



## Yotta D1

### ❖ Context

- The UP CM inaugurated **North India's first hyperscale data centre**, Yotta D1, at Data Centre Park in Greater Noida.

### ❖ Key Highlights

- It is also the **country's biggest and UP's first data centre**.
- It will also be the first pillar of North India's 5G revolution.

### ❖ About Data Centre

- It is a physical facility that organisations use to house their critical applications and data.
- The **key components** of a data centre design include routers, switches, firewalls, storage systems, servers, and application-delivery controllers.
- There are **4 main types of data centres** (DC) - Enterprise DC, Managed services DC, Colocation DC and Cloud DC.

### ❖ Demand of DCs in India

- The demand for data centres, data and cloud storage has been growing at an exponential level.
- On the one hand, corporations are embracing advanced technologies and digital infrastructure and on the other hand, use of smart devices by individuals are increasing.
- 1.5 billion mobile phones and 650 million internet users in the world are from **India** and are **using 20% of the world's data**.
- The country's total estimated data centre demand is expected to be **2,100 MW as of FY 2025**.

### ❖ Supply of DCs in India

- Currently, there are **138 data centres in India** with **57% capacity in Mumbai & Chennai**.
- The Yotta D1 data centre will increase data storage capacity of the country (currently at 870 mw), which until now stood at 2% only. **MW indicates IT design power load**.

## Standardisation of Rating Scales for CRAs

### ❖ Context

- The Securities and Exchange Board of India (SEBI) issued a circular pertaining to the standardisation of rating scales used by credit rating agencies (CRAs) for issuer rating and corporate credit rating.



### ❖ Key Highlights

- The term credit rating refers to a **quantified assessment of a borrower's creditworthiness** in general terms or with respect to a particular debt or financial obligation.
- The rules will come into effect from **Jan 1, 2023**.
- As per rules, CRA will have to assign a rating outlook and disclose the same in the press release.
- CRAs will have to report to SEBI their compliance with the norms as ratified by their boards of directors.

### ❖ Rating Outlook

- A "rating outlook" reflects the predicted direction of the rating movement in the **short to medium term**.
- **Stable, positive, and negative** are the standard descriptors to be used for an issuer or security placed on rating outlook.

### ❖ Rating Watch

- A "rating watch" indicates a CRA's view on the expected direction of the rating movement in the **short term**.
- Standard descriptors to be used for an issuer or security for rating watch include **Rating Watch with positive implications, Rating Watch with developing implications, and Rating Watch with negative implications**.

### ❖ Symbols and Credit Risk

- As per SEBI rules, rating symbols should have **CRA's first name as prefix**.

List of Rating Symbols	
<b>AAA</b>	Highest degree of safety regarding timely servicing of debt obligations and lowest credit risk.
<b>AA</b>	High degree of safety
<b>A</b>	Adequate degree of safety
<b>BBB</b>	Moderate degree of safety
<b>BB</b>	Moderate risk of default
<b>B</b>	High risk of default
<b>C</b>	Very high risk of default
<b>D</b>	In default or are expected to be in default soon

### ❖ About Credit Rating Agencies

- A credit rating agency (CRA) evaluates and assesses an individual's or a company's creditworthiness to help investors.
- They are **different from credit information bureaus (CIBs)** which generate a three number score related to borrowers for information to lenders.
- The **SEBI authorises and regulates credit rating agencies** according to SEBI Regulations, 1999 of the SEBI Act, 1992.
- **Registered CRAs in India are** - CRISIL, ICRA, CARE, ONICRA, Fitch India, BWR, SMERA.

## Face to Face Centres





## e₹-W

### ❖ Context

➤ RBI started a pilot program of its digital currency (CBDC) for the **wholesale segment (e₹-W)**.

### ❖ Key Highlights

- It allows select banks to use **CBDC (e-rupee)** for **settling secondary-market transactions in government securities**.
- Use of e₹-W is expected to make the **inter-bank market** more efficient.
- Settlement in central bank money would **reduce transaction costs** by preempting the need for settlement guarantee infrastructure or for collateral to mitigate settlement risk.
- About Central Bank Digital Currency**
- Central Bank Digital Currency (CBDC) is a **digital form of legal tender**, Indian National Rupee, issued by the Reserve Bank, which is a form of fiat currency.
- Thus, the digital rupee **would appear as liability on a central bank's balance sheet**.
- It is **not comparable to the private virtual currencies or cryptocurrencies** as private crypto assets do not represent any person's debt or liabilities as no issuer exists.
- CBDC **offers central banks direct control over the money supply**, making it easier to distribute government benefits to citizens and to better monitor transactions to enforce tax laws.

### ❖ Structure of CBDC

- As per RBI, CBDC, can be structured as token-based or account-based.
- Token-based CBDC** : It would be a bearer instrument like banknotes, meaning whosoever holds the tokens at a given point in time would be presumed to own them.
  - The person receiving a token will verify that his ownership of the token is genuine.
  - It is viewed as a preferred mode for CBDC-R as it would be closer to physical cash.
- Account based CBDC** : It would require maintenance of record of balances and transactions of all holders of the CBDC and indicate the ownership of the monetary balances.
  - In this case, an intermediary will verify the identity of an account holder.
  - This system can be considered for CBDC-W

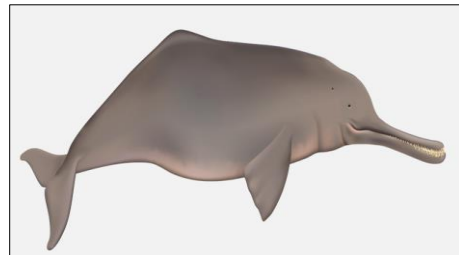
### ❖ Models for Issuance and Management

- There are two models for issuance and management of CBDCs under the RBI's consideration - **direct model (single tier model) and indirect model (two-tier model)**.
- In the direct model, the central bank will be responsible for managing all aspects of the digital rupee system such as issuance, account-keeping and transaction verification.
- In the indirect model, the central bank will issue CBDC to consumers indirectly through intermediaries and any claim by consumers will be managed by the intermediary.

## Gangetic Dolphin

### ❖ Context

➤ Recently, the **Uttar Pradesh government** said that **Dolphins have started coming back to the Ganga river** with improvement in the quality of its water through the **Namami Gange programme**.



### ❖ Key Highlights

- Dolphins have also been seen **breeding in Brijghat, Narora, Kanpur, Mirzapur and Varanasi**, which is likely to increase their number further in the coming days.
- At present, the **population** of dolphins in Ganga in Uttar Pradesh is estimated to be around **600**.



- The **Namami Gange programme** was **launched in 2014** with the objective to rejuvenate Ganga by adopting an integrated approach.
- It focused on the interception & diversion of sewage by tapping the drains flowing into the river Ganga.

### ❖ About

- It is **one of five species of river dolphin found around the world**.
- It is found mainly in the Indian subcontinent, particularly in **Ganga-Brahmaputra-Meghna and Karnaphuli-Sangu river systems**.
- An adult dolphin could weigh between **70 kg & 90 kg**.



- The breeding season of the Gangetic dolphin extends from January to June.
- Ganges River Dolphin as the **National Aquatic Animal of India**.
- Conservation Status** :
  - IUCN Red List- Endangered.**
  - WPA Act 1972- Schedule 1.**
  - CITES- Appendix I.**
  - CMS- Appendix 2.**

## Face to Face Centres



## Mahatma Gandhi National Rural Employment Guarantee Scheme

### ❖ Context

- Recently, an internal study commissioned by the **Ministry of Rural Development** has argued for decentralisation of the **Mahatma Gandhi National Rural Employment Guarantee Scheme (MGNREGS)**.

### ❖ Key Highlights of the Study

- There should be a **greater diversification of permissible works** instead of listing the types of permissible works.
- **Broad categories of works** may be listed out.
- **Flexibility** should be given **at ground level to select the type of works** as per broad categories.
- The internal study also flagged the **frequent delay in fund disbursement**.
- It noted that the **MGNREGS wages were far below the market rate** in many States,
  - It is defeating the purpose of acting as a safety net.

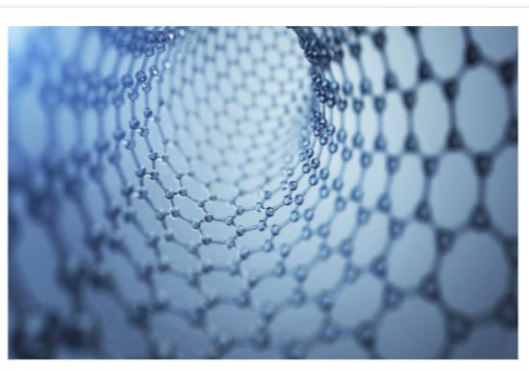


### ❖ About MGNREGS

- The National Rural Employment Guarantee Act, 2005 introduced the scheme.
- The scheme was introduced as a social measure that guarantees **“the right to work”**
- It **guarantees 100 days of work a year** to every rural household with an aim to enhance the livelihood security of people.
- In 2010, NREGA was renamed as MGNREGA.
- **Within 15 days** of submitting the application or from the day work is demanded, wage employment will be provided to the applicant.
  - Applicant will get **unemployment allowance** in case employment is not provided within fifteen days of submitting the application
- The Act currently covers all districts except for those that have a **100% urban population**.
- The **Ministry of Rural Development (MRD)** in association with the state governments monitors the implementation of the scheme.
- **Social Audit** of MGNREGA works is mandatory, which lends to accountability and transparency.
- It is the **Gram Sabha and the Gram Panchayat** which approves the shelf of works under MGNREGA and fix their priority.

## News in Between the Lines

### TiB2



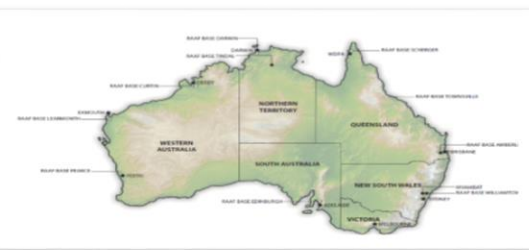
### ❖ Context

- **IIT Gandhinagar** and **Japan Advanced Institute of Science and Technology (JAIST)** have invented a new anode material that enables lithium batteries to be recharged within minutes.

### ❖ Key Highlights

- The new two-dimensional (2D) anode material was developed using nanosheets derived from titanium diboride (TiB2).
- It resembles a multi-stacked sandwich where metal atoms are present in between layers of boron.
- Titanium diboride (TiB2) is an extremely hard ceramic which has excellent heat conductivity, oxidation stability and wear resistance.

### Tindal Air Base



### ❖ Context

- The United States is planning to deploy up to six nuclear-capable B-52 bombers to an air base in northern Australia, amid heightened tensions with China.

### ❖ Key Highlights

- Dedicated facilities for the bombers will be set up at the Royal Australian Air Force's remote Tindal base.
- It is about 300 km south of Darwin, the capital of Australia's Northern Territory.

### Coronal Holes

### ❖ Context

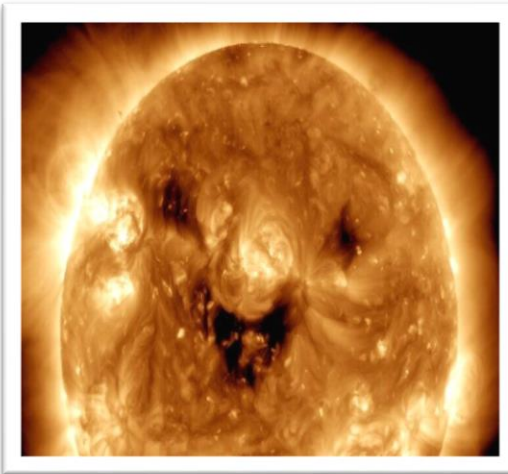
- Recently, NASA shared an image of the **sun seemingly ‘smiling’**.

### ❖ Key Highlights

- It was **captured by the NASA Solar Dynamics Observatory**.

## Face to Face Centres



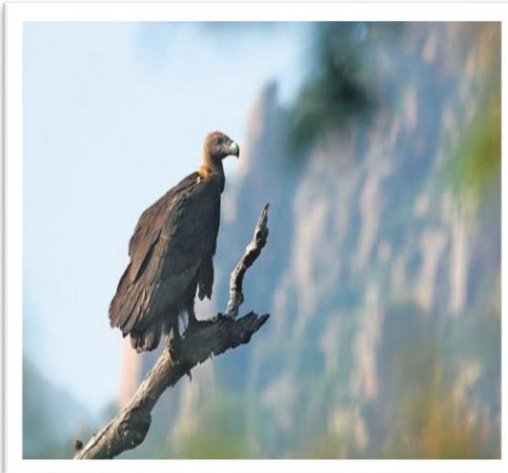


- The image has **dark patches on the sun's surface** resembling eyes and a smile.
- NASA explained that the patches are **called coronal holes**, which can be seen in ultraviolet light but are **typically invisible to our eyes**.

❖ **About Coronal Holes**

- These are regions on the sun's surface from where fast solar wind gushes out into space.
- Because they contain little solar material, they **have lower temperatures and thus appear much darker** than their surroundings.
- Here, the **magnetic field is open to interplanetary space**, sending solar material out in a high-speed stream of solar wind.
- Coronal holes can **last between a few weeks to months**.
- The holes are not a unique phenomenon, **appearing** throughout the sun's approximately **11-year solar cycle**.
- They can **last much longer during solar minimum**.
  - **Solar minimum** is a period of time when activity on the Sun is substantially diminished, according to NASA.

## Aceclofenac



❖ **Context**

- Recently, **Indian Veterinary Research Institute (IVRI)** has demanded a **ban on using aceclofenac in cattle** after a new study showed that the drug metabolises into diclofenac in water buffaloes - as it does in cows.
- Such metabolisms **pose a threat to vulture populations** in the country.

❖ **Key Highlights**

- **Diclofenac** - an anti-inflammatory drug - was **banned** for veterinary use by the Government of India in 2006.
- It was found to be the main **cause of a dramatic decline** (99 per cent) of the **vulture population** across Asia.
- The drug **caused accidental poisoning in raptors** after they fed on carcasses of cattle injected with it.
- Aceclofenac in water buffaloes poses the same threat to vultures as it is a pro-drug of diclofenac.
- **Vulture Action Plan 2020-2025** also mentions the drug as **'toxic'**, along with other drugs like **nimesulide** and **ketoprofen**.

## Aadhaar-Voter ID Card Linkage



❖ **Context**

- Recently, The **Supreme Court issued notice to the Centre** on a plea challenging the power of the Election Commission (EC) to link the Aadhaar database with voter ID cards.

❖ **Key Highlights**

- In December 2021, the Central government passed **The Election Laws (Amendment) Bill, 2021**.
  - It **amended the Representation of the People Act, 1950** and the Representation Act, 1951 to implement certain electoral reforms.
- **Section 23(4), was added to the Representation of the People Act, 1950-**
  - It **allows electoral registration officers to seek the Aadhaar number** of people who want to register themselves as voters "for the purpose of establishing the identity.
  - It allows the electoral registration officers to ask for Aadhaar numbers from **"persons already included in the electoral roll** for the purposes of -
    - Authentication of entries in the electoral roll.
    - To identify registration of the name of the same person in the electoral roll of more than one constituency or more than once in the same constituency.
  - **No individual will be denied inclusion in the electoral roll**, nor have their names deleted from the roll if they are unable to furnish their Aadhaar number due to "sufficient cause as may be prescribed.

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### Face to Face Centres

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