



Parliamentary Privileges

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PARLIAMENTARY PRIVILEGES

Parliamentary privileges are special rights, immunities, and exemptions enjoyed by MPs, MLAs and their committees.

Constitutional Provision

- Article 105: For MP's
- Article 194: For MP's

Grants only civil immunity for statements or acts performed in course of duty.

Sources of Power

- Constitutional provisions
- Various laws made by Parliament
- Rules of both Houses
- Parliamentary conventions
- Judicial interpretations

Privileges of Individual Members

- Freedom of Speech** in Parliament
- MP/Committee **immune from legal proceedings** regarding statements or voting
- Immune from court proceedings** regarding publication of reports, papers, votes, or proceedings by either House of Parliament
- Courts prohibited from questioning Parliamentary proceedings validity due to **alleged procedural irregularities**
- Members **immune from arrest in civil cases** during a House or Committee meeting and 40 days before or after its session

Collective Privilege of House

- House has **right to be promptly informed about a Member's arrest**, detention, conviction, imprisonment, and release
- Immunity from arrest and service of legal process** within precincts of House without obtaining permission of Chairman/ Speaker
- Protection of publication of proceedings of secret sitting of House
- Evidence** presented to Parliamentary Committee, along with report and proceedings, **must remain confidential** until officially laid on House's Table
- Members/officers of the **House require House's permission to present documents or testify in court** regarding House proceedings

Important Judgements

- State of Kerala vs. K. Ajith Case (2021)** - SC emphasised that privileges and immunities should not be used to exempt individuals from the general criminal law applicable to all citizens
- In 2024, the 7-judge Constitution Bench overturned the 5-judge Bench decision in **P.V. Narasimha Rao v. State Case (1998)**, clarifying that the protection provided by Articles 105 and 194 of the Constitution do not extend to bribery cases

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Revamped Pharmaceuticals Technology Upgradation Assistance Scheme and UCPMP 2024

For Prelims: PTUAS Scheme, [PMPDS](#), [PLI scheme for Pharmaceuticals](#), Schedule M and WHO-GMP Standards

For Mains: Indian pharmaceutical industry, health, Government policies and interventions

Source: [PIB](#)

Why in News?

The **Department of Pharmaceuticals (DoP)**, Ministry of Chemicals and Fertilizers, announces the **Revamped Pharmaceuticals Technology Upgradation Assistance Scheme (RPTUAS)**.

- It aims to upgrade the technological capabilities of the pharmaceutical industry in alignment with global standards.
- Additionally, the DoP released the **Uniform Code for Pharmaceutical Marketing Practices (UCPMP) 2024**. The code aims to ensure responsible marketing practices and curb misleading promotional activities.

What are the Key Highlights of the RPTUAS?

- **Objective:**
 - The Department of Pharmaceuticals through RPTUAS aims to contribute to the growth of the pharmaceutical industry and ensure compliance with global manufacturing standards.
- **Key Features:**
 - **Broadened Eligibility Criteria:**
 - Expanded eligibility **beyond [Micro, Small, and Medium Enterprises \(MSMEs\)](#)** to include any pharmaceutical manufacturing unit with a turnover of less than Rs 500 crores.
 - Preference remains for MSMEs, supporting smaller players in achieving high-quality manufacturing standards.
 - **Flexible Financing Options:**
 - Introduces subsidies on a reimbursement basis, offering more flexibility than the traditional credit-linked approach.
 - **Comprehensive Support for Compliance:**
 - Supports a wide range of technological upgrades in line with revised **[Schedule-M](#)** and **[World Health Organization \(WHO\)- Good Manufacturing Practices \(GMP\)](#)** standards, including HVAC systems, testing laboratories, clean room facilities, etc.
 - **Dynamic Incentive Structure:**
 - Offers incentives based on turnover, ranging from 20%, 15%, and 10% of investment under eligible activities for turnovers less than Rs. 50.00 crore, Rs. 50.00 to less than Rs. 250.00 crore, and Rs. 250.00 to less than Rs. 500.00 crore, respectively.
 - **State Government Scheme Integration:**
 - Allows integration with state government schemes to provide additional top-up assistance.
 - **Enhanced Verification Mechanism:**
 - Implements a robust verification mechanism through a Project Management Agency to ensure transparency and accountability.

Pharmaceuticals Technology Upgradation Assistance (PTUAS) Scheme

- PTUAS helps drug companies upgrade their facilities to produce medicines that meet global standards. It was launched in July 2022.
- **Incentives under the Scheme:**
 - **Interest Subvention:**

- Up to a maximum of 5% per annum (6% for units owned and managed by [Scheduled Castes and Scheduled Tribes](#)) of interest subvention for the loan component eligible under the scheme, capped at Rs. 10 crore.
- This subsidy is applicable for a maximum period of 3 years on the reduced balance for loans sanctioned by [scheduled commercial banks /financial institutions](#), both in the public and private sectors.

What are the Revised Schedule M and WHO-GMP Standards?

- The Union Health Ministry's notification in January 2024 introduced revisions to **Schedule M of the Drugs and Cosmetics Rules, 1945**, focusing on robust quality control measures for pharmaceutical and biopharmaceutical products.
 - **Schedule M** prescribes **Good Manufacturing Practices (GMP)** for pharmaceutical products.
 - GMP was first incorporated in Schedule M of the Drugs and Cosmetics Rules, 1945 in the year 1988 and the last amendment was done in June 2005.
 - With the amendment, the words 'Good Manufacturing Practices' (GMP) have been replaced with 'Good Manufacturing Practices and Requirements of Premises, Plant and Equipment for Pharmaceutical Products'.
- The revised Schedule M emphasizes adherence to GMP and incorporates requirements for premises, plant, and equipment. This ensures alignment with the **World Health Organization (WHO) GMP Standards**.
 - GMP is the mandatory standard that builds and brings quality into a product by way of control on materials, methods, machines, processes, personnel, facility/environment, etc.
- The updated Schedule M introduces a **pharmaceutical quality system (PQS), quality risk management (QRM), product quality review (PQR)**, qualification and validation of equipment, and a computerised storage system for all drug products.

Recent Cases of Quality Issues in the Indian Medicines

- In December 2023 the data from the **Central Drugs Standard Control Organisation (CDSCO)**, shows that at least **6% of cough syrup samples from 54 Indian manufacturers failed a mandatory quality test for export**.
 - Gambia, Uzbekistan, Cameroon, and the World Health Organization (WHO) expressed concerns following the deaths of children who had taken these medications.
- **In April 2023, the US Centers for Disease Control and Prevention (CDC) and the Food and Drug Administration (USFDA) raised concerns over a drug-resistant bacteria strain allegedly linked to eye drops imported from India.**

What are the Key Provisions of UCPMP 2024?

- **Restrictions on Inducements:**
 - Medical representatives are **prohibited from using inducements** to gain access to healthcare professionals.
- **Prohibition of Payments and Gifts:**
 - Companies are barred from offering cash, monetary grants, or pecuniary benefits to healthcare professionals or their family members.
 - Pharmaceutical companies are forbidden from giving gifts or any pecuniary advantages to individuals qualified to prescribe or supply drugs.
- **Evidence-Based Claims:**
 - Claims about a **drug's usefulness must be supported by up-to-date evidence**, and terms like "safe" and "new" must be used appropriately.
- **Transparent CME Programs Only:**

- Pharmaceutical companies can only engage with healthcare professionals (HCPs) for Continuing Medical Education (CME) through well-defined, transparent, and verifiable guidelines.
- **Strict Compliance:**
 - The UCPMP will be circulated for strict compliance by all pharmaceutical companies and associations.
 - All associations must constitute an **Ethics Committee for Pharmaceutical Marketing Practices.**

Pharmaceutical Industry in India

- **Industry Scenario:**
 - The **Economic Survey 2022-23** mentions that India is ranked **3rd worldwide in the production of pharma products by volume and 14th by value.**
 - The Pharma Industry is expected to reach USD 130 Bn by 2030. India is a major exporter of Pharmaceuticals, with over 200+ countries served by Indian pharma exports.
 - The nation is the largest provider of **generic medicines globally**, occupying a 20% share in global supply by volume, and is the **leading vaccine manufacturer globally.**
 - India supplies over 50% of Africa's requirement for generics, 40% of generic demand in the US and 25% of all medicine in the UK.
 - India also accounts for approximately **60% of global vaccine demand.** 70% of WHO's vaccines are sourced from India.
- **Schemes Related to the Pharma Sector:**
 - [Promotion of Bulk Drug Parks Scheme.](#)
 - [Pharmaceutical & Medical Devices Promotion and Development Scheme \(PMPDS\).](#)
 - [Production-linked incentive \(PLI\) scheme for pharmaceuticals.](#)
 - [National Medical Device Policy 2023.](#)

UPSC Civil Services Examination, Previous Year Question (PYQ):

Mains:

Q. How is the Government of India protecting traditional knowledge of medicine from patenting by pharmaceutical companies? (2019)

Initiatives to Promote Sustainable Agriculture

For Prelims: Krishi Sakhi Convergence Programme, School Soil Health Programme, Geographic Information System, [Soil Health Card](#), [NABARD](#), [National Mission of Natural Farming](#)

For Mains: Sustainable Agriculture, Government policies and interventions for development in various sectors and issues arising out of their design and implementation

Source: [PIB](#)

Why in News?

In a significant stride towards revolutionising the agricultural sector and promoting sustainable farming practices, the Union Minister for Agriculture & Farmers and Union Minister for Rural Development jointly inaugurated four key initiatives in New Delhi.

- These initiatives, including the **Revamped Soil Health Card Portal & Mobile Application, School Soil Health Programme, Krishi Sakhi Convergence Programme (KSCP), and CFQCTI Portal for Fertilizer Sample Testing**, hold the promise of transforming the agricultural landscape of the country.

What are the Inaugurated Initiatives for Soil Health Management?

- **Revamped Soil Health Card Portal and Mobile Application:**
 - The [Soil Health Card](#) portal has been revamped and a mobile application has been introduced for soil sample collection and testing. The portal includes a **registry of soil labs with real-time status** and geo-coordinates mapping.
 - It also provides **real-time data on soil sample collection**, lab testing, and Soil Health Card generation.
 - The new portal features a centralised dashboard at national, state, and district levels, as well as [Geographic Information System \(GIS\) analytics](#).
 - The portal also includes features such as fertilizer management, a nutrient dashboard, and heat maps of nutrients.
 - The initiative allows for real-time monitoring of progress, automatic capture of geo-coordinates during sample collection, and registration of plot details.
- **School Soil Health Programme:**
 - The **Department of Agriculture & Farmers' Welfare (DA&FW)** in collaboration with the **Department of School Education and Literacy**, initiated a pilot project. This project involved the establishment of **20 soil laboratories in rural Kendriya and Navodaya Vidyalaya schools**.
 - Study modules and training were provided to students and teachers. A mobile application was customised for the school program, and the portal has a dedicated section for the program to document all student activities.
 - Under this program **school students will collect soil samples, and test them in school labs, and create Soil Health Cards**.
 - Students educate farmers on Soil Health Card recommendations, fostering critical thinking and practical learning.
 - The **Soil Lab Programme** also aims to instil a sense of responsibility and respect for the environment in students, teaching them about [sustainable agriculture](#) and the impact of human activities on soil health.
 - Now, this programme has been **scaled up in 1000 schools**. Kendriya Vidyalaya, Navodaya Vidyalaya and Eklavya Model Schools have been taken under this programme.
 - The DA&FW, in collaboration with the [National Bank for Agriculture and Rural Development \(NABARD\)](#), will set up soil labs in these schools.
- **Krishi Sakhi Convergence Programme (KSCP):**
 - A MoU between the **Ministry of Agriculture & Farmer Welfare and the Ministry of Rural Development** initiated the **KSCP**, which aims to transform rural India through the empowerment of Krishi Sakhi.
 - The programme includes a **Krishi Sakhis Training Programme** to certify 70,000 Krishi Sakhis as "**Para-Extension Workers**."
 - Krishi Sakhis are practising farmers and trained para-extension professionals. They serve as farmers' friends, guiding [Natural Farming](#) and **Soil Health Management**.
 - Krishi Sakhis play a pivotal role in implementing various schemes such as the [National Mission of Natural Farming \(NMNF\)](#) and the [Pradhan Mantri Fasal Bima Yojana \(PMFBY\)](#).
 - Certified Krishi Sakhis act as para-extension workers, facilitating awareness creation and capacity building among farmers.
 - They serve as a **link between farmers, [Krishi Vigyan Kendras \(KVKs\)](#)**, and the

Agriculture and Allied Departments.

- **Krishi Sakhis** receive training in agroecology, natural resource management, crop diversity, and health and nutritional security.
- They conduct awareness generation meetings on topics such as natural farming and soil health management.
- The programme has trained close to **3500 Krishi Sakhis** and is being implemented in 13 states, contributing to sustainable agriculture and rural development.
- Krishi Sakhis serve as catalysts for transformation, nurturing sustainable agriculture and reshaping rural India.

▪ **CFQCTI Portal:**

- The Central Fertilizer Quality Control and Training Institutes' (CFQCTI's) portal introduces facilities for **sample collection and testing, ensuring quality control in fertilizer management.**
- The portal facilitates the generation of OTP for sample verification, automatic allocation to labs, and issuance of analysis reports, streamlining the process of quality assessment.

What Impact Do These Initiatives Envisage?

▪ **Promotion of Sustainable Agricultural Practices:**

- These initiatives aim to promote sustainable agricultural practices, such as organic farming, to ensure **long-term environmental and economic benefits.**

▪ **Enhancement of Farmer Livelihoods:**

- By addressing concerns related to soil health, fertilizer quality, and agricultural sustainability, these initiatives seek to **enhance farmer livelihoods and improve their economic well-being.**

▪ **Credibility of Organic Farming:**

- Efforts to **enhance the credibility of organic farming** through initiatives like the Soil Health Card Portal and Krishi Sakhi Convergence Programme are expected to boost confidence in organic products and encourage their adoption.

▪ **Quality and Efficacy of Fertilizers:**

- Initiatives to address concerns related to the quality and **efficacy of fertilizers**, as seen in the CFQCTI Portal, aim to safeguard the interests of farmers by ensuring the use of reliable inputs.

What are the Concerns Regarding Soil Health in India?

▪ Soil and water are fundamental resources for sustenance, with over **95% of food originating from them.**

- The symbiotic connection between soil and water is crucial for agricultural systems and for achieving the [United Nations Agenda 2030](#).
- Current climatic changes and human activities are exerting excessive pressure on soil and water resources.

▪ In India, **around 50% of the country's net sown area is rainfed**, contributing to 40% of total food production.

▪ Soil health in India faces challenges such as **low nutrient levels, with an average soil organic carbon (SOC) of around 0.54%.**

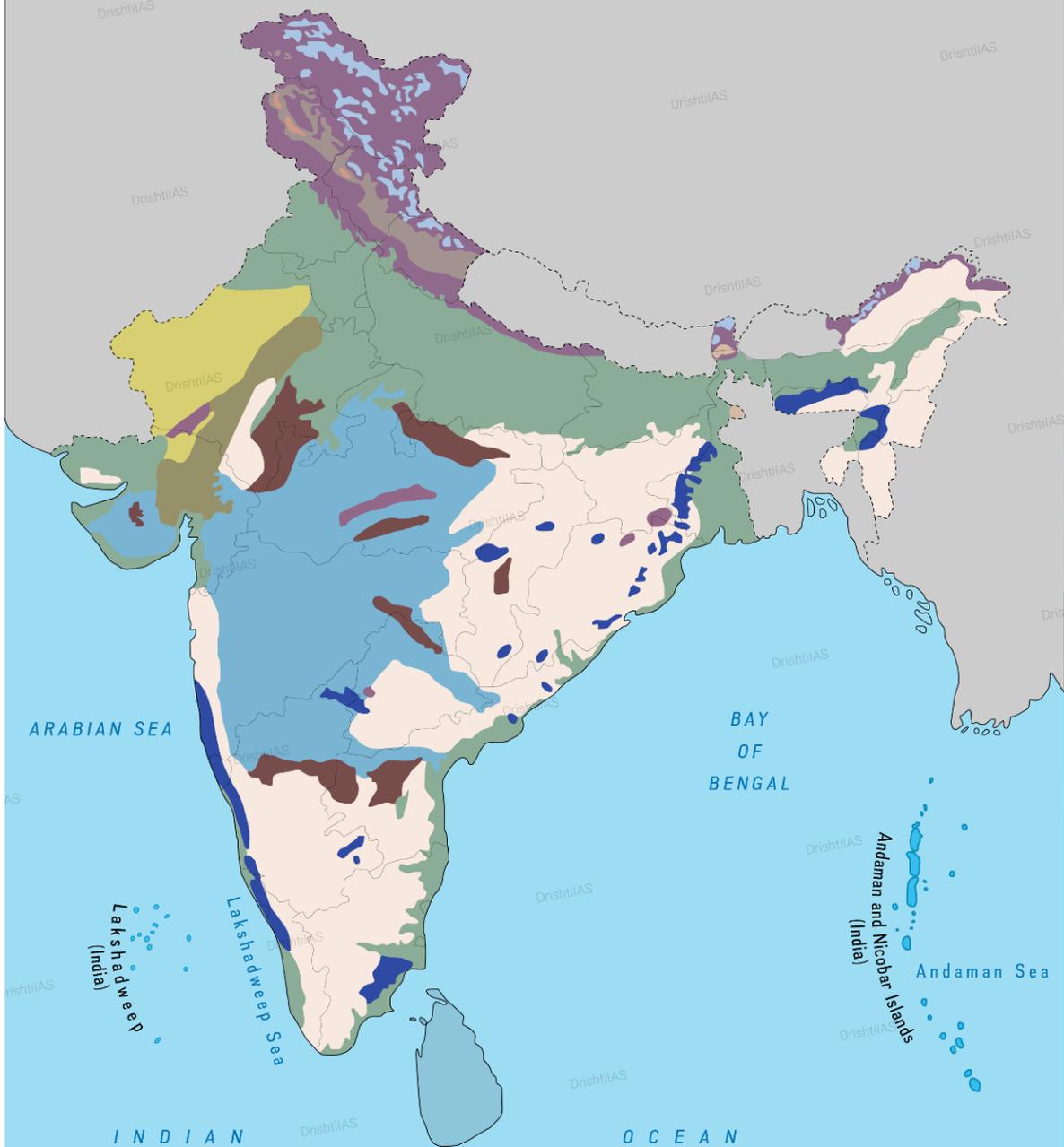
▪ **Land degradation** is a significant issue, with about **30% of the total geographical area affected**, leading to deficiencies in plant nutrients and impacting nutrition intake among the population.

▪ Nutrient depletions and deficiencies, along with inappropriate fertiliser application, result in declining productivity.

- Sustainable food production requires practices like adequate replenishment of nutrients, tailored fertiliser applications based on soil analyses, and increasing organic content in soil.

▪ India loses an estimated **3 billion tonnes of soil annually due to water and wind erosion.**

Types of Soil in India



Alluvial Soil (29.55%)	In the Upper and Middle Ganga plain, two different types of alluvial soils have developed, viz. Khadar and Bhangar.
Black Soil (19.62%)	It is also known as 'Regur Soil' or the 'Black Cotton Soil'.
Red Soil (19.62%)	The soil develops a reddish colour due to a wide diffusion of iron in crystalline and metamorphic rocks. It looks yellow when it occurs in a hydrated form.
Desert Soil (14.02%)	They are generally sandy in structure and saline in nature.
Laterite Soil (4.77%)	Laterites are not suitable for cultivation. Thus, are widely cut as bricks for use in house construction.
Mountain Soil	It is also known as 'Forest Soil'. They are loamy and silty on valley sides and coarse-grained in the upper slopes.
Snowfields	This soil is found under the snow and glaciers at the highest peak of the greater Himalayas, Karakoram, Ladakh, and Zaskar.
Grey and Brown Soil	Submontane Soil Red and Black Soil

Other Initiatives Related to Conserving Soil

- **Five-Pronged Programme of Soil Conservation:**

- India's five-pronged strategy for soil conservation which includes making soil chemical-free, saving soil biodiversity, enhancing soil organic matter, maintaining soil moisture, mitigating soil degradation, and preventing soil erosion.

- **Soil Health Card scheme:**

- The government of India's Soil Health Card scheme, launched in 2015, **displays soil health indicators and associated descriptive terms**, which guide farmers in making necessary soil amendments.

UPSC Civil Services Examination, Previous Year Questions (PYQs)

Prelims

Q1. The black cotton soil of India has been formed due to the weathering of

- (a) brown forest soil
- (b) fissure volcanic rock
- (c) granite and schist
- (d) shale and limestone

Ans: (b)

Q2. Which of the following statements regarding laterite soils of India are correct? (2013)

1. They are generally red in colour.
2. They are rich in nitrogen and potash.
3. They are well-developed in Rajasthan and UP.
4. Tapioca and cashew nuts grow well on these soils.

Select the correct answer using the codes given below:

- (a) 1, 2 and 3
- (b) 2, 3 and 4
- (c) 1 and 4
- (d) 2 and 3 only

Ans: (c)

Mains:

Q.1 How is science interwoven deeply with our lives? What are the striking changes in agriculture triggered off by science-based technologies? **(2020)**

Q.2 Sikkim is the first 'Organic State' in India. What are the ecological and economical benefits of Organic State? **(2018)**

Q. How far is Integrated Farming System (IFS) helpful in sustaining agricultural production? **(2019)**

Unemployment in India

For Prelims: [Periodic Labour Force Survey \(PLFS\)](#), National Sample Survey Office (NSSO), [Covid-19 pandemic](#), [Worker Population Ratio](#), [Labour Force Participation Rate](#).

For Mains: Unemployment in India, Major Issues Related to Unemployment in India.

Source: [MOSPI](#)

Why in News?

According to the [Periodic Labour Force Survey \(PLFS\)](#), conducted by the **National Sample Survey Office (NSSO)**, in 2023, India's unemployment rate has dropped significantly, marking the lowest in the past three years.

- The PLFS gives estimates of Key employment and unemployment Indicators like, the **Labour Force Participation Rates (LFPR)**, **Worker Population Ratio (WPR)**, **Unemployment Rate (UR)**, etc and the **Activity Status- 'Usual Status'** and **'Current Weekly Status'**.

Note

- **Labour Force Participation Rate (LFPR):** LFPR is defined as the percentage of persons in the labour force (**i.e. working or seeking or available for work**) in the population.
- **Worker Population Ratio (WPR):** WPR is defined as the percentage of employed persons in the population.
- **Unemployment Rate (UR):** UR is defined as the percentage of persons unemployed among the persons in the labour force.
- **Activity Status- Usual Status:** The activity status of a person is determined based on **the activities pursued** by the person during the specified reference period.
 - When the activity status is determined based on the reference period of the last 365 days preceding the date of the survey, it is known as the **usual activity status of the person**.
- **Activity Status- Current Weekly Status (CWS):** The activity status determined based on a **reference period of the last 7 days preceding the date of the survey** is known as the **CWS** of the person.

What are the Key Highlights of the Report?

- **India's Unemployment Rate:**
 - India's unemployment rate for individuals aged 15 and above has dropped to **3.1% in 2023**, marking the lowest in the past three years.
 - The unemployment rate was at **3.6% in 2022** and **4.2% in 2021**.
 - There is a decline in the **unemployment rate among females to 3% in 2023 from 3.3% in 2022** and 3.4% in 2021.
 - Similarly, for males, it decreased to 3.2% in 2023 from 3.7% in 2022 and 4.5% in 2021.
- **Recovery in Employment Scenario:**
 - There is a **recovery in the employment scenario** post the impact of the [Covid-19 pandemic](#), with increased economic activity after the lifting of lockdowns by the Centre and states.
- **Urban and Rural Unemployment:**

- Urban areas witnessed a **reduction to 5.2% in 2023** from 5.9% in 2022 and 6.5% in 2021, while **rural areas experienced a decrease to 2.4% in 2023** from 2.8% in 2022 and 3.3% in 2021.
- The LFPR in Current Weekly Status (CWS) for individuals **aged 15 and above in urban areas rose to 56.2% in 2023**, showing an upward trajectory from 52.8% in 2022 and 51.8% in 2021.
- **Economic Growth:**
 - This positive employment data comes on the heels of recent reports indicating India's economic **growth surging to 8.4% in the third quarter of 2023-24**.
 - Sectors such as manufacturing, mining & quarrying, and construction played a pivotal role in driving this growth, as per data released by the NSO.
 - The NSO's second advance estimate pegs India's growth at **7.6% for the entire fiscal year 2023-24**, surpassing the initial projection of 7.3% released in January 2024.

What is the Periodic Labour Force Survey?

- **About:**
 - The **National Statistics Office (NSO)** is conducting **PLFS** to produce **annual statistics of employment and unemployment** characteristics for both rural and urban areas, along with quarterly estimates for urban areas.
 - The first annual report based on the data collected in PLFS during July 2017- June 2018 was published in May 2019.
- **Objective of PLFS:**
 - To estimate the key employment and unemployment **indicators (viz. Worker Population Ratio, Labour Force Participation Rate, Unemployment Rate)** in the short time interval of **three months for the urban areas only in the 'Current Weekly Status' (CWS)**.
 - To estimate employment and unemployment **indicators in both 'Usual Status' and CWS in both rural and urban areas annually**.

What is Unemployment?

- **About:**
 - Unemployment refers to the **condition where individuals capable of working are actively seeking employment** but are unable to secure suitable jobs.
 - An unemployed person is someone who is part of the labour force, and possesses the requisite skills but currently lacks gainful employment.
 - Basically, an unemployed person is someone of **working age, jobless, able and available to work, and actively looking for a job**.
- **Measurement of Unemployment:**
 - The unemployment in the country is commonly calculated using the formula:
 - $$\text{Unemployment rate} = \left[\frac{\text{Number of Unemployed Workers}}{\text{Total Labour Force}} \right] \times 100.$$
 - Here, the 'total labour force' includes the employed and the unemployed. Those who are neither employed nor unemployed — students, for example— are not considered a part of the labour force.
- **Types of Unemployment:**
 - **Structural Unemployment:** Rooted in mismatches between the **skills possessed by the workforce and the requirements** of available positions, this form of unemployment highlights systemic issues within the labour market.
 - **Cyclical Unemployment:** Tied to economic cycles, this type escalates during economic downturns and diminishes during periods of expansion, showcasing the sensitivity of job availability to macroeconomic conditions.
 - **Frictional Unemployment/Transitional Unemployment:** Also called transitional unemployment, arising from the natural transition between jobs, this type reflects the temporary period individuals spend searching for new employment opportunities.
 - **Underemployment:** While not strictly unemployment, this concept pertains to individuals employed in positions that underutilize their skills or provide insufficient working hours, contributing to a sense of economic inefficiency.
 - **Hidden Unemployment:** Refers to individuals who are not actively seeking employment

due to discouragement or other factors but could potentially enter the job market if conditions improve.

- **Disguised Unemployment:** It arises because more labourers work in the factory/land than are required. Hence productivity i.e., **production per unit of labour will be less.**

What are the Major Causes of Unemployment in India?

- **Population Size:**
 - India's substantial population amplifies the **competition for employment** opportunities, putting additional pressure on the job market.
 - Managing this demographic challenge **necessitates a comprehensive approach to economic development** and job creation.
- **Skills Mismatch:**
 - A predominant cause, where the **skills possessed by the workforce may not align with the evolving demands** of the job market. Addressing this issue requires initiatives focused on enhancing education and vocational training programs.
- **Informal Sector Dynamics:**
 - The prevalence of the informal sector introduces complexities in tracking and addressing unemployment. Efforts **to formalise and regulate this sector** can contribute to a more accurate representation of employment conditions.
- **Policy Implementation Challenges:**
 - Well-intentioned policies may face challenges in effective implementation, impacting their ability to generate employment. **Streamlining policy execution** and ensuring alignment with ground realities are imperative.
- **Global Economic Factors:**
 - Influences from the global economy, such as **trade dynamics and geopolitical shifts, can impact India's employment scenario.** Crafting policies that enhance economic resilience to external factors is essential.

What are the Government's Initiatives Related to Employment?

- [Support for Marginalized Individuals for Livelihood and Enterprise \(SMILE\)](#)
- [PM-DAKSH \(Pradhan Mantri Dakshta Aur Kushalta Sampann Hitgrahi\)](#)
- [Mahatma Gandhi National Rural Employment Guarantee Act \(MGNREGA\)](#)
- [Pradhan Mantri Kaushal Vikas Yojana \(PMKVY\)](#)
- [Start Up India Scheme](#)
- [Rozgar Mela](#)
- [Indira Gandhi Urban Employment Guarantee Scheme- Rajasthan.](#)

Way Forward

- Aligning education with the current market demands by updating curricula to impart relevant skills, **emphasising vocational training, and promoting lifelong learning** to enhance employability.
- Fostering a conducive environment for startups by providing financial incentives, reducing bureaucratic hurdles, and offering mentorship programs to encourage entrepreneurship.
- Formulating and implementing policies that promote job creation, including investment in infrastructure, industry-friendly regulations, and fiscal incentives for businesses generating employment.

UPSC Civil Services Examination, Previous Year Questions (PYQs)

Prelims

Q. Disguised unemployment generally means (2013)

- (a) large number of people remain unemployed
- (b) alternative employment is not available
- (c) marginal productivity of labour is zero
- (d) productivity of workers is low

Ans: (c)

Mains

Q. Most of the unemployment in India is structural in nature. Examine the methodology adopted to compute unemployment in the country and suggest improvements. (2023)

Coral Bleaching in Great Barrier Reef

For Prelims: [Coral Bleaching](#), [Great Barrier Reef](#), [El Nino](#), [UNESCO World Heritage site](#)

For Mains: Implications of coral bleaching on marine biodiversity, Climate Change

Source: DTE

Why in News?

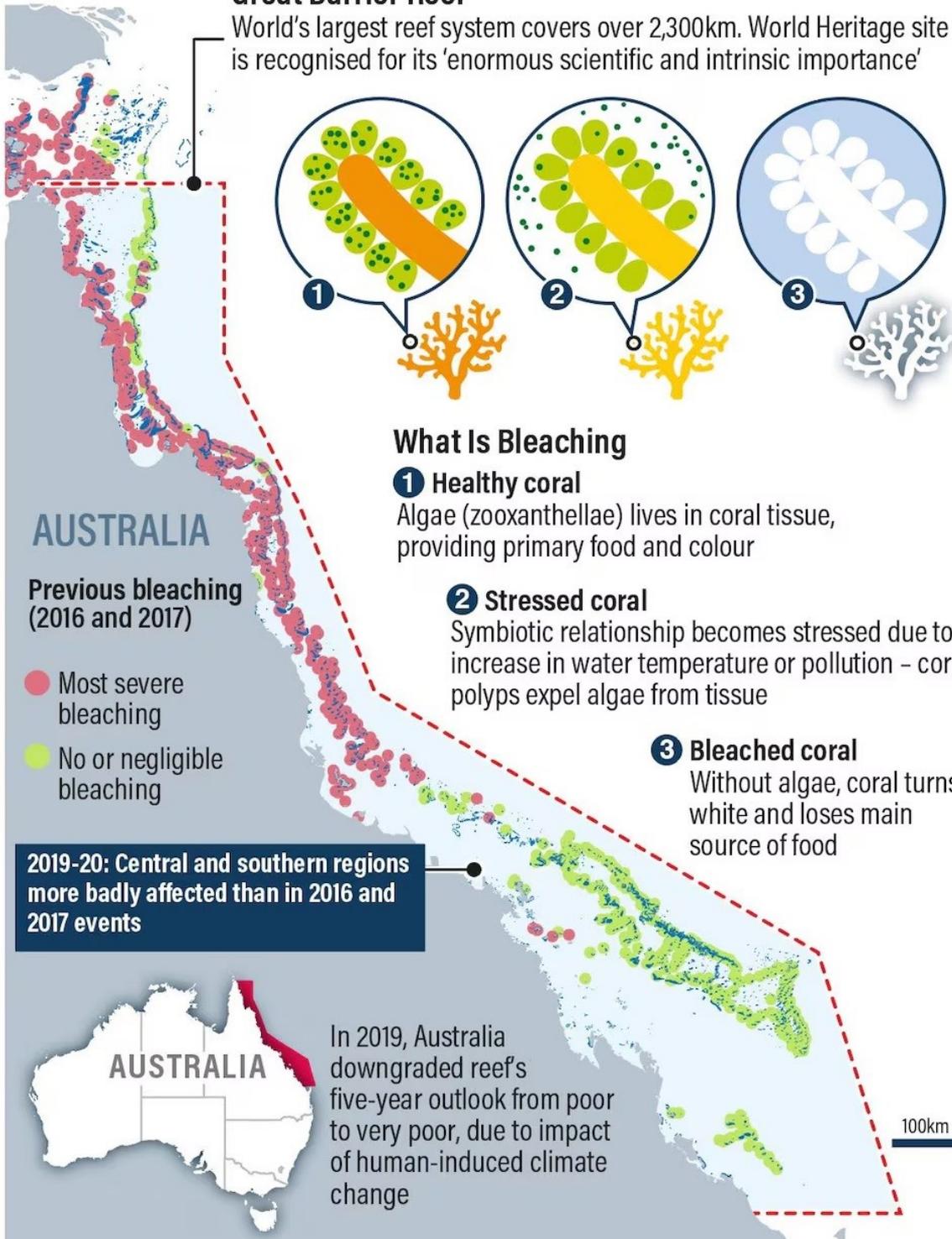
Recent aerial surveys conducted by Australian authorities confirm widespread **coral bleaching** across **two-thirds of the Great Barrier Reef (GBR)**, signalling a dire threat exacerbated by **climate change**. Urgent action is needed to mitigate the impacts and protect this vital marine ecosystem.

Great Barrier Reef (GBR)

- The GBR is the **world's largest coral reef system**. It's located in the Coral Sea off the coast of Queensland, Australia.
 - The GBR stretches across 2,300 km and is made up of around 3,000 individual reefs and 900 islands.
- The GBR is home to 400 types of coral, and 1,500 species of fish. It's also home to endangered species such as the **dugong** and the large green turtle. The **GBR is a UNESCO World Heritage site** and was inscribed in 1981.
 - In 2023, the UNESCO Heritage Committee **refrained from listing Australia's Great Barrier Reef as a site "in danger"** but warned that the world's biggest coral reef ecosystem remained under **"serious threat" from pollution and the warming of oceans**.
- Widespread mass bleaching of the Great Barrier Reef was first seen in 1998 and happened again in 2002, 2016, 2017, 2020, 2022 and now in 2024.

Great Barrier Reef

World's largest reef system covers over 2,300km. World Heritage site is recognised for its 'enormous scientific and intrinsic importance'



What Factors are Contributing to the Coral Bleaching in GBR?

▪ Temperature Stress:

- Warmer water temperatures can trigger coral bleaching, causing corals to expel the **algae (zooxanthellae) living** in their tissues and turn white.
 - Above-average sea surface temperatures over an extended period have led to significant **heat stress on the reef**, exacerbating the bleaching phenomenon.
- Bleached coral isn't dead, but weakened and susceptible to starvation and disease. Persistent stress can lead to coral death.

- **Climate Change Impact:**
 - Rising ocean temperatures, exacerbated by **climate change**, increase coral **susceptibility to stress and mortality**, leading to widespread bleaching events globally due to [El Niño conditions](#).
- **Other Environmental Stressors:**
 - Cold water temperatures, pollution, runoff, and extreme low tides can also induce coral bleaching, highlighting the **multifaceted nature of this phenomenon**.
- **Algae Relationship:**
 - Coral bleaching occurs when the **symbiotic relationship between corals and algae is disrupted**, impacting the corals' food source and making them vulnerable to disease.

What are the Implications of Coral Bleaching?

- **Ecological Impact:**
 - Coral reefs (also called **Rainforest of seas**) are vital ecosystems that support a diverse range of marine life. Coral bleaching can lead to the **loss of habitat and biodiversity, affecting fish populations, marine plants**, and other organisms that depend on coral reefs for survival.
- **Economic Consequences:**
 - Coral reefs are important for **coastal protection, tourism, and fisheries**. **Coral reef ecosystems provide society with resources and services worth USD 375 billion per year**. The degradation of coral reefs due to bleaching can have economic repercussions, impacting **industries such as tourism and fishing, which rely on healthy reef ecosystems**.
- **Food Security:**
 - Coral reefs provide food and livelihoods for millions of people worldwide. Coral bleaching threatens the **availability of seafood and can disrupt the livelihoods of communities** dependent on fishing and reef-related tourism.
- **Climate Change Indicator:**
 - Coral bleaching serves as a **visible indicator of climate change** impacts on marine ecosystems.
- **Loss of Ecosystem Services:**
 - Coral reefs provide essential ecosystem services, including shoreline **protection, nutrient cycling, and [carbon sequestration](#)**.
 - Bleaching diminishes the ability of reefs to provide these services, affecting the overall health of marine ecosystems and coastal communities.

Coral Reefs

(Rainforests of the seas)



About

- ✦ **Large underwater structures** – made of skeletons of **colonial marine invertebrates** ‘coral’ – individually called **polyp**
- ✦ **Symbiotic** Relationship with **algae** ‘**zooxanthellae**’ (responsible for beautiful colours of corals)
- ✦ Support over 25% of marine biodiversity

Hard Corals vs Soft Corals

- ✦ **Hard Corals** - Rigid skeleton **made of CaCO_3** - **reef-building** corals
- ✦ **Soft Corals** - Non reef-building

Great Barrier Reef (Australia)

- ✦ Largest Coral Reef in the World
- ✦ World Heritage Site (1981)
- ✦ Endures Mass Coral Bleaching



Corals in India

- ✦ Present in the areas of Gulf of Kutch, Gulf of Mannar, Andaman & Nicobar, Lakshadweep Islands and Malvan



Significance

- ✦ Coral reefs **protect coastlines from storms/erosion**, provide jobs, offer opportunities for recreation
- ✦ Source of **food/medicines**

Threats

- ✦ **Natural:** Temperature, Sediment Deposition, Salinity, pH, etc.
- ✦ **Anthropogenic:** Mining, Bottom Fishing, Tourism, pollution, etc.

Coral Bleaching

- ✦ Corals under stress - expel algae – thus turning white (bleached)
- ✦ Bleached corals - not dead – but, more risk of starvation/disease



Initiatives to Protect Corals

Technology

- ✦ **Cyromesh:** Storage of the coral larvae at (-196°C) - Can be later reintroduced to the wild
- ✦ **Biorock:** Creating artificial reefs on which coral can grow rapidly



Global

- ✦ International Coral Reef Initiative
- ✦ The Global Coral Reef R&D Accelerator Platform

Indian

National Coastal Mission Programme



UPSC Civil Services Examination, Previous Year Question (PYQ)

Prelims

Q. 1 "Biorock technology" is talked about in which one of the following situations?

- (a) Restoration of damaged coral reefs
- (b) Development of building materials using plant residue
- (c) Identification of areas for exploration/extraction of shale gas
- (d) Providing salt licks for wild animals in forests/protected areas

Ans: (a)

Q.2 Consider the following statements: (2018)

1. Most of the world's coral reefs are in tropical waters.
2. More than one-third of the world's coral reefs are located in the territories of Australia, Indonesia and Philippines.
3. Coral reefs host far more number of animal phyla than those hosted by tropical rainforests.

Which of the statements given above is/are correct?

- (a) 1 and 2 only
- (b) 3 only
- (c) 1 and 3 only
- (d) 1, 2 and 3

Ans: (d)

Q.3 Which of the following have coral reefs? (2014)

1. Andaman and Nicobar Islands
2. Gulf of Kachchh
3. Gulf of Mannar
4. Sunderbans

Select the correct answer using the code given below:

- (a) 1, 2 and 3 only
- (b) 2 and 4 only
- (c) 1 and 3 only
- (d) 1, 2, 3 and 4

Ans: (a)

Mains

Q. Assess the impact of global warming on the coral life system with examples. (2019)

Human-Animal Conflict

For Prelims: Human-Animal Conflict, [Wildlife Protection Act, 1972](#), [State Disaster Management Authority \(SDMA\)](#), [The Biological Diversity Act, 2002](#).

For Mains: Human-Animal Conflict, Issues of Human-Wildlife Conflict and Solutions.

Source: [IE](#)

Why in News?

Amid repeated deaths from animal attacks and rising anger over them, Kerala has declared the [Human-Animal Conflict](#) as a **state-specific disaster**.

- This declaration signals a significant shift in how the government addresses this pressing issue, altering the responsibilities and authorities involved.

How State Handle Human-Animal Conflict as a State-Specific Disaster?

Aspect	Current Management	Proposed Change (State Specific Disaster)
Responsibility	Forest department under the Wildlife Protection Act, 1972 .	State disaster management authority under the Disaster Management Act
Decision Making Authority	Chief Wildlife Warden	State Disaster Management Authority (Chief Minister at State Level)
District Level Authority	District Collector as the executive magistrate	District Collector as a Chairperson of District Disaster Management Authority
Intervention Capability	Limited by Wildlife Protection Act	Enhanced powers to take decisive actions under Disaster Management Act 2005
Judicial Oversight	Decisions may be questioned in court under wildlife laws	Limited judicial interference due to provisions of Disaster Management Act
Jurisdiction of Courts	Courts can entertain suits under relevant wildlife laws	Only the Supreme Court or High Court can entertain suits related to actions under Disaster Management Act, 2025 (Section 71) .
Norms Override Capability	Limited under Wildlife Protection Act	Authority to override other norms, including wildlife laws, during the declared disaster period (Under Section 72)

- As per **section 71 of the Disaster Management Act, no court** (except the Supreme Court or a High Court) **shall have jurisdiction to entertain any suit** or proceeding in respect of anything done by relevant authorities in pursuance of any power conferred by this Act.
 - Section 72 of the Act says that the provisions of **this Act will have an overriding effect on any other law during the specific period** that a disaster has been declared.

▪ **Other State-Specific Disasters:**

- In 2015, Odisha declared **snakebite a state-specific disaster**.
- In 2020, Kerala declared [Covid-19 as a state specific disaster](#).
 - Besides, **heat waves, sunburn and sunstroke** have been declared so in 2019, the phenomenon of **soil piping** in 2017, and [lightning](#) and [coastal erosion in 2015](#).

What is Human-Animal Conflict?

▪ **About:**

- Human-animal conflict refers to situations where human activities, such as agriculture, infrastructure development, or resource extraction, come into conflict with wild animals, leading to negative outcomes for both humans and animals.

▪ **Implications:**

- **Economic Losses:** Human-animal conflict can result in **significant economic losses for people**, especially farmers and livestock herders. Wild animals can destroy crops, damage infrastructure, and kill livestock, leading to financial hardship.
- **Threats to Human Safety:** Wild animals can pose a **threat to human safety**, especially in areas where people and wildlife coexist. Attacks by large predators such as lions, tigers, and bears can result in serious injury or death.
- **Ecological Damage:** Human-animal conflict can have a negative impact on the environment. For example, when humans kill predators, it can lead to an **increase in prey populations**, which can then cause ecological imbalances.
- **Conservation Challenges:** Human-animal conflict can also pose a challenge to conservation efforts, as it can lead to negative perceptions of wildlife and make it difficult to implement conservation measures.
- **Psychological Impacts:** Human-animal conflict can also have psychological impacts on people, **especially those who have experienced attacks or property damage**. It can lead to fear, anxiety, and trauma.

What Strategies Can be Implemented to Mitigate Human-Animal Conflict?

▪ **Habitat Management:**

- Protecting and **restoring natural habitats for wildlife** can reduce their need to encroach on human settlements in search of food and shelter.
- This can **involve creating wildlife** corridors, establishing protected areas, and implementing sustainable land-use practices.

▪ **Crop Protection Measures:**

- Implementing techniques such as **fencing, scare devices, and crop diversification** can help protect **crops from wildlife damage**, reducing economic losses for farmers.

▪ **Early Warning Systems:**

- Developing and **deploying early warning systems**, such as alerting communities about the presence of wildlife nearby, can help prevent human-wildlife conflicts and mitigate threats to human safety.

▪ **Community Engagement and Education:**

- Educating local communities about **coexisting with wildlife**, raising awareness about the **importance of conservation**, and providing training in conflict resolution techniques can foster greater understanding and tolerance toward wild animals.

▪ **Conflict Resolution Mechanisms:**

- Setting up conflict resolution mechanisms, such as **wildlife conflict response teams or hotlines**, can facilitate timely interventions and minimise conflicts between humans and animals.

What are the Government Measures to Tackle Human-Animal Conflict?

- **[The Wildlife Protection Act, 1972:](#)** The act provides the legal framework for the activities, Prohibition of hunting, Protection and management of wildlife habitats, and establishment of protected areas etc.

- **The Biological Diversity Act, 2002:** India is a part of the [United Nations Convention on Biological Diversity](#). It ensures that the Biological Diversity Act **complements rather than contradicts** existing laws concerning forests and wildlife.
- **National Wildlife Action Plan (2002-2016):** It focuses on strengthening and enhancing the protected area network, on the conservation of Endangered wildlife and their habitats, on controlling trade in wildlife products and on research, education, and training.
- **Project Tiger:** [Project Tiger](#) is a **Centrally Sponsored Scheme**, launched in 1973. It provides havens for tigers in the country's national parks.
- **Project Elephant:** It is a centrally sponsored scheme and was launched in February 1992 for the protection of elephants, their habitats and corridors.
- **National Disaster Management Authority (NDMA):** It lays down guidelines to be followed by different Ministries or Departments of Central Government for the purpose of integrating **measures for disaster prevention or mitigation of its effects** in their development plans and projects



HUMAN-WILDLIFE CONFLICT



When encounters between humans and wildlife lead to negative results, such as loss of property, livelihoods, and even life

Causes of HWC

- Agricultural Expansion
- Urbanization
- Infrastructure Development
- Climate Change
- Wildlife Populations Growth and Range Expansion

Impacts of HWC

- Grave injuries, Loss of life
- Damage to farms and crops
- ↑ violence against animals

WWF India during 2003-2004 developed the Sonitpur Model by which community members were connected with Assam Forest Dept and given training on how to drive elephants away from crop fields and human habitations safely.

In 2020, the SC upheld Madras HC's decision on the Nilgiris elephant corridor, affirming the right of passage of the animals and closure of resorts in the area.

Data on HWC

- Tigers killed 125 humans between 2019 and 2021
- Death of 329 tigers due to poaching, natural and unnatural causes.
- Elephants killed 1,579 humans in three years
- Death of 307 elephants due to poaching, electrocution, poisoning and train accidents

Advisory for HWC Management (Standing Committee of the National Board of Wildlife)

- Gram Panchayats empowered to deal with problematic wild animals (WPA 1972)
- Compensation against crop damage due to HWC (PM Fasal Bima Yojna)
- Local/State depts. to adopt early warning systems and create barriers
- Paying a part of ex-gratia as interim relief within 24 hours of the incident to the victim/family

State – Specific Initiatives

- **UP** - Man-animal conflict under **listed disasters** (in State Disaster Response Fund)
- **Uttarakhand** - **Bio-fencing** carried out by growing various species of plants in areas
- **Odisha** - Casting **seed balls** inside different forests to **enrich food stock for wild elephants**



UPSC Civil Services Examination Previous Year Question (PYQ)

Prelims:

Q. Consider the following statements in respect of Trade Related Analysis of Fauna and Flora in Commerce (TRAFFIC): (2017)

1. TRAFFIC is a bureau under United Nations Environment Programme (UNEP).
2. The mission of TRAFFIC is to ensure that trade in wild plants and animals is not a threat to the conservation of nature.

Which of the above statements is/are correct?

- (a) 1 only
- (b) 2 only
- (c) Both 1 and 2
- (d) Neither 1 nor 2

Ans: (b)

Exp:

- Trade Related Analysis of Fauna and Flora in Commerce (TRAFFIC), the wildlife trade monitoring network, is a joint program of World Wide Fund for Nature (WWF) and IUCN – the International Union for Conservation of Nature. It was founded in 1976. It is not a bureau under UNEP. Hence, statement 1 is not correct.
- TRAFFIC works to ensure that trade in wild plants and animals is not a threat to the conservation of nature. Hence, statement 2 is correct.
- TRAFFIC focuses on leveraging resources, expertise and awareness of the latest globally urgent species trade issues such as tiger parts, elephant ivory and rhino horn. Large scale commercial trade in commodities like timber and fisheries products is also addressed and linked to work on developing rapid results and policy improvements. Therefore, option (b) is the correct answer.

Mains:

Q.1 Discuss the recent measures initiated in disaster management by the Government of India departing from the earlier reactive approach. **(2020)**

Q.2 With reference to National Disaster Management Authority (NDMA) guidelines, discuss the measures to be adopted to mitigate the impact of the recent incidents of cloudbursts in many places of Uttarakhand. **(2016)**

India's 5G Fighter Aircraft and LCA Tejas

Source: IE

Why in News?

The **Cabinet Committee on Security (CCS)** approved a Rs 15,000 crore project to design and develop India's **fifth-generation fighter** multirole jet, the **Advanced Medium Combat Aircraft (AMCA)**.

- In a related incident, a Court of Inquiry has been initiated to investigate the cause of an Indian Air Force Light Combat Aircraft (LCA) Tejas crash during an operational training sortie in Rajasthan.

What are the Fifth-generation Fighter Jets?

- **About:**
 - **Fifth-generation (5G) fighters** are aircraft capable of operating in **heavily contested combat zones**, characterised by the presence of the most advanced air and ground threats, both current and anticipated.
 - 5G fighter jets have **stealth capabilities** and can **cruise** at **supersonic speeds** without engaging afterburners.
 - It stands out from fourth-generation (4G) peers due to its **multi-spectral low-observable design**, self-protection, radar jamming capabilities, and integrated avionics.
 - **5G jets** are possessed by **Russia (Sukhoi Su-57)**, **China** (Chengdu J-20), and the **US**

(F-35).

▪ **Need for India:**

- The IAF currently **has around 30 fighter squadrons** against the **sanctioned strength of 42**.
 - The squadrons of MiG-21s, MiG-29s, Jaguars, and Mirage 2000s are scheduled to be phased out by the middle of the next decade.
- India must enhance its air defences against **China and Pakistan**, with China possessing 3,304 aircraft, while India and Pakistan have 2,296 and 1,434 aircraft, respectively.
- India aims to **enhance its self-sufficiency in defence**, focusing on strengthening its air force and replacing ageing aircraft, albeit with the recognition that acquiring fighter jets and other equipment is a time-consuming process.
- India is developing the **Advanced Medium Combat Aircraft (AMCA)**, with five prototypes to be collaboratively manufactured by **ADA, HAL, and private industries**, building on the success of the [LCA Tejas](#).
 - Once it acquires these fifth-generation fighters, India will join a select group comprising the **US, Russia, and China**.

What are the Features of Advanced Medium Combat Aircraft (AMCA)?

- **Nodal Agency:** The [Aeronautical Development Agency \(ADA\)](#) under the [Defence Research and Development Organisation \(DRDO\)](#) will be the **nodal agency** for executing the programme and designing the aircraft.
 - **Manufactured By: State-owned Hindustan Aeronautics Limited (HAL).**
- **Features:**
 - **Stealth:** The **25-tonne twin-engine aircraft** is set to surpass current Indian Air Force fighters in size, and will feature **advanced stealth to outmatch global 5G stealth fighters**.
 - **Fuel and Weapon:** The aircraft will have a **large, concealed internal fuel tank** of 6.5-tonne capacity, and an **internal weapons bay** for a range of weapons, including indigenous weapons.
 - **Engine:** The **AMCA Mk1** will feature the **US-built GE414 engine** (90 kilo Newton class), while the more advanced **AMCA Mk2** will use a more powerful **110 kN engine** developed by **DRDO's-Gas Turbine Research Establishment (GTRE)** in collaboration with a foreign defence major.
- **Development Timeline:** The **ADA** aims for the **aircraft's first flight in 4-5 years**, with full development expected to take around 10 years; five prototypes will precede HAL's manufacturing, involving the private industry.

What are the Features of Light Combat Aircraft (LCA) Tejas?

- **About:**
 - The [Light Combat Aircraft \(LCA\) programme](#) was started by the Government of India in 1984 when they established the ADA to manage the LCA programme.
 - It replaced the ageing Mig 21 fighter planes.
- **Designed by:**
 - ADA under the [Department of Defence Research and Development](#).
- **Manufactured by:**
 - State-owned Hindustan Aeronautics Limited (HAL).
- **Features:**
 - The **lightest, smallest, and tailless** multi-role supersonic fighter aircraft in its class.
 - Designed to carry a range of **air-to-air, air-to-surface**, precision-guided, weapons.
 - Air-to-air refueling capability.
 - Maximum payload capacity of 4000 kg.
 - It can attend the **maximum speed of Mach 1.8**.
 - The range of the aircraft is 3,000km
- **Variants of Tejas:**
 - **Tejas Trainer:** 2-seater operational conversion trainer for training air force pilots.
 - **LCA Navy:** Twin- and single-seat carrier-capable for the Indian Navy.
 - **LCA Tejas Navy MK2:** This is phase 2 of the LCA Navy variant.

- **LCA Tejas Mk-1A:** This is an improvement over the LCA Tejas Mk1 with a higher thrust engine.

UPSC Civil Services Examination, Previous Year Question:

Prelims

Q. Which one of the following is the best description of 'INS Astradharini', that was in the news recently? (2016)

- (a) Amphibious warfare ship
- (b) Nuclear-powered submarine
- (c) Torpedo launch and recovery vessel
- (d) Nuclear-powered aircraft carrier

Ans: (c)

Q. In the context of the Indian defence, what is 'Dhruv'? (2008)

- (a) Aircraft-carrying warship
- (b) Missile-carrying submarine
- (c) Advanced light helicopter
- (d) Intercontinental ballistic missile

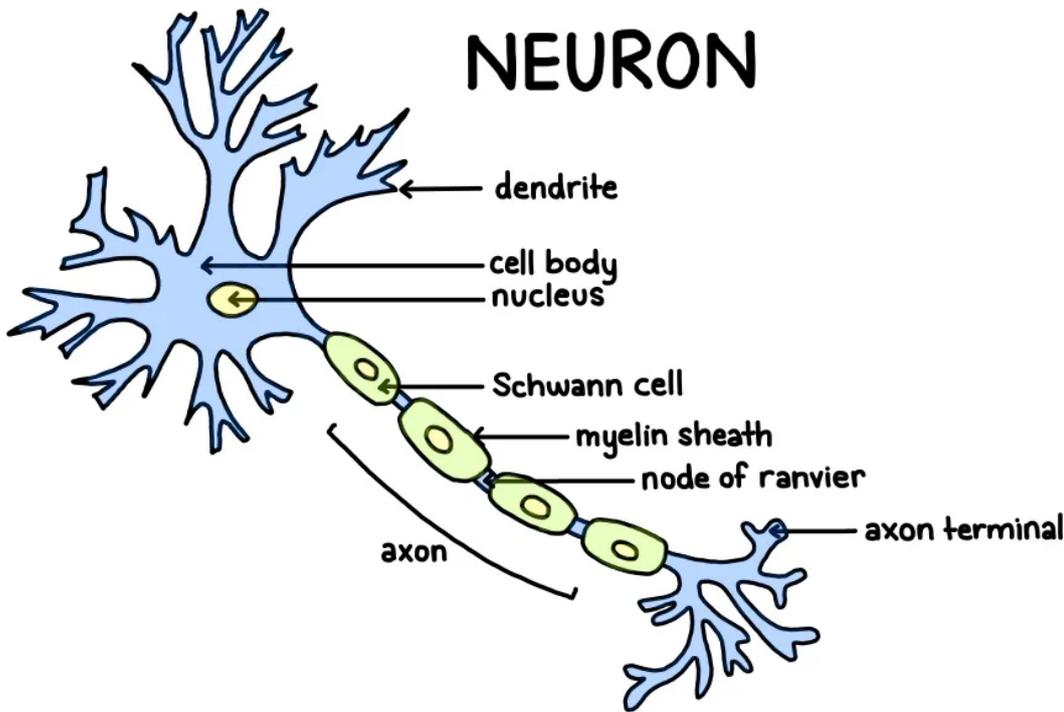
Ans:(c)

Connectome

Source: TH

The human brain, comprising billions of **neurons**, forms a complex network vital for our existence and cognition. Understanding this intricate network, known as the **connectome**, offers profound insights into brain function and neurological disorders.

- Connectome Concept represents a comprehensive **map of neural connections**, akin to a **blueprint illustrating the electrical and chemical signals** exchanged between neurons.
- A neuron consists of a **cell body containing the nucleus, dendrites for receiving** input, and an **axon for sending messages**, sometimes enveloped by a **myelin sheath** for faster signal transmission.
 - **Neurons** communicate through synapses, where dendrites **receive chemical signals, convert them to electrical impulses**, and transmit them through axons to other neurons.
- Despite the brain's complexity and data volume, the **connectome simplifies scientists' understanding**, facilitating advancements in neuroscience and neurological health research.
- Mapping the connectome aids in comprehending brain function and the impact of conditions like **Attention deficit hyperactivity disorder (ADHD) and Alzheimer's disease** on neural processes.



Read more: [Brainware](#), [Mysterious Cells in Human Brain](#)

Italian Court Ruling Against Returning Sea Migrants

Source: [TH](#)

Italy's highest court, the Court of Cassation, ruled that **it is illegal to return rescued sea migrants to Libya**.

- The court's ruling is based on the [principle of non-refoulement](#) that forbids the forced return of people to countries where their lives or rights are at risk.
 - The court's ruling affirms Libya as unsafe for migrants, highlighting the risk of "inhuman and degrading treatment" in detention centres under coastguards and militias if returned.
- Italy's top court ruling that it is illegal to return sea migrants to Libya aligns with **Article 98 of the United Nations Convention on the Law of the Sea (UNCLOS)**.
 - This article obligates **states to help anyone found at sea** in danger of being lost and to rescue those in distress if they can do so without serious danger to their own ship or people.



Read more: [UNCLOS Maritime Zones](#), [Conflict in Libya](#)

Karnataka Ban Harmful Food Colouring Agents

Source: [TH](#)

Recently, the Karnataka Government has announced a ban on the use of harmful **colouring agents** in popular food items **like cotton candy and Gobi Manchurian**.

- The ban targets **Rhodamine B in cotton candy** and imposes restrictions on **Tartrazine usage in Gobi Manchurian**.
 - **Rhodamine B** is a chemical compound commonly employed in synthetic dyes for colouring silk, jute, leather, cotton, and wool, as well as in the cosmetics and plastics industries.
 - **Tartrazine is a bright yellow azo dye** that is more stable and a cheaper alternative to natural food dyes.
- According to the [Food Safety and Standards Authority of India \(FSSAI\)](#), no colouring matter should be added to food unless permitted in the **Food Safety and Standards (Food Products Standards and Food Additives) Regulation, 2011**.

Read more: [Food Safety and Standards Authority of India](#)

National Speed Breeding Crop Facility

[Source: PIB](#)

Recently, the **Union Minister of Science & Technology**, inaugurated the first-of-its-kind "**National Speed Breeding Crop Facility**" at the premier [National Agri-Food Biotechnology Institute \(NABI\)](#) in Mohali.

- The facility will be used to **develop new varieties such as wheat, rice, soybean, pea, tomato**, etc., by using a precisely controlled environment to achieve more than four generations of a crop per year.
- The facility will help agricultural and biotechnology researchers for improved crop varieties, plant breeders and farmers in adopting varieties of superior yield and nutritional traits.
- The facility will cater to all the States of India but it will especially be useful for the North Indian States like **Punjab, Himachal Pradesh, Haryana** and the **UT of J&K**.
- **NABI** is the first **Agri-Food Biotechnology Institute**, established in India on **18th February 2010**.
 - The NABI has significantly contributed to '[Atal Jai Anusandhan Biotech \(UNaTI\) Mission](#), [Poshan Abhiyan](#), and [Biotech Kisan Hubs](#) for **Jammu & Kashmir, Ladakh, Himachal Pradesh, Punjab, Haryana** etc.

Read More: [Technology in Indian Agriculture](#)

Pritzker Architecture Prize 2024

[Source: IE](#)

Recently, Japanese architect **Riken Yamamoto** was declared the winner of the prestigious 2024 **Pritzker Architecture Prize**, often called the "**Architecture Nobel**". This award is the highest international honour in the field. **Yamamoto is the ninth laureate from Japan**.

- The prize was established by **Jay A Pritzker** and his wife **Cindy** in **1979** to honour living architects whose work demonstrates **talent, vision, and commitment to humanity** and the **built environment**.
 - Riken Yamamoto's architectural vision prioritises **family** and **community**, with a focus on the visible and tangible aspects of architecture.
 - Yamamoto's designs often incorporate innovative concepts such as "**relational living**" and **preserving natural landscapes**, as seen in projects like **Hotakubo Housing** and the **Yokosuka Museum of Art**.
 - **Balkrishna Doshi**, is the first Indian architect to win a **Pritzker Prize (2018)**. His renowned work is the **Aranya Low-Cost Housing Complex**, located in the city of Indore.
 - The complex connects a community through a cluster of buildings stitched together by a network of courtyards and pathways.
-

Haiti

[Source: TH](#)

Recently, **Haitian Prime Minister Ariel Henry** announced his intention to resign, once a **transitional presidential council** is created.

▪ **About:**

- It is located between the **Caribbean Sea and the North Atlantic Ocean.**
- It occupies the **western one-third of the island of Hispaniola**, sharing a border with the **Dominican Republic on the eastern side.**
 - Haiti is also neighbored by **Jamaica to the west and Cuba to the northwest.**
- **Official Languages:** French, Haitian Creole.
- **Major Mountain Ranges:** Massif de la Selle, Massif du Nord.
- It is the **world's first independent Black-led republic.**
 - The nation underwent about two centuries of **Spanish colonial rule** and more than a century of French rule.

