BHARAT NATIONAL CYBER SECURITY EXERCISE (BHARAT NCX 2024)

- It is a landmark initiative to **fortify India's cybersecurity resilience.**
- It is being **conducted by the National Security Council Secretariat (NSCS)** Government of India in strategic partnership with Rashtriya Raksha University (RRU).
- This flagship event serves as a unifying platform for over 300 **participants**, representing a diverse spectrum of **government agencies, public organizations**, and the **private sector,** all resolutely committed to the safeguarding of critical information infrastructure through **training sessions, Live Fire, and Strategic exercises.**

Key Features:

- o The exercise includes immersive **training on cyber defense and incident response, live-fire simulations** of cyberattacks on IT and OT systems, and **collaborative platforms** for government and industry stakeholders.
- o A **Strategic Decision-Making Exercise** will bring together senior management from across sectors to simulate decision-making in a national-level cyber crisis, enhancing their ability to respond to high-pressure situations with strategic acumen.
- o The **CISO's Conclave** will feature **Chief Information Security Officers** from the government, public, and private sectors sharing insights, participating in panel discussions, and exploring the latest trends and government initiatives in cybersecurity.
- o On the sidelines, the **Bharat Cybersecurity Startup Exhibition** will showcase innovative solutions from Indian startups, emphasizing their role in enhancing the nation's cybersecurity infrastructure.
- o The exercise also **highlights leadership engagement and capacity building,** fostering a unified approach to emerging cyber challenges.

WORLD ANTI-DOPING AGENCY (WADA)

- It was established in 1999 as an **international independent agency** to lead a collaborative worldwide movement for **doping-free sport.**

- Its **governance and funding** are based on an **equal partnership between** the **sport movement and governments** of the world.

- Its primary role is to **develop, harmonize, and coordinate anti-doping rules** and policies across all sports and countries.

- Its key activities include **scientific research, education**, the development of anti-doping capacities, and **monitoring the World Anti-Doping Code (Code)**, the document harmonizing anti-doping policies in all sports and all countries.

Formation:

- o After the events that shook the world of cycling in the summer of 1998, the International Olympic Committee (IOC) decided to convene a World Conference on Doping.

- o The **First World Conference on Doping in Sport** held in Lausanne, Switzerland, on February 2-4, 1999, produced the **Lausanne Declaration on Doping in Sport**.

- o It provided for the creation of an **independent international anti-doping agency** to be operational for XXVII Olympiad Games in Sydney in 2000.

- o Pursuant to the terms of the Lausanne Declaration, the WADA was **established on November 10, 1999, in Lausanne** to promote and coordinate the fight against doping in sport internationally.

- WADA is a Swiss private law, **not-for-profit foundation.**

- Its **seat is in Lausanne, Switzerland**, and its **headquarters are in Montreal, Canada**.

Governance Structure:

- A **42-member Foundation Board** (Board), the agency's highest policy-making body, is jointly composed of **representatives of the Olympic Movement** (the **IOC, National Olympic Committees, International Sports Federations**, and **athletes**) and **representatives of governments** from all five continents.

- A 16-member Executive Committee (ExCo), to which the Board delegates the management and running of the agency, including the performance of all its activities and the administration of its assets.

WHAT IS CLOUD SEEDING?

- Cloud seeding, also known **as artificial rain**, is a weather modification technique that aims to enhance precipitation by introducing substances into clouds to stimulate rainfall.

How is it done?

- The science behind cloud seeding involves **dispersing materials such as silver iodide, potassium iodide, or dry ice into clouds** to encourage the formation of rain or snow.

- These particles serve as nuclei for water droplets to form around, potentially leading to increased precipitation. The process can be carried out using aircraft, ground-based generators, or even rockets in some cases.

- Cloud seeding is done to **increase the radius of the cloud droplets** so that they will grow bigger and because of gravity, they will come down as rainfall.

- In the context of air pollution, cloud seeding is seen as a potential method to "wash away" particulate matter and other pollutants from the air.

- The theory is that increased rainfall could help settle dust and other airborne particles, temporarily improving air quality.

- **Challenges:** Suitable **atmospheric conditions are necessary** for the technique to be effective, including the presence of clouds with sufficient moisture.

SMALL AND MEDIUM ENTERPRISES (SMES)

- Small and medium enterprises (SMEs) in India are businesses that are categorized as small-scale industrial (SSI) or medium-scale industrial units.
- They are a key part of the Indian economy and are classified based on their annual turnover and investment in equipment and plants.

Characteristics of SMEs:

- **Classification**:
  - **Micro Enterprises**: Investment up to ₹1 crore and turnover up to ₹5 crore.
  - **Small Enterprises**: Investment up to ₹10 crore and turnover up to ₹50 crore.
  - **Medium Enterprises**: Investment up to ₹50 crore and turnover up to ₹250 crore.
- **Diverse Sectors**:
  - Operate across manufacturing, retail, IT, textiles, and more.
  - Significant role in rural industrialization.
- **Scalability**:
  - SMEs often act as ancillary units, supplying to large industries while fostering entrepreneurship.

Key Statistics:

- **Contribution to GDP**: SMEs contribute approximately **30% to India's GDP**.
- **Exports**: Account for nearly **48% of India's total exports**.
- **Employment**: Provide employment to over **110 million people** across urban & rural areas.
- **Number of Enterprises**: Over **63 million** registered SMEs operate in India.

Challenges:

- **Access to Finance**: Limited funding options and high borrowing costs.
- **Technology Adoption**: Low penetration of advanced technologies.
- **Regulatory Compliance**: Complex procedures and frequent policy changes.

- **Global Competition**: Difficulty competing with large-scale industries and international players.

Government Support:

- **Schemes and Initiatives**:
  - **MSME Samadhan**: Resolves payment issues.
  - **Prime Minister's Employment Generation Programme (PMEGP)**: Encourages entrepreneurship.
  - **Credit Guarantee Fund Scheme for Micro and Small Enterprises (CGTMSE)**: Offers collateral-free loans.
  - **Production Linked Incentive (PLI) Scheme**: Supports manufacturing SMEs.
- **Digital Platforms**:
  - **Udyam Registration**: Simplifies the registration process for SMEs.
  - **TReDS (Trade Receivables Discounting System)**: Improves cash flow management.

META TO CHALLENGE CCI'S ORDER ON WHATSAPP DATA-SHARING POLICY

WhatsApp-CCI dispute

  - The WhatsApp-CCI dispute involves an investigation into WhatsApp's 2021 privacy policy, which mandated user data sharing with Meta, raising concerns about anti-competitive practices and data privacy violations.

- **CCI's probe against WhatsApp**

  - The CCI initiated its probe in 2021 to assess whether the policy harmed competition by unfairly exploiting user data.
  - The **CCI has now fined Meta $25.4 million** and directed WhatsApp to stop sharing user data with Meta-owned apps for advertising purposes for the next five years.
  - This investigation is crucial in India, where data protection laws are still evolving. It has also sparked broader discussions about data privacy and competition law.

- **Concerns raised**
  - WhatsApp's 2021 privacy policy sparked global controversy, particularly in India, over concerns about undue control over user data and limited consumer choice, with non-compliance risking app access loss.
  - While WhatsApp claimed the update aimed to enhance business-user communication, critics feared it would commercialize personal data.
  - The absence of comprehensive data protection laws in India heightened the backlash, prompting legal scrutiny and the CCI investigation.

Competition Commission of India (CCI)

  - It is a **statutory body** established in March 2009 under the Competition Act, 2002.
- **Objectives:**
  - Eliminate practices having adverse effect on competition
  - Promote and sustain competition
  - Protect the interests of consumers
  - Ensure freedom of trade in the markets of India
- **Members:** It consists of one Chairperson and six members who shall be appointed by the Central Government.
- **Functions of CCI**
  - The commission is a **quasi-judicial body** who also gives opinions to statutory authorities.
  - It is also mandated to undertake competition advocacy, create public awareness and impart training on competition issues.
  - In order to fulfil its objectives, the commission may:
    - conduct an enquiry into certain kinds of agreements and dominant position of enterprise,

WHAT IS HIGH-ALTITUDE SICKNESS?
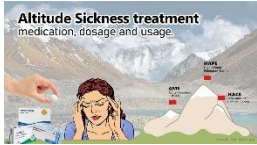
High-altitude sickness, or **Acute Mountain Sickness** (AMS), occurs when the **body cannot acclimatise to high elevations**, typically over 8,000 feet (2,400 metres).

- As altitude increases, the air pressure and oxygen levels decrease, leading to hypoxia — a shortage of oxygen in the body's tissues.

Symptoms:

- Early symptoms of AMS include headache, nausea, fatigue, and shortness of breath.
- If left untreated, it can escalate into **high-altitude pulmonary edema** (HAPE), a life-threatening condition where fluid accumulates in the lungs, or **high-altitude cerebral edema** (HACE), where fluid collects in the brain.
- Both conditions require immediate medical intervention, and descent to lower altitudes is often the only way to prevent fatal outcomes.
- At higher altitudes, the body **tries to adjust by increasing the breathing rate**, which can cause hyperventilation, and produce more red blood cells to carry oxygen, which thickens the blood and strains the heart.
- In cases of HAPE, fluid accumulation in the lungs exacerbates breathing difficulties, while HACE causes symptoms like confusion, hallucinations, and even coma.
- The primary cause of high-altitude sickness is **rapid ascent without allowing the body time to acclimatise.** Gradual ascent, which allows the body to adapt to lower oxygen levels, is the best way to prevent high-altitude illnesses.

Treatment: The most effective treatment is **immediate descent to lower altitudes**. Symptoms usually improve significantly with a descent of 300-1,000 metres. Supplemental oxygen or a **portable hyperbaric chamber** can also help alleviate symptoms of AMS and HACE in emergencies.

SATHYAMANGALAM TIGER RESERVE

- **Location**: It is located at the junction of the Eastern and the Western Ghats in the Nilgiri Biosphere Reserve, in the **Erode District of Tamil Nadu**.
- Its area is contiguous with the **Mudumalai Tiger Reserve, Bandipur Tiger Reserve (Karnataka),** and **BR Tiger Reserve and Wildlife Sanctuary (Karnataka).**
- Together, these reserves-forming the **Nilgiris biosphere landscape**, have the **biggest tiger population in the world**, at over 280 tigers.

  Terrain: It is **hilly and undulated,** with altitudes ranging between 750 m and 1649 m.

  Vegetation: It consists of **southern tropical dry thorn forests, mixed deciduous forests, semi-evergreen forests**, and Riparian forests.

  Climate:
  - It is **subtropical and dry**.
  - The summers are hot and dry; the monsoons are wet and cooler, with river flooding.
- **Rivers**: Some of the prominent rivers in the region include the **Bhavani, Moyar,** and **Noyyal**
- **Tribal Communities**: It is home to several indigenous tribal communities, including the **Irula and Kurumba**

  Flora: Common species of trees and shrubs found **are Albizia amara, Chloroxylon swietenia,** Gyrocarpus jacquini, **Neem, Tamarind, Sandalwood**, Randi dumetorum, Zizyphus, and associates.

  Fauna: The major species are **Elephant, Tiger, Panther, Sloth bear, Gaur, Black Buck**, Spotted deer, Wild boar, Black naped hare, Common langur Nilgiri langur, Striped neck mongoose, and Bonnet macaque.

KEY FACTS ABOUT SABARMATI RIVER

The Sabarmati Riverfront development project, which aims to transform around 38 kilometres of riverbanks from Ahmedabad to Gandhinagar across seven phases, has begun monetizing its first phase, covering around 11 kilometres on either side of the river.

- It is a **monsoon-fed river** that **originates in the Aravalli Hills of Rajasthan** near Udaipur and **meets in the Bay of Khambhat in Arabian sea.**

- The Sabarmati basin extends over the states of **Rajasthan and Gujarat,** having an area of 21,674 sq.km with a maximum length and width of 300 km and 150 km.

- It **flows north-south through Ahmedabad**, bisecting the city into its western and eastern halves.

- It covers a total distance of 371 km, out of which 48 km is traversed in Rajasthan and the remaining 323 km in Gujarat.

- Its total catchment area is 21,674 sq. km.

- It is **bounded by the Aravalli Hills** in the north and north-east, the **Rann of Kutch** in the west, and the **Gulf of Khambhat** in the south.

- The major part of the basin is covered with agriculture, accounting for 74.68% of the total area.

Tributaries: Its principal tributaries joining from left are the **Wakal**, the **Hathmati,** and the **Vatrak,** whereas the **Sei** joins the river from right.