

## UPSC Daily Current Affairs| One Liners 01-12-2025

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**Environment**

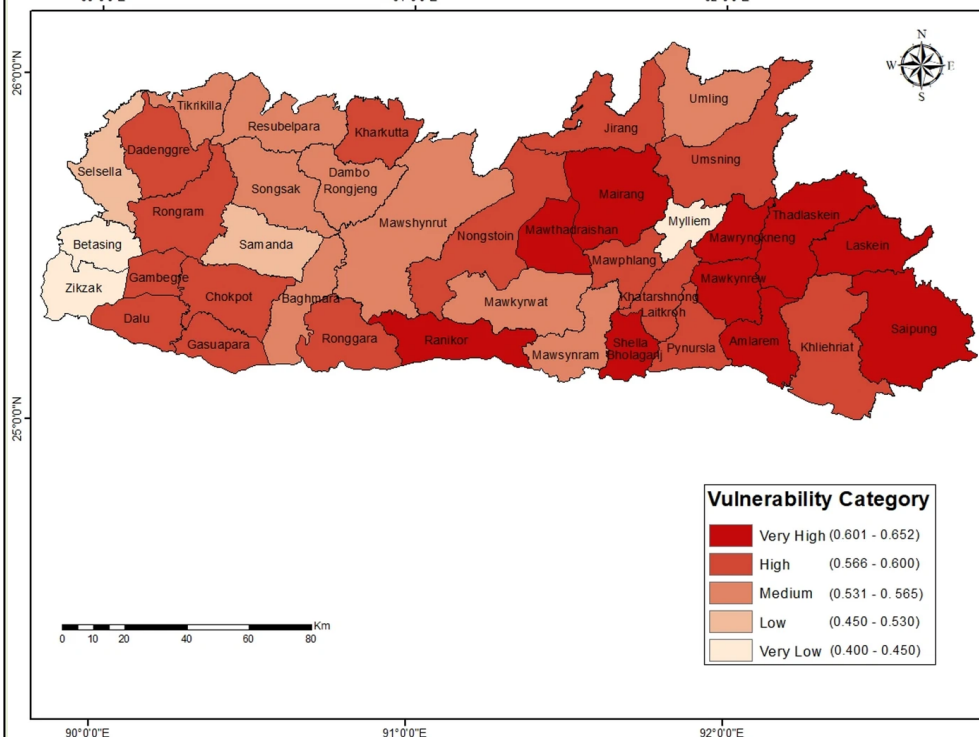
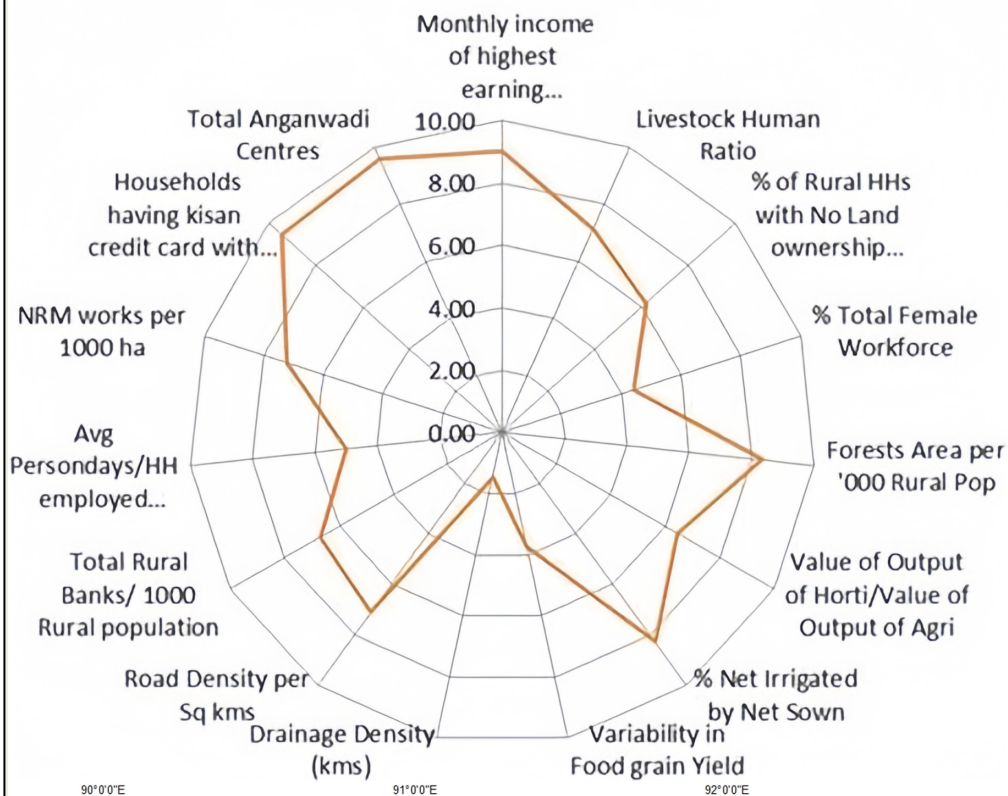
## Climate Vulnerability Assessment in Meghalaya

• **Conducted by** - Meghalaya Climate Change Centre (MCCC), under the *National Mission for Sustaining the Himalayan Ecosystem (NMSHE)* under the National Action Plan for Climate Change (NAPCC).

• **Factors** - Limited access to institutional credit, low household incomes, inadequate public health and nutrition infrastructure, such as Anganwadi Centres and scarce forest resources and low irrigation coverage.

• **Highlights** - 25 out of 39 Community & Rural Development (C&RD) Blocks in Meghalaya fall under the high or very high climate vulnerability categories.

### Drivers of Vulnerability



## Security

### Hansa-3(NG)

Recently, Union Minister of State for Science and Technology launched the production version of Hansa-3 NG.

- It is an indigenously developed all-composite airframe (as opposed to purely metal).
- **1<sup>st</sup> designed and developed by** - CSIR-NAL.
- **Aim** - To meet the expanding demand for PPL (Private Pilot License) and CPL (Commercial Pilot License) training.
- **Features** -
  - Advanced Glass Cockpit for enhanced situational awareness.
  - Rotax 912 iSc3 Sport Engine for fuel-efficiency.
  - Bubble Canopy for panoramic visibility and improved pilot comfort.

### Council of Scientific and Industrial Research - National Aerospace Laboratories (CSIR-NAL)

- It is an India's only government aerospace R&D lab.
- **Founded** - 1959 (as National Aeronautical Research Laboratory, renamed NAL in 1993).
- **Headquarters** - Bengaluru, Karnataka.
- **Nodal ministry** - Ministry of Science and Technology.
- **Objectives** -
  - To design and develop indigenous aircraft and aerospace technologies.
  - To support national aerospace missions and collaborate with industry for commercialisation.
  - To create aeronautical components, testing, simulation, and manufacturing systems.

### Iron Bird Facility for SARAS Mk-2

- It as a crucial platform for full-system integration, ground testing, and validation of major aircraft subsystems.
- **Facilities** - It significantly reduce flight-testing risks and accelerate development timelines, enabling engineers to identify and resolve design and software issues early.

### Manufacturing Facility for High Altitude Platforms (HAPs)

- India's initiative to join the select league of nations developing solar-powered unmanned aircraft capable of flying above 20 km altitude for long-endurance missions.
- **Similar technologies** - US, UK, Germany, South Korea, New Zealand and Japan.
- **Existing facility** - Achieved 7.5 km altitude and over 10 hours endurance, and the first full-scale flight to 20 km is targeted for 2027.
- **Advantages** - It offers a cost-effective alternative to satellites for surveillance, telecommunication, and environmental monitoring, opening a new frontier for India's aerospace sector.

### High Altitude Platforms (HAPs)

- **HAPs** - These are aircraft or airships situated in the stratosphere (from 17 to 22 km above the ground).
- **Used for** - The delivery of wireless communications and other applications.
- **Aim** - To serve a large number of users, either in dense urban areas or over a wide geographical area.
- **Alternative infrastructure** - Between terrestrial systems and satellites, and can offer:
  - Line-of-sight links over a wide area.
  - Shorter link lengths than satellite systems.
  - High capacities.
  - Very rapid deployment.
  - Accessible for maintenance.
  - Easily reconfigurable to cover short-term fluctuations in usage.

### **NaviMet system at HAL Airport**

- It is a comprehensive weather monitoring system aids in measuring crucial weather parameters such as *visibility, humidity, and wind speed, among others*.
- **Developed by** - CSIR-NAL.
- **Combination of NAL's 2 indigenous innovations** — Drishti and AWOS, which are currently operational in over 170 Indian airports.
- **Aim** - To aid safe landing and take-off operations at airports.
- **Significance** - It reflects another successful example of *Indigenous Technology in public-private collaboration*.

## **Science**

### **SIM-Binding" for Messaging Platforms**

The government has issued directions for "SIM binding" for messaging platforms like WhatsApp, Telegram, and Signal to combat cyberfraud.

- **Directive issued by** - Department of Telecommunications (DoT).
- **Legal status** - *Telecommunication Cybersecurity Amendment Rules, 2025*, to introduce the concept of *Telecommunication Identifier User Entity (TIUE)* under the scope of telecom regulations.
- **Implementation** - As per the rules, a TIUE (who is not a licensee like telecom operators) uses telecommunication identifiers — such as mobile numbers — to identify its users.
- Platforms will have to send to the DoT a compliance report within the next 4 months.
- **Aim** - To curb or combat cyber threats and fraud.

### **SIM-Binding**

- It is a process where a messaging app verifies that the registered SIM card remains active in your device.
- If the SIM is removed, replaced, or deactivated, the app will stop functioning.
- **Change for web users** - Web versions like WhatsApp Web will log out automatically *every 6 hours*.
- Users will need to *re-scan the QR code* to continue using the service.

## **Miscellaneous**

### **SportEdge Meerut**

- **SportEdge Meerut** - Sports and Entrepreneurship Development for Growth & Excellence.
- **Launched by** - Ministry of Skill Development and Entrepreneurship.
- **Collaboration with** - Sports, Physical Education, Fitness & Leisure Skills Council (SPEFL-SC), British Asian India Foundation (BAIF) and NEST will develop evidence-based learning and improve operations management for the cluster.
- **Aim** - To accelerate India's rise as a global leader in sports manufacturing, innovation, and enterprise, and transform Meerut into an internationally recognized Sports Hub.
- **Strategic pillars** -
  - Industry & Market Assessment.
  - Sustainable Livelihoods & Entrepreneurship.
  - Developing Local Sporting Talent.
  - Gender Equity at the Core.