

## 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.*

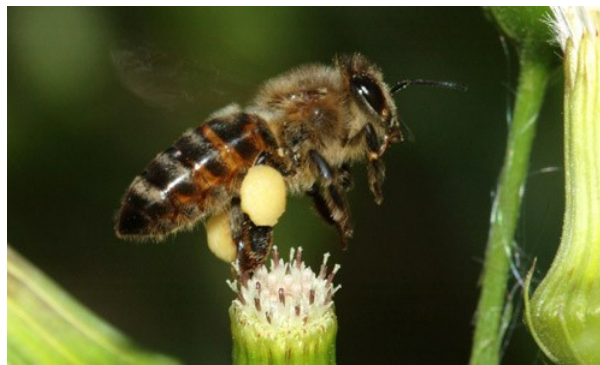
- **AntiMicrobial Resistance (AMR)** - It is the ability of microorganisms to persist or

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**

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

- 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 5<sup>th</sup> 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 1<sup>st</sup> 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](#)