

### WHAT IS DRISHTI 10 'STARLINER'?

Chief of Naval Staff recently flagged off the first indigenously manufactured Drishti 10 'Starliner' Unmanned Aerial Vehicle (UAV) for the Navy.



#### About Drishti 10 'Starliner':

- It is an indigenously manufactured Unmanned Aerial Vehicle (UAV).
- It was developed by Adani Defence and Aerospace.
- It is an advanced intelligence, surveillance, and reconnaissance (ISR) platform with 36 hours of endurance and a 450 kg payload capacity.
- It is an all-weather military platform that has clearance to fly in both segregated and unsegregated airspace.
- It is designed to possess high endurance, combat-proven capabilities, and advanced features, providing a significant boost to India's naval capabilities.
- The UAV's autonomous nature, coupled with its mission effectiveness and payload configuration options, makes it an invaluable asset for strategic operations.
- One of the distinguishing features of the Drishti 10 'Starliner' is its minimal maintenance requirements, making it cost-effective and operationally efficient.
- This characteristic ensures increased operational readiness, reducing downtime, and maximizing deployment opportunities.
- It is equipped with advanced communication systems, including satellite communication and Line-of-Sight (LOS) data links, ensuring reliable and secure data transmission.

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### WHAT IS UGRAM?

The Defence Research and Development Organisation recently launched an indigenous assault rifle named 'Ugram'.



## About Ugram:

- ‘Ugram’ is a state-of-the-art **indigenous assault rifle**.
- It has been **developed** by the Armament Research and Development Establishment (ARDE), a unit of DRDO, in collaboration with a private industry partner.
- It was **developed in less than 100 days**.
- It has been developed as per the **General Staff Qualitative Requirements (GSQR)** of the army into consideration.

## Features:

- The rifle will **deploy rounds of 7.62 mm calibre**, making it more ferocious than rifles that use 5.62 mm calibre rounds, like the INSAS rifle, which is popularly used by the armed forces in India, including paramilitary forces.
- It has an effective **range of 500 metres**.
- It **weighs less than four kilograms**.
- The rifle has a **20-round magazine** that fires **robustly and in full auto mode**.

## WHAT IS REC LIMITED?

REC Ltd. recently announced its ambitious plan to increase its financial sanctioning in the infrastructure space, including roads and highways, to ₹1 lakh crore in the current financial year.



## About REC Limited:

- REC Limited (formerly Rural Electrification Corporation Limited) is a **Central Public Sector Undertaking** under the **Ministry of Power** involved in **financing projects** in the complete **power sector value chain** from **generation to distribution**.
- It is registered with the **RBI** as a **Non-Banking Finance Company (NBFC)**, a **Public Financial Institution (PFI)** and an **Infrastructure Financing Company (IFC)**.

- **History:**

- It was **incorporated in 1969**, in the backdrop of severe drought and famine in the country, to **energize agricultural pump-sets for irrigation purposes**, thereby reducing the dependency of agriculture on monsoons.
  - REC has evolved and **expanded its financing mandate to cover the entire Power-Infrastructure sector**, comprising Generation, Transmission, Distribution, Renewable Energy, and new technologies like Electric Vehicles, Battery Storage, Green Hydrogen, etc.
  - More recently REC has **also diversified into the Non-Power Infrastructure sector** comprising Roads & Expressways, Metro Rail, Airports, IT Communication, Social and Commercial Infrastructure (Educational Institution, Hospitals), Ports, and Electro-Mechanical (E&M) works in respect of various other sectors like Steel, Refinery, etc.
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## PRAVASI BHARATIYA DIWAS

Recently, the Prime Minister of India extended greetings on the occasion of Pravasi Bharatiya Diwas.



It is also known as Non-Resident Indian (NRI) Day, is celebrated on **January 9** to mark the contribution and achievements of the overseas Indian community to the development of India.

- It is the flagship event of the **Ministry of External Affairs**.
- The day also **commemorates the return of Mahatma Gandhi**, the greatest Pravasi, from South Africa to India in 1915, who led India's freedom struggle and changed the lives of Indians forever.
- It was first celebrated in 2003. It was an **annual event earlier**, but in 2015, the government revised its format to celebrate PBD **once every two years**.
- It has become a platform to connect the Indian diaspora with their roots and encourage their continued engagement with India's progress.

- It is held in different cities, to showcase the diversity and progress of different regions of India.
  - Till date, 17 conventions have been held. The last Pravasi Bharatiya Divas was celebrated in the **Indore of Madhya Pradesh in 2023.**
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## 50 YEARS OF PROJECT TIGER

### What is Project Tiger?

- It is a tiger conservation program (a **Centrally Sponsored Scheme of the MoEF&CC**) launched in **1973** by the Government of India and administered by the **National Tiger Conservation Authority (NTCA)**.
- It aims at
  - **Ensuring a viable population of the Bengal tiger** (‘endangered’) in its natural habitats,
  - Protecting it from extinction,
  - **Preserving areas of biological importance** as a natural heritage that represent the diversity of ecosystems across the tiger's range in the country.

### Developments After the Launch of the Project Tiger:

- **In 2005**, the then PM appointed a 5-member ‘**Tiger Task Force**’ after a public outcry that India’s tigers existed only on paper and not in the forests of Sariska in Rajasthan.
  - In Sariska, the government had spent Rs 2 crore per tiger in 2002-2003 for their upkeep and safety, versus Rs 24 lakh per tiger elsewhere.
- The Task Force found that the **increasing conflict** between the forest/wildlife bureaucracy and those who coexist with the tigers was a recipe for disaster.
- So, the Parliament **amended WLPA in 2006** to create the National Tiger Conservation Authority (NTCA) and a tiger conservation plan.
  - From an administrative category arbitrarily constituted and administered by the forest bureaucracy, **Tiger Reserves became a statutory category in 2006.**

- Later, the government also enacted the **Forest Rights Act (FRA) 2006**, which recognized all customary and traditional forest rights - individual as well as community - on all forest land, including in Tiger Reserves.

## Success Story of the Project Tiger:

- Today, Tiger Reserves are hailed worldwide as **India's miraculous success story** in environment and forest conservation, especially in this age of climate change.
- From only 9 Reserves in 1973 encompassing 9,115 sq. km, **there are today 54 in 18 States**, occupying 78,135.9 sq. km/ 2.38% of India's total land area.
- **CTHs** cover 42,913.37 sq. km/ 26% of the area under National Parks and Wildlife Sanctuaries.
- According to the Tiger Census 2022, there were 3,167-3,925 tigers in the country and their **population is growing at 6.1% a year**, prompting the government to claim India is now home to 3/4th of the world's tigers.
- The monitoring system **M-STripES** (Monitoring System for Tigers - Intensive Protection and Ecological Status) - is a software-based monitoring system developed (by NTCA in 2010) **to assist patrol and protect tiger habitats.**

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## FIRST US LUNAR LANDER SINCE 1972 LAUNCHED

### Why in news?

- A spacecraft developed by a private US company and carrying a bunch of scientific instruments from NASA, took off from Florida, USA.
- This launch aims to become the first US spacecraft to land on the Moon in more than 50 years.

### Artemis programme

- **About**
  - The Artemis program is a series of ongoing lunar missions run by NASA.
- **Aim**

- It seeks to establish a permanent base camp on the Moon.
- It also aims to send astronauts and robots for longer stays for more comprehensive exploration and scientific studies of the lunar surface and atmosphere.
- It would also explore opportunities for the utilization of resources available on the Moon with the ultimate objective of launching deep space missions from the lunar surface.

## Key highlights of the mission

- **Involvement of private player**

- The **Peregrine lander module** of the mission, as well as the **Vulcan rocket** that launched it, have both been built by private space companies in the US.
- The Mission is part of NASA's **Commercial Lunar Payload Services (CLPS)** initiative that seeks to involve the private space sector in its ambitious Artemis program.
  - This launch was the first under the CLPS initiative.
  - Under CLPS, so far, at least 14 private companies have been contracted to carry NASA payloads to the Moon.
  - This collaboration is aimed at creating the market and technology ecosystem in the private space industry for the science and technology needs of lunar exploration.

- **The mission**

- Five payloads from NASA sat inside the Peregrine lander that was launched by the Vulcan heavy rocket.
  - The payloads are meant to carry out various exploratory activities, including the detection of water.
- The spacecraft will take more than 40 days to reach the Moon, and is planned to make a landing on February 23.



## WHY 2023 WAS THE WARMEST YEAR EVER?

### What's in Today's Article?

- Background (Rising Temperatures, Reasons Behind Rising Temperature, What Lies Ahead)

### Reasons Behind 2023 Being the Warmest Year:

- The main driver behind extreme warming is the **increasing greenhouse gas concentrations in the atmosphere.**
- Greenhouse gases like carbon dioxide, methane, and water vapor trap the Sun's energy in the Earth's system before it escapes to space, causing warming.
- Since the Industrial Revolution, human activities like burning fossil fuels such as coal, oil, and gases have released unprecedented levels of such gases.
- As a result, the planet has warmed rapidly, especially in recent decades.
- **In 2023, greenhouse gas concentrations reached the highest levels ever recorded in the atmosphere,** according to C3S and the Copernicus Atmosphere Monitoring Service (CAMS).
- Carbon dioxide concentrations in 2023 were 2.4 parts per million (ppm) higher than in 2022; methane concentrations increased by 11 parts per billion (ppb).
- The onset of El Niño last year, after seven years, also played a key role.
  - **El Niño refers to an abnormal warming of surface waters in the equatorial Pacific Ocean.**
  - It increased the likelihood that temperature records would be broken, and there would be more extreme heat in many parts of the world and the ocean.

### What Could Happen Now?

- Scientists have suggested that **2024 could be warmer than even 2023.**
- Typically, in the past few decades, very hot years have been ones that began in an El Niño state.

- Last year, El Niño didn't set in until around July, which means that it wasn't the primary reason behind the abnormal heat at that point. Therefore, 2024 could be hotter than last year.
- It is also possible that the next year may surpass the 1.5-degree Celsius warming threshold across the entire calendar year for the first time.
- The WMO in its 2023 **State of Global Climate report** said **there was a 66% chance that at least one of the years between 2023 and 2027 would cross the threshold.**
- A long-term breach of the 1.5-degree limit would unleash far more severe climate change impacts, including more frequent and severe droughts, heatwaves, and rainfall.
- To prevent this, **the world needs to urgently implement certain steps, including greenhouse gas emission cuts, which it has failed to do so far.**

## WHAT IS PRASADAM?

Union Minister for Health & Family Welfare recently inaugurated the country's first healthy & and hygienic food street, 'Prasadam', at Neelkanth Van, Mahakal Lok, in Ujjain, Madhya Pradesh.



### About Prasadam:

- It is the country's first "Healthy and Hygienic Food Street".
- It has been opened at Neelkanth Van, Mahakal Lok, in Ujjain, Madhya Pradesh.
- It will connect people in every corner of the country with pure and safe local and traditional food.
- Spread over 939 square metres with 19 shops, Prasadam offers convenient and culturally rich dining options for the 1-1.5 lakh devotees who visit the Mahakaleshwar Temple daily.
- The food street is designed to provide various facilities, including a kids' play area, drinking water facility, CCTV surveillance, parking, public conveniences, and seating spaces.



## Key Facts about Mahakaleshwar Temple:

- It is a **Hindu temple** dedicated to Shiva.
  - **Location:**
    - It is located in the ancient city of **Ujjain**, in the state of **Madhya Pradesh**.
    - The temple is situated **beside the Rudra Sagar Lake**.
  - It is **one of the twelve Jyotirlingas** of Lord Shiva.
  - Mahakaleshwar **idol is Dakshina Mukhi, facing south**, unlike all the other Jyotirlingas.
  - The temple, which is **spread over five levels**, sees a huge throng of devotees during the **Maha Shivaratri festival**.
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## INS KABRA

Indian warship, **INS Kabra**, an indigenous fast attack craft, docked at the Colombo port in a move aimed at fostering bilateral ties between India and Sri Lanka.



### About INS Kabra:

- It is a naval vessel **named after** an island of the **Andaman and Nicobar archipelago**.
  - It belongs to the **Car Nicobar class** of high-speed offshore patrol vessels built by Garden Reach Shipbuilders and Engineers (GRSE) for the Indian Navy.
  - It was the eighth in a series of 10 **Fast Attack Crafts**.
  - The vessels are designed as a cost-effective platform for patrol, **anti-piracy, and rescue operations in India's Exclusive Economic Zone**.
  - The class and its vessels are named after Indian islands. They are the first water jet-propelled vessels of the Indian Navy.
  - With a **top speed of over 35 knots**, and excellent manoeuvrability offered by her water-jet propulsion, the ship is ideally suited for high-speed interdiction of fast-moving targets.
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