

1. Groundwater exploitation and sinking land

Topic: Environment and Ecology



In News: Groundwater exploitation is silently sinking the ground. Subduction in parts of Haryana, Punjab and Delhi is as high as 7-12 cm a year, but a reversal is possible if aquifers are left to charge

More on the Topic

- Agricultural practices in northwest India are heavily dependent on groundwater withdrawal.
- According to the Central Ground Water Board (CGWB), With limited monsoon rain, the groundwater table is precariously low.
- In Punjab, for instance, 76% of the groundwater blocks are 'over exploited'. In Chandigarh it is 64% and about 50% in Delhi. This means that more groundwater than can be recharged is extracted.
- Over time, **when the underlying aquifers (deep water channels that are stores of percolated water) aren't recharged, they run dry and the layers of soil and rock above them start to sink.**
- GRACE (Gravity Recovery and Climate Experiment) satellites that could measure minute changes in gravity on different parts of the earth's surface has revealed that **excessive groundwater extraction is linked to land subsidence.**
- Over exploited groundwater blocks and land subsidence has been reported in Kolkata and parts of eastern India too.

About Land Subsidence:



- Land subsidence refers to **the gradual sinking or settling of the Earth's surface**, usually due to the compaction of underground layers of soil, rock, or other materials.
- It occurs when the support structures beneath the land, such as aquifers, underground mines, or natural gas extraction, are depleted or when certain geological processes take place.
- In urban areas, **it can damage infrastructure, including roads, buildings, and underground utilities.**
- It can also increase the **risk of flooding in coastal regions by reducing the elevation of the land relative to sea level.**
- In agricultural areas, **subsidence can affect irrigation systems, disrupt the flow of water in rivers and canals, and cause permanent damage to farmland.**

Difficulty to find land subsidence:

- Unlike land movement from landslips or earthquakes, subsidence from groundwater extraction was gradual and barely visible annually. So, it is harder to correlate with structural damage.

India's Ground Water Statistics:

- India has 17% of the world's population, but possesses only 4% of the world's freshwater resources.
- The **annual per capita availability of water** has declined by 75% – from 6,042 cubic meters in 1947 to 1,486 cubic meters in 2021.
- According to the most recent Central Ground Water Board data, as many as 256 of 700 districts in India have reported **'critical' or 'over-exploited' groundwater levels.**
- India is the largest user of Groundwater (GW) (accounting for 1/4th of total withdrawal)

Reasons for increased Ground Water Extraction:

- Successive **droughts and erratic rainfall** have led to excess extraction of groundwater.
- **Low prices or free electricity** offers an incentive for the unchecked lifting of groundwater. The vast majority of groundwater pumps are unmetered, and if charged, are billed at a flat, non-volumetric, and highly subsidized tariff.
- **Green Revolution** caused the overuse of groundwater.
- Government encourages farmers to produce **water-intensive crops** like rice and sugarcane through increased minimum support prices (MSP).

Source: Indian Express



2. Minimum Import Price

Topic: Economy



In News: Centre has fixed Minimum Import Price (MIP) for apple.

More on the Topic:

- MIP is a temporary **measure to provide protection to domestic industry from predatory pricing of imports**. Below this price, import of the commodity is not allowed.
- **Directorate General of Foreign Trade (DGFT)** is an arm of the commerce ministry which frames rules related to exports and imports.

Why the MIP has been invoked for Apples:

- Jammu and Kashmir have been a prominent hub for apple cultivation for many decades. Despite the region's success in apple production, local growers have faced numerous challenges in recent years **due to the influx of tax-free apples from foreign countries**.
- This unfair competition has adversely affected their livelihoods. The absence of import taxes on foreign apples created **an uneven playing field for J&K apple growers**, who had to bear additional expenses such as transportation, packaging, and cold storage.
- As a result, their profits declined, making it **increasingly difficult to compete with the imported produce flooding the market at lower prices**.

- Recognizing the plight of J&K apple growers and the need to protect their interests, the central government has taken a proactive step by introducing the Minimum Import Price (MIP) for apples.

Source: DTE

3. State of the Global Climate report

Topic: International Relations



In News: State of the Global Climate report has been published by WMO.

More on the Topic:

- Global mean temperature in 2022 was 1.15 [1.02 to 1.28] °C above the 1850-1900 average. The years 2015 to 2022 were the eight warmest in the instrumental record back to 1850. 2022 was the 5th or 6th warmest year.



- Concentrations of the **three main greenhouse gases – carbon dioxide, methane, and nitrous oxide – reached record observed highs in 2021**, the latest year for which consolidated global values are available (1984-2021).
- The annual **increase in methane concentration from 2020 to 2021 was the highest on record.**
- Glacial losses were substantial in the previous decade. Measurements on glaciers in High Mountain Asia, western North America, South America and parts of the Arctic also reveal substantial glacier mass losses.
- **Ocean warming rates have been particularly high in the past two decades.** Despite continuing La Niña conditions, 58% of the ocean surface experienced at least one marine heatwave during 2022.
- Global mean sea level (GMSL) continued to rise in 2022.
- For the period 2005-2019, **total land ice loss from glaciers, Greenland, and Antarctica contributed 36% to the GMSL rise**, and ocean warming (through thermal expansion) contributed 55%.
- Ocean acidification: **CO₂ reacts with seawater resulting in a decrease of pH** referred to as 'ocean acidification'.
- There is very high confidence that open ocean surface pH is now the lowest it has been for at least 26 [thousand years].

Climate Change Impacts over the world:

- It was estimated that over 20 million people faced acute food insecurity across the region, under the effects of the drought and other shocks.
- Record breaking rain in July and August led to extensive flooding in Pakistan.
- Record breaking heatwaves affected Europe and resulted in a huge number of death.
- 9.8% of the global population is facing food insecurity associated with climate change. Half of these are in Asia and one third in Africa.
- Drought and flood is leading to displacement of significant population in countries like Pakistan, Somalia, Ethiopia.
- Climate change has important consequences for ecosystems and the environment. Global warming is causing the temperate zone to expand.
- Climate change is also affecting recurring events in nature, such as when trees blossom, or birds migrate.

Source: Hindu

4. Channapattanam Toys

Topic: Art and Culture



In News: Prime Minister has unveiled the mascot of the International Museum Expo 2023 which is a stylised and contemporarised life-size version of a 5-feet tall toy in Channapatna style inspired by the Bronze Dancing Girl of the Sindhu Saraswati Sabhyata.

More on the Topic:

- The International Museum Expo is being organized as part of Azadi ka Amrit Mahotsav to celebrate the 47th International Museum Day (IMD).
- The IMD theme for this year is 'Museums, Sustainability and Well Being'.
- The Museum Expo is designed to initiate a holistic conversation on Museums with museum professionals to enable them to evolve as cultural centers that play a pivotal role in India's cultural diplomacy.

Channapattanam Toys:

- GI tagged Channapatna toys are a particular form of wooden toys (and dolls) that are manufactured in the town of Channapatna in the Ramanagara district of Karnataka.
- As a result of the popularity of these toys, Channapatna is known as Gombegala Ooru (toy-town) of Karnataka.
- Traditionally, the work involved lacquering the wood of the **Wrightia tinctoria tree**, colloquially called **Aale mara (ivory-wood)**.
- It has a rich cultural history back to the time of **Hyder Ali and Tipu Sultan in the 18th century**.

- The toys devoid of any chemicals as they are dyed with vegetable colours.

Dancing Girl of Sindh:

- The sculpture, famously known as 'The Dancing Girl,' is one of the highest achievements of the artists of Mohenjodaro.
- The 'Dancing Girl' is a sculpture made of bronze. It belongs to the **Indus Valley Civilization** and dates back to circa 2500 BCE.

Source: FE

5. Operation Karuna

Topic: International Relations



In News: India has launched 'Operation Karuna' to assist Myanmar which has been devastated by Cyclone Mocha.

More on the Topic:

- Indian Navy ships carrying relief material reached Yangon.
- Super cyclone Mocha hit Bangladesh and Myanmar causing widespread devastation and killing hundreds.
- In Myanmar, Rakhine state is the worst-hit while in Bangladesh the Cox's Bazar which shelters in the world's largest refugee camp is worst-hit.
- Indian Navy remains committed to ensuring Security and Growth for All in the Region and continues to be the first responder in the region during such calamities.

Source: PIB

6. Trade and Partnership Agreement (TEPA)

Topic: International Relations



In News: The Indian government and the European Free Trade Association (EFTA) states are making progress toward a new Trade and Economic Partnership Agreement (TEPA).

More on the Topic:

- If successful, a TEPA between EFTA and India could lead to integrated and resilient supply chains, new opportunities for businesses and individuals on both sides, increased trade and investment flows, job creation, and economic growth.
- India is the ninth-largest trading partner of EFTA, **accounting for about 2.5% of India's total merchandise trade in 2020-21.**
- The main items of India's exports to EFTA are textiles, chemicals, gems, and jewellery, machinery, and pharmaceuticals.
- The main items of India's imports from EFTA are machinery, chemicals, precious metals, and medical instruments.

About EFTA:

- The European Free Trade Association (EFTA) is a **four-nation bloc founded by the Stockholm Convention in 1960.**
- **Iceland, Liechtenstein, Norway, and Switzerland** are the EFTA States.
- The four EFTA countries are not part of the European Union (EU).

Source: Hindu



7. Gharials

Topic: Environment and Ecology



In News: The World Wildlife Fund-Pakistan (WWF-Pakistan) confirmed reports of gharials being present (*Gavialis gangeticus*) in Punjab.

More on the Topic:

- Gharials are a type of Asian crocodylian distinguished by their long, thin snouts.
- Crocodylians are a group of reptiles that includes crocodiles, alligators, caimans, and more.
- Their Habitats include Fresh waters of the northern India – Chambal river, Ghagra, Gandak river and the Sone river (Bihar).
- Gharial is a indicator specie which indicates clean river water.

Source: Hindu
