# UPSC Daily Current Affairs| Prelim Bits 13-03-2025

## Polypharmacy

## Why in News?

*A cross-sectional study conducted among 600 older adults across 6 Indian cities has found that the prevalence of polypharmacy and unsafe self-medication is high in this population.*

- **Polypharmacy** – Refers to the intake of *5 or more medications per day*.
- **Prevalence** – The *highest prevalence of polypharmacy was found in Guwahati (57%)*, while Madhya Pradesh (Ujjain) had the lowest prevalence (11.7%).
- **Impact** – The prevalence of polypharmacy was 33.7% with significant associations to *multiple comorbidities*,(2 or More Disease) causing hospitalization.
- **Survey Conducted by** – Researchers from various institutes such as Department of Global Public Health, Karolinska Institutet, Stockholm, Sweden and the Indian Council of Medical Research.
- **Older Persons' Prescriptions and Screening Tool to Alert to Right Treatment (STOPP-START)** – An updated *screening tool* that was used in the survey to:
    - Identify potentially inappropriate medications (PIM) and potential prescribing omissions (PPO) respectively.
- The study found the proportion of prescriptions with PIM and PPO were 28.8% and 20.3% respectively.
- The *highest prevalence of PIM use is 46.2%* and it was attributed to medications prescribed without evidence-based clinical indications and those prescribed beyond the recommended duration.
- **Key findings of the survey** – 25.2% of the individuals used at least one fixed-drug combination (solid oral formulations).
- The most common combinations were *antihypertensive* and *antidiabetic* fixed-drug combinations.
- The *prevalence of self-medication was 19.7%*, associated with factors, such as staying alone, multiple comorbidities and recent hospitalizations.
- The *most common medicines* that were self-medicated were *nonsteroidal anti-inflammatory drugs (59%).*
- It was followed by paracetamol (42.4%) and antibiotics for upper respiratory tract infection and diarrhoea (33.9%).
- A *lack of awareness and unsafe practices* were found among self-medicating individuals.
- Among those who self-medicated, 65.3% lacked knowledge of self-medication, 50% did not comprehend the risks and 40.7% reported unsafe self-medication practices.
- **Prevention** – To promote safe medication use in older adults.
- Lack of interventions in creating awareness and establishing services for medication reconciliation, review and feedback.

**Reference**

1. The Hindu | Polypharmacy

## Ocelot

## Why in News?

*Recently, fewer than 100 ocelots in the United States are feline species which are in the face of extinction.*

> *A **feline** is a member of the cat family Felidae, which includes lions, tigers, cheetahs, leopards, pumas, and lynxes.*

- **Ocelot** – It is a ***medium-sized wildcat***, which is twice the size of the average house cat.
- **Scientific Name** – Leopardus Pardalis.
- **Habitat** – Tropical and subtropical rainforests, mangrove swamps, savannas, semi-arid thorn scrub, brushlands, tree branches, or inside a hollow tree.
- **Distribution** – Found in ***Mexico, Central America and Northern Argentina in South America.***
- **Morphology** – It has *beautiful fur coats* covered with a pattern of rosettes, stripes & spots, and fur is golden with black or dark brown doughnut-shaped spots that are tan in the middle.
- Eyes have a layer that reflects light, the neck and belly are white, rounded ears, and a short tail ringed with black or black bars.



- **Sexual dimorphism –** Male is slightly lighter and longer than female.
- **Behaviour** – It is a typically *solitary and nocturnal cat*.
- It is a good swimmer, climber & jumper.
- They communicate with each other using body language, scent marking, and vocalizations.
- **Diet** – Feed on rabbits, rodents, iguanas, fish, frogs, crabs, snakes, lizards, baby peccaries, young deer, monkeys or birds.
- **Threats:**
    - Hunted for their fur or skins.

    - Human encroachment, large cities being built and roadways.
- **Conservation status**
    - **IUCN** – Least Concern.
    - **CITES** – Appendix I.(Species that are the most endangered).

*Ocelot subspecies, known as the Texas ocelot (Leopardus pardalis albescens), is endangered.*

**References**


1. The Hindu| Decrease in Ocelots Population in the US
2. National Geographic| Ocelot
3. SDZWA| Ocelot


## India's Road Safety Crisis

### Why in News?

*The Ministry of Road Transport and Highways declared January 2025 as Road Safety Month, calling on all stakeholders to collaborate to make roads safer.*

- **Road Safety Crisis** – With approximately 11.9 lakh global road fatalities annually and road traffic crashes being the 13th largest contributor to India's health burden "between" 2009-2019.
- **Public health concern** – Road safety has emerged as a critical public health concern requiring immediate attention.
- **Key risk factors** – One of the ways to reduce road traffic injuries is to focus on key risk factors, such as *speeding, not wearing helmet and seat belt, and drink driving*.
- **Economic impact** – According to a World Bank report, 75% of lower-income households and 57% of higher-income households reported *income decline following a crash.*
- **Measures taken** – The United Nations Decade of Action for Road Safety 2021-2030 *aims to halve road deaths globally by 2030*.
- India has aligned with this framework through various state-level initiatives.
- **Karnataka** – Alone accounted for 8.6% of India's road fatalities in 2022, with crash incidents increasing by 9%, fatal crashes by 7%, and grievous injuries by 18% in 2023 compared to the previous year.
- **Karnataka's Multi-Pronged Approach** – Karnataka has implemented a comprehensive strategy combining mass media campaigns with enhanced enforcement:
    - **December 2023** – Campaign addressing speeding through crash survivor stories, reaching an estimated 2.3 crore adult.
    - **January 2024** – Campaign focused on correct helmet usage.
    - **December 2024-January 2025** – Instructional campaign explaining crash science and speed impacts.
- The Karnataka model demonstrates *effective policy integration between public awareness and enforcement. Police* conducted targeted enforcement drives while

disseminating key messages at checkpoints and through social media.
- This approach echoes successful international models like Bogotá, Colombia, where similar strategies reduced speeding.
- **Measures needed** – Sustainable road safety improvement requires shifting cultural perceptions from viewing crashes as "unavoidable accidents" to "unacceptable tragedies."
- *Communication campaigns along with sound legislation and law* enforcement have the most influence.
- Studies suggest that even a *single, well-designed, evidence-based road safety campaign* can reduce crashes by 0.5%.

**Reference**

The Hindu | Road Safety Crises

## Pradhan Mantri Dakshta Aur Kushalta Sampann Hitgrahi (PM-DAKSH) Yojana

### Why in News?

*Union Minister of State for Social Justice and Empowerment has recently inaugurated the Skill Training Programme under PM-DAKSH Yojana, for Persons with Disabilities (Divyangjan) in Shillong.*

- **About** – A ***central sector scheme*** which was launched in 2020-21.
- **Objective** – To enhance competency level of the different target groups to make them employable both in self-employment and wage-employment for their socio-economic development.
- **Target groups**:
  - Scheduled Castes (SCs), Other Backward Classes (OBCs), De-notified Tribes (DNTs), Economically Weaker Sections (EWSs), Safai Mitras including Waste Pickers etc.
- **Ministry** – Ministry of Social Justice and Empowerment.
- **National Skill Qualification Framework (NSQF)** – Training is aligned with the NSQF and post-training support is provided for employment or self-employment opportunities.
- **Category of Skilling Programmes**
- **Up-skilling/Re-skilling** – Focused on enhancing existing skills.
- **Short Term Training Programs** – Designed for immediate employment opportunities.
- **Long Term Training Programs** – Aimed at providing in-depth skill development.
- **Entrepreneurship Development Programs** – Encouraging self-employment ventures.
- **Key benefits** – Training free of cost for the trainees, 100% grants by Government.
- *Stipend will be given to trainees* during the period of training.
- Trained candidates will be provided *certification* after successful completion of training and assessment.
- Trained candidates will be provided placement after assessment and certification.
- **Recent developments** – PM-DAKSH Scheme has benefited 1,87,305 individuals in

2023-2024.
- An independent *third-party evaluation* is planned to assess the "on-ground impact" before re-appraisal for the next Finance Commission cycle.
- Skilled Training Programme for Persons with Disabilities (Divyangjan) in Shillong was recently launched under PM-DAKSH Yojana.
- The programme was organised at Composite Regional Centre for Skill Development, Rehabilitation and Empowerment of Persons with Disabilities, Shillong.

**Reference**

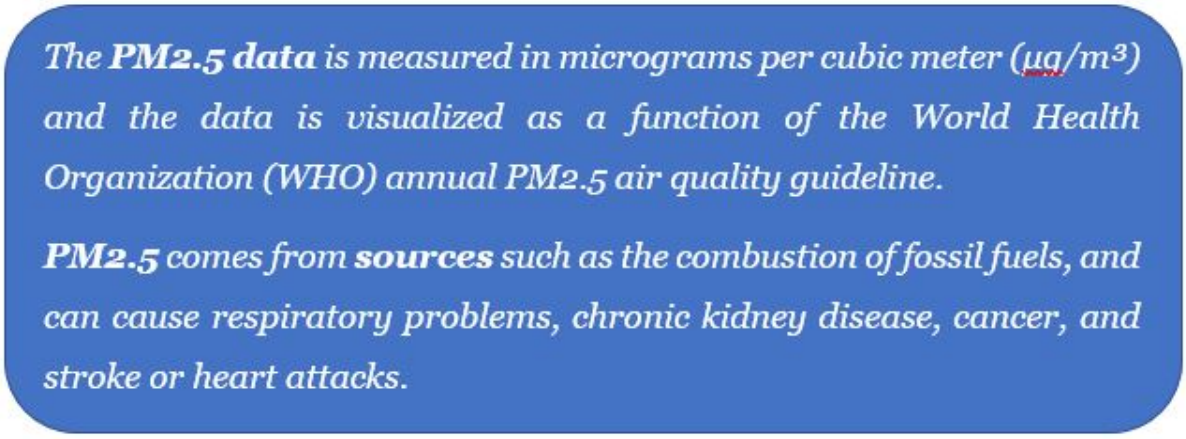
1. The Sentinel | PM DAKSH
2. My Scheme | PM DAKSH

## World Air Quality Report (WAQR), 2024

### Why in News?

*According to the recently released World Air Quality Report, 2024 13 out of world's 20 most polluted cities are in India.*

- **WAQR** – It is an *annual report*, which evaluates the global state of air quality from the previous year.
- It is a *comprehensive report presents PM2.5 air quality data* collected from 8,954 cities *across 138 countries*, regions and territories.




- **Released by** – IQAir, a Swiss Air Quality technology company.
- **5 µg/m3** – Is the recommended *average annual limit of PM2.5* by the World Health Organization's (WHO).

### Key Findings of the Report, 2024

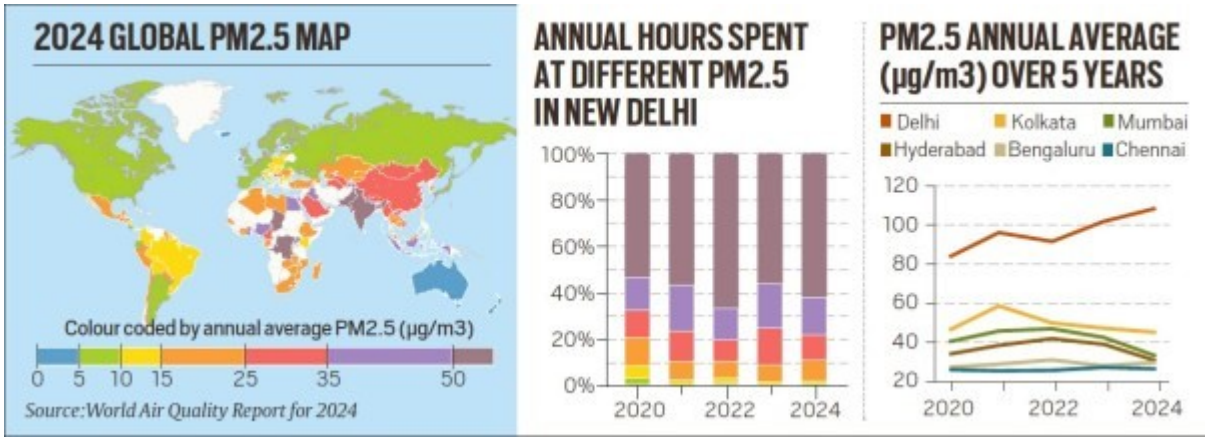
- **Global status** – *Only 17% of global cities* meet WHO air pollution guideline.
- *Only 12 countries*, regions and territories recorded PM2.5 concentrations below the WHO's recommended average annual limit of 5 µg/m3.
- **Oceania** – It is the ***world's cleanest region***, with 57% of regional cities meeting the WHO guideline.

**Based on WHO Annual PM2.5 Guideline**

| 7 Countries met Average Guideline | 5 Most Polluted Countries | Countries & Regions Exceeded Guideline |
|---|---|---|
| Australia<br>Bahamas<br>Barbados<br>Estonia<br>Grenada<br>Iceland<br>New Zealand | Chad<br>Bangladesh<br>Pakistan<br>Democratic Republic of Congo<br>**India** | 126 (91.3%) |
| The annual average PM2.5 concentrations of the % most polluted countries is 91.8 µg/m3, 78 µg/m3, 73.7 µg/m3, 58.2 µg/m3, and 50.6 µg/m3 respectively. | | |

## Key Findings of the Report, 2024 in India

- **India – *Byrnihat* (128.2 µg/m3) in meghalaya, *most polluted city in the world*.**
- **Delhi** – It continued to see high levels of pollution (91.6 µg/m3), which almost unchanged from 92.7 µg/m3 in 2023.
- **Top 5 polluted cities** – Rourkela, Nagpur, Nasik, Asansol and Gurugram.
- **Top 5 cleanest cities** – Varanasi, Prayagraj, Coimbatore, Bengaluru and Chennai.




### References


1. The Indian Express| World Air Quality Report, 2024
2. IQAir| World Air Quality Report Summary


## One Liners 12-03-2025

### History, Art and Culture

## National Archives of India (NAI)

*NAI celebrates its 135th Foundation Day with the inauguration of the exhibition "Indian Heritage through Architecture"*

• **Aim –** To make historical documents accessible to a wider audience.
• **Showcasing** – India's architectural legacy, covering ancient, medieval, Mughal, and colonial-era structures.
• **Displayed** – Official government files, personal papers of eminent personalities, UNESCO documents, and archaeological excavation records.
• **Launch of Gyan Bharatam Mission** – A visionary initiative to save and promote the heritage of the country's manuscripts.
• Announced in the Union Budget 2025-26.

# Geography

## Vadhavan Port on PPP Model

*Recently, Union Cabinet has approved the setting up of Major Port at Vadhavan, near Dahanu, in Maharashtra on PPP mode.*

• **PPP Framework** – Concessions for port terminals are granted via global bidding, with revenue-sharing agreements and assets revert to port authorities after tenure completion.
• **Major Ports** – India has 12 Major Ports governed by the Major Port Authorities Act, 2021,
• **Vadhavan Port Project** – Approved in June 2024, the Rs 76,220 crore project in Maharashtra will be developed under PPP model.

# Polity & Governance

## Prime Minister Dhan Dhaanya Krishi Yojna

*Recently, government has launched a programme to improve farmer's livelihood.*

• **Objective** – To help 1.7 crore farmers through enhanced agriculture productivity, improved irrigation facilities and facilitating long-term and short-term credit.
• **Implementation** – By converging other schemes and *cover 100 aspirational districts* with low productivity, moderate crop intensity and below average credit parameters.
• **Benefits** – Provides quality seeds, fertilizers, and chemicals to boost crop production.

## Rural Prosperity and Resilience Programme

*Recently, government has launched a comprehensive multi-sectoral rural programme.*

• **Purpose** – Launched in partnership with states to address under-employment in agriculture.
• **Key focus areas** – Skilling, investment, and technology to invigorate rural economy.
• Modernizing agriculture with improved productivity and warehousing.
• **Target beneficiaries** – Rural women, young farmers, marginal & small farmers and landless families.
• **Implementation strategy** – Adoption of global and domestic best practices, technical & financial assistance from multilateral development banks.
  - **Phase-1** – Cover 100 developing agri-districts.

## PLI scheme for Specialty Steel

*Recently, government has launched the second round of PLI scheme for Specialty Steel.*

• **Objective** – To strengthening domestic production, fostering innovation, and reducing imports.
• **Specialty steel** – It is a value-added steel wherein normal finished steel is worked upon by way of coating, plating and heat treatment.
• **Applications** – Used in defence, space, power, automobile, specialized capital goods etc.
• **Duration** – 2025-26 to 2029-30.

# Agriculture

## Soil Fertility Mapping

• **Soil Fertility Maps** – It provides detailed spatial information about the *nutrient composition, health and delineating* natural bodies of soils
• **Mapped by** – Soil & Land Use Survey of India (SLUSI) under Department of Agriculture & Farmers' Welfare.
• District/village-wise digital soil fertility mapping is done through ***geo-spatial techniques*** using Soil Health Card (SHC) data.
• **Geospatial techniques:**
  - Remote sensing
  - AI based tools.
• **Application** – It helps farmers in application of fertilizers and reducing the risk of overuse or underuse of fertilizers.

## AAHAR-2025

*Recently, Union Minister of Food Processing Industry inaugurated the AAHAR-2025 event.*
• **AAHAR-2025** – Advancing Food Safety and Innovation
• **Organized by** – Ministry of Food Processing Industries and NIFTEM-Kundli.
• **Objective** – To focus on innovations in food processing, machinery, packaging, safety, and regulatory frameworks, bringing together experts from various sectors.
• **Vision** – *At least one Made-in-India food product* on every global dining table.
• **Key Outcomes**:
  - Importance of aligning regulatory standards with global best practices
  - Integrating advanced technologies like Blockchain and AI for food safety
  - Fostering collaborations to enhance India's food processing sector.

# Science

## Preprints

*Preprints were gaining popularity due to its open-access.*
• **About** – A preprint is a *scientific paper shared publicly* before undergoing peer review in a journal.
• **Advantages** – It allows rapid dissemination of research, especially in urgent cases like COVID-19 or Pandemic Like situation , though quality varies.
• **Impact** – It promote open-access science but also raise concerns about the reliability of non-peer-reviewed studies.

## Polygraph

• **Polygraph** – It is also called a *lie-detector test*, is generally used during interrogation by police.
• **Working Mechanism** – Uses a pneumograph tube, blood pressure cuff, and electrodes to detect deviations linked to deception.
• **Significance** – Records physiological responses like blood pressure, pulse, respiration and skin conductivity during interrogations.
• **Reliability** – Scientifically *unreliable* and inadmissible in court.

# Miscellaneous

## 75/25 Initiative

*Recently, government unveiled the 75/25 initiative on World Hypertension Day on May 17, 2023.*
• **Aim** – To provide *standardized care to 75 million people* with Hypertension and Diabetes by December 2025.
• **Address Non-Communicable Diseases (NCDs)** – Such as hypertension, diabetes, oral cancer, breast cancer and cervical cancer.
• **Screening Drive** – A nationwide NCD screening campaign is launched to achieve 100% screening for individuals aged 30+ from Feb 20 to Mar 31, 2025.



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