Prelim Bits 21-10-2021 | UPSC Daily Current Affairs

Kushinagar

Prime Minister inaugurated the Kushinagar international airport, Uttar Pradesh, which will mainly service the ***Buddhist tourism circuit****.*

- In Kushinagar, the Buddha attained Mahaparinirvana (ultimate salvation) in 483 BC and was cremated at Rambhar Stupa.
- Kushinagar is identified with Kushinara, **capital of the ancient Malla republic** - one of the 16 mahajanapadas of the 6^{th}-4^{th} centuries BC.
- The area went on to be part of the kingdoms of the Mauryas, Shungas, Kushanas, Guptas, Harshavardhana, and the Palas.
- Kushinara is believed to have been inhabited until the 12th century.
- The first excavations in Kushinagar were carried out by **Alexander Cunningham and ACL Carlleyle**, who unearthed the main stupa and the 6-metre-long statue of the Reclining Buddha in 1876.

TIMELINE OF BUDDHA

LUMBINI

BUDDHA WAS BORN AS THE PRINCE SIDDHARTHA GAUTAMA IN C. 563 BC

KAPILAVASTU

LIVED UNTIL THE AGE OF 29 WITH HIS PARENTS IN THE SHAKYA CAPITAL

BODH GAYA

ATTAINED ENLIGHTENMENT UNDER THE BODHI TREE IN 500 BCE

SARNATH

FIRST SERMON AT A DEER PARK NEAR VARANASI

RAJGIR

HE TAUGHT IN THE AREA, WHERE HE WAS BUILT A FOREST MONASTERY BY KING BIMBISARA OF MAGADHA

SHRAVASTI

IT IS THE CAPITAL OF ANCIENT KOSALA KINGDOM, WHERE HE LIVED THE LARGEST PART OF HIS LIFE

KUSHINAGAR

LAST SERMON IN VAISHALI & ATTAINED MAHAPARINIRVANA HERE (483 BC)

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Buddhist Tourism Sites

> Buddhism originated in India and 7 of the 8 main Buddhist pilgrimage sites are in India, but it gets not even 1% of Buddhist pilgrims in the world.

- In 2016, the Ministry of Tourism announced the Buddhist Circuit as **India's first transnational tourism circuit** (India, Nepal and Sri Lanka).
- Buddhist Circuit includes Bodh Gaya, Vaishali, & Rajgir (Bihar), Kushinagar, Sarnath, and Shravasti (UP), and Lumbini (Nepal).
- A Buddhist Circuit tourist train covers all destinations in 14 days, and helicopter services and more airports are in the pipeline.
- The push is intended to assert and consolidate India's position as the original centre of Buddhism, against the claims from China.

Bio-enzymes from Kinnow

Punjab farmers, especially in kinnow belt, have started making bio-enzymes (BEs) from falling kinnow fruits, which, if not would become a total waste.

- Farmers can collect these dropped fruits from their kinnow fields and prepare bio-enzymes (BEs) at a low cost.
- Horticulture department experts say nearly 15-20% of the total kinnow production falls from the tree before and during the harvesting period.
- The fallen fruit is a major challenge for kinnow farmers in the state as one needs to dig up small pits to bury them, otherwise the fallen fruit rot and invite a fly attack on the healthy fruit still on the plants.
- But now, some farmers are using this fallen fruit to improve the pH level and soil fertility of their land by making BEs from this waste fruit.
- This waste kinnow can prove a boon to improve soil, water, air, depleting ground water, water contamination and overall ecology.
- Not only can plant health be improved, it also helps prevent indiscriminate usage of chemical sprays of fungicides and bacterial diseases on crops, especially vegetables, tuber crops and cereals.
- BEs can be used for a whole year in the form of spray on vegetables and mixing it with field irrigation.

Bio-enzymes

- They are **organic solutions produced through fermentation of organic waste** including various fruits, vegetable peels and flowers, by mixing in sugar, jaggery/molasses and water.
- It takes 60-100 days to ferment organic waste.
- To fasten the fermentation, yeast can be used as culture to prepare it in 45-50 days. BE's also have a lot of usage in our daily lives.

Kinnow

- Often pronounced as Kinoo or Kinu, this fruit is a **high yield mandarin** and is a hybrid of 2 citrus cultivators 'King' & 'Willow Leaf'.
    - While an orange is a hybrid of citrus reticulate and citrus maxima, kinnow is a hybrid of citrus deliciosa and citrus nobilis.

- Developed by HB Frost in 1935, Kinnow is a year-long duration crop and it's juicier than oranges.
- It is majorly grown in Punjab, Himachal Pradesh, Jammu & Kashmir, Rajasthan and even Haryana.
- The main harvesting period is from November-end to March, but some varieties of citrus fruit start coming into the markets in October.

Dust Mitigation Measures at C&D Sites

Commission for Air Quality Management in NCR and Adjoining Areas (CAQM) has been taking up for strict compliance of dust mitigation measures at Construction & Demolition (C&D) sites.

Dust emanating from C&D sites is a major consistent source of air pollution.

- The statutory directions were issued by CAQM to the authorities of the NCR states and Delhi to reduce dust from C&D sites includes imposing and collecting Environmental Compensation (EC) from the
    1. Violators of dust mitigation norms at the C&D sites, and
    2. Vehicles found violating the prescribed dust abatement norms during transportation of materials relating to C&D waste.
- C&D activities generate enormous amounts of dust and contribute significantly to PM2.5 and PM10 adversely affecting the quality of air.
- To tackle the problem of dust resulting from construction, remodeling, repair and demolition, such activities need to be strictly monitored and inspected regularly for compliance of various dust control measures.

Perfluoroalkyl and Polyfluoroalkyl Substances

- Perfluoroalkyl and Polyfluoroalkyl Substances (PFAS) are a complex, ever-expanding group of manufactured chemicals.
- PFAS molecules are made up of a chain of linked carbon and fluorine atoms.
- As the carbon-fluorine bond is one of the strongest, these chemicals do not degrade in the environment.
- **Uses** - PFAS are used to make various types of **everyday products**.
    - E.g.: They keep food from sticking to cookware, make clothes and carpets resistant to stains, and create effective firefighting foam.
- They are used in **industries** like aerospace, automotive, construction, electronics, and military.
- There are two kinds of PFAS, Perfluorooctanoic acid (PFOA) and Perfluorooctane sulfonate (PFOS).
- PFOA and PFOS were manufactured for the longest time, and are the most widespread in the environment. Recently, they are being replaced by alternatives, such as GenX.
- **Concerns** about the public health impact of PFAS have arisen for the following reasons:
    1. **Widespread occurrence** of PFAS in blood and urine of people.
    2. **Numerous exposures** - PFAS are used in hundreds of products globally, with many opportunities for human exposure.
    3. **Persistent** - PFAS remain in the environment for an unknown amount of time and may take years to leave the body.
    4. **Bioaccumulation** - Different PFAS chemicals may enter the food chain in various ways,

gradually accumulating and remaining in a body over time. This occurs due to more intake than excretion of the chemicals.

- **Impacts** - People are most likely exposed to these chemicals by consuming PFAS-contaminated water or food, using products made with PFAS, or breathing air containing PFAS.
- Health effects on humans include
    1. Altered metabolism,
    2. Fertility and reduced fetal growth,
    3. Increased risk of being overweight or obese, and
    4. Reduced ability of the immune system to fight infections.

Secured Overnight Financing Rate

Rural Electrification Corporation Limited (REC Ltd.) raised a US$75 million 5-year Secured Overnight Financing Rate (SOFR) linked Syndicated Term Loan with Sumitomo Mitsui Banking Corporation (SMBC).

- The Secured Overnight Financing Rate (SOFR) is a benchmark interest rate for dollar-denominated derivatives and loans that is replacing the London interbank offered rate (LIBOR).
    - Interest rate swaps on more than $80 trillion in notional debt switched to the SOFR in 2020.
    - This transition is expected to increase long-term liquidity but also result in substantial short-term trading volatility in derivatives.
- The daily SOFR is **based on transactions in the Treasury repurchase market**, where investors offer banks overnight loans backed by their bond assets.
- SOFR is seen as preferable to LIBOR since it is based on data from observable transactions rather than on estimated borrowing rates.
- Benchmark rates such as the SOFR are essential in the trading of derivatives, particularly interest-rate swaps.
- [Corporations & other parties used interest-rate swaps to manage interest-rate risk and to speculate on changes in borrowing costs.]

While SOFR is becoming the benchmark rate for dollar-denominated derivatives and loans, other countries have sought their own alternative rates, such as SONIA and EONIA.

REC Limited

- REC Limited is a Navratna NBFC focusing on Power Sector Financing and Development across India.
- Established in 1969, REC Limited has completed over fifty years in the area of its operations.
- It provides financial assistance to state electricity boards, state governments, central/state power utilities, independent power producers, rural electric cooperatives and private sector utilities.
- Its business activities involve financing projects in the complete power sector value chain; different type of projects includes Generation, Transmission, Distribution Projects, and Renewable Energy projects.

Source: PIB, The Hindu, The Indian Express, Times of India