

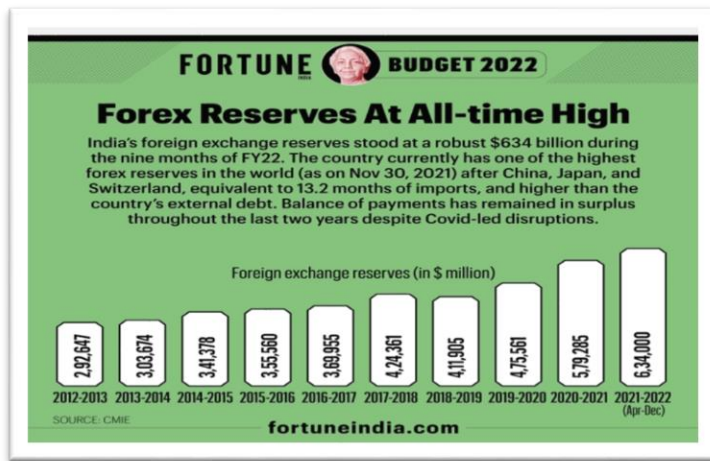
## Foreign Exchange Reserves (Forex)

### ❖ Context

- Eight months after hitting a **record high of \$642.45 billion** in September 2021, India's foreign exchange reserves have now **fallen below the \$600 billion mark.**

### ❖ Key Highlights

- Forex declined by \$2.69 billion to \$597.72 billion during the week ended April 29.
- **Reasons for the Decline:**
  - **Capital outflows** by foreign portfolio investors (FPIs):
    - Because the US Federal Reserve started monetary policy tightening and interest rate hikes.
  - **Demand for dollars also remained high:**
    - Russia-Ukraine war led to a spike in oil and commodity prices.
  - **The valuation loss**, reflecting the appreciation of the US dollar against major currencies.
  - **Decline in gold prices.**



### ❖ About Foreign Exchange Reserve

- Foreign Exchange reserves or Forex reserves are **assets such as foreign currencies, gold reserves, treasury bills, etc retained by a central bank or other monetary authority.**
- The **majority of foreign exchange reserves are held in US dollars.**
- **India's foreign exchange reserves include:**
  - Foreign Currency Assets.
  - Gold Reserves.
  - Special Drawing Rights (SDR).
  - Reserve position with the International Monetary Fund (IMF).
- **Purpose:**
  - To ensure that RBI has **backup funds** if their national currency rapidly devalues or becomes altogether insolvent.
  - If the value of the Rupee decreases due to an increase in demand of the foreign currency then RBI sells the dollar in the Indian money market so that **depreciation of the Indian currency can be checked.**
  - A country with a good stock of forex has a **good image at the international level** because the trading countries can be sure about their payments.
  - A good forex reserve **helps in attracting foreign trade and earns a good reputation** in trading partners.

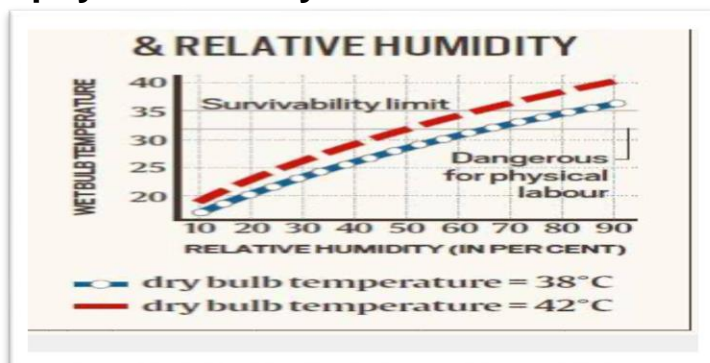
## Heatwaves and Humidity

### ❖ Context

- Recently, the recent **IPCC report AR6** has emphasized that **humidity is also very important while estimating the physiological stress that extreme heat puts on the human body.**

### ❖ Key Highlights

- “**Wet bulb temperature**” has been used to measure exposure to extreme heat.
- The report mentions that **sustained exposures to wet bulb temperatures above 35°C are fatal.**
- Sustained exposures to wet bulb temperatures above **32°C are dangerous for intense physical activity.**



### ❖ About Wet Bulb Temperature

- Wet bulb temperature is **the lowest temperature to which air can be cooled by the evaporation of water** into the air at a constant pressure.
- This lowest temperature is **achieved by adiabatic evaporation** (without adding heat or with equal enthalpy). (Absolute humidity rises).
- It is **therefore measured by wrapping a wet wick around the bulb of a thermometer** and the measured temperature corresponds to the wet bulb Temperature.

### ❖ Dry Bulb Temperature

- The dry bulb temperature is the **ambient temperature.**
- The **difference** between these two temperatures is a **measure of the humidity of the air.**
- The **higher the difference in these temperatures, the lower is the humidity.**

### Face to Face Centres

## Coal Gasification

### ❖ Context

- In order to support coal gasification and availability of coal for the sector at a concessional rate, the **Ministry of Coal** has introduced a policy for **concessions of 50% in revenue share** for commercial auction of coal blocks.

### ❖ Key Highlights

- If the **successful bidder consumes** the coal produced either in its own plant(s) or plant of its holding, subsidiary, affiliate, associate **for coal gasification or liquefaction or sells** the coal for coal gasification or liquefaction on an yearly basis, then the bidder can avail of concessions.
- The government **aims** gasification of **100 million tonne coal by 2030**.

### ❖ What Is Coal Gasification & Syngas?

- It is the process of **converting coal into synthesis gas (syngas)**.
- Syngas is a mixture of **mainly hydrogen (H<sub>2</sub>) and carbon monoxide (CO)**. It also contains some carbon dioxide (CO<sub>2</sub>).
- It can also be created either by gasification of plants biomass or waste products (carbon-based) pyrolysis. **In principle, Syngas can be produced from any hydrocarbon feedstock.**
- Syn-Gas can be used to further produce:
  - **Gaseous Fuels** such as Hydrogen (Blue coupled with CCUS), Substitute Natural Gas (SNG or Methane), Di-Methyl Ether (DME).
  - **Liquid Fuels** such as Methanol, Ethanol, Synthetic diesel and chemicals like Methanol derivatives, Olefins, Propylene, Mono-Ethylene Glycol (MEG), nitrogenous fertilisers including ammonia, DRI, industrial chemicals.

### ❖ Benefits Of Syngas

- According to the International Energy Agency's Energy Technology Systems Analysis Programme (ETSAP), the coal gasification process holds good potential in the future, with **coal being the most abundantly available fossil fuel across the world**, and that even **low-grade coal can be used in the process**.
- According to the Ministry of Chemicals and Fertilisers, urea is currently produced using pooled natural gas, which comprises both domestic natural gas and imported LNG. The usage of locally available coal for **making fertilisers** would help reduce the import of LNG.
- Coal gasification is a **more efficient way to generate electricity** compared to conventional coal-fired power plants.
- It can also help India to transit the energy needs of its **economy** from coal based to **hydrogen based**.
- **Methanol** produced from syngas can be used to **blend with the petrol** and help India to reduce its dependence on its import.

## News in Between the Lines

### Unified Citizen Data Hub (UCDH)



### ❖ Context

- The **Maharashtra government** is planning to prepare a Unified Citizen Data Hub (UCDH) that will contain a wide range of information about an individual in order to help streamline the **transfer of welfare benefits** and **plan more schemes**.

### ❖ Key Highlights

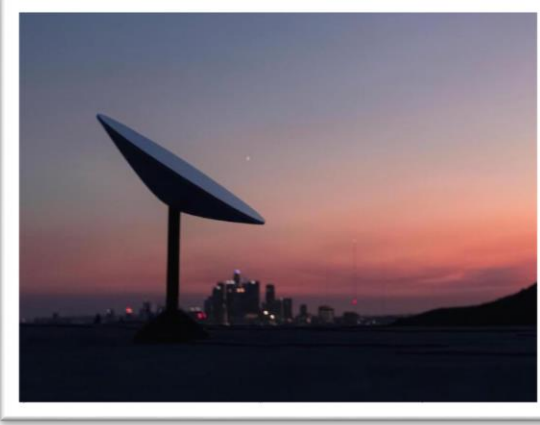

- Citizens will get a unique ID - '**a golden record**' - within the MH-UCDH portal.
- About **56 databases will be merged through 377 agencies** and bodies - including zila parishads, police, municipal corporations, collectorates, and the health, education and finance departments - in order to create a 360-degree profile of any particular citizen.
- It will help in making **data driven decisions** related to scheme planning, beneficiaries identification and proper targeting.

### ❖ Current challenges

- Multiple departments manage legacy systems and the beneficiary details are scattered. The details of most of the beneficiaries are also **incomplete, inaccurate, not updated or available at all**.
- There is also difficulty in:
  - Identification of family or household.
  - Monitoring of the quantum of benefits paid at various levels of entity — for example on individual-level, family-level, location-wise.
  - Ability to cross-check data (such as beneficiary details, benefits claimed, etc.) with databases of other government agencies.

### Face to Face Centres



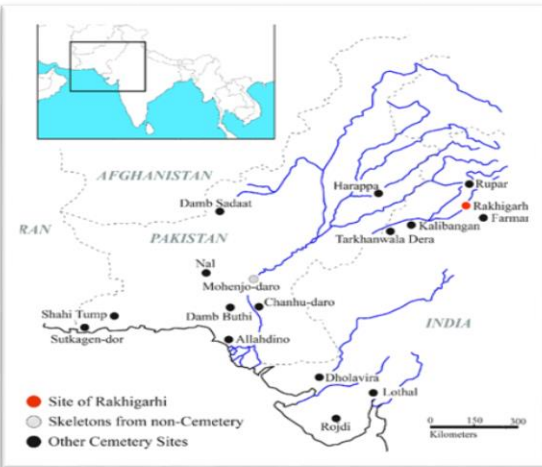
	<ul style="list-style-type: none"> <li>❖ <b>Problems With Aadhar</b> <ul style="list-style-type: none"> <li>• Historical data and analysis of payouts made before linking of Aadhaar data is not available. The portal also maintains records of only registered citizens - <b>it is not an exhaustive database of all eligible residents.</b></li> <li>• The data primarily pertains to individuals and not organisations.</li> <li>• Possibility of leakages.</li> </ul> </li> </ul>
<p><b>Network Operation And Control Charges (NOCC)</b></p> 	<ul style="list-style-type: none"> <li>❖ <b>Context</b> <ul style="list-style-type: none"> <li>➤ The <b>Department of Telecommunications (DoT)</b> has abolished the network operation and control centre (NOCC) charges.</li> </ul> </li> <li>❖ <b>Key Highlights</b> <ul style="list-style-type: none"> <li>• The Network Operations &amp; Control Centre was created under the DoT to <b>control the transmissions from ground segment, or satellite earth stations,</b> along with the master control facility under Department of Space to manage the operation of satellites in orbit. Charges are levied on <b>use of space segments by telecom service providers for satellite telephony, broadband, etc.</b> The NOCC levy regime was <b>introduced in 2003,</b> and the DoT levied Rs 21 lakh per transponder every year for 36 MHz of spectrum on a pro-rata basis.</li> <li>• Additionally, the government also charged Rs 6,000 for every trial of the antenna that is used for receiving and transmitting signals. The move is expected to provide a fillip to upcoming satellite broadband companies &amp; services.</li> </ul> </li> </ul>
<p><b>Health Cover To The Missing Middle</b></p> 	<ul style="list-style-type: none"> <li>❖ <b>Context</b> <ul style="list-style-type: none"> <li>➤ The <b>National Health Authority (NHA)</b> plans to extend health insurance cover under Ayushman Bharat Pradhan Mantri Jan Arogya Yojana (<b>ABPM-JAY</b>) to <b>gig workers</b> earning between Rs. 15000-25000 and <b>other such groups.</b></li> </ul> </li> <li>❖ <b>Key Highlights</b> <ul style="list-style-type: none"> <li>• ABPM-JAY covers poor families based on Socio-Economic Caste Census 2011. As per NITI Aayog report, <b>nearly 70% of India's population</b> is now estimated to be protected by some health insurance schemes, including those run by state governments, social insurance schemes and private insurance plans. That leaves around <b>400 MN Indians without any form of financial protection for their health needs.</b></li> <li>• NHA has been given the mandate to expand coverage to sections of society, including the <b>non-poor segment,</b> which is <b>commonly referred to as the missing middle.</b></li> <li>• NITI Aayog defines the segment as the missing middle because they are <b>not poor enough</b> to be covered by government-subsidised insurance schemes and <b>not wealthy enough</b> to buy private insurance cover. These groups can be given the opportunity to become beneficiaries of government schemes through <b>payment of income graded premiums.</b> Many <b>organisations</b> have <b>associates or partners</b> besides their regular employees like salesmen and distributors of FMCG companies, who can also be covered.</li> </ul> </li> <li>❖ <b>Adverse Selection &amp; Universal Health Coverage</b> <ul style="list-style-type: none"> <li>• However, NHA is facing the <b>challenge of adverse selection</b> in ABPM-JAY.</li> <li>• Adverse selection is the <b>imbalance caused by enrollment of more high risk, sick policyholders than healthy policyholders.</b> It makes any insurance scheme unviable. <b>Universal health coverage</b> as highlighted by National Health Policy (2017) will help <b>reduce the chances of adverse selection. Including missing middle</b> will also prove to be the <b>last link</b> to universal health coverage.</li> </ul> </li> </ul>
<p><b>State of the World's Birds</b></p>	<ul style="list-style-type: none"> <li>❖ <b>Context</b> <ul style="list-style-type: none"> <li>➤ Recently, the State of the World's Birds, an annual review of environmental resources was published. It was <b>published by the Manchester Metropolitan University (MMU).</b> The report attributed the <b>threat to almost half of the 10,994 recognised extant species of birds</b> to the expanding human footprint on the natural world and climate change.</li> </ul> </li> </ul>



### ❖ Key Findings

- **Humans eat 14% of the world's surviving species of birds.**
- **Around 48%** of bird species worldwide are known or suspected to be **undergoing population declines. 13.5% of 10,994** recognised extant species are **currently threatened with extinction.** These include **798** classified as **vulnerable (7%), 460 as endangered (4%), and 223 as critically endangered.**
- **More threatened bird species (86%) are found in tropical areas than in temperate latitude.** Apart from tropical forests, the **threat of natural grasslands has been particularly worrying for North America, Europe and India.** The degradation and loss of natural habitats, as well as direct overexploitation of many species, are the key threats to avian biodiversity.

## Rakhigarhi



### ❖ Context

- Recently, The **Archaeological Survey of India (ASI)**, which has been working in Rakhigarhi in Haryana, made one of its biggest discoveries yet with the excavation of a 5000 year old jewelry making factory.

### ❖ Key Highlights

- **Rakhigarhi is among the five iconic sites** announced by the Union Finance Minister during her Budget Speech in February 2020.
- The other sites are **Hastinapur in Uttar Pradesh, Sivasagar in Assam, Dholavira in Gujarat and Adichanallur in Tamil Nadu.**

### ❖ Key Findings

- **This excavations have revealed:** The structure of some houses.
  - Lanes and drainage system.
  - A jewelry-making unit and Pieces of copper and gold jewelry, terracotta toys, besides thousands of earthen pots and seals.
- It has **indicated the presence of industrial society**, replete with a planned city with a complex street system on raised platforms, and houses with extensive layouts, and a drainage system.

### ❖ About Rakhigarhi

- It is a village and an **archaeological site belonging to the Indus Valley Civilisation** in Hisar District of the northern Indian state of Haryana.
- It was **part of the mature phase of the Indus Valley Civilisation**, dating to 2600-1900 BCE. The site is **located in the Ghaggar-Hakra River plain.**
- Seven mounds are located here. The **site shows the sequential development of the Indus culture** in the now dried up Saraswati basin.
- In May 2012, the **Global Heritage Fund declared Rakhigarhi one of the 10 most endangered heritage sites in Asia.**

## Fishing Cat



- **Conservation Status:**
  - IUCN Red List- Endangered.
  - Wildlife (Protection) Act, 1972- Schedule I.
  - CITES- Appendix II.

### ❖ Context

- A Kolkata based Conservationist has conducted a study on the Fishing Cat, one of the many – smaller cats found in Asia and South-East Asia and among the few that live in wetlands.

### ❖ About Fishing Cat

- **About:** The fishing cat, *Prionailurus viverrinus*, is a **medium-sized cat weighing, on average, 6-15kg.** It's **one of the 15 species of the cat family, Felidae,** found in India.
- **Habitat:** It is strongly associated with **wetlands, inhabiting swamps and marshy areas around oxbow lakes, reed beds, tidal creeks and mangrove forests.** Most records are from **lowland areas.**
- **Distribution:** Most of them are found in **low-elevation regions, along the major river basins of South and South-East Asia.** It can be found in the river basin of the Indus in Pakistan, the Ganga-Brahmaputra, Mahanadi, Godavari and Krishna in India and the Irrawaddy, which primarily stretches across Myanmar, with a tiny portion in India and China.
- **Food:** It is nocturnal and apart from **fish** also **preys on frogs, crustaceans, snakes, birds,** and scavenges on carcasses of larger animals.

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