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.

The **PM2.5 data** is measured in micrograms per cubic meter ($\mu g/m^3$) and the data is visualized as a function of the World Health Organization (WHO) annual PM2.5 air quality guideline.

PM2.5 comes from **sources** such as the combustion of fossil fuels, and can cause respiratory problems, chronic kidney disease, cancer, and stroke or heart attacks.

- **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.
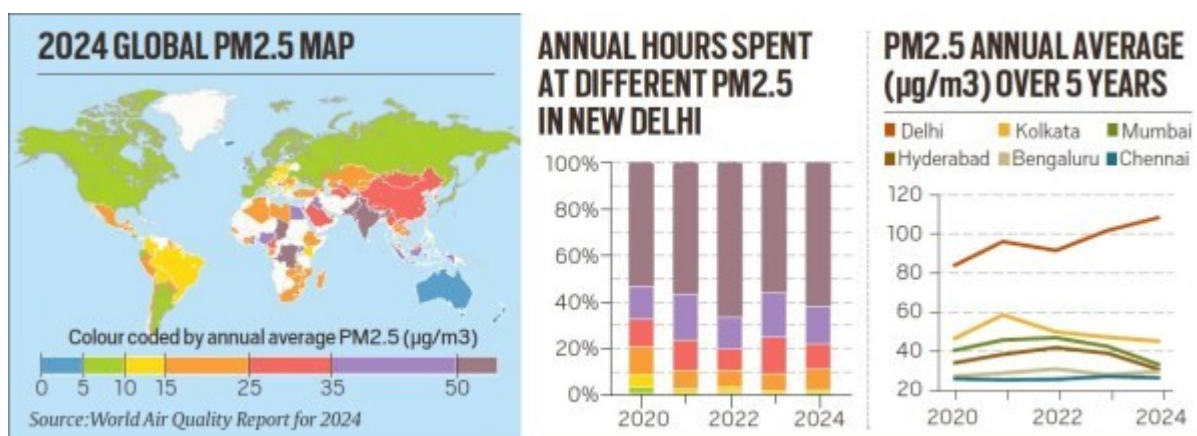- **Oceania** – It is the ***world's cleanest region***, with 57% of regional cities meeting the WHO guideline.

Based on WHO Annual PM2.5 Guideline

7 Countries met Average Guideline	5 Most Polluted Countries	Countries & Regions Exceeded Guideline
Australia Bahamas Barbados Estonia Grenada Iceland New Zealand	Chad Bangladesh Pakistan Democratic Republic of Congo **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.