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Leonids Meteor Shower

This year's annual November Leonids Meteor Shower has begun.

- Every year in November, an annual meteor shower called the Leonids radiate out from the direction of the constellation of Leo in the sky.
- The peak activity of a meteor shower is on November 17. The peak time comes when the Earth passes through the densest part of the debris.
- The meteors originate from the comet 55P/Tempel-Tuttle, which orbits the sun every 33 years in the constellation Leo.
- Earth passes through this trail of meteors each year as it revolves around the sun, causing meteor showers (1,000 meteors per hour) to occur.
- Leonids are the major shower that features the fastest meteors (speeds of 71 km/s), although the rates are often as low as 15 meteors per hour.
- They are also called fireballs (because of their bright colours) and earthgazer meteors (because they streak close to the horizon.)
- The light is a result of the friction between the meteorite and the molecules present in the Earth's atmosphere because of which it burns.
- The last Leonid storm took place in 2002.
- **Visibility** - The showers are visible on any cloudless night when the Moon is not very bright. They are best viewed at about midnight.
- Ideally, the viewing location should have no light pollution; the farther away from cities the better.

Issi saaneq

Some researchers have determined that a well-preserved dinosaur skull excavated in East Greenland in 1994 belongs to a new species - Issi saaneq.

- Issi saaneq lived about 214 million years ago in the Late Triassic outcrops of the Malmros Klint Formation in Jameson Land, Greenland.
- It was a two-legged medium-sized, long necked herbivore and a predecessor of the sauropods, the largest land animals ever to live.
- The name of the new dinosaur pays tribute to Greenland's Inuit language and means "coldbone".
- The new findings are the first evidence of a distinct Greenlandic dinosaur species.
- The dinosaur differs from all other **sauropodomorphs** discovered so far, but has similarities with dinosaurs found in Brazil, such as the Macrocollum and Unaysaurus, which are almost 15 million years older.
- Together with the *Plateosaurus* from Germany, they form the group of **plateosaurids**: relatively bipeds that reached lengths of 3-10 m.

Climate Change Performance Index

The 17th edition of the Climate Change Performance Index was released.

- This index was compiled by Germanwatch, the New Climate Institute, and the Climate Action Network.
- The index is an independent monitoring tool for tracking the climate protection performance of 60 countries and the European Union.
- **Findings** - The recent edition of the index kept the first 3 ranks of the overall rankings empty as no country had performed well enough in all index categories to achieve an overall very high rating.
- The first 3 ranks in the greenhouse gas emissions category were kept empty too.
- Overall, the overall top performers in the list of 60 countries were Denmark, Sweden and Norway.
- Australia, South Korea, Russia and the US are among the lowest performing countries along with Kazakhstan and Saudi Arabia.
- In terms of greenhouse gas emissions, Sweden, Egypt, Chile and the UK are in the top 7 of this category.
- **India** is at number 10 in the overall rankings. It is a high performer except in the renewable energy category, in which it is ranked “medium”.
- India is benefiting from its relatively low per-capita emissions.
- India is ranked 10 in terms of greenhouse gas emissions.

Kerala Revoked Order to Fell Trees by TN

A fresh controversy over felling of trees downstream the baby dam, which is part of the 126-year-old Mullaperiyar dam has erupted

> Mullaperiyar dam is situated in Kerala, and Tamil Nadu, the custodian of the dam. Although the dam is controlled by Tamil Nadu, the permission for felling trees has to be granted by Kerala, where the dam is situated.

- Mullaperiyar dam comprises the main dam, a baby dam, an earthen dam and the spillway.
- **Baby dam** was constructed to increase the water level.
- As per a 2014 Supreme Court directive, the water level at the dam can be maintained at 142 ft.
- Pointing out the age of the dam and raising safety concerns, Kerala has been demanding that the water level be reduced to 136 ft.
- For Tamil Nadu, strengthening of the baby dam is crucial for increasing the water level from 142 ft to 152ft.
- This is the reason why Tamil Nadu is seeking the permission from Kerala to cut the trees.
- Recently, Kerala granted TN permission to cut down trees. But it froze its decision in the wake of fears that the move would impair the interests of Kerala in the long-pending inter-state dispute.
    - By strengthening the baby dam and other structures, TN can play to hilt its demand that water level has to be raised to 152 ft.
- The forest department froze the order, pointing out that cutting of trees from the Periyar Tiger

Reserve is subject to the clearance by the Union Ministry of Environmental and Forests and other statutory bodies.
- So, Tamil Nadu has to obtain approval from the Standing Committee of the National Board of Wild Life.
- Apart from that, permission is required as per the Forest Conservation Act of 1980. However, Tamil Nadu has not completed these mandatory steps before seeking permission to cut the trees.

Services Sector

The Minister of Commerce and Industry said that India is poised to achieve services export target of $1 trillion by 2030.

- The Services sector are a key driver of India's economic growth.
- The services sector provides employment to nearly 2.6 crore people and contributes approximately 40% to India's total global exports.
- Services trade surplus was $89 billionn in FY 2020-21 and it has been the largest FDI recipient (53% of FDI inflows 2000-2021).
- Indian services have the twin power of universal acceptance & universal attraction.
- In 2020, India became the 7th largest services exporter in the world, moving up the ladder by two positions.
- Services PMI rose to a decade high of 58.4 in October 2021.
- Services is boosting India's transition from an assembly economy to a knowledge based economy.
- So, the Government is actively pursuing market access opportunities (FTAs) and working on a scheme alternative to SEIS.
- The Government is supporting the service sector through Aatmanirbhar Bharat Package, collateral-free Automatic Loans for Businesses, including MSMEs.
- Rs. 56,027 Crore was released under various Export Promotion schemes.

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