

## **1. India to invite Pakistan for SCO summit in Delhi**

### **Why in News?**

- India said that it will invite the heads of government of all member countries of the Shanghai Cooperation Organisation (SCO), including Pakistan, when it hosts the summit later this year.

### **Highlights:**

- India and Pakistan became members of the SCO in 2017, and India usually sends its Foreign or Defence ministers to attend the SCO heads of government meetings.
- This would mean that Pakistan's representative, either Prime Minister Imran Khan or a Minister will be coming to India to attend the SCO heads of government meeting.
- If Khan comes for the meeting, this will be the first opportunity for the Indian government to host him after he became Prime Minister in 2018.
- The government's announcement comes hours after Pakistan's efforts to raise J&K at the United Nations Security Council through China failed.

### **Shanghai Cooperation Organisation:**

- The Shanghai Cooperation Organisation (SCO), or Shanghai Pact, is a Eurasian political, economic, and security alliance, which was created on 15 June 2001 in Shanghai, China by China, Kazakhstan, Kyrgyzstan, Russia, Tajikistan, and Uzbekistan.
- The organisation has expanded its membership to eight countries when India and Pakistan joined SCO as full members on 9 June 2017 at a summit in Astana, Kazakhstan.
- The Heads of State Council (HSC) is the supreme decision-making body in the SCO, it meets once a year and adopts decisions and guidelines on all important matters of the organisation.
- Military exercises are also regularly conducted among members to promote cooperation and coordination against terrorism and other external threats, and to maintain regional peace and stability.

## **2. APNA UREA – SonaUgle**

### **APNA UREA – SonaUgle:**

- The Union Minister for Chemicals and Fertilizers launched the “APNA UREA – SonaUgle” brand of Hindustan Urvarak & Rasayan Limited (HURL).

- HURL is Joint Venture Company promoted by the three Maharatna Companies i.e. Coal India Limited (CIL), NTPC Limited (NTPC) and Indian Oil Corporation Limited (IOCL) as the lead promoters with FCIL and HFCL as other two partners.
- The commissioning of the HURL's three Units in the states of UP, Bihar and Jharkhand will open forward and backward linkages for business activity in the Eastern part of India.
- It will be instrumental in opening new avenues for the generation of income and employment in the Eastern part of our country.

### **3. Telecommunication Consumers Education and Protection Fund (TCEPF)**

#### **Why in News?**

- The Telecom Regulatory Authority of India (TRAI) has informed that telecom service providers will need to deposit all unclaimed money of consumers, including excess charges and security deposit, in the Telecommunication Consumers Education and Protection Fund (TCEPF).

#### **Telecommunication Consumers Education and Protection Fund (TCEPF):**

- The TCEPF Regulations, 2007 have been amended to provide the basic framework for depositing unclaimed money of consumers by service providers, maintenance of the TCEPF and other related aspects.
- Any unclaimed / unrefundable amount belonging to consumers in the TCEP fund will be utilized for the welfare measures of the consumers.
- With this amendment, service providers will deposit any unclaimed consumer money of any form such as excess charges, security deposit, plan charges of failed activations, or any amount belonging to a consumer, which service providers are unable to refund to consumers.

#### **Significance:**

- The TRAI observed that there is a need to bring clarity among service providers in depositing money which they are unable to refund to the consumers.
- While some service providers were depositing money only on account of excess billing revealed in the audit, others were depositing unclaimed money such as security deposits and plan charges of failed activations.

## **4. Yada Yada virus**

### **Why in News?**

- A Novel Virus detected in Australian mosquitoes has been provisionally named the Yada Yada virus (YYV), after the catchphrase made famous by the American sitcom Seinfeld.

### **Highlights:**

- The Cambridge dictionary defines the phrase Yada Yada as an informal exclamation used to describe boring speech.
- The first known usage of the phrase was in 1967, and it is considered to be the alteration of an earlier word “yatata”, which meant idle chatter. In the Hebrew language, the word “yada” means to “know”.
- When the team of researchers extracted RNA from a large number of mosquitoes in Australia’s Victoria state, they found a new alphavirus, which belonged to a group that includes other alphaviruses such as chikungunya virus and the astern equine encephalitis.
- The novel virus poses no threat to human beings, because it is a part of a group of viruses that only infect mosquitoes. Other viruses in the same group include the Tai forest alphavirus and the Agua Salud alphavirus.
- While the discovery of the virus does not have any direct implications for human beings, in the papers, the authors have mentioned that YYV’s discovery expands the “diversity and geographic range” of mosquito-specific alphavirus complexes, which may help in revealing the origin of the virus and “host switching”.
- Mosquito-specific viruses can help us understand how viruses evolved and can be really useful for vaccine production and diagnostics.

## **5. Removing Heavy Metals from Water**

### **Why in News?**

- Researchers at IIT- Bombay have successfully removed heavy metals such as arsenic, chromium, cadmium and mercury from waste water with very High Efficiency.

### **Highlights:**

- The carbon-based nanostructure that the team fabricated shows 80-90% adsorption efficiency for all the four heavy metals studied.
- No electricity is required for the nanostructure to remove heavy metals from water as it allows for gravity-driven purification of the water.

- The nanostructures can be recycled and reused multiple times. While there is an initial drop of about 8% after the first cycle, the efficiency remains constant at 75-85% in the subsequent cycles.
- The carbon nanostructure is able to adsorb the heavy metals in the wide range of pH conditions, pH 2 to 13.
- The nanostructure is obtained through a single-step process of chemical vapour deposition followed by removing the silica template.
- The reason it shows very high adsorption efficiency is its hydrophilic [water-loving nature] nature that allows for extensive and rapid interaction between the heavy metal-containing water and the carbon nanostructure.
- For the four heavy metals to get adsorbed on the nanostructure the water has to be in contact with the nanostructure for at least 32 seconds.
- Since the heavy metals chemically react and bind to the surface of the nanostructure, they do not leach back into the water.
- They can be recovered by treating the nanostructure with mild acid.
- The team tested the ability of the structure to adsorb heavy metals in industrial effluent over a range of pH conditions (pH 2-13).
- The industrial effluent was simulated by mixing 100 ppm of each metal.

## **6. Dedicated Freight Corridor Corporation of India (DFCCIL)**

### **Why in News?**

- The 14<sup>th</sup> Foundation Day of Dedicated Freight Corridor Corporation of India (DFCCIL) was celebrated in New Delhi.

### **DFCCIL:**

- The Dedicated Freight Corridor Corporation of India Limited or DFCCIL is a business establishment operated by the Railways Ministry of the Government of India to work the dedicated freight corridors (DFCs).
- It engages in the planning and development, deployment of monetary resources, building, upkeep and the operation of the DFCs.
- DFCCIL has been assigned the status of 'special purpose vehicle' by the Indian government.

## Objectives:

- To build a corridor with appropriate technology that enables Indian railways to regain its market share of freight transport by creating additional capacity and guaranteeing efficient, reliable, safe and cheaper options for mobility to its customers.
- To set up Multimodal logistic parks along the DFC to provide complete transport solution to customers.
- To support the government's initiatives toward ecological sustainability by encouraging users to adopt railways as the most environment-friendly mode for their Transport Requirements.

## **7. ELECRAMA 2020**

### Why in News?

- Union Minister of Heavy Industries & Public Enterprises, Environment, Forest and Climate Change and Information & Broadcasting inaugurated ELECRAMA 2020.

### ELECRAMA 2020:

- ELECRAMA is the flagship showcase of the Indian electrical industry and a platform to connect the world with the Indian industry in respect of technology, new trends and innovation for the future energy transition.
- Featuring not just equipment & technology, ELECRAMA offers peerless thought leadership platforms for everything electric – from technical conclaves, seminars, conferences to industry summits.
- ELECRAMA over the years emerged as a platform for knowledge-sharing with a strong focus on electric vehicles, Internet of Things (IoT), storage solutions and renewable energy.
- ELECRAMA is supported by the Ministry of Power, Ministry of New and Renewable Energy and Ministry of Heavy Industries and Public Enterprises, Government of India.
- ELECRAMA 2020 will serve as a catalyst to boost the Indian growth story for the Indian industry, MSME and start-ups to understand and experience global trends and adopting New Technologies.

## **8. Steppe Eagle**

### **Why in News?**

- A lone endangered steppe eagle (*Aquila nipalensis*) has been sighted by a group of birdwatchers in a paddy field at Velagaleru near Vijayawada.

### **About:**

- Steppe eagle is believed to be the second-largest migratory eagle species to India.
- In winter, steppe eagle breeds in Russia, Kazakhstan, and Mongolia.
- Conversion of open habitats to aquaculture, pesticides and various effluents are a few threats to the species.
- IUCN categorizes it as **Endangered** in its Red list.



## **9. Irrawaddy Dolphins**

### **Context:**

- Recently, Dolphin Census in Chilika lake reported the direct sighting of 146 Irrawaddy dolphins.
- It is being carried out using Hydrophone monitoring technique. A hydrophone is a microphone designed to be used underwater for recording or listening to underwater sound.



### **About the Irrawaddy Dolphins (*Orcaella brevirostris*):**

- They are found in coastal areas in South and Southeast Asia, and in three rivers: the Irrawaddy (Myanmar), the Mahakam (Indonesian Borneo) and the Mekong (China).
- They are listed as 'Critically Endangered' as per the IUCN Red List.
- Their total population of these aquatic mammals in the world is estimated to be less than 7,500. More than 6,000 Irrawaddy dolphins have been reported from Bangladesh.
- Their distribution in Chilika is considered to be the highest single lagoon population.

### About Chilika Lake:

- It is Asia's largest and world's second-largest lagoon.
- It lies on the east coast of India in the state of Odisha, separated from the mighty Bay of Bengal by a small strip of sand.
- It is the largest wintering ground for migratory birds on the Indian sub-continent and is home to a number of threatened species of plants and animals.
- It is designated the first Indian wetland of international importance under the Ramsar Convention, in 1981. It has the large Nalabana Island (Forest of Reeds) covering about 16 sq km, which was declared a bird sanctuary in 1987.

## 10. Spread of Coronavirus

### Why in News?

- Recently, Coronavirus outbreaks in Wuhan, china.

### About Coronavirus:

- They are a large family of viruses that cause illness ranging from the common cold to more severe diseases such as Middle East Respiratory Syndrome (MERS-CoV) and Severe Acute Respiratory Syndrome (SARS-CoV).
- They are zoonotic, meaning they are transmitted between animals and people.

### Symptoms of CoV:

- **Common signs of infection include respiratory symptoms, fever, cough, shortness of breath and breathing difficulties. In more severe cases, infection can cause pneumonia, severe acute respiratory syndrome, kidney failure and Even Death.**

### It spread from an Infected Person to others through:

- The Air by coughing and sneezing.
- Rarely, fecal contamination.
- Close Personal contact, such as touching or shaking hands.
- Touching an object or surface with the virus on it, then touching your mouth, nose, or eyes before washing your hands.

## **11. Missile K-4**

### **Context:**

- Recently, India has successfully test-fired Missile K-4.

### **About Missile K-4:**

- It is an Intermediate range Submarine Launched Ballistic Missile (SLBM). The series is named after former president and scientist A.P.J. Abdul Kalam.
- It is powered by solid rocket propellants and is considered to be highly accurate with a strike range of 3500 km.
- It will be the chief support of the Arihant class of indigenous Ballistic Missile Nuclear Submarines (SSBN). It will give India the standoff capability to launch nuclear weapons submerged in Indian waters.
- The test was carried out by the Defence Research and Development Organisation (DRDO) from a submerged pontoon (a flattish boat that relies on floats to remain buoyant) off the Visakhapatnam coast (Andhra Pradesh).
- India's Circular Error Probability (CEP) is much more sophisticated than Chinese missiles.
- It determines the accuracy of a missile. The lower the CEP, the more accurate the missile is.

