Geography Class 40

16th December, 2023 at 9:00 AM

THE CLASS STARTED WITH A BRIEF OVERVIEW OF THE PREVIOUS TOPICS (09:17 AM)

PROBLEMS ASSOCIATED WITH EXTRACTION OF OCEANIC RESOURCES (09:20 AM)

- **Distribution**:
- The resources are **'not distributed uniformly'**, for example, petroleum and natural gas resources in the Persian Gulf, Gulf of Mexico, etc.
- Polymetallic nodules are 'widely distributed' on the ocean floor making them difficult to extract, It is concentrated only in a few regions.
- For Example, Clarion Clipperton zone, Peru basin, near Cook Island and the central Indian Ocean.
- **Note:** The **'International Seabed Authority'** is the authority that gives permission for the extraction of resources like polymetallic nodules from the open sea.
- **Technological issues:**
- The current 'development of technology is not enough'
- For Example, Thorium extraction, OTEC, Wave energy, and production of fresh water from marine water.
- **Economical issues:**
- The cost of extraction of resources is too high.
- **Environmental issues:**
- 'Bottom trawling' affects the ocean seafloor ecosystem.
- Increased sedimentation of plastic. For Example, the Great Pacific Garbage Patch.

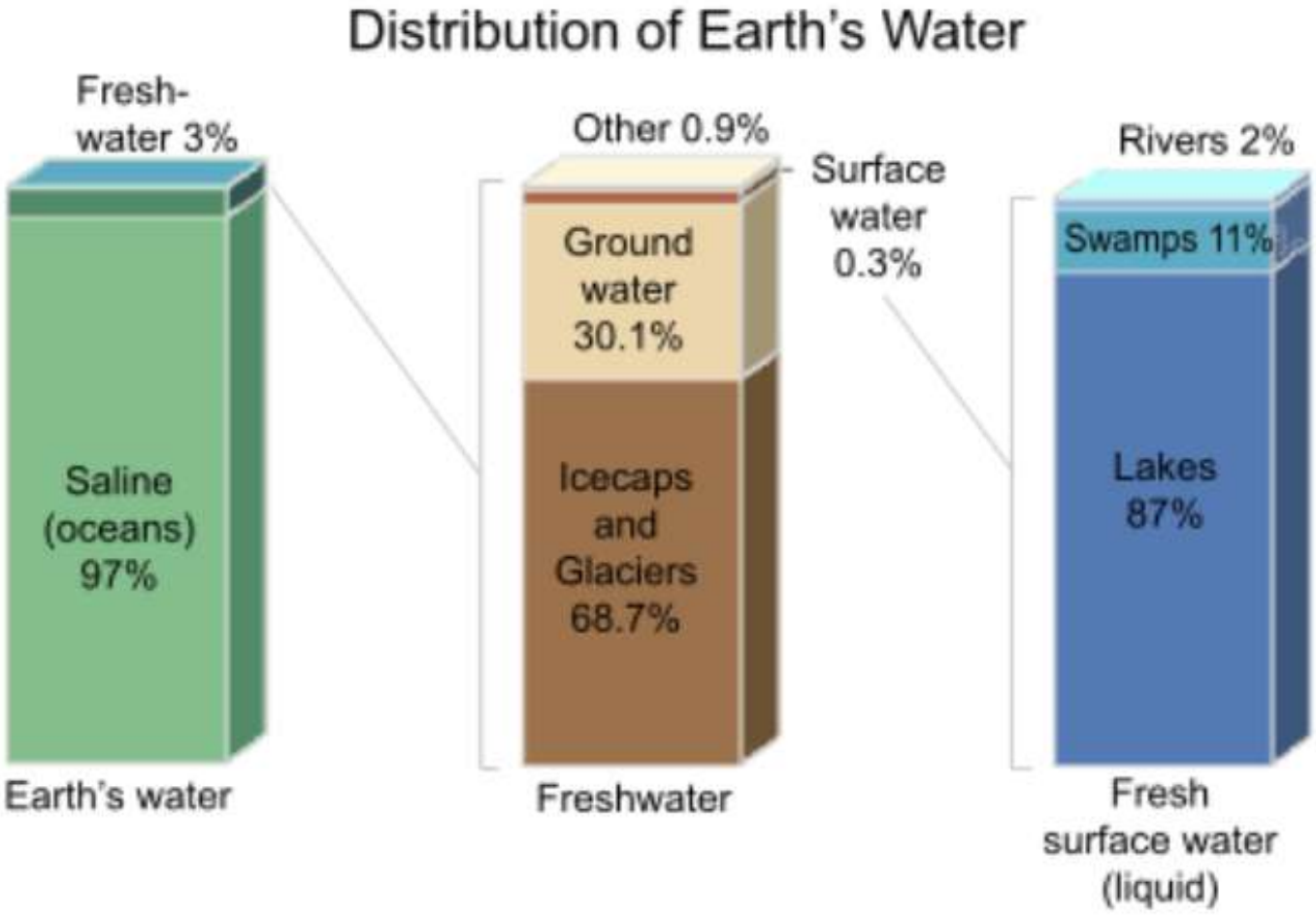
FISH RESOURCE (09:47 AM)

- Fish resources are obtained through both inland fishing and marine fishing.
- Marine fishing is done mainly near the continental shelf.
- **Major Fishing Areas:**
- North West Atlantic Ocean. (Grand Bank)
- North East Atlantic Ocean. (Dogger Bank)
- North West Pacific Ocean.
- Entire west coast of North America.
- Peru, Chile coast.
- Along South East Asian Islands.
- **Conditions favouring the growth of Fishing activities:**
- Wide continental shelf enabling wide sunlight and growth of plankton.
- The merging of warm and cold currents.
- Upwelling zones in the ocean.
- Presence of the coral reefs.
- **Factors responsible for the growth of the fishing industry:**
- Higher investment in the fishing industry.
- The demand for fish is high where agriculture development is less. for example, Japan.
- The broken coast or **indented coast** helps in developing the fishing industry.
- Presence of Forest resources for wood making.
- **Reasons for non-development of fishing in the tropical regions:**
- High agricultural development led to less demand for fish.
- Preservation is difficult because of the high cost of refrigeration and associated infrastructure.
- Presence of Tropical cyclones.
- Less infrastructure and development as these are less developed countries.
- Growth of plankton will not be great due to high temperature.

- **Indian Fishing Sector:**
- India has a wide coastline of around 7,500 km.
- **Problems associated with India's fishing sector:**
- Less demand for fish exists due to cultural and other factors, compounded by a substantial vegetarian population
- Better agriculture development in the country.
- Low infrastructure development of Cold storage, supply chain, etc.
- Unorganized and informal fishing sector.
- Indian fishermen use traditional methods of extraction resulting in inefficiency and lower profits
- In India, fishing is a caste-based economic activity and it led to less development in the sector.
- Emergence of cyclones, Monsoons, strong winds, etc also affects the fishing sector.
- India's territorial issues with neighbouring countries like Pakistan are also crucial for this sector.
- **Initiative taken in the fishing sector by the Indian Government:**
- **Blue Revolution:**
- It was launched during the 5^{th} and 6^{th} FYP, It was launched in two phases.
- **During phase -I:**
- Government-established **FFDA (Fishing Farming Development Agency)**
- It was developed to provide better quality seeds, etc.
- A program was started which is called **FSDA (Fish Seed Development Programme)**
- The output from Inland fishing was doubled.

- **During Phase II:**
- The government established the FFDA all over India.
- Both Inland and Marine fishing were targeted.
- The focus areas were Coastal states like Andhra Pradesh, West Bengal, etc.
- The **National Fisheries Development Board** was established in 2006.
- It acts as a Nodal agency for all the fishing activities in India.
- **Mission Neel Kranti**, started in 2015.
- Integrated development and management of the fisheries were brought with a target year between 2015 to 2020.
- It aimed at enhancing the economic prosperity of the country by augmenting fisheries, and fish farmers and contributing towards food and nutritional security.
- **PM Matsya Sampada Yojana** announced in the 2019 Budget.
- It aims to promote aquaculture, benefit all fishermen with social security, and expand the coverage to accidental insurance.

FRESHWATER RESOURCES (10:38 AM)



- **Problems of Indian Water resources:**
- The **'nature of the Indian monsoon'** is short duration and non-uniform across the region and irregular in timing.
- The difference between the Himalayan and peninsular drainage systems.
- **'Influence of topography'** like rainshadow region of western ghats, coromandel coast, the orientation of Aravalis, El Nino, La Nina, etc.
- Increase in population, **'water-intensive agriculture'** such as flood irrigation, growing sugarcane in Maharashtra.
- **'Excessive extraction of groundwater'**, etc.
- **'Water pollution'** from Industry and agriculture.
- Due to Rapid urbanization, it becomes unplanned management of the resources.
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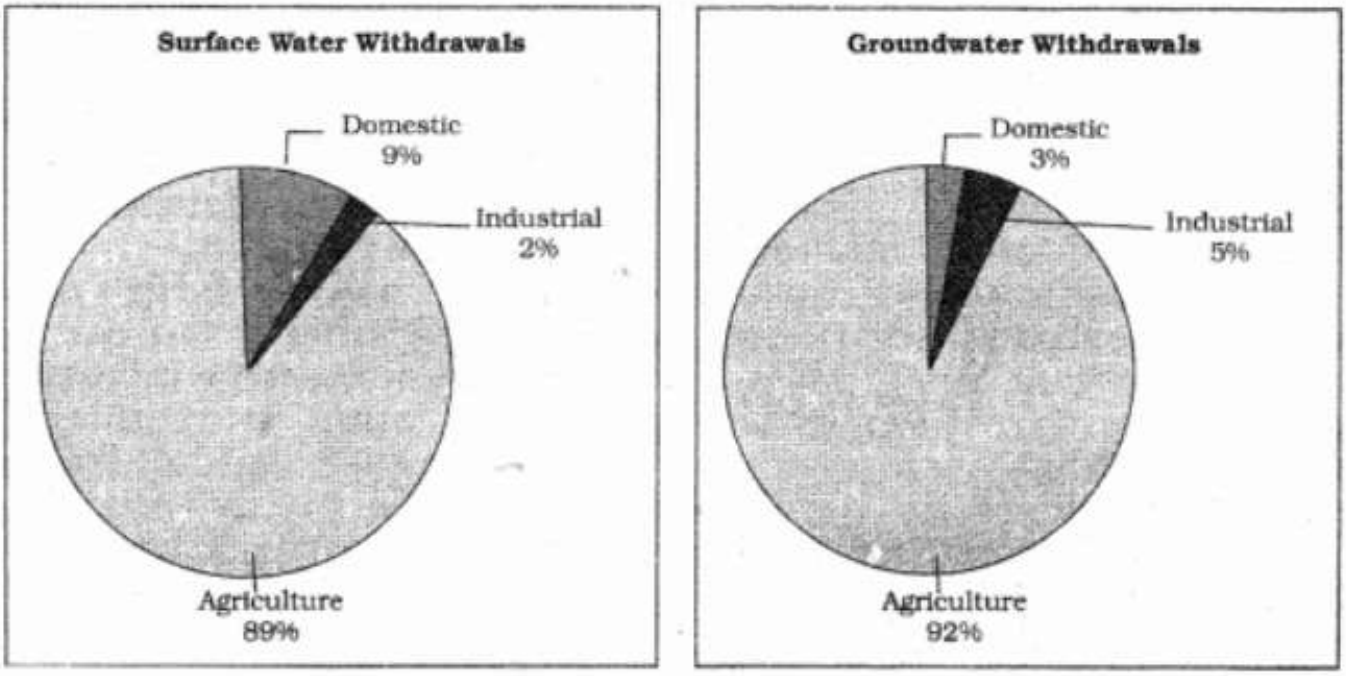


- Unscientific management and Changing natural vegetation patterns.
- Deforestation and overgrazing.
- Increased soil erosion and land degradation.
- Water sharing issues between states and countries.
- Global warming and climate change impact water availability.

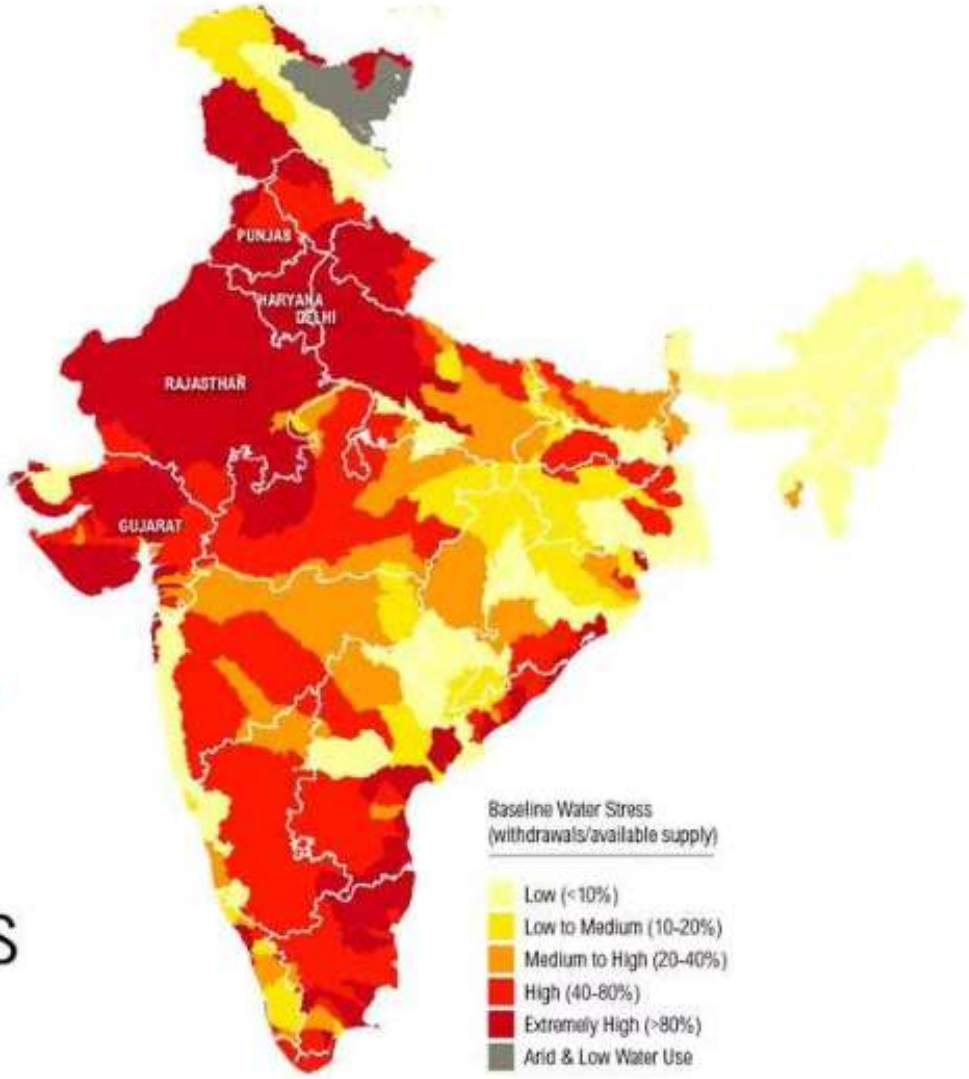
WATER STRESS (11:37 AM)

- It situation when the 'supply and demand' of water are mismatched.
- It is measured using the **Falkenmark indicator.**
- The country is said to be water-stressed if the water availability is below **1,700 cubic meters per person per year.**
- As per the 2011 census, water availability in India was 1,545 cubic meters per person per year.
- If the water availability goes below 1,000 cubic meters per person per year then it is called **'Water scarcity'**

- **Regionwise water stress in India:**

54%

of India Faces **High** to **Extremely High** Water Stress



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- **a) Northern Region:**
- **Areas:**
- Himachal Pradesh, Uttarakhand, Ladakh, Western UP, Punjab, Haryana, etc.
- In these regions the water availability is very low.
- **Reasons:**
- The reasons are Deforestation, pollution, high population, water-intensive agriculture, excessive extraction of groundwater, etc.
- **b) Western Region:**
- **Areas**

  :
- Gujarat, Rajasthan, Maharashtra, Madhya Pradesh, etc.
- **Reasons**

  :
- Natural availability is low, Rainshadow region, deforestation, Water-intensive crops, etc.
- **c) Southern Region:**
- **Areas**

  :
- Goa, Telangana, Andhra Pradesh, Tamilnadu, Kerala, etc.
- **Reasons**

  :
- Natural availability of water is less.
- Rainshadow effect.
- Hard rock topography.
- Unplanned Urbanization.

- **d) Eastern Region:**
- **Areas**

  :

- Chattisgarh, Odisha, Eastern UP, etc.
- **Reasons**

  :
- Mining, pollution (Arsenic and fluoride pollution)
- Population

WATER MANAGEMENT (11:54 AM)

- **REDUCE:** Reduce the use of water, The use of RO water purifiers can be discouraged.
- **REUSE:** The excess water from the RO can be reused for washing utensils.
- **RECYCLE:** The grey water can be recycled.
- Reforestation and Afforestation.
- **Sustainable Agriculture**:
- Done through Less intensive and through indigenous crops.
- Micro irrigation through Drip and sprinkler irrigation.
- Using locally available inputs.
- Terrace cultivation.
- Mulching.

TOPIC FOR THE NEXT CLASS: RAINWATER HARVESTING, INTERLINKING OF RIVERS AND NATURAL VEGETATION.