

Prelim Bits 07-09-2023 | UPSC Daily Current Affairs

VGF Scheme for BESS

The Union Cabinet approves the Scheme for Viability Gap Funding (VGF) for development of Battery Energy Storage Systems (BESS).

- **Mission** - The scheme envisages development of 4,000 MWh of BESS projects by 2030-31.
- **BESS** - These are devices that enable energy from renewables, like solar and wind, to be stored and then released when the power is needed most.
- **Financial support** - ***Up to 40% of the capital cost*** will be supported in the form of Viability Gap Funding (VGF).
- The entire viability gap funding (VGF) of 3,760 crore will be borne by the Central Government.
- The VGF shall be disbursed in 5 tranches linked with the various stages of implementation of BESS projects.
- **Aim** - *To bring down the cost of battery storage systems* increasing their viability to provide clean, reliable, and affordable electricity to the consumers and distribution companies.
- To ensure that the benefits of the scheme reach the consumers, a minimum of 85% of the BESS project capacity will be made available to Distribution Companies (Discoms).
- The scheme is in sync with India's ambition to meet its 50% of energy requirements through renewable energy and non-fossil energy sources by 2030 and also help reduce carbon emission.

The solar energy has increased from 2.6 GW in 2014 to 71 GW at present while wind energy has increased from 21 GW (in 2014) to 40 GW.

References

1. [PIB | Viability Gap Funding for development of BESS](#)
2. [The Hindu | viability gap funding for 4,000 MWh BESS](#)
3. [Live Mint | Union cabinet approves VGF](#)
4. [The Hindu Businessline | viability gap funding of 3,760 cr](#)

Apis Mellifera

A recent study has found that Apis mellifera can be an effective biomonitor for determining the spread of antimicrobial resistance (AMR) in urban neighbourhoods.

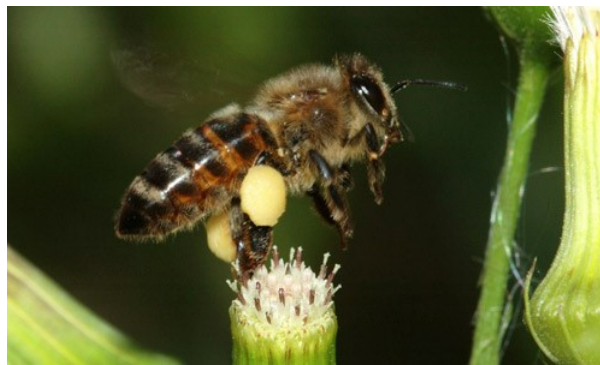
- **AntiMicrobial Resistance (AMR)** - It is the ability of microorganisms to persist or

grow in the presence of drugs designed to inhibit or kill them.

- **Biomonitoring** - It is a tool for measuring biodiversity and pollution through the analysis of pollen collected by bees, which act as natural drones and bioindicators.
- Bees interact with human environments, so they are a really good indicator of pollution that may present of risk of harm to humans.
- It was found that 80% bees sampled across all hives were positive for one or more AMR targets.

Apis Mellifera

- **About** - The western honey bee or European honey bee (*Apis mellifera*) is the most common of the 7-12 species of honey bees worldwide.
- **Geographical Range** - It is native to Europe, western Asia, and Africa.
- Now it can be found on every continent except Antarctica.
- **Diet** - Adult bees eat pollen and nectar collected from flowering plants by worker bees, as well as concentrated nectar called honey.
- Young larval bees eat honey, nectar and the bodily secretions from worker bees called "***worker jelly***" or "***royal jelly***".



References

1. [Down to Earth | Honeybees could be biomonitors](#)
2. [I Naturalist | Apis-mellifera](#)
3. [Chesapeakebay | European-honey-bee](#)

NPCI's New Payment Products

The NPCI has recently launched a slew of new payment options on popular payments platform UPI.

- **New Initiatives** - Credit Line on UPI; UPI LITE X; Tap & Pay; Hello! UPI; and BillPay Connect.
- **Aim** - To create an inclusive, resilient, and sustainable digital payments ecosystem.
- It will help UPI to achieve the target of 100 billion transactions per month.

Products

Specifications

Hello! UPI	<ul style="list-style-type: none"> • It is a feature for conversational payments on UPI. • It will help users make voice-enabled UPI payments via apps, telecom calls, and IoT devices in Hindi and English. • It will soon be available in several other regional languages also.
BillPay Connect	<ul style="list-style-type: none"> • Through a <i>nationalized number</i> for bill payment across India it enables users to fetch and pay their bills by sending a 'Hi' on the messaging app across the country. • It has been introduced by the NPCI's subsidiary Bharat BillPay. • Customers without smartphones or immediate mobile data access will be able to pay bills by giving a missed call as well. • It also connect offers Voice Assisted Bill Payments facility
Credit Line on UPI	<ul style="list-style-type: none"> • To increase access to credit, and promote financial inclusion and innovation through pre-sanctioned credit lines from banks via UPI.
UPI LITE X	<ul style="list-style-type: none"> • It was launched for offline payments • It was build based on the UPI Lite feature, which was launched in 2022. • UPI LITE X will be accessible to anyone with a compatible device that supports <i>Near Field Communication (NFC)</i>, offering payments faster than other payment methods.
UPI Tap & Pay	<ul style="list-style-type: none"> • To enhance adoption of QR code and NFC technology, NPCI introduced 'UPI Tap & Pay'. • It will allow customers to tap NFC-enabled QR codes to make payments at merchant locations.

- To know about National Payments Corporation of India (NPCI) click [here](#).

References

1. [Hindustan Times | Npci-launches-new-products](#)
2. [Live Mint | Pre-sanctioned-credit-lines-through-upi](#)
3. [Economic Times | RBI allows pre-sanctioned credit lines](#)

Smart Lander for Investigating Moon (SLIM)

Japan's space Agency JAXA has recently launched the SLIM moon lander.

- **SLIM** - It is a small-scale exploration lander designed for pinpoint landings on the Moon's surface and investigate into the Moon's origins.
- The mission was dubbed as the ***Moon Sniper***.
- It will also test technology fundamental to exploration in low-gravity environments, an important requirement for future scientific investigation of the solar system.
- **Agency** - Japan Aerospace Exploration Agency (JAXA).
- **Launch vehicle** - H-IIA rocket.
- This is the ***first Moon-landing attempt*** being made by Japan Aerospace Exploration Agency (JAXA).
- If successful,

- Japan would be the 5th country to successfully soft land on the moon.
- SLIM would be the smallest and lightest spacecraft to land on the Moon.
- The chosen landing site for SLIM is near a small crater named ***Shioli*** in the equatorial region of the Moon.
- SLIM is set to touch down on the near side of the moon close to ***Mare Nectaris***, a lunar sea that, viewed from Earth, appears as a dark spot.
- After landing, the craft aims to analyse the composition of olivine rocks near the sites in search of clues about the origin of the moon.
- **Rover** - No lunar rover is loaded on SLIM.

References

1. [The Indian Express | Japan Moon Mission takes off](#)
2. [Space | Japan-launches-slim-moon-lander](#)
3. [Reuters | Japan launches 'moon sniper'](#)

Sea weed Park

Minister of Fisheries, Animal Husbandry & Dairying has recently laid down the foundation stone for the establishment of Multi-Purpose Seaweed Park recently in Tamil Nadu.

- **Introduced** - India's 1st Fisheries Aquapark in form of 'Multipurpose Seaweed Park in Tamil Nadu' was announced in the Union Budget 2021.
- **Model** - Hub-and-spoke model.
- **Objective** - It aims to promote the cultivation and conservation of seaweed.
- It is envisioned as a research and development centre for seaweed cultivation for scientists and researchers to study different species of seaweed and their potential applications.
- The sea weed park will also serve as a training centre for local communities to create awareness.
- **Cultivation** - The seaweed park will promote the sea weed cultivation in 136 coastal fishing villages in 6 coastal districts of Tamil Nadu.
- **Conservation** - The park will also focus on the conservation of marine ecosystems and will house an aquarium highlighting various marine species that rely on seaweed for survival.
- **Related Schemes** - *Pradhan Mantri Matsya Sampada Yojana (PMMSY)* & and *Kisan Credit Cards (KCC)*. *as well as State Schemes*.

References

1. [PIB | Sagar Parikrama Phase VIII](#)
2. [Live Mint | Sagar Parikrama](#)