

## Wolbachia

### ❖ Context

- Scientists at the **Vector Control Research Centre (VCRC)** of **Indian Council of Medical Research (ICMR)** have cross-bred local *Aedes aegypti* mosquitoes with mosquitoes that carry the *Wolbachia* bacteria from Australia's Monash University.

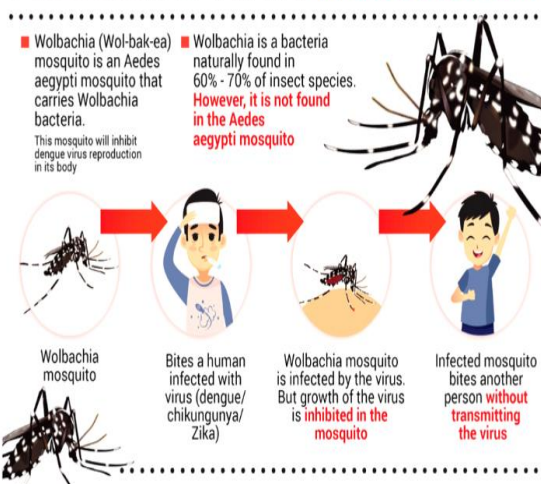
### ❖ Key Highlights

- Scientists had acquired two strains of the *Aedes aegypti* eggs harbouring *Wolbachia* - **wMel and wAlb** - from **Monash University** with the approval of the Indian government.
- Colonies of mosquitoes were raised from these eggs in labs and females were mated with *Aedes aegypti* males of the Puducherry strain.

### ❖ About Aedes Aegypti

- The *Aedes aegypti* mosquito is the main transmitter of dengue, zika, chikungunya and yellow fever viruses.

### MOSQUITO WITH WOLBACHIA



- Only **female mosquitoes** bite humans and thus only they can transmit viruses.
- The mosquito originated in **Africa**, but has spread through **tropical and subtropical regions** around the world.
- They first spread during the **slave trade** between the 15th and 19th centuries, then through trade with Asia during the **18th and 19th centuries**, and then again following **troop movements in World War II**.

### ❖ About Wolbachia

- They are extremely common bacteria that occur naturally in 50 % of insect species, including some mosquitoes, fruit flies, moths, dragonflies and butterflies.
- They live inside insect cells and are **passed from one generation to the next through an insect's eggs**.
- ***Aedes aegypti* mosquitoes don't normally carry Wolbachia**, however many other mosquitoes do.
- *Wolbachia* is safe for humans and the environment.

### ❖ How Wolbachia Prevents Spread of Diseases

- When *Aedes aegypti* mosquitoes carry *Wolbachia*, the bacteria **compete with viruses** like dengue, Zika, chikungunya and yellow fever.
- This makes it **harder for viruses to reproduce** inside the mosquitoes. And the mosquitoes are much less likely to spread viruses from person to person.

### ❖ What if Males Alone Wolbachia are Released?

- When such males mate with the wild females, it will lead to the **production of sterile eggs**.
- This way one can actually **eliminate the mosquito populations, but it is not desirable**.
- Mosquitoes play an important role as pollinators and in the food chain.
- Mosquito larvae grow by consuming microorganisms such as algae and microbes that decompose decaying plant material.
- Larval mosquitoes serve as food sources for many predators, including fish and birds.

## RBI Measures to Arrest Rupee Decline

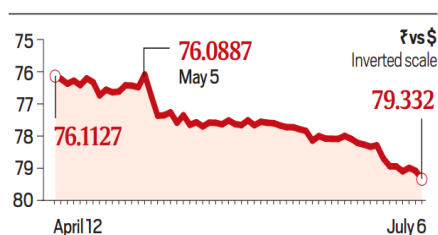
### ❖ Context

- To prevent the slide in the rupee and shore up foreign exchange reserves, the Reserve Bank of India (RBI) announced a series of measures.

### ❖ Background

- Forex reserves have reduced by \$50 BN in over nine months.
- Rupee has depreciated 4.1 % to 79.30 against the US dollar in the current financial year till date.
- FPIs (foreign portfolio investors) have pulled out Rs 2.32 lakh crore in six months.
- Nearly **a third of India's external debt of \$ 621 billion will be due** for maturity in the coming months.

#### CONCERNING INDICATORS



**\$593 billion:** Forex reserves as on June 24; down about \$50 bn from peak last year

**₹2.32 lakh cr:** Foreign Portfolio Investment outflows (Jan-July 2022)

**\$70.3 billion:** Trade deficit for Q1

### ❖ Measures

- Doubling the annual overseas borrowing limits for companies to \$1.5 billion.
- Temporarily abolishing interest-rate caps for banks to attract deposits from non-resident Indians.

- Easing rules for foreign investors to invest in government and corporate debt in India.
- Exempted banks from maintaining cash reserve ratio and statutory liquidity ratio on incremental foreign currency and rupee-denominated term deposits raised from non-resident Indians between 1 July and 4 November, 2022.
- Removal of the ceiling on interest rates on these deposits between 7 July and 31 October, 2022.

### ❖ Fully Accessible Route (FAR)

- FPI investment in government bonds under FAR has no limits, unlike other securities.
- Currently, only 5-year, 10-year and 30-year G-secs are designated under FAR.
- RBI has allowed new issuances of 7-year and 14-year government securities under the fully accessible route (FAR).

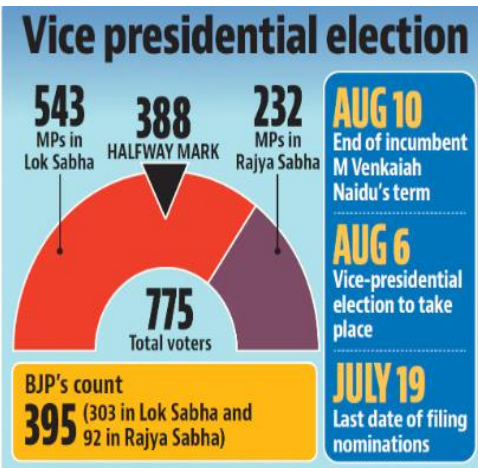
## Face to Face Centres

## Vice President of India

### ❖ Context

- Recently, The **Election Commission of India** issued the notification for the **election of the Vice President of India**.

### ❖ Key Highlights



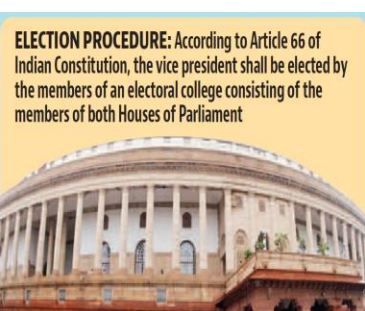
- The **term of office of Vice President M Venkaiah Naidu** comes to an end on **August 10**.
- The election is **scheduled for August 6**, and July 19 is the last date for filing nominations.

### ❖ Office of the Vice President

- **Article 63:** There shall be a Vice-President of India
- **Article 64:** The Vice-President "shall be ex officio Chairman of the Council of the States" (Rajya Sabha).
- **Article 65:** Vice-President shall act as President in the vacancy of office of the President until the new President is elected.

### ❖ Eligibility

- **Article 66(3):** No person shall be eligible for election as Vice-President unless he :



- is a **citizen of India**
- has completed the **age of thirty-five years**
- is **qualified for election as a member of the Council of States**.

- He **should not hold any office of profit** under the Union government or any state government or any local authority or any other public authority.

### ❖ Term of Office

- **Article 67 :** Vice-President shall hold office for a **term of five years** from the date on which he enters upon his office.
- The Vice President can **resign at any time by sending a letter of resignation to the President**.
- He can **hold office beyond his terms of five years** until his successor takes office.

### ❖ Election of Vice President

- **Constitutional Provisions:**
  - **Article 66** deals with provision of the Election of the Vice-President.
  - Election to the office of the Vice-President is **conducted by the Election Commission of India**.
- **Method of Voting:**
  - The Indian Vice President is **elected through an electoral college system**.
  - It follows the **system of proportional representation** utilizing a single transferable vote system and secret ballots.
- **Electoral College:**
  - **Elected and nominated members from Lok Sabha and Rajya Sabha only**.
  - It does not include the members of the state legislative assemblies.
- **Disputes:**
  - Any **disputes related to the election of the Vice-President** are inquired into and **decided by the supreme court** whose decision is final.

## News in Between the Lines

### Section 69 (A) of the IT Act, 2000



### ❖ Context

- Recently, **Twitter initiated legal action against some of the government missives** ordering it to take down certain content posted on the microblogging site.
- **Government issued this order under Section 69 (A) of IT act 2000.**

### ❖ Section 69 (A) of the IT Act, 2000

- Section 69A of the IT Act was **introduced by an amendment to the Act in 2008**. It allows the Center to **issue blocking orders to social media intermediaries in the interest of :**
  - Sovereignty and integrity of India.
  - Security of the state.
  - Friendly relations with foreign states or
  - Public order or for preventing incitement to the commission of any cognisable offense relating to above.
  - Defense of India.
- As per rules for **blocking orders are sent to a review committee**, which then issues these directions.
- Blocking orders issued under the aforesaid section are usually **confidential in nature**.

### Face to Face Centres

## Derecho



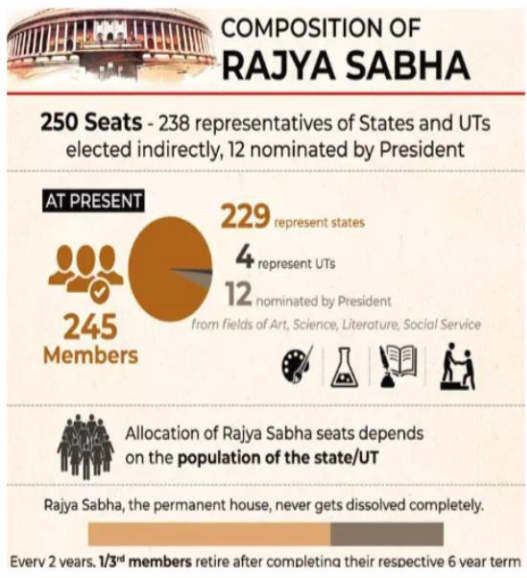
### ❖ Context

- Recently, States of Nebraska, Minnesota and Illinois in the **US** were hit by a **storm system called a derecho**.

### ❖ About Derecho

- A derecho is a **widespread, long-lived, straight-line windstorm**.
- It is associated with a **“band of rapidly moving showers or thunderstorms”**.
- The name comes from the Spanish word ‘la derecha’ which means ‘straight’.
- Straight-line storms are those in which **thunderstorm winds have no rotation unlike a tornado**.
- These storms travel hundreds of miles and cover a vast area.
- A derecho generally **occurs during summertime** beginning May, with most hitting in June and July.
- They mostly **occur across central and eastern parts of the United States**.

## Nominated MPs in Rajya Sabha



### ❖ Context

- Recently, The government **nominated 4 persons to Rajya Sabha**.

### ❖ Key Highlights

- The **new 4 entrants to Rajya Sabha are:** Musician Ilaiyaraaja, track-and-field icon PT Usha, Telugu screenwriter V Vijayendra Prasad, and philanthropist and spiritual leader Veerendra Heggade to Rajya Sabha.
- The Upper House of Parliament **now has nine nominated members**.

### ❖ Nominated MPs

- **Constitutional Provision for Nominating MPs:**
  - As per **Article 80 (Part V)** of the Constitution, the **President can nominate 12 members** in the Council of States (Rajya Sabha).
  - These persons should have special knowledge or practical experience in the field of Art, Science, Literature and Social Service.
- **Role:**
  - They **enjoy all the powers and privileges** to which the elected MPs are entitled.
  - They can **take part in the proceedings of the House** in the normal manner.
  - Nominated members are **not allowed to vote in the election of the President**.
  - They do have the **right to vote in the election of the Vice-President**.
- **Significance:** The nomination **facilitates the representation of eminent professionals and experts** who cannot face direct elections.

## Sun Temple



### ❖ Context

- The Archaeological Survey of India (ASI) is **restoring the Sun Temple** in Konark, Odisha and is likely to be completed within a month.

### ❖ Key Highlights


- The **restoration work was started in 2021**.
- The Jagmohan or the assembly hall of the temple is restored with newly-carved stones.


### ❖ About Sun Temple


- It was **built in the 13th century**.
- The sun temple was conceived as a gigantic chariot of the Sun God, with 12 pairs of exquisitely ornamented wheels pulled by seven horses.
- It was **built by King Narasimhadeva I**, the great ruler of the **Ganga dynasty**.
- The temple was **included in UNESCO World Heritage Site** in 1984.
- It is a perfect **blend of Kalinga architecture, heritage, exotic beach and salient natural beauty**. It is **protected under the National Framework of India by the Ancient Monuments and Archaeological Sites and Remains (AMASR) Act (1958)** and its Rules (1959).
- This temple was **also known as ‘BLACK PAGODA’** due to its dark colour

## Face to Face Centres



<h2>Assam's Indigenous Muslim Communities</h2> 	<ul style="list-style-type: none"> <li>This was used as a navigational landmark by ancient sailors to Odisha.</li> <li>The <b>Jagannath Temple in Puri</b> was called the “White Pagoda”.</li> </ul> <p>❖ <b>Context</b></p> <ul style="list-style-type: none"> <li>The Assam cabinet has decided to grant <b>indigenous status</b> to five <b>Assamese-speaking Muslim communities</b> from the state to distinguish them from Bengali-speaking Muslims.</li> </ul> <p>❖ <b>Key Highlights</b></p> <ul style="list-style-type: none"> <li>The five communities are <b>Goria, Moriya, Deshi, Julah and Syed</b>.</li> <li>For several years, indigenous Muslims in Assam have been seeking a separate classification that distinguishes them from Muslims who migrated to the state from East Pakistan (now Bangladesh).</li> <li>Indigenous Assamese Muslims use Assamese as their mother tongue and follow cultural traditions and festivities similar to Assamese Hindus.</li> </ul> <p>❖ <b>About the Groups</b></p> <ul style="list-style-type: none"> <li><b>Gorijas, Moriyas and Julhas</b> trace their roots to upper and middle Assam, the <b>Deshis</b> hail from lower Assam.</li> <li><b>Deshis</b> are 13th century converts from indigenous communities such as Koch Rajbongshi and Mech.</li> <li><b>Gorijas</b> trace their lineage back to the time of the 13th-century Ahom kings. They came with Muslim armies and were captured in warfare. When they were released, they mingled with the mainstream society.</li> <li>In Edward Gait's A History of Assam, Gorijas are described as hailing from Gaur, the ancient “Mahammadan capital” of Bengal.</li> <li><b>Moriyas</b> trace their lineage to artisans converts who came to the region around the 1500s. They were exceptionally good with crafts — especially bell metal.</li> <li><b>Julhas</b> were from Bihar and UP who came to Assam along with the railway expansion during British rule. They were of various professions: tent-makers, rope-makers, weavers, machine drillers.</li> </ul>
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<h2>National Advisory Committee for Animal Husbandry</h2> 	<p>❖ <b>Context</b></p> <ul style="list-style-type: none"> <li>The <b>Union Ministry of Fisheries, Animal Husbandry and Dairying (FAHD)</b> has announced the formation of a National Advisory Committee for the Animal Husbandry and Dairying sector encompassing several industry experts and business leaders.</li> </ul> <p>❖ <b>Key Highlights</b></p> <ul style="list-style-type: none"> <li>The newly formed committee will be chaired by the <b>Union Minister for FAHD, and co-chaired by the Minister of State FAHD</b>.</li> <li>The <b>48-member committee</b> will meet once every quarter in a financial year to discuss, recommend, prescribe and advise policies regarding the sectors.</li> </ul>
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<h2>Sodium Ion Batteries</h2>  <p><a href="#">Daily Current Affairs</a> <a href="#">Daily Pre PARE</a> <a href="#">Daily MCQ Quiz</a></p>	<p>❖ <b>Context</b></p> <ul style="list-style-type: none"> <li><b>Scientists at IIT Kharagpur</b> with support from DST, have used nano-materials to develop Na-ion-based batteries and supercapacitors and have integrated them in e-cycles.</li> </ul> <p>❖ <b>Key Highlights</b></p> <ul style="list-style-type: none"> <li><b>Sodium iron phosphates and sodium manganese phosphates</b> were combined with various novel architectures of carbon to develop a battery.</li> <li>Sodium-ion (Na-ion) batteries have triggered academic and commercial interest as a possible complementary technology to lithium-ion batteries because of several advantages -             <ul style="list-style-type: none"> <li>High natural abundance.</li> <li>High performing.</li> <li>Can be scaled up to industrial-level production.</li> <li>Can be totally discharged to zero volt, similar to a capacitor, making it a safer option in comparison to many other storage technologies.</li> <li>Simpler disposal that can address climate mitigation issues.</li> <li>Low costs of Na-ion batteries.</li> </ul> </li> </ul>
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