UPSC Daily Current Affairs | Prelim Bits 04-10-2024

National Mission on Edible Oils - Oil seeds

Cabinet Approves National Mission on Edible Oils – Oilseeds (NMEO-Oilseeds) for 2024-25 to 2030-31.

- **Aim -** It is an initiative aimed at boosting domestic oilseed production and achieving self-reliance in edible oils.
- **Duration -** The Mission will be implemented over a 7-year period, from 2024-25 to 2030-31.
- **Ministry –** Ministry of Agriculture and Farmers Welfare.
- **Key crops -** It will focus on enhancing the production of key primary oilseed crops such as Rapeseed-Mustard, Groundnut, Soybean, Sunflower, and Sesamum.
- It also focus on increasing collection and extraction efficiency from secondary sources like Cottonseed, Rice Bran, and Tree Borne Oils.
- **Targets -** The mission aims to increase primary oilseed production from 39 million tonnes (2022-23) to 69.7 million tonnes by 2030-31.
- Together with ***NMEO-OP (Oil Palm),*** the Mission targets to increase domestic edible oil production to 25.45 million tonnes by 2030-31 meeting around 72% of our projected domestic requirement.

Around 9 MT of palm oil is imported every year to the tune of Rs. 40,000 crore which is around 56 % of the total imports of edible oil.

- This will be achieved by promoting adoption of high-yielding high oil content seed varieties, extending cultivation into rice fallow areas, and promoting intercropping.
- **Features -** The Mission will harness ongoing development of high-quality seeds by using cutting-edge global technologies such as genome editing.
- The Mission also seeks to expand oilseed cultivation by an additional 40 lakh hectares by targeting rice and potato fallow lands, promoting intercropping, and promoting crop diversification.
- **SATHI Portal -** To ensure the timely availability of quality seeds, it will introduce an Online 5-year rolling seed plan through the 'Seed Authentication, Traceability & Holistic Inventory (SATHI)' Portal.

National Mission on Edible Oils - Oil Palm (NMEO-OP)

• It is a ***Centrally Sponsored Scheme*** in India aimed at enhancing the production of edible oils and oilseeds.
• **Launched in –** 2021.
• **Target -** The mission plans to expand oil palm cultivation to 10 lakh hectares by the year 2025-26.
• **Funding -** The cost of the initiative is shared between the Central and State Governments at a ratio of 60:40 for general states and 90:10 for northeastern states.

References

1. PIB | National Mission on Edible Oils - Oil seeds
2. Times of India | National Mission on Edible Oils - Oil seeds

Solar Eclipse

The recent annual solar eclipse created a rare ring of fire phenomenon visible in parts of South America because the Moon is farther from the Earth than usual.

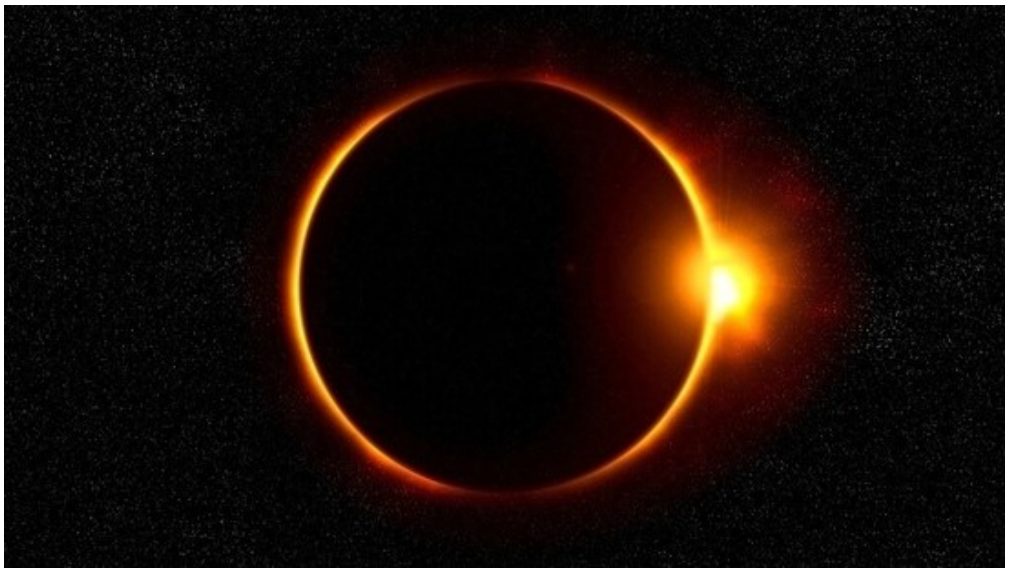
> *A "ring of fire" occurs when the Moon lines up between the Sun and the Earth to create a solar eclipse but does not block out the Sun's light entirely.*

- A solar eclipse occurs when the ***moon is positioned between Earth and the sun*** and casts a shadow over Earth.
- A solar eclipse is witnessed only during the new moon when the Moon and Sun are aligned on the same side of Earth.
- A new moon occurs about 29.5 days because that is how long it takes the Moon to orbit Earth.
- This, however, does not mean that a solar eclipse happens every month. It takes place only between two to five times annually.
- It is because the Moon does not orbit Earth in the same plane as the Earth orbits the Sun.
- In fact, the Moon is tilted by about five degrees with respect to Earth.
- As a result, most of the time when the Moon is in between the Sun and Earth, its shadow is either too high or too low to fall on the Earth.
- **Types of solar eclipse**
- There are 4 different types of solar eclipses depending on how the sun, moon and Earth are aligned at the time of the event
    - **Total solar eclipse -** The sun is fully obscured by the moon.
    - **Partial solar eclipse -** The moon doesn't fully block the sun so only a portion of the sun is obscured. Here the moon appears to take a "bite" out of the sun.

> *Partial solar eclipse is the most common type of solar eclipse.*

    - **Annular solar eclipse -** The moon is centered in front of the sun but doesn't

cover the entirety of the surface (as seen in a total solar eclipse). A "ring of fire" shines around the moon.
    - **Hybrid solar eclipse -** The rarest solar eclipse is a combination of a total and annular eclipse (sometimes known as an A-T eclipse) and is produced when the moon's shadow moves across Earth.
    - These begin as one type of eclipse and transition to another.



References

1. Hindustan Times | 'Ring of Fire' solar eclipse
2. The Hindu | Solar eclipse created rare 'ring of fire'

Swallowtail butterflies

A new study found that the overexploitation of 25 species of host plants threatens the swallowtail butterflies in the forest habitats of a part of Assam often referred to as the "citrus belt of the world".

- **Family –** Papilionidae.
- Swallowtail butterflies are named for the distinctive "tail-like" projections on their hindwings, even though many species within this group lack these tails.
- **Distribution** - It includes over 550 species found worldwide, except in the Arctic. India is home to 77 of the 573 recorded species.
- **Characteristics** - They are known for their large size and colorful appearance, specifically the characteristic tail-like extensions on their hindwings.
- **Diet -** Swallowtail butterflies primarily feed on nectar from a variety of flowering plants.
- These butterflies often mimic the patterns of distasteful species to avoid predation.
- They serve as valuable indicator species, reflecting the health of their ecosystems.
- There are many species but the most famous ones are Blue-striped mime (Papilio slateri), Bhutan glory (Bhutanitis lidderdalii), and Kaiser-i-Hind (Teinopalpus imperialis).

- Swallowtail is the ***state butterfly of Arunachal Pradesh.***
- **Conservation -** The International Union for Conservation of Nature designated the northeastern part of the country, where 69 species have been recorded, 'swallowtail-rich zone' under the Swallowtail Conservation Action Plan.
- **Threat -** Habitat destruction due to illegal farming, agriculture, deforestation, and pesticide use.

Reference

The Hindu | Swallowtail butterflies

Classical Language Status

The Union Cabinet recently approved classical language status to Marathi, Bengali, Assamese, Pali, and Prakrit.

- Classical languages are ancient languages with independent traditions and a rich literary history that continue to influence various literary styles and philosophical texts.
- The government first introduced the concept of classical languages in October 2004 by conferring this status to Tamil.
- Earlier, 5 other languages also enjoyed classical status: Sanskrit (2005), Kannada (2008), Telugu (2008), Malayalam (2013), and Odia (2014).
- **Criteria -** The criteria for a classical language include an ancient history and literary tradition spanning 1500-2000 years, with a significant significant body of ancient texts that are still valued today.
- The current framework, as revised in 2024 by the Linguistic Experts Committee (LEC) under Sahitya Akademi, emphasises 4 key factors.
- **Key Factors**
  - High antiquity of the language's early texts/recorded history over a period of 1500-2000 years.
  - A body of ancient literature/texts, which is considered a heritage by generations of speakers.
  - The language must have a distinct and original literary tradition, not derived from another speech community.
  - Knowledge texts, especially prose texts, in addition to poetry, epigraphical and inscriptional evidence.
- The classical languages and literature could be distinct from their current form or could be discontinuous with later forms of their offshoots.
- **Benefits of status -** Conferring classical language status to languages will promote these languages, their cultural preservation, academic research, and the overall recognition of linguistic heritage.
- The move will enhance awareness of the language and strengthen the linguistic identity of speakers, fostering pride in their language's contribution to national and global culture.

- It will ensure that ancient literary texts, manuscripts, and works are conserved.
- Digitization of ancient manuscripts will make them accessible for future generations of scholars.
- **Promoting these languages -** Once a language is notified as a classical language, the Education Ministry provides certain benefits to promote it.
- These include 3 Central Universities established in 2020 through an Act of Parliament to promote Sanskrit.
- The Central Institute of Classical Tamil was set up to facilitate the translation of ancient Tamil texts, promote research, and offer courses for university students and language scholars of Tamil.
- The Centres for Excellence for studies in classical Kannada, Telugu, Malayalam, and Odia were also established under the Central Institute of Indian Languages in Mysuru.

References

1. The Hindu | Classical Language Status
2. Times of India | Cabinet gave its approval to classical language status

C/2023 A3 (Tsuchinshan-Atlas)

C/2023 A3 (Tsuchinshan–Atlas) reached its closest approach to the Sun (perihelion) becoming increasingly visible to observers on Earth recently.

- Comet C/2023 A3 (Tsuchinshan–Atlas) is thought to orbit the sun about every 80,000 years on a highly elongated path.
- The comet is currently between the orbits of ***Jupiter and Saturn.***
- It is approximately 129.6 million kilometres away from Earth and is currently located in the ***Sextans constellation.***
- **Discovered by -** Purple Mountain Observatory; ATLAS South Africa.
- **Discovered -** 9 January 2023.
- It is a ***non-periodic*** comet. Unlike more familiar comets, such as Halley's Comet, this one is unpredictable in its appearance.

Asteroid Terrestrial-impact Last Alert System (ATLAS)

- ATLAS is a NASA-funded early warning system.
- **Developed by -** The University of Hawaii.
- It consists of 4 telescopes located in Hawaii and Chile.
- It is designed to detect smaller near-Earth objects days to weeks before they potentially impact Earth.
- ATLAS can survey the entire dark sky every 24 hours, making it a crucial tool for monitoring and tracking potential asteroid threats.

References

1. The Guardian | Comet C/2023 A3 (Tsuchinshan–Atlas)
2. The Indian Express | Comet C/2023 A3 lights up



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