# UPSC Daily Current Affairs | Prelim Bits 14-09-2024

## Mission Mausam

*The Union Cabinet recently approved Mission Mausam with a budget outlay of 2,000 crores over two years.*

- **Mission Mausam** - It aims to make India 'Weather Ready' and 'Climate Smart'.
- The mission seeks to enhance the country's weather and climate observations, understanding, modelling and forecasting.
- **Mission Period** - 2024-26.
- **Nodal Ministry** - Ministry of Earth Sciences.
- **Implementing Agencies**
  - India Meteorological Department(IMD), Mausam Bhavan, New Delhi
  - National Centre for Medium Range Weather Forecasting (NCMRWF), Noida
  - Indian Institute of Tropical Meteorology, Pune
- **Objectives**
  - Develop Cutting Edge Weather Surveillance Technologies & Systems
  - Implement Higher resolution atmospheric observations with better temporal and spatial sampling/coverage
  - Implement Next-generation radars, and satellites with advanced instrument payloads
  - Implement High-Performance Computers (HPC).
  - Improve understanding of weather and climate processes and prediction capabilities
  - Develop improved earth system models, and data-driven methods (use of AI/ML)
  - Develop Technologies for weather management
  - Develop state-of-art dissemination system for last mile connectivity
  - Capacity building
- **Features** – The mission will establish
  - 50 Doppler Weather Radars (DWR)
  - 60 Radio Sonde/Radio Wind (RS/RW) stations
  - 10 Wind Profilers
  - 25 radiometers
  - 1 Urban testbed
  - 1 Process testbed
  - 1 Ocean Research station
  - 10 Marine Automatic Weather Stations with upper air observation.
  - 100 disdrometers.

*A disdrometer is a device that measures the size and velocity of falling raindrops, snowflakes, and hail. It can also differentiate between different types of*

*precipitation.*

- **Benefits** – Mission will improve forecasts on both spatial and temporal scales and air quality data and help strategize weather management/intervention in the long run.
- Improved services for weather, climate, and natural hazards

**References**

PIB | Project Mausam

## Vertical Launch Short Range Surface-to-Air Missile (VLSRSAM)

*Defence Research & Development Organisation (DRDO) and the Indian Navy successfully conducted back-to-back flight tests of the Vertical Launch Short Range Surface-to-Air Missile (VLSRSAM).*

- **VL SRSAM** – It is the indigenously built ***short-range*** surface-to-air missile.
- It is a ***ship-borne weapon*** system designed to neutralise various ***aerial threats*** at close ranges, including sea-skimming targets.
- **Missile Developed by** - Defence Research and Development Organisation (DRDO).
- **Operational range** – 80 Km
- **Flight altitude** - 16 km (52,000 ft)
- **Maximum speed** - Mach 4.5
- **Guidance Technology**- During mid-course flight, the missile uses ***fibre-optic gyroscope*** based inertial guidance mechanism while in terminal phase uses ***active radar homing***.
- **VLS** - Each Vertical Launch System (VLS) can hold forty missiles in a twin quad-pack canister configuration.
- **Replacing Barak** - VL-SRSAM intended to replace older Barak 1 surface to air missile system onboard Indian Navy warships.
- **Flight Test** - The flight test was carried out from a land-based vertical launcher, targeting a high-speed aerial target flying at a low altitude.
- The missile system successfully tracked and engaged the target.
- **Testing site** - Integrated Test Range (ITR) in Chandipur, off the coast of Odisha.

**Reference**

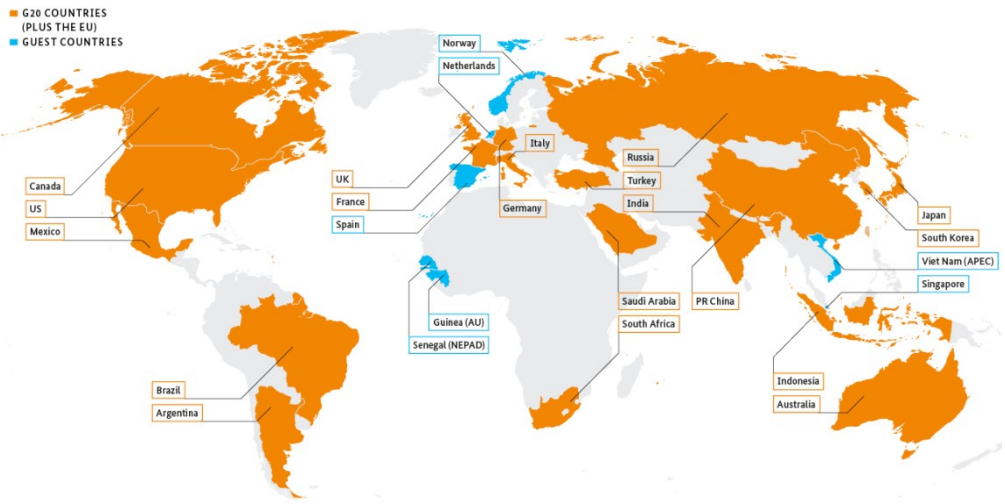
PIB | VL-SRSAM

## G20 Agriculture Ministerial Meeting

*India Participated in G20 Agriculture Ministerial Meeting in Cuiabá, Brazil.*

- **2024 G 20 Presidency** - Brazil has assumed the presidency of the G20 until November 2024.

- **G20 Countries** - Argentina, Australia, Brazil, Canada, China, France, Germany, India, Indonesia, Italy, Japan, Mexico, Russia, Saudi Arabia, South Africa, South Korea, Turkey, United Kingdom, and United States.




- **Agriculture Ministerial Meeting** - It is aimed to promote international cooperation in addressing critical issues for global agriculture such as food security, sustainable agriculture, technological innovation, and climate change adaptation.
- **Venue** - Cuiabá, Brazil.
- **Priority Areas** – The meeting centred around Four key priority areas for global agriculture.
- **Sustainability** - Sustainability of agriculture and food systems in their multiple paths
- **International Trade** - Enhancing international trade's contribution to food security and nutrition
- **Inclusiveness** - Elevating the essential role of family farmers, smallholders, indigenous peoples and local communities in sustainable, resilient and inclusive agriculture and food systems
- **Aquaculture** - Promote the integration of sustainable fisheries and aquaculture into local and global value chains.

**Reference**

PIB | India Participates in G20 Agriculture Ministerial Meeting

## Herpetofauna Survey

*The first-ever preliminary herpetofauna survey conducted in Grass Hills National Park and Karian Shola National Park.*

- **Key Findings-** The survey revealed rich biodiversity, identifying ***20 species of reptiles and 34 species of amphibians***.
- **Grass Hills National Park**
  - It is a protected area located in the ***Anamalai Hills*** of Tamil Nadu, India.
  - Recorded 11 reptile species and 12 amphibian species.

    - Montane shola grassland ecosystem unique to the Western Ghats.
- **Karian Shola National Park**
    - It is part of the Anamalai Tiger Reserve in Tamil Nadu, featuring tropical rainforest ecosystems.
    - Recorded 9 reptile species and 22 amphibian species.
    - Grassland surrounded by semi-evergreen and deciduous forest.

*Anamalai Tiger Reserve is located in the Western Ghats of Tamil Nadu, India. It also encompasses important ecological zones like the Grass Hills and Karian Shola.*

- **Critically endangered and endangered species**
    - Anaimalai flying frog (Rhacophorus pseudomalabaricus).
    - Deccan night frog (Nyctibatrachus deccanensis).
    - Cold stream torrent frog (Micrixalus frigidus).
    - Resplendent Shrubfrog (Raorchestes resplendens).
- **Rare and newly described reptiles**
    - Three-lined Shieldtail (Platyplectrurus trilineatus), last seen in 2018.
    - Anamudi dwarf gecko (Cnemaspis anamudiensis), first report since discovery.
    - Newly described species: Cnemaspis anaimalaiensis and Tail-spot Shieldtail (Uropeltis caudomaculata).
- **Other notable amphibians**
    - Star-eyed ghat frog (Ghatixalus asterops).
    - Green-eyed bush frog (Raorchestes chlorosomma).
    - Kodaikanal bush frog (Raorchestes dubois).
    - Yellow-bellied bush frog (Raorchestes flaviventris).
    - Legless amphibian Ichthyophis tricolor.
    - Tadpoles of the evolutionary distinct Purple frog (Nasikabatrachus sahyadrensis).
- **Ecological significance-** Nearly ***85% of the species*** recorded are endemic to the Western Ghats.
- Many species are restricted to the Anamalai sub-cluster, highlighting the ***region's unique biodiversity.***

**Reference**

The Hindu | Herpetofauna Survey

## Poltava

*49 people killed in Ukraine's Poltava after Russia Launches 2 Ballistic Missiles recently.*

- Poltava is a city in ***east-central Ukraine.***
- It is located 300 kilometres east of Kyiv, the capital of Ukraine.
- It lies along the ***Vorskla River.***
- **History**

- Archaeological evidence dates the city from the ***8th to the 9th century***, although the first documentary reference is from 1174, when it was variously known as Oltava or Ltava.
- Destroyed by the ***Tatars in the early 13th century***, it was the centre of a Cossack regiment by the 17th century.
- In 1709 Peter I the Great inflicted a crushing defeat on Charles XII of Sweden outside Poltava after Charles had laid siege to the town for 3 months.
- In 1802 it became a provincial centre.




- The modern city of Poltava is largely new, having been reconstructed after it suffered severe damage during ***World War II*.**

**Reference**

NDTV | Ukraine's Poltava after Russia Launches 2 Ballistic Missiles

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