Prelim Bits 13-07-2019

Chandrayaan-2 mission

- India is aiming to be the 4th country to land on the lunar surface after the USA, Russia and China.
- ISRO will launch Chandrayaan-2, its second spacecraft to the moon on July 15, 2019.
- **Chandrayaan-1** was designed to just orbit the Moon and make observations, while **Chandrayaan-2** is created to land on the Moon.
- This mission is aimed at landing a rover near the **unexplored South Pole.**
- According to ISRO, there is a possibility of the presence of water in permanently shadowed areas around it.
- South Pole region also has craters that are cold traps and contain a fossil record of the early Solar System.
- Chandrayaan 2, has three important components — the Orbiter, the Lander 'Vikram', and Rover 'Pragyan'.
- The Chandrayaan will be tucked into the **GSLV Mk-III** rocket.
- It is also called as **'Baahubali'**, the country's heaviest and most powerful rocket to date.
- It is a three-stage heavy-lift launch vehicle developed by ISRO.
- The vehicle has two solid strapons, a core liquid booster and a cryogenic upper stage.
- This mission will help us to better understand the origin and evolution of the moon.
- Studies of lunar topography, mineralogy, elemental abundance, and signatures of water ice are the prime objectives.
- The orbiter has 8 instruments fitted into it and 7 of them are India's.
- NASA has one payload onboard called the Laser Retroreflector Array (LRA).
- The **'Terrain Mapping Camera-2'(TMC-2)** will map the lunar surface and help to prepare 3D maps of it.
- The **'Miniature Synthetic Aperture Radar'(Mini SAR)** will also map the surface of water-ice in the South Pole and thickness of the lunar dust on the surface.
- The **'Dual Frequency Radio Science'(DFRS)** will study the density of the electrons in the moon's ionosphere.
- The orbiter has a high-resolution camera (**OHRC**) that ensures that the lander makes a safe touchdown on the lunar surface by taking 3D images of

the landing site.

- The '**Solar X-ray Monitor'(XSM)** measures the intensity of the solar rays and the outer most part of the atmosphere or its corona.
- **CLASS** (Chandrayaan 2 Large Area Soft X-ray Spectrometer) measures the light absorbed by the Moon and will check for different metals that are present in its spectrum.
- Thermo-physical property of the lunar surface and seismic activities will also be measured.
- The orbiter will continue to orbit the Moon for a year, at an altitude of 100 kilometres.
- The Rover which is 6-wheeled, AI-powered and the Lander are designed to work for only 14 days (1 lunar day).

Merchant Discount Rate (MDR)

- It is a fee charged by a bank to a merchant for payment processing services from customers on debit and credit card transactions.
- It is also referred to as the **'Transaction Discount Rate'** or TDR.
- To give a push to digital payments adoption, government has proposed no charge or merchant discount rate for companies with over Rs 50 cr turnover accepting payments digitally
- The MDR will instead be borne by supporting banks and the Reserve Bank of India.
- Necessary amendments are being made in the Income Tax Act and the Payments and Settlement Systems Act, 2007 to give effect to these provisions.
- Contrary to public perception, the MDR has not been made zero.
- The FM's decision has just shifted its incidence on to the RBI and banks.
- So many payments providers apprehend that the banks will find a way of passing on the costs to them.
- In turn, this will negatively impact the health of a sector that needs nurturing.

Great Indian bustard

- The Environment Ministry initiated a project to save the 'Great Indian bustard'.
- With just 130 great Indian bustards left in the country, this project focuses on their conservation and protection.
- It is a Centrally Sponsored Scheme.
- Through 'Integrated Development of Wildlife Habitats', government provides funds to states & Union Territories under the component 'Species Recovery Programme'.

- The fund is for conservation and protection of 21 critically endangered species, including the Great Indian Bustard.
- The ministry has also initiated 'Habitat Improvement and Conservation Breeding of Great Indian Bustard' – An Integrated Approach.
- The important objective of this is to, build up captive population of great Indian bustard and to release the chicks in the wild for increasing the population.
- Rajasthan, Gujarat and Maharashtra are the important range states involved in this programme.
- Currently, there are two centres for breeding and hatching, in Jaisalmer and in Kota, both in Rajasthan.
- **Key Facts** about Great Indian bustard,

    i. **Schedule I** of the Indian Wildlife (Protection)Act, 1972
    ii. **Appendix I** of CITES
    iii. **Critically Endangered** on the IUCN Red List
    iv. **Habitat** - Found in the Indian-subcontinent

- **Threats** -

    1. Agriculture & aquaculture
    2. Energy production & mining
    3. Transportation & service corridors
    4. Human intrusions & disturbance
    5. Invasive and other problematic species and diseases

- However, the government does not recognise noise pollution as a cause of danger to the bird.

LaQshya

- "LaQshya" (Labour room Quality improvement Initiative) is to improve quality of care in labour room and maternity operation theatres in public health facilities.
- It's under the 'Ministry of Health and Family Welfare'.
- It aims to give qualitative care to the pregnant mother in the Labour Room to minimize the risks associated with childbirth.
- **Objectives**-

    1. To reduce maternal and newborn mortality & morbidity due to hemorrhage, retained placenta, preterm, obstructed labour, newborn sepsis, etc.
    2. To improve Quality of care during the delivery and immediate post-partum care, stabilization of complications and ensure timely referrals,

and enable an effective two-way follow-up system.

3. To enhance satisfaction of beneficiaries visiting the health facilities and provide Respectful Maternity Care (RMC) to all pregnant women attending the public health facilities.

- The healthcare facilities identified for the implementation of LaQshya program are -

  I. Government medical college hospitals.
  II. District Hospitals & equivalent health facilities.
  III. Designated FRUs and high case load CHCs with over 100 deliveries/month (60 in hills and desert areas)

- It also plans to conduct quality certification of labour rooms and provide facilities to achieve the outlined targets.

Source: Indian Express, PIB, The Hindu

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