats and Western Ghats.
- Tiger reserve and Elephant reserve.
- Doda Betta is the highest peak of the Nilgiri Hills.
- Mukurti peak in Nilgiris.
- Anamalai Hills
- Anaimudi Peak is the highest peak in south India.
- Palani hills--Kodaikanal lake.
- Cardamom Hills end at Kanyakumari.
- **Eastern Ghats:**
- From Mahandi to Nilgiri hills.
- Mehndragiri Peak is the highest peak.
- Nallamala hills, Eramalla hills, Velikonda range, Palkonda Range.
- Seshachalam biosphere reserve near Tirumala Hills.
- Jawadi Hills, Shevroy Hills, Satyamangalam tiger reserve, Nagarhole Tiger Reserve.
- **Passes in the Western Ghats:**

- Talghat.
- Borghat-->Mumbai --Pune.
- Palghat between Kerala and Tamil Nadu.

#### **PLATEAUS: (4:23:19 PM):**

- Malwa Plateau between Aravali and Vindhya.
- Bundelkhand Plateau-- Buxwaha diamond mine.
- Bhandar Plateau.
- Baghelkhand Plateau.
- Chota Nagpur plateau-- Rurh of India.
- Meghalaya Plateau.
- Deccan plateau:
- Maharashtra plateau.
- Telangana plateau.
- Karnataka plateau
- The hilly region of the Karnataka plateau is called Malnad.
- Plain region-- Maidan.
- Rayalseema.
- Krishna River separates the Telangana plateau and Rayalseema.
- Dandakaranya plains in Chattisgarh.

#### **COASTS:**

- The **eastern coast** is divided into the Odisha coast-- Utkal coast, Andhra coast, and Tamil Nadu coast.
- Utkal coast-- Mahanadi delta.
- Chilika Lake-- the largest lake in India.
- Chandipur beach.
- Northern circars-- North of KG delta.
- Coromandel coast-- South of KG delta.
- Pulicat lake.
- **Western coast:**
- Kathiawar coast:
- Rann of Kutch to Daman.
- Konkan coast:
- Daman to Goa.
- Submergent coast.
- Malabar coast:
- Karnataka to Kanyakumari.
- Emergent coast.
- Canara Coast.

**The topic for the next class- Islands, wildlife sanctuaries, etc**

#### **Map Class 07**

#### **ISLANDS- 9:18 AM**

- **Andaman and Nicobar islands:**
- They are Volcanic islands.
- The only active volcano in South Asia is located on an active Java trench.
- There are corals here but not atolls.
- **Andaman group:**
- Coco Islands-- Myanmar.
- Landfall islands-- Northernmost island.
- North Andaman, Middle Andaman, South Andaman, and Little Andaman islands.
- Highest peak-- saddle peak of Andaman group of islands in North.
- The largest island is the middle of Andaman.
- Capital --Port Blair-- South Andaman.
- Narcondam volcano is dormant and the barren volcano is active.
- Baratang is a mud volcano.
- Havelock Island-- Netaji hoisted the flag---renamed Swarajdweep.
- It has a wet evergreen forest.

- Many tribal groups located on Sentenelese island, are most primitive.
- Port Blair-- Kalapani jail.
- **Mount Harriet**--renamed as Mount Manipur to mark the Anglo-Manipur war of 1891 located in South Andaman.
- **Nicobar Islands:**
  - Great Nicobar, Little Nicobar, Car Nicobar.
  - Great Nicobar-- Largest group of islands.
  - Indira Point is located here which is the southernmost point of India.
  - Galathea Bay and national park- the leatherback sea turtle.
- **Lakshadweep Islands:**
  - Northern Amandivi Islands and Southern Cananore Islands ---Minicoy island
  - Capital- Kavaratti in Cananore island
  - Coral islands.
  - Lakshadweep has been given Organic status--the first UT to achieve it.
  - Thundi and Kadmat Beach have been given blue flag certification.
- **West Bengal:**
  - Sagar Island (Ganga sagar island)-- West Bengal coast.
  - New Moore Islands emerged after the 1973 cyclone.
- **Odisha coast:**
  - Abdul Kalam island--it is DRDO testing missile range
  - Sriharikota island--in Pulicat lake--ISRO space centre
  - Rameshwaram Island is located here---Pamban Island--India is building its first vertical lift bridge.
  - The southernmost point is called Dhanushkodi---deserted town.
- **Kerala Coast:**
  - Willingdon Island- Kochi port.
  - Munroe Island is located on Lake--Astamudhi Lake (Ramsar site)
  - Karnataka Coast----St.Mary Island ( geological heritage site) near Uduppi.
  - Famous for Columnar basalt.
  - Largest riverine island -- Majuli- Assam

#### **CHANNELS: 10:01 AM**

- Coco channel.
- Duncan's passage between South and Great Andaman.
- Between Andaman and Nicobar--10-degree channel-- passes through Palk strait.
- Great Nicobar and Sumatra- Great channel or a 6-degree channel.
- Between Miniocy and Lakshadweep ----9-degree channel in Lakshadweep islands.
- Between Minicoy and Maldives---8-degree channel.
- Between Point Calimere and Jafna---Palk strait.
- Gulf of Mannar--Biosphere reserve

#### **RIVERS OF INDIA- 10:09 AM**

- Two Drainage Systems in India-
- Himalayan Drainage--Peninsular Drainage
- Himalayan Drainage- Indus --Ganga-- Brahmaputra
- These are fed by glaciers.
- Peninsular Drainage- East flowing-- West flowing
- **Indus:**
  - Origin- Near Manasarovar
  - It flows through Tibet and enters India near Demchok.
  - Indus flows on the outskirts of Leh.
  - It flows between Zaskar and Ladakh ranges.
  - It is antecedent in nature as it runs through a gauge.
  - Indus R. flows between Pangong Tso and Tso Moriri (the breeding place for black-necked cranes).
  - Tso Kat is a Ramsar site
- **Right Bank Tributaries-**
- **Shyok:**
  - It takes a U-turn and joins Nubra R.
  - It originates from the Rimo Glacier next to the Siachin Glacier (Nubra originates from Siachin).

- Shyok flows between Karakoram and Ladakh.
- Karakoram and Shyok nubra wildlife sanctuary.
- It joins Indus inside the POK.
- Hunder Sand Dunes are located in the Shyok Valley, which is formally called Nubra Valley.
- Galwan River is a tributary of Shyok.
- Gilgit River comes from Gilgit Baltistan and joined Indus in POK.
- Nubra- It originates from the Siachen Glacier and joins Shyok.
- Kabul- It joins Indus inside Pakistan.
- **Left Bank Tributaries-**
- **Zaksar river:**
  - First major left bank tributary of the Indus.
  - It originates from the Great Himalayas.
  - Hemis National Park is located around the river.
- **Jhelum:**
  - It originates from Verinag in Pir Panjal.
  - It flows between the Pir Panjal and the Great Himalayas.
  - The river meanders in the Kashmir Valley.
  - Dal Lake is located on the floodplains of Jhelum.
  - Wular is the largest freshwater lake and is also a Ramsar site.
  - Neelam River joins Jhelum--Kishen Ganga project on Neelam river
- **Chenab:**
  - It originates from Bara Shigri, which is the actual origin of the river Chandra.
  - River Chandra (Chandratal) and Bhaga (Surajtal) meet to form Chenab--the entire region is a biosphere.
  - The region of Chandra and Bhaga has the Cold Desert.
  - It originates from Himachal, enters J&K, and leaves India from J&K itself.
  - While flowing through Jammu Hills, Ban Ganga meets river Chenab which comes from Vaishnav Devi.
  - The highest railway bridge in India- Chenab Railway Bridge is being constructed.
  - Chenab projects- Pakal Dul project, Kwar project, Dulhasti project, Ratle project, Baglihar project.
- **Rabi:**
  - It originates from Kullu Hills near Rohtang.
  - It forms the border between India and Pakistan in Northern Punjab.
  - It merges with Chenab, and so does Jhelum.
  - Ujh Multipurpose Project is being constructed on the tributary of the Rabi River.
- **Beas:**
  - It originates near the Rohtang Valley.
  - The stretch of Beas inside Punjab is a Conservation Reserve as well as a Ramsar Site.
  - Beas merges with Satluj at Harike.
  - Keshpurmiani in Punjab--wetland--located between Beas and Rabi.
- **Satluj:**
  - It originates from Rakas Lak.
  - It is an antecedent river.
  - It enters India through the Shipki La pass.
  - It flows through Himachal and Punjab.
  - As it enters Punjab, Bhakra & Nangal Dams are constructed on the river.
  - Govind Sagar Reservoir is made by the Bhakra Dam.
  - Nangal- Ramsar Site.
  - Harike is a bird sanctuary as well as a Ramsar Site.
  - Indira Gandhi Canal starts from Harike.
  - Satluj and Chenab merge together, and combined waters join the river Indus.

#### **GANGA RIVER SYSTEM- 11:25 AM**

- Confluence of Bhagirathi and Alaknanda (Devprayag)
- It flows through Uttrakhand, UP, Bihar, Jharkhand, and West Bengal and then enters Bangladesh.
- **Alaknanda:**
  - It originates from Satopanth Glacier to the north of Badrinath.
  - It further flows through Joshimath and Srinagar.

- Joshimath is located on a massive deposition of a moraine--Sinking.
- Dhauli Ganga comes from Niti Pass.
- Rishi Ganga is a tributary of Dhauli Ganga.  
Rishi Ganga originates from the Nanda Devi Biosphere Reserve.
- Tapovan Vishnugad Hydropower Project- Dhauli Ganga
- **Panch-Prayag-**
- Vishnuprayag- Alaknanda & Dhauli Ganga
- Nandprayag- Alaknanda & Nandakini
- Karnaprayag- Alaknanda & Pindar Ganga
- Rudraprayag- Alaknanda & Mandakini
- Devprayag- Alaknanda & Bhagirathi
- **Bhagirathi:**
- Origin- Gaumukh
- Tehri Dam- Tallest Dam in India.
- Ganga forms the largest Delta--the Indian part is Sunderban.
- It forms a border between India and Bangladesh.
- Farakka Barrage is located on the river Ganga.
- Hoogly is a distributary of river Ganga---banks of it's we have Kolkata and Haldia.
- East Kolkata wetlands--Sagar island (delta of Hoogly)
- **Left bank Tributaries-**
- **Ram Ganga:**
- Origin- Uttrakhand (near Nainital).
- India's first national park- Jim Corbett National Park lies in the river basin of Ram Ganga.
- It joins Ganga near Kannauj.
- **Gomti:**
- It originates in Uttar Pradesh (Pilibhit).
- It flows through Lucknow.
- **Ghagra:**
- It originates from Manasarovar.
- It enters UP and further Bihar where it joins Ganga.
- Kali River Sarda is a tributary of Ghagra.
- Kali River originates from Kalapani, Lipulekh.
- Rapti River is a left-bank tributary of Ghagra from Nepal.
- **Gandak:**
- It originates near the border of Nepal and Tibet.
- It is antecedent in nature.
- It is also called the Narayani River.
- It flows between Dhaulagiri & Annapurna.
- Gandak joins Ganga in Bihar.
- Between Ghagra and Gandak, the Son River joins Ganga.
- Bhuri Gandak River comes from Nepal to join Ganga.
- **Kosi:**
- It is also called Saptkosi.
- It is an antecedent river.
- Saptkosi-- Sun Kosi -- Tamor Kosi (comes from Kanchanjanga) -- Amar Kosi
- It is often called the Sorrow of Bihar.
- **Mahananda:**
- It comes from the Darjeeling Hills.
- It passes through the Siliguri corridor.
- It joins Ganga in Bangladesh.
- Between Teesta and Mahananda- Mahananda Wildlife Sanctuary is located.
- **Right Bank Tributaries-**
- **Yamuna:**
- It flows through Uttrakhand, Himachal, Haryana, and UP.
- It originates from the Banderpunch glacier.

- It joins Ganga at Allahabad-Prayagraj.
- **Tributaries-**
- River Tons (left bank)
- Asan Barrage recently declared the Ramsar site.
- River Giri (right bank- Himachal)
- Construction of Renuka Dam is undergoing on the Giri River.
- **Chambal:**
- It originates from Vindhya in Moh (MP)---Mahe river also comes from Vindhya
- It flows through MP, Rajasthan, and UP.
- It is a habitat for Gharial (Critically Endangered).
- It is also a home Gangetic Dolphin.
- It flows through Kota.
- Chambal- Parvati -- Kali Sindh -- Banas
- Gandhi sagar dam on chambal and Rana sangha dam.
- **Banas:**
- Banas originates from Aravali near Kumbalgarh (UNESCO Heritage site).
- Sindh, Betwa, and Ken--Ken and Betwa interlinking project---Daudhan Dam--Panna tiger (UNESCO MAB) reserve is submerging.
- Durgawati tiger reserve declared to compensate.
- **Son:**
- It originates from Amarkantak.
- It flows through Chattisgarh, Jharkhand, UP, Bihar, and MP.
- It flows parallel to Kaimur Hills.
- It joins Ganga at Patna.
- River Rihand and River North Koel are tributaries of Son.
- White Tigers are found near the region surrounding Rihand.
- Damodar- Sorrow of Bengal
- Damodar is the most polluted river in India.
- Four dams on the Damodar river valley project- Tilaiya, Konan, Moithon, Panchet

**Topic for the next class- Continuation of the topic of River mapping.**

**Map Class 08**

#### **Brahmaputra river (1:08 PM)**

- Tsangpo
- Sadia to Dhubri
- NW-2
- Jamuna
- Merging with Ganga--->Padma
- Padma+Barrak-->Megna
- 5th largest in terms of water discharge
- Angsi and Chemyangdung
- Majuli Island
- The major tributaries and formations on it
- 3 biosphere reserves
- Manas-Tiger, elephant, Golden Langur
- Mauling
- Pakke
- Nameri-National park
- Raimona
- Mane
- Buxa tiger reserve- WB
- Pobitora-Highest Rhino density in india
- Orang- Tiger reserve
- Kaziranga

#### **Peninsular Rivers (01:48PM)**

- Subarnrekha

- Baitarni
- Brahamani
- Son river
- South Koel
- Bhitarkanika
- Gahirmatha
- Chilka lake
- Rushikulya river
- Nagoli river
- Pranhita
- Kaleshwaram lift irrigation project
- Godavari where it enters Andhrapradesh-> Papikonda hills
- Pottiseema/ Polavaram dam
- Nandur Madhameshwar--newly declared Ramasar site
- Krishna river
- Bhima
- Husain Sagar lake
- Ghataprabha and Malaprabha
- Mandovi/Mahadayi River -->tributaries-->Kalasa and Banduri
- Tunga+Bhadra-->Tungabhadra
- Bhadra tiger reserve
- Bhadravati Iron and steel plant
- Tungabhadra flows through Hampi
- **Penneru rivers-**
- Originate from Nandi hills
- It is E-->W river
- Penneru forms Estuari
- **Palar River-**
- Originate from Nandi hills
- Kanchi
- Kalpakkam nuclear power plant
- Supplies drinking water to Chennai
- **Kaveri river**
- Originates from Kalakaveri in Brahmagiri hills
- Flows through two states
- Passes on the outskirts of Mysore-->Kishnaraja Sagara dam
- Shivana Samudram hydropower project->to KGF
- Hogenakal Waterfall -->forms a deep gorge
- Mekedatu project at the confluence of Arkavati and Kaveri
- Mettur dam
- Seringapatnam-largest living temple complex in the world
- Point Calimere-> Northernmost point of Kaveri River
- Pichavaram mangroves
- Vedaranyam- Dandi salt march led by Raja ji

#### **WEST FLOWING RIVERS (2:39 PM)**

- **1)Ghaggar-**
- Comes from Himachal
- Totally inland
- **2)Luni-**
- comes from Aravalis
- Flows through part of Rajasthan
- Though the Sambhar Salt lake-Ramsar site
- drains into Rann of Kutch
- **3)Sabarmati-**
- In Gujarat



- On it, a bridge has been inaugurated in Ahabadabd named Atal Bridge
- Crosses Gulf of Khambat
- **3)Narmada-**
- MP, MH, Gujarat
- Indira Sagar in MP
- Sardar Sarovar damn
- Here we have the Statue of Unity
- At the Gulf of Khambat, there is a project under construction- The Bharboot project
- **4)River Tapi-**
- panchkmari
- **5)Mandovi-**
- Dudhsagar waterfall
- **6)Saravati and Netravati**
- Jog falls
- 7)Periyar
- Mullaperiyar dam
- **8)Pamba river-**
- Vembanad lake
- **9)Chalakudi River-**
- Known for the Athirappalli waterfall

#### **LAKES AND WETLANDS (03:19 PM)**

- Keoladeo Wetland and National Park
- Renuka on Satluj
- Kabar tal- Bihar
- Bhoj- Bhopal
- Rudrasagar
- East Kolkata
- Chillika and Bhitarnakanika
- Kolleru
- Karnataka
- Rangantettu

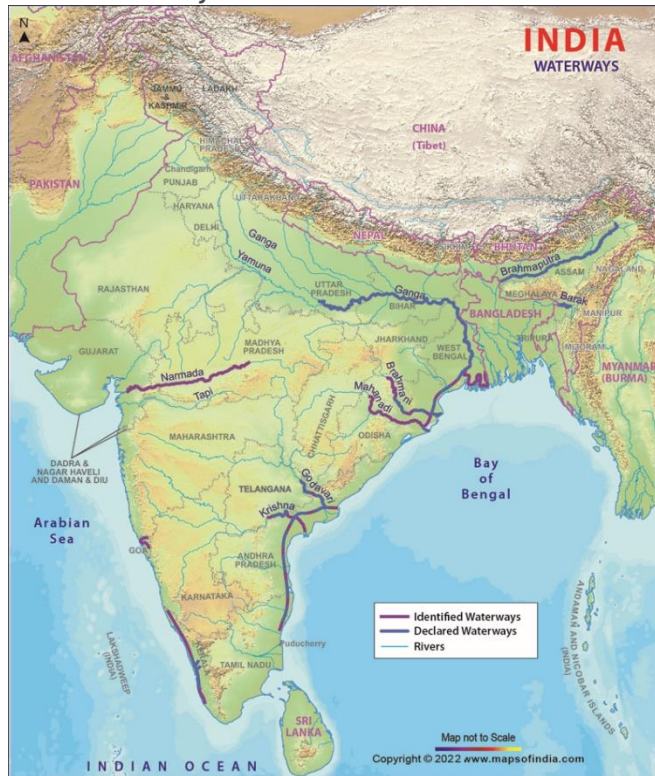
#### **BIOSPHERE RESERVES IN INDIA (3:32 PM)**

- Great Nicobar
- Gulf of Munnar
- Agasthyamalai
- Nilgiri
- Seshachalam
- Agasthyamalai
- Pachmari
- Simlipal
- Sunderban
- Achanakmar Amarkantak
- Panna
- Runn of Kutch
- Nokrek
- Manas
- Dibru Saikhowa
- Khangchendzonga
- Dihang Debang
- Nanda devi
- Cold desert

#### **ECONOMIC GEOGRAPHY (3:52 PM)**

- **National highways-**
- N-->E
- E-->W
- Longest NH-->Shrinagar to Kanyakumari

- Second: NH27 Porbandar to Silchar
- **Expressways:**
- NE 1: Ahmadabad to Vadodra
- NE 2: National peripheral expressway
- NE 3: Delhi to Meerut
- NE 4: Mumbai- Vadodara
- **Freight corridors:**
- Eastern from Ludhiana to Dankuni
- Western from Dadri to JNPT
- **National waterways:**



- 
- **Ports:**
- Major and minor ports



- 
- **Tribes of India:**
- Andamanese
- Nicobarese
- Onge
- Jarawa
- Sentinels
- Shompen
- Bhils
- khonds
- Gond
- Asur
- Munda
- Meena
- Abhujmarya
- Bishonhornmarya
- Irulas
- Todas
- Bakerwal
- Gaddis
- Tharu
- Bhotias etc.

**NEXT CLASS: MAPPING IS COMPLETE**