

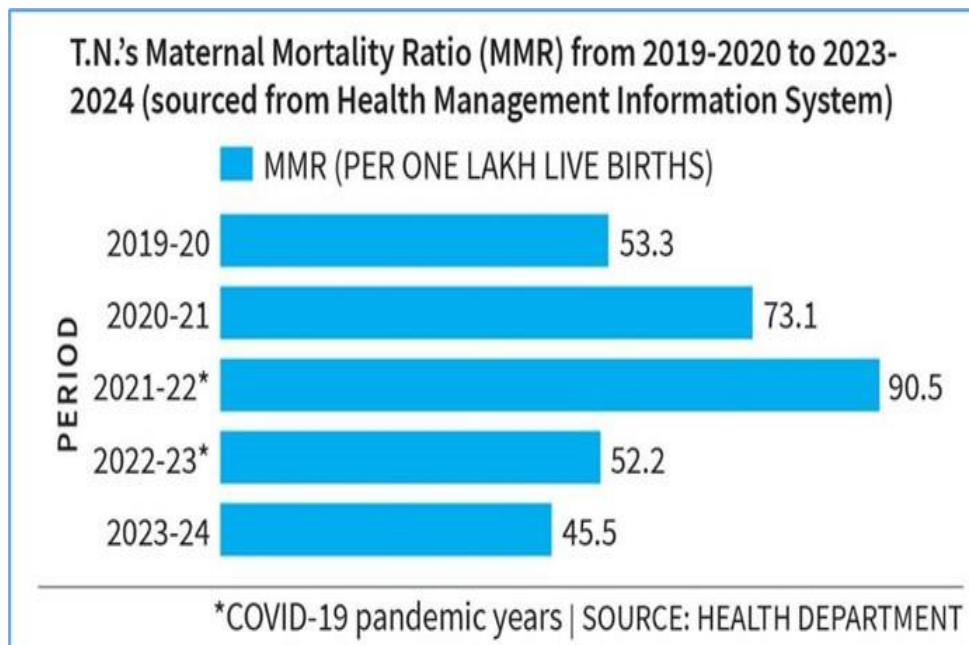
October - 10

TNPSC BITS

- ❖ Tamil Nadu govt launched "Nallosai" in college and "Katral Inithu" in schools, to help students, to develop holistic skills in arts, science, sports, information technology, and soft and work skills After school/college hours.
- ❖ Madras Atomic Power Station Unit 2 at Kalpakkam has completed one year of continuous operations recently.
- ❖ The centre has approved the establishment of a National Centre of Excellence (NCoE) for Animation, Visual Effects, Gaming, Comics, and Extended Reality (AVGC-XR) in Mumbai.
- ❖ The 2024 edition of the annual apex-level international conference of the Indian Navy – the Indo-Pacific Regional Dialogue (IPRD) was held in New Delhi.
- ❖ Mumbai Cricket team clinched the Irani Cup trophy for the 15th time after 27 years.

TAMIL NADU

New Task Force to Reduce MMR



- ❖ Tamil Nadu has constituted a State-level task force to reduce maternal deaths.
- ❖ The aim is to bring down the Maternal Mortality Ratio (MMR) to less than 10 per one lakh live births in the next two years.

- ❖ The present MMR is 45.5 per one lakh live births.
- ❖ It will comprise experts, and representatives from the Indian Medical Association, the WHO and UNICEF.

NATIONAL

Modified Eco-mark Scheme

- ❖ The Ministry of Environment, Forest and Climate Change has notified the Ecomark Rules recently.
- ❖ It replaces the Ecomark scheme of 1991.
- ❖ The scheme will encourage the demand for environment-friendly products, promote lower energy consumption, resource efficiency and circular economy.



INTERNATIONAL

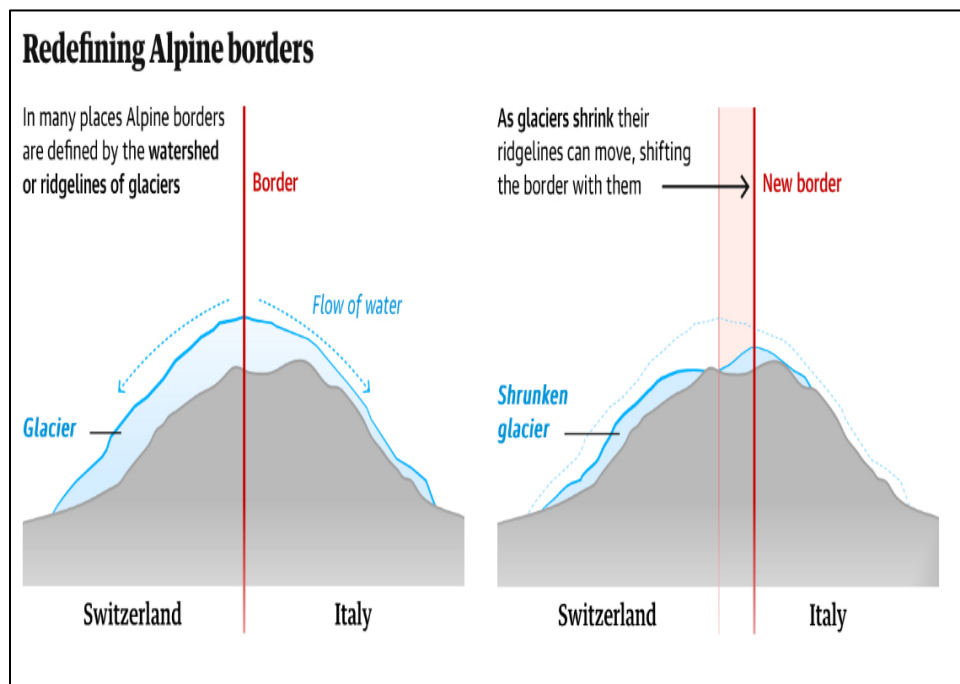
International Medical Device Regulators Forum

- ❖ India has become an affiliate member of the International Medical Device Regulators Forum (IMDRF).
- ❖ The IMDRF is a group of global medical device regulators, was established in 2011.
- ❖ It aims to speed up the adoption of international medical device regulatory harmonisation and convergence.

- ❖ Its members include national regulatory authorities of the U.S., Australia, Canada, the European Union, Japan, the United Kingdom, Brazil, Russia, China, South Korea, Singapore and the WHO.



Redrawing of Alpine Borders

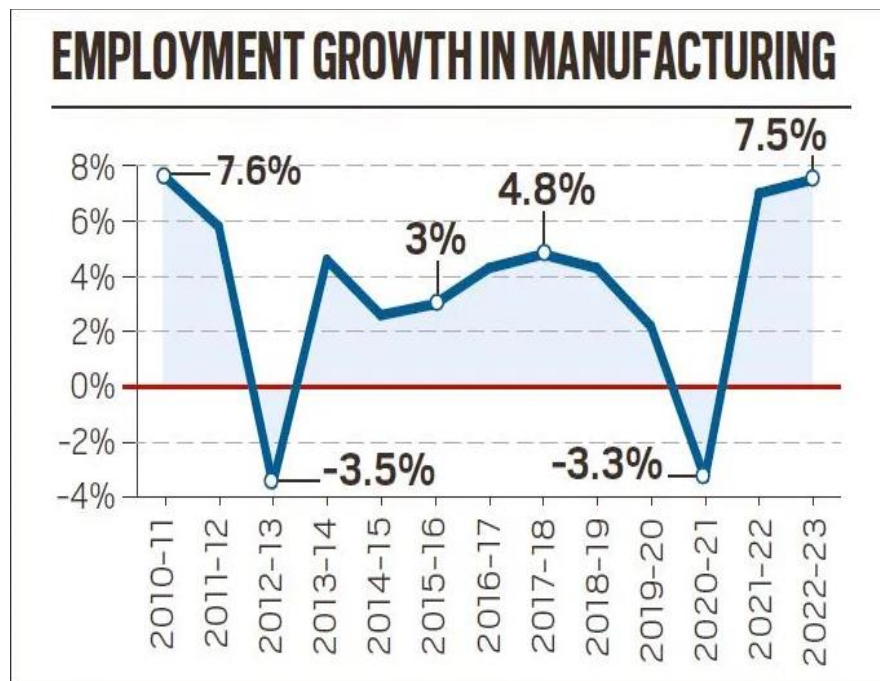


- ❖ Switzerland and Italy redrew their shared border in the Alps last week, forced by melting glaciers.

- ❖ In 2023, Italy and Switzerland had set up a commission to study climate impacts on glaciers and their subsequent effect on the border.
- ❖ Switzerland and Italy have agreed to changes along the landmarks of Plateau Rosa, the Carrel refuge, and the Gobba di Rollin.
- ❖ This is where the Zermatt region of Switzerland meets the Aosta valley of Italy.
- ❖ The region is home to several ski resorts that fuel the economy of both countries.

ECONOMY

Annual Survey of Industries for 2022-23



- ❖ The total number of employees in manufacturing industries increased by 7.5 per cent to 1.84 crore in 2022-23 from 1.72 crore in 2021-22.
- ❖ This is the highest rate of increase in employment in manufacturing industries in the last 12 years.
- ❖ The highest employment was recorded in factories producing food products, followed by textiles, basic metals, wearing apparel and motor vehicles, trailers and semi-trailers.
- ❖ The total number of factories increased from 2.49 lakh in 2021-22 to 2.53 lakh in 2022-23.

- ❖ The number of workers employed in the informal sector in 2022-23 had dropped by 16.45 lakh or about 1.5 per cent to 10.96 crore compared to 11.13 crore in 2015-16.
- ❖ In terms of GVA, Maharashtra ranked first in 2022-23 followed by Gujarat, Tamil Nadu, Karnataka and Uttar Pradesh.

India's Employment Growth (2016-2023)



- ❖ The employment in India increased by 36 per cent (17 million jobs) between 2016-17 and 2022-23.
- ❖ During the same period, the gross domestic product (GDP) grew at an average rate of over 6.5 per cent.
- ❖ As per the PLFS data from 2017 to 2023 the Worker Population Ratio (WPR) has increased by 9 percentage points or almost 26 per cent during this period.

SCIENCE AND TECHNOLOGY

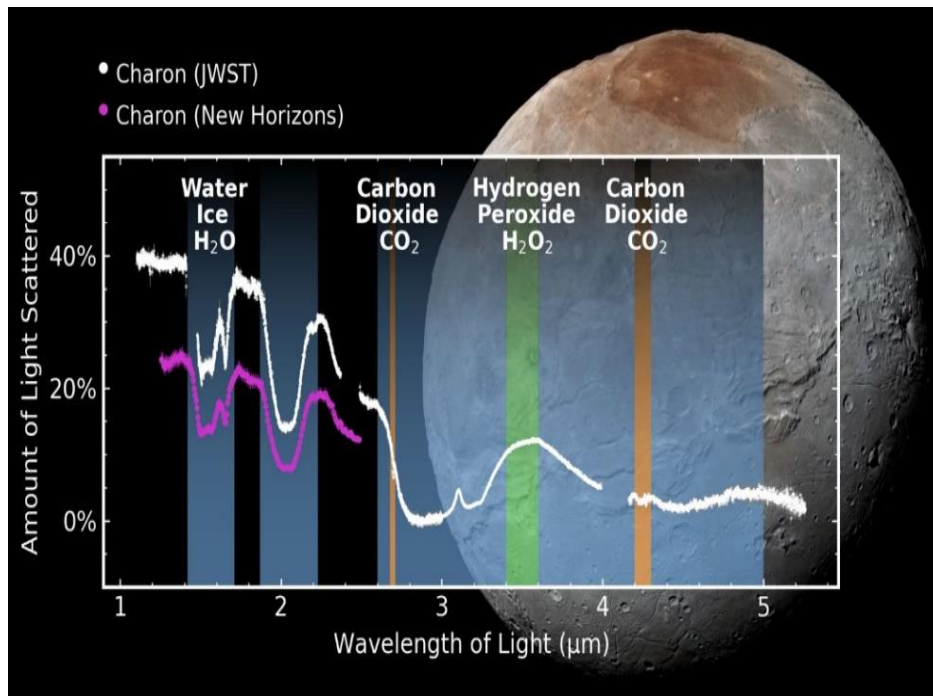
Map of Sun's rotation

- ❖ Indian astronomers have mapped the variation in the Sun's rotation speed from its equator to its poles for the first time.
- ❖ This was done by using 100 years of daily solar observations from the Kodaikanal Solar Observatory.
- ❖ This work provides a deeper understanding of the Sun's inner workings, crucial for predicting its activity and impact on Earth.
- ❖ The Sun experiences differential rotation, meaning different parts of it rotate at different speeds.

- ❖ The equator completes one full rotation in about 25 days, while the poles take about 35 days.



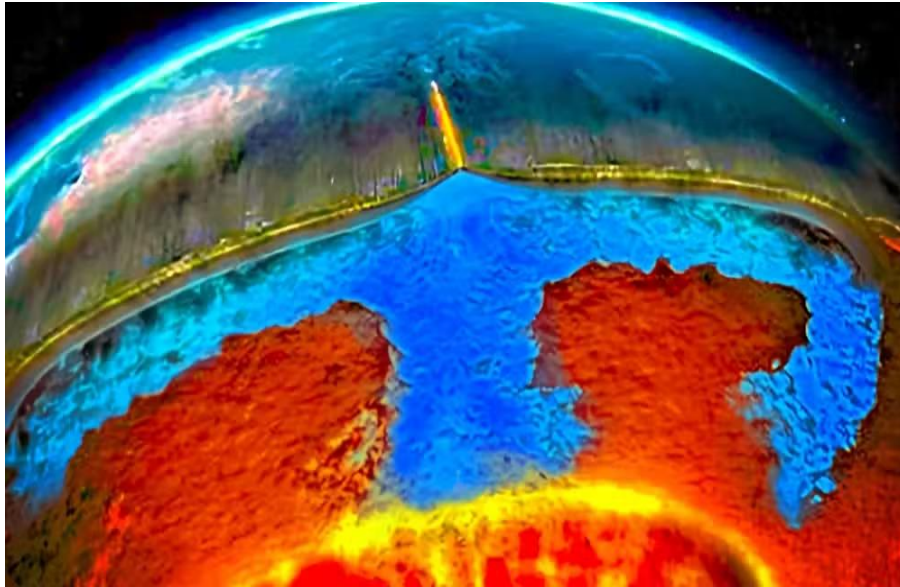
CO₂ and H₂O₂ in 'Charon'



- ❖ The James Webb Space Telescope has detected carbon dioxide and hydrogen peroxide on Pluto's largest moon Charon.

- ❖ The Charon's surface consists of the crystalline water ice, ammonia, and other organic materials.
- ❖ Charon with a diameter of approximately 1200 kilometres which is half the size of Pluto.

Sixth Ocean Hidden in Earth's Mantle



- ❖ Scientists have discovered a sixth ocean at approximately 700 kilometres beneath the Earth's surface.
- ❖ This ocean is three times larger than all surface oceans combined.
- ❖ This pool of water is trapped within a blue rock formation known as ringwoodite, situated deep within the Earth's mantle.
- ❖ However, the water reservoir is not an ocean in the traditional sense.
- ❖ They are water molecules trapped within the crystal structure of ringwoodite.

ENVIRONMENT

Status of Elephant in India 2022-23

- ❖ The Environment Ministry has shelved its elephant census report, 'Status of Elephant in India 2022-23'.
- ❖ Data from the unreleased report show a sharp decline in elephant populations in the east-central and southern landscapes.
- ❖ The slide in numbers is especially dramatic in Southern West Bengal (84%), Jharkhand (64%), Odisha (54%), and Kerala (51%).

- ❖ Until 2002, elephants were counted in India by the “total direct count” method.
- ❖ In 2002, the “indirect dung count method” was introduced in the southern states.
- ❖ In 2023, Karnataka, Tamil Nadu, and Kerala used a protocol combining the block count and dung count methods.

| ELEPHANT NUMBERS IN INDIA (2012-2023) | | | | |
|--|--------------|--------------|----------------|---------------|
| States | 2012 | 2017 | 2022-23 | Change |
| Tamil Nadu | 4015 | 2761 | 3136 | 13.6% |
| Karnataka | 6068 | 6049 | 6013 | -0.6% |
| Kerala | 6117 | 5706* | 2785 | -51.2% |
| Maha (W Ghat) | 4 | 6 | 27 | 350% |
| Western Ghats | 16204 | 14522 | 11961 | -17.6% |

STATES

Co-District – Assam

DECENTRALISATION POWER

Co-districts will have jurisdiction over services like land revenue, administrative and magisterial powers, food and civil supplies, excise, disaster management, and development and welfare works of the people



CM said this focused approach will greatly ensure efficiency in service delivery, leading to convenience for the people and development of the state

- ❖ Co-districts is a pioneering initiative by the Assam government within the existing districts.



- ❖ They rolled out 39 co-districts in the first phase.
- ❖ It aims to ensure timely access to essential govt services and streamline citizen-centric services by bringing governance to the grassroots.
- ❖ These 'co-districts' will serve as smaller administrative units below the districts led by an officer of the rank of Assistant District Commissioner.

PERSONALITIES, AWARDS, AND EVENTS

MIDORI Prize 2024

- ❖ Vera Voronova from Kazakhstan and Ysabel Agustina Calderón Carlos from Peru have been selected for the MIDORI Prize for Biodiversity 2024.
- ❖ They have been recognised for their outstanding contributions to conservation and sustainability.
- ❖ The MIDORI Prize is given every two years to people who make outstanding contributions to protecting biodiversity at all levels.
- ❖ With this year's winners, the total number of MIDORI Prize recipients has reached 19 individuals from 17 different countries.

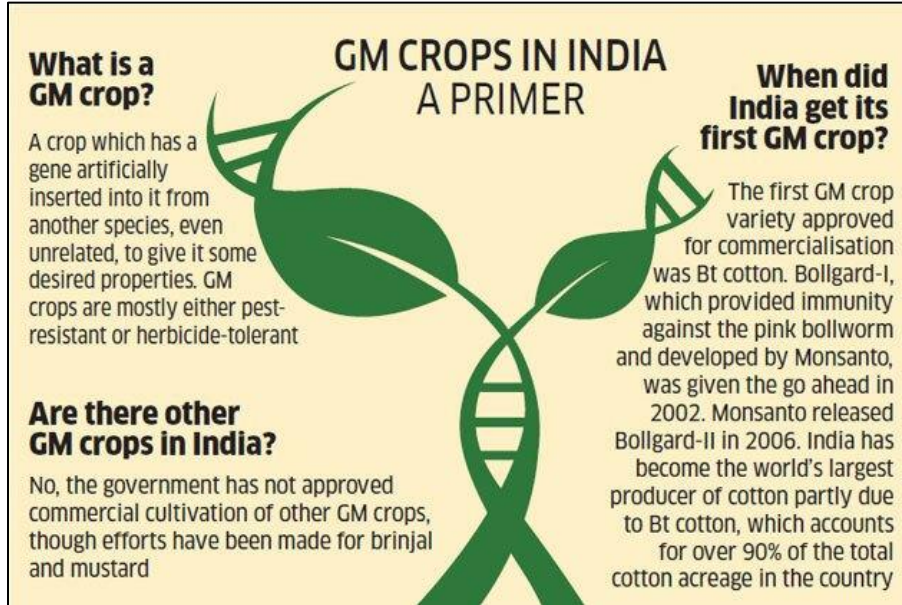


MISCELLANEOUS

Herbicide-tolerant BT cotton

- ❖ The government is promoting Herbicide-tolerant BT (HTBT) cotton to reduce the use of herbicide 'glyphosate'.
- ❖ 'Glyphosate' is designed to kill all plants coming into contact with it, the chemical cannot ordinarily distinguish between crop and weed.

- ❖ The use of glyphosate involves health hazards and risk to human beings and animals.
- ❖ The HTBt cotton variant adds another layer of modification, making the plant resistant to the herbicide glyphosate.



GM CROPS IN INDIA
A PRIMER

What is a GM crop?
A crop which has a gene artificially inserted into it from another species, even unrelated, to give it some desired properties. GM crops are mostly either pest-resistant or herbicide-tolerant

When did India get its first GM crop?
The first GM crop variety approved for commercialisation was Bt cotton. Bollgard-I, which provided immunity against the pink bollworm and developed by Monsanto, was given the go ahead in 2002. Monsanto released Bollgard-II in 2006. India has become the world's largest producer of cotton partly due to Bt cotton, which accounts for over 90% of the total cotton acreage in the country

Are there other GM crops in India?
No, the government has not approved commercial cultivation of other GM crops, though efforts have been made for brinjal and mustard

