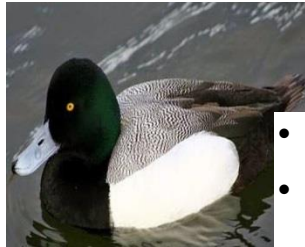


WHAT IS GREATER SCAUP?

A rare species of duck, Greater Scaup, was recently sighted in Loktak lake in Manipur's Bishnupur district after a gap of over 90 years.



About Greater Scaup:

- The Greater scaup is locally known as **Sadangman**.
 - It is a medium-sized diving duck species that belongs to the family of Anatidae.
 - The greater scaup species is distributed in Asia, Europe, the United States and Canada. It is a rare visitor to the Indian Subcontinent.
 - The breeding scaup inhabits shallow, freshwater lakes, pools and rivers with grassy shorelines.
 - The greater scaup species are **highly migratory**, breeding near arctic regions and migrating to the warmer south from August onwards.
 - **Conservation status:**
 - IUCN Red List: **Least concern**
- #### Key facts about Loktak Lake
- Loktak Lake is a freshwater lake in the Manipur state.
 - It is famous for unique floating islands called Phumdis with multiple plant species.
 - The **Keibul Lamjao National Park** located on the Loktak Lake is the last natural habitat of the "Sangai" the dancing deer of Manipur.
 - The lake is designated as a wetland of international importance under the Ramsar Convention.

WHAT IS RULE 14 IN THE NEW ELECTRICITY (AMENDMENT) RULES, 2022?



The gazette notification on the Electricity (Amendment) Rules, 2022, came out recently and the Kerala government had objected to Rule 14 under the rules.

What does Rule 14 say?

- It permits distribution companies (Discoms) to automatically recover from consumers, on a monthly basis, the expenses arising out of variations in fuel price and power purchase costs.
- It requires the State electricity regulatory commission to specify a price adjustment formula for automatically passing on the costs through the consumer tariff on a monthly basis.
- Fuel and power purchase adjustment surcharges shall be calculated and billed to consumers, automatically, without going through the regulatory approval process, on a monthly basis, according to the formula, prescribed by the respective State Commission.

GANDAK RIVER

Two shilas (stones), around seven feet long and weighing over 350 tonnes, from Nepal's Kali Gandaki river are set to arrive at Ayodhya, where they will be used to carve the idol of Lord Ram, said the priests from Janaki temple (Janakpur), Nepal.



About Gandak River:

- It is one of the major rivers in Nepal and India.
- It is also known as the Kali Gandaki and Narayani after the confluence with Trisuli river in Nepal.
- It is a north bank tributary of the Ganga in India.
- **Origin:** It rises at 7620 m in Tibet near the Nepal border.
- It flows southwest into India and then turns southeast along the Uttar Pradesh–Bihar state border and across the Indo-Gangetic Plain.
- It enters the Ganga River opposite Patna.
- The largest hydroelectricity project in Nepal is located along this stretch of the river.

WHO ARE NATTUKOTAI NAGARATHAS?

Sevvai Pongal which was held recently attracts hundreds of Nagarathars from across the globe.



About Nattukotai Nagarathas:

- Also called Nattukottai Chettiars, Nagarathas are a people of **Indian origin**, well known for **their financial dealings** and hospitality.
- They are **followers of the Hindu religion** and worship the **Shiva and Muruga deities** of the Hindu faith.
- They **belong to a very prolific Business Community**, who in olden days **moved out of India to foreign lands** like Burma, Ceylon, Java, Sumatra, Malaysia, Singapore & Vietnam (Saigon) .
- They **hail from a place called Chettinad**, an area situated in the South-Eastern region of Tamil Nadu.
- They are **considered the pioneers of modern banking**.
- They **introduced concepts like pattru (debit), varavu (credit), selavu (expenditure), laabam (profit) and nashtam (loss)**. These are all **collectively known as iynthogai (trial balance)** - a unified document which reflects the current financial status of the business at any given time.
- **They created 96 villages and built 9 temples with each family owing allegiance to a single temple only.**
- The Nagarathas **were the primary providers of capital to Burmese cultivators** through much of the colonial period.

Chettinad region:

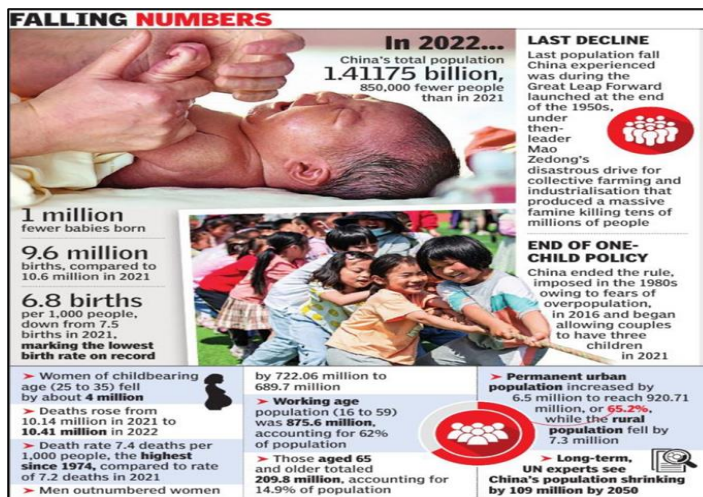
- Almost centrally located in the southern Indian state of Tamil nadu, Chettinad is a culturally and historically important region **famous for its unique cuisine, agriculture and architecture**.
- The origin of Chettinad **begins in the 13th century** when the Nattukottai Chettiars migrated to Karaikudi.
- The **new settlement eventually became the Chettinad region (Land of the Chettiars)** of 96 villages (in 1947,) but now due to the movement of people out of certain villages, has diminished to about 75 villages.
- Chettinad has **well planned towns provided with well defined roadways, reservoirs to store and supply water to the town, a planned market place, temples** and everything, providing the basic needs of people.

CHINA'S POPULATION DROPS FOR FIRST TIME IN 60 YEARS

Why in news?

- China's population fell last year for the first time in six decades.
- This is being termed as a historic turn that may mark the start of a long period of decline with profound implications for its economy and the world.

News Summary: China's National Bureau of Statistics reported a drop of roughly 850,000 people for a population of 1.41175 billion in 2022, the first dip since 1961.



What is the significance of falling population of China?

- **India No. 1**
 - China's population has begun to shrink. That possibly makes India the world's most populous nation.
 - Last year, UN experts put India's population at 1.412 billion in 2022, but they didn't expect the country to overtake China until 2023.
- **China will get old before it gets rich**
 - The recent trend shows that China's population is shrinking faster than expected.
 - Hence, demographers contend that China will get old before it gets rich.
 - This event will affect the economy due to drop in revenues and increase in government debt due to soaring health and welfare costs.

- **China will have to readjust its posture**

- Based on the recent demographic trends, China will have to adjust its social, economic, defence and foreign policies.
- Shrinking labour force and downturn in manufacturing capacity will affect China's image as an economic powerhouse and the world's factory floor.

Why China is witnessing decline in its population?

- **One-Child Policy**

- One cause behind the fall in numbers in China is the one-child policy imposed between 1980 and 2015.
 - This policy limited the number of children couples could have to one.
- But as the proportion of those in the working-age population began reducing, the policy became a matter of concern.
- Hence, from 2016, all married couples were allowed to have a second child. Again, in 2021, China allowed couples to have three children.

- **High cost of living**

- High education costs and costs of living have put many people off having children, even as a number of incentives have been announced by the government.

- **Zero-Covid policies**

- China's stringent zero-Covid policies that were in place for three years have caused further damage to the country's demographic outlook.

Where does India stand?

- **Population**

- India has not conducted an official headcount Census after 2011.
- But going by the United Nations' projections, its population stood at 1,417.2 million in 2022 (more than China's) and is expected to reach 1,428.6 million in 2023.

- **Mortality and fertility**

- The crude death rate (CDR) — the number of persons dying per year per 1,000 population – has fell down to 7.3-7.4 for India in 2020.
- The total fertility rate (TFR) — the number of babies an average woman bears over her lifetime — came down to 2 during 2019-21.
- A TFR of 2.1 is considered as replacement-level fertility.
- Eg., a woman having two children replaces herself and her partner with two new lives.
- Since all infants may not survive, the replacement TFR is taken at slightly above two.

If India's TFR is already below-replacement, why is its population still increasing?

- The TFR is the average number of births by women aged 15-49 based on surveys for a particular period/year.
- Populations can keep growing even with TFRs falling. De-growth requires TFRs to remain below replacement levels for extended periods.
- Hence, the effects of declining TFRs may reflect only after a couple of generations.
- China's TFR dipped below replacement first in 1991 and its population peaked in 2021 (2022 saw the decline in China's population).
- It took over 30 years for below-replacement fertility rates to translate into negative population growth.

WHAT IS A GIANT METREWAVE RADIO TELESCOPE?

Recently, a radio signal originating from atomic hydrogen in an extremely distant galaxy was detected by the Giant Metrewave Radio Telescope (GMRT).



Why in news?

- Astronomers from McGill University in Canada and the Indian Institute of Science (IISc) in Bengaluru have used data from the telescope to detect atomic hydrogen.

Key facts about Giant Metrewave Radio Telescope

- It is a **low-frequency radio telescope** that helps investigate various radio astrophysical problems ranging from nearby solar systems to the edge of the observable universe.

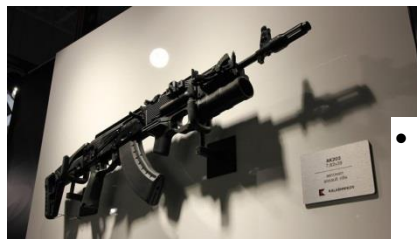
- It is operated by the **National Centre for Radio Astrophysics(NCRA)**, a part of the Tata Institute of Fundamental Research, Mumbai.

What is Atomic Hydrogen?

- Atomic hydrogen is the basic fuel required for **star formation** in a galaxy.
 - When hot ionised gas from the surrounding medium of a galaxy falls onto the universe, the gas cools and forms atomic hydrogen.
 - This atomic hydrogen then becomes molecular hydrogen and eventually leads to the formation of stars.
 - Atomic hydrogen **emits radio waves** of 21 cm wavelength, which helps in the direct tracing of the atomic gas content in nearby and distant galaxies.
-

WHAT IS AK-203?

Recently, the **Indo-Russian Rifles Private Limited (IRRPL)**, has started producing **AK-203 Kalashnikov assault rifles** at Korwa in Uttar Pradesh.



About AK-203:

- The AK-203 rifles are manufactured in a joint venture between **India and Russia**.
- These are high-quality, convenient and modern small arms.
- This model combines excellent ergonomics, adaptability to different shooters and high-performance characteristics, it is one of the best assault rifles in the world.
- The joint venture plans to ensure 100% localisation of the production of AK-203 rifles in India

What is Indo-Russian Rifles Private Limited (IRRPL)?

- The IRRPL was set up in 2019 jointly between erstwhile OFB [now Advanced Weapons and Equipment India Limited (AWEIL) and Munitions India Limited (MIL)] of India and Rosoboronexport and Kalashnikov of Russia.
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WHAT IS NATIONAL COAL INDEX?

Recently, Coal Ministry Offered relaxation in the Revision of the Performance Bank Guarantee and extended Bid due date for the Commercial Coal Block auction up to January 30.



Why in news?

During the launching of the sixth-round commercial coal mines' auction for 141 coal mines, the ministry of Coal decided to annually revise the Performance Bank Guarantee (PBG) based on the National Coal Index (NCI) for April at the beginning of the year 2023.

What is National Coal Index?

- The NCI is a price index which reflects the **change in the price level of coal** on a particular month relative to the fixed base year.
- This price index combines the prices of coal from all the sales channels- Notified Prices, Auction Prices and Import Prices.
- It has been rolled out on 4th June 2020 and the aim is to have an index that will truly reflect the market price.
- The base year is FY **2017-18**.
- The concept and design of the Index as well as the Representative Prices have been developed by **the Indian Statistical Institute, Kolkata**.

What is a coal auction?

- An auction-based regime was introduced in 2014, which allowed private sector participation. The sector has recently been opened for commercial mining by the private sector.

WHAT IS THE MEDOG PROJECT?

Concerns over China's proposed 60,000 MW hydropower in Medog, Tibet are influencing the design of a proposed hydropower project in Arunachal Pradesh's Upper Siang district.



About Medog Project:

- It is a proposed **Chinese project to build the world's biggest hydroelectric dam over the Yarlung Tsangpo** (name of Brahmaputra in Tibet) river in Tibet close to the Arunachal

Pradesh border.

- The proposed dam will be **built in Medog County**, where the **Yarlung Tsangpo/Brahmaputra Grand Canyon (world's deepest and longest canyon)** is located.
- The proposed **60000 MW dam** will have 3 times the capacity of the Three Gorges Dam.

Where is Medog County located?

- It is located in the **southeast of the Tibet Autonomous Region** and at the lower branch of Yarlung Tsangpo River.
- Medog is the **last county in Tibet which is located close to the Arunachal Pradesh border**.
- This is the place with the lowest elevation, the mildest, the most abundant rainfall, and the best ecological preservation on Tibet Plateau.

Three Gorges Dam:

- It is a **hydroelectric gravity dam** that spans the **Yangtze River** located in Hubei province, **China**.
- The Three Gorges Dam is the **world's largest power station** in terms of installed capacity (22,500 MW).