

100 years of establishment of Indian Council of Agricultural Research (ICAR)-National Institute of Secondary Agriculture (NISA)

ICAR-NISA was established in **1924** as **Indian Institute of Natural Resins and Gums**, in Ranchi, Jharkhand. It was **renamed** in 2022 as ICAR-NISA and comes under **Ministry of Agriculture and Farmers' Welfare**.

Secondary Agriculture

- Secondary agriculture includes the **value addition of primary agricultural products** as well as other agriculture-related activities like beekeeping, poultry farming, agricultural tourism etc.
 - ⊕ It refers to all practices/processes that convert **agricultural produce, residues and by-products** into high value commodities for **pharmaceutical, industrial, medicinal and specified food uses**.
 - ⊕ Secondary agriculture is a broad term including **both food and non-food processing**.
- **Examples:** Extraction of vitamins from grains and oil from rice bran, production of jaggery from sugarcane, cottage scale unit for making jams, pickles etc.
- **Growth Potential:**
 - ⊕ **Consumer demand** for value-added products like ready-to-eat and functional foods.
 - ⊕ Requirement for use of **unconventional renewable agro-bio resources**.
 - ⊕ Large quantities of agricultural byproducts.

Significance of Secondary Agriculture

- **Environmentally sustainable:** Crop residues and agricultural waste can be utilized properly instead of being burnt or dumped.
- **Farmer's Income:** Better economic returns from activities like beekeeping, lac culture, etc.
- **Value Addition:** Enhances shelf life and increases total productivity.
- **Cottage Industry:** Promotes agriculture/rural and cottage industries and usage of technology.

Challenges of Secondary Agriculture

- Industries producing **high value products** from agriculture residues/by-products like Active Pharmaceutical Ingredients, etc. are in **nascent stage**.
- **Small size land holdings** in India making collection of crop residue difficult.
- **Lack of research** in appropriate technology.
- **Lack of awareness** on the processing of agricultural waste by farmers.

PM Mega Integrated Textile Regions and Apparel (PM MITRA) Park inaugurated in Maharashtra

It is being developed by the Maharashtra Industrial Development Corporation (MIDC) as the State Implementation Agency.

- It is one of the **7 PM MITRA Parks** under the **PM MITRA Park Scheme**.
 - ⊕ Six other states covered under it include Tamil Nadu, Telangana, Gujarat, Karnataka, Madhya Pradesh and Uttar Pradesh.

About PM MITRA Park Scheme

- Notified by the **Ministry of Textiles** in 2021.
 - ⊕ It is inspired by the **5F vision** i.e., - **Farm to Fibre to Factory to Fashion to Foreign**.
- **Aim:** To develop integrated large scale and modern industrial infrastructure facilities for the entire value-chain of the textile industry.
- **Time Period:** 2021-22 to 2027-28
- **Implementation Agency:** Special Purpose Vehicle owned by the Centre and State Government.
- **Eligibility and Selection Criteria:** Contiguous and encumbrance-free land parcel of at least 1000 acres, State Textile and industrial policy, etc.
 - ⊕ MITRA parks can be either **Greenfield or Brownfield**.

Potential Benefits of PM MITRA Parks Scheme

- **Reducing logistics costs/Enhancing Competitiveness:** as it will create an **integrated value chain** right from spinning, weaving, processing/dyeing and printing to garment manufacturing at 1 location.
- **Employment Generation:** Each park is intended to create **1 lakh jobs directly** and 2 lakh jobs indirectly.
- **Achieving SDG Target:** E.g., SDG 9 ("Build resilient infrastructure, promote sustainable industrialization and foster innovation")

Other initiatives taken for textiles Industry

- **Scheme for Capacity Building in Textile Sector (SAMARTH)**, addresses the skilled manpower requirement across textile sector.
- **Amended Technology Up-gradation Fund Scheme (ATUFS)**, provides credit linked Capital Investment Subsidy (CIS) to units for purchase of benchmarked machinery in different segment of Textile Sectors.
- **National Technical Textiles Mission**
- **Production Linked Incentive (PLI) Scheme** for Textiles.



Union Cabinet has approved the development of Venus Orbiter Mission (VOM)

VOM, to be accomplished by **Department of Space**, is envisaged to **orbit a scientific spacecraft** in the orbit of planet Venus.

- **ISRO will be responsible** for development of spacecraft and its launch, which is scheduled in **March, 2028**.
- **Budget:** Rs. 1,236 Crore, out of which Rs 824 Crore will be spent on the spacecraft.
- **Significance:**
 - ⊕ Better **understanding of Venusian surface** and subsurface, atmospheric processes and influence of Sun on Venusian atmosphere.
 - ⊕ **Understand evolution of sister planets**, both Venus and Earth.
 - ⊕ **Enable India for future planetary missions** with larger payloads, optimal orbit insertion approaches.
 - ⊕ **Large employment potential and technology spin-off** to other sectors of economy.

About Venus

- Venus is **Earth's nearest** planetary neighbour and is **considered as 'Earth's-twin'** due to similar size and shape.
- Venus' thick atmosphere traps heat creating a **runaway greenhouse effect** – making it the **hottest planet** in our solar system.
- Venus is permanently shrouded in **thick, toxic clouds of sulfuric acid**.
 - ⊕ **Phosphine**, a possible indicator of microbial life, has been observed in the clouds.
- **Venus, along with Uranus**, rotates from east to west, while all other planets rotate west to east.

🌍 Missions to Venus		
	Mission (Year)	Highlights
Past Missions 	Mariner 2 (1962, USA)	First spacecraft at Venus. Detected no magnetic field.
	Venera 7 (1970, Soviet Union)	First successful soft landing on another planet (Venus).
	Magellan (1990, USA)	First near-global radar mapping of Venus' surface.
	Akatsuki (2015, Japan)	Studying Venus' atmosphere.
Future Missions 	NASA's DAVINCI - Venus Flyby and Probe (2029) and VERITAS - Orbiter (2031), EnVision - ESA's Venus Orbiter (2031).	

Bombay HC struck down the 2023 amendment to Rule 3 of the IT Rules mandating establishment of Fact Checking Units (FCU)

- Verdict has been delivered in the **Kunal Kamra vs Union of India case**.

Background

- The 2023 amendment [(3(1)(b)(v))] to **IT (Intermediary Guidelines and Digital Media Ethics Code) Rules, 2021** empowered the Government to identify **fake news** pertaining to its business on **social media platforms** through FCU.
 - ⊕ Such news was to be **flagged** and **taken down** by the intermediary.
 - ⊕ Failure to do so would subject the intermediaries to a **legal action and losing their safe harbor** (legal immunity against third-party consent).
- In 2023, Supreme Court stayed the Centre's notification establishing **FCU** in **Press Information Bureau (PIB)**.

Key Observations by the HC

- Rules are **ultra vires (unconstitutional)** or beyond the powers of the **IT Act, 2000**.
- **Violate the Principles of Natural Justice and Fundamental Rights under Articles:**
 - ⊕ **14** [Equality before Law]
 - ⊕ **19 (1) (a)** [Freedom of Speech and Expression]
 - ⊕ **19 (1) (g)** [Freedom to practice any profession]
 - ⊕ **21** [Right to Life and Personal Liberty].
- **Vague**, does not clearly define fake or misleading news.
 - ⊕ Also, in the absence of **"right to the truth,"** the **State** is not **responsible** for providing citizens with only accurate information determined by the FCU.
- Fail to satisfy the **test of proportionality**.

About Test of Proportionality

- It requires that the measure taken to restrict a fundamental right should satisfy
 - ⊕ **Legitimacy:** Evaluates if the law serves a valid government objective.
 - ⊕ **Suitability:** Checks if the law effectively addresses that objective.
 - ⊕ **Necessity:** Considers whether the law is essential, or if less restrictive alternatives are available.
 - ⊕ **Balancing:** Weighs the benefits of the law against the rights it may infringe upon.

Cabinet approved the proposal to become a member of the International Big Cat Alliance (IBCA)

India became a founder member by signing and ratification of the Framework Agreement on the establishment of the **IBCA**.

- Apart from **India, Nicaragua, Eswatini** and **Somalia** have also joined IBCA

About IBCA

- **Genesis:** On the occasion of commemorating **50 years of India's Project Tiger** in **2023**, India launched IBCA.
- **Aim: Strengthen global cooperation** for the **conservation of seven big cat species** (tiger, lion, leopard, snow leopard, cheetah, jaguar and puma) and their habitats.
 - ⊕ India inhabits all cats except Puma and Jaguar
- **Multi-country and multi-agency coalition:** Participants consist of 95 big cat range countries, non-range countries interested in big cat conservation, conservation partners and related scientific organizations.
 - ⊕ All UN member countries are eligible for becoming the member of IBCA.
 - ⊕ Nine International Organizations have also consented to be partner organization of IBCA.
- **Funding:** Support of Rs. 150 crores for five years from 2023-24 to 2027-28.
- **HQ:** India

Significance of protecting big cats and their habitats

- **Keystone species:** Saving predators also safeguard the intricate web of biodiversity within their ecosystem
- **Keeping ecosystems healthy:** As apex predators, their hunting keeps herbivore populations in check.
- **Supports economy:** Providing livelihood opportunities and promoting ecotourism.

Conservation Status of Big Cats in India

- **IUCN Status:** **Endangered** (Tiger), **Vulnerable** (Lion, Cheetah, Snow Leopard, Leopard), **Near Threatened** (Jaguar) and **Least concern** (Puma)
- **All five big cats in India are listed in Schedule 1 and 4 of Wildlife Protection Act, 1972 and CITES Appendix**

Concerns raised on Work-Life Balance in India after death of an Ernst & Young employee

According to International Labour Organization (ILO), India has emerged as **one of the most overworked countries** globally.

Key findings of ILO

- After Bhutan, India has **ranked second for share of employed working 49 or more hours per week** (51% in India).
- **Pacific Island nations like Vanuatu, Kiribati and Micronesia** with average **24.7, 27.3, and 30.4 working hours per week**.
 - ⊕ Average working hours per week in India are around **46.7 hours**.

Factors contributing to lack of work-life balance

- **Remote work:** Technology and Covid-19 pandemic provided impetus to work from home, resulting in **indefinite working hours**.
- **Gender bias in family responsibilities:** Only **32% of women** reported maintaining work-life balance (IIM-A).
- **Industry's focus on counting hours** rather than measuring productivity.
- **Informal Economy:** More uneven distribution of hours of work.

Impact of long working hours

- **Health:** Increased working hours comes with **higher risk of stroke, stress and affects mental well-being**.
- **Productivity:** Enterprises experience negative externalities, including **lower productivity** levels and **absenteeism**.
- **Social impact:** Less engagement in community and civic life.

Steps that can be taken for work-life balance

- Limit working hours like a 40-hour workweek in Iceland, Spain, the UK, etc. and promote **wellness programs**.
- **Right to Disconnect:** Countries like France and Australia have introduced right to refuse work-related contact outside working hours.

Legal Provisions related to working hours

- **ILO's Hours of Work (Industry) Convention, 1919:** Working hours of persons employed shall not exceed **8 in the day and 48 in the week**.
- **Indian Factories Act, 1948:** No adult worker shall be allowed to work for more than 48 hours in any week.
- **Weekly Holidays Act, 1942:** Grants weekly holidays to employed.

Also in News



Witness Protection Scheme (WPS), 2018

Highlighting the importance of witnesses as **"eyes and ears of justice"**, the Supreme Court raised concerns over the implementation of the WPS, 2018.

- Scheme was endorsed by the **SC in 2018 enforceable** in all States/UTs.

About WPS, 2018

- **Objective:** Protection of witnesses based on the threat assessment and protection measures inter alia include protection/change of identity of witnesses, their relocation, etc.
- Provides protection under three categories on the basis of threat:
 - ⊕ **Category A:** Threat to the life of a witness or his family.
 - ⊕ **Category B:** Threat to safety, reputation or property.
 - ⊕ **Category C:** Threat is moderate
- Provides for a **State Witness Protection Fund** operated by the **Department/Ministry of Home** under State/UT Government.



Facial Recognition Technology (FRT)

Government has introduced the FRT **two factor authentication process** for delivering **Take Home Ration (THR)** as a **pilot project**.

- THR is part of **Integrated Child development scheme (ICDS)**.
- **Two factor authentication:** beneficiary's photo will be captured and verified and a onetime password will be sent on their phones.

About FRT

- **An Artificial intelligence (AI) system** which allows identification or verification of a person based on certain images or video data using complex algorithms.
- Uses **key features of the face and their respective distances from one another** to morph a virtual facial map.
- **FRT can be used for two purposes:**
 - ⊕ **1:1 verification:** matches a person's facial map to a specific photograph
 - ⊕ **1:n identification:** compares a person's face against an entire database



Credit Default Swaps

Securities and Exchange Board of India (SEBI) allowed mutual funds to buy and sell Credit Default Swaps (CDS) to **improve liquidity** in corporate bond market.

- A CDS is a **financial derivative** that allows an investor to **swap or offset their credit risk** with that of another investor.
- CDS are like insurance contracts that **protect the investor in case the bond borrower defaults** on their payment of dues.
 - ⊕ It is maintained through **premium payments** similar to insurance contracts for the bond market.

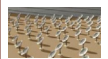


Vivad Se Vishwas Scheme 2024

Finance ministry notifies **Direct Tax Vivad Se Vishwas Scheme, 2024 (VSV 2.0)**.

About VSV 2.0

- **Aim:** To resolve income tax disputes currently under appeal.
- **Objectives:** Simplify taxes, improve taxpayer services, and reduce litigation while also enhancing government revenue.
- It will allow taxpayers to **settle appeals, writ petitions, and special leave petitions pending** in the Supreme Court, high courts, and appellate tribunals before the cutoff date of July 22, 2024.
 - ⊕ Settlement by **paying the full tax amount, thereby waiving any interest and penalties.**
- Scheme is **open to both taxpayers and tax authorities** involved in the disputes.



Square Kilometer Array

Square Kilometer Array (SKA), **world's largest radio telescope in making**, has carried out its **first observations** and became partially functional.

About SKA

- SKA project aims at building world's largest radio telescope, with eventually over a square kilometre of collecting area.
- SKA will consist of one global observatory, operating two large telescopes (South Africa and Australia).
- **Objectives of SKA Telescopes:**
 - ⊕ Understand about the birth of Universe.
 - ⊕ Detect Gravitational Waves.
 - ⊕ Understand evolution of Galaxies, Dark matter and Cosmic Magnetism.
- India **joined SKA Organization in 2012 as an Associate Member** and has actively participated in the pre-construction phase of the SKA telescopes.



Food Import Rejection Alert (FIRA)

Government launched the **FIRA online portal** during the 2nd edition of the **Global Food Regulators Summit 2024**.

- Hosted by the **Food Safety Standards Authority of India (FSSAI)** in **New Delhi**.

About FIRA

- Developed by **FSSAI**
- **Generates alerts** on food consignments **rejected by India** due to **poor safety standards** notifying the public and food safety authorities.
- Has an **online interactive interface** for **rapid dissemination of information** ensuring **enhanced traceability and transparency**.
- Provides a database for tracking rejected food products, **strengthening of the risk management system** and preventing health risks arising from rejected food.



Criticality

Third indigenous Pressurized Heavy Water Reactor (PHWR) unit of the **Rajasthan Atomic Power Project (RAPP)** has attained **criticality**.

- It is located at **Rawatbhata**.
- Earlier 2 PHWRs units of the **Kakrapar Atomic Power Station** in Gujarat have attained criticality.

What is criticality?

- A reactor achieves **criticality** (and is said to be critical) when each fission event releases a sufficient number of **neutrons** to sustain an ongoing series of reactions.
- The reactor is neither increasing nor decreasing in power—this is the ideal operating condition for energy production.



Sustainable Aviation Fuel (SAF)

India and Brazil decided to collaborate on production and use of Sustainable Aviation Fuels (SAF).

About SAF

- Currently, SAF remains major mature and viable pathway to **decarbonise aviation sector**.
- It is a **liquid fuel** currently used in commercial aviation which reduces CO2 emissions by up to 80%.
 - ⊕ It contains **fewer impurities (such as sulphur)**, which enables an even greater reduction in **sulphur dioxide and particulate matter emissions**.
- It can be produced from a number of sources (**feedstock**) including **waste oil and fats, green and municipal waste and non-food crops**.
- It can also be **produced synthetically** via a process that captures carbon directly from the air.

Place in News



Lao PDR (People's Democratic Republic) (Capital: Vientiane)

India's Minister for Commerce and Industry co-chaired the **21st ASEAN-India Economic Ministers** meet in Lao PDR.

Political Features:

- **Location:** **Only landlocked** country in **Southeast Asia (member of ASEAN)**.
- Part of **Golden Triangle** (Opium growing region).
- **Bordering Countries:** **China** (North); **Vietnam** (Northeast and East); **Cambodia** (South); **Thailand** (West); and **Myanmar** (Northwest).

Geographical Features

- **Plateaus:** **Xiangkhiang, Bolovens** and **Khammouan**.
- **Mountain Ranges:** **Annamite Range, Luang Prabang Range**
- **Highest Peak:** **Phu Bia**.
- **Major Rivers:** **Mekong** (bordering Myanmar and Thailand)



AHMEDABAD



BENGALURU



BHOPAL



CHANDIGARH



DELHI



GUWAHATI



HYDERABAD



JAIPUR



JODHPUR



LUCKNOW



PRAYAGRAJ



PUNE



RANCHI