



STATE PCS CA

(CONSOLIDATION)

UTTAR PRADESH

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628 Tigers Died in India

Why in News?

According to government data, a total of **628 tigers** died in India during the past five years due to **natural causes and other reasons**, including **poaching**.

Key Points

- According to the **National Tiger Conservation Authority (NTCA)**, 96 tigers died in 2019, 106 in 2020, 127 in 2021, 121 in 2022, and 178 in 2023.
 - 349 people were killed in tiger attacks during this period, with **Maharashtra alone recording 200 deaths**.
 - **Uttar Pradesh recorded 59 human deaths in tiger attacks** while **Madhya Pradesh reported 27**.
- India launched **Project Tiger** on **April 1, 1973**, to **promote tiger conservation**.
 - Currently, **India has 55 tiger reserves covering more than 78,735 square km**, nearly 2.4% of the country's geographical area, of tiger habitat.

TIGER

Royal Bengal Tiger (*Panthera tigris*) is the National animal of India.

Subspecies of Tiger

- The continental (*Panthera tigris tigris*)
- The Sunda (*Panthera tigris sondaica*)

Habitat

Tropical rainforests, evergreen forests, temperate forests, mangrove swamps, grasslands, and savannas

Countries Where Tiger Population Is Found

- Found only in 13 Tiger Range countries- India, Nepal, Bhutan, Bangladesh, Myanmar, Russia, China, Thailand, Malaysia, Indonesia, Cambodia, Laos, and Vietnam
- As per the latest report by IUCN, tiger has gone extinct in Cambodia, Laos, and Vietnam

Protection Status

- IUCN Red List: Endangered
- CITES: Appendix I
- WPA 1972: Schedule I

Threats

- Habitat loss
- Poaching and illegal trade
- Human-Wildlife conflict

Conservation Efforts

- International Big Cats Alliance (IBCA): For conservation of seven big cats namely Tiger, Lion, Leopard, Snow Leopard, Cheetah, Jaguar and Puma (launched by India)
- Tx2 campaign: Launched by WWF; stands for 'Tiger times 2' signaling the goal to double the tiger population by 2022
- National Tiger Conservation authority (NTCA): Constituted under the WPA, 1972
- Project Tiger: Launched in 1973

Tigers in India

- India has the largest population
 - As of 2022, India has 3167 tigers
 - Largest population has been found in Central Indian Highlands & Eastern Ghats Landscape
- Tiger Reserves: India now has 53 tiger reserves
 - Ranipur in UP is the latest
 - Nagarjun Sagar (Andhra Pradesh) is the largest while Orang (Assam) is the smallest (Core area)

Note:

Venkateshwar's MOU with Brazil

Why in News?

Recently, **Shri Venkateshwar University** located in **Meerut** has signed an **MoU (Memorandum of Understanding)** with **Brazil** to **promote educational and research collaborations** of the students of the two countries.

Key Points

- The focus will be on **student and faculty exchange programs** in the fields of **dairy, agriculture, biotechnology, health and tourism**.
- Both nations will **collaborate on advanced technologies and innovations** through joint seminars, workshops, and regular classes.
- This partnership is considered a substantial step forward in offering **students high-quality higher education and international experiences**.

IIT-Kanpur Professor Discovered Exoplanet

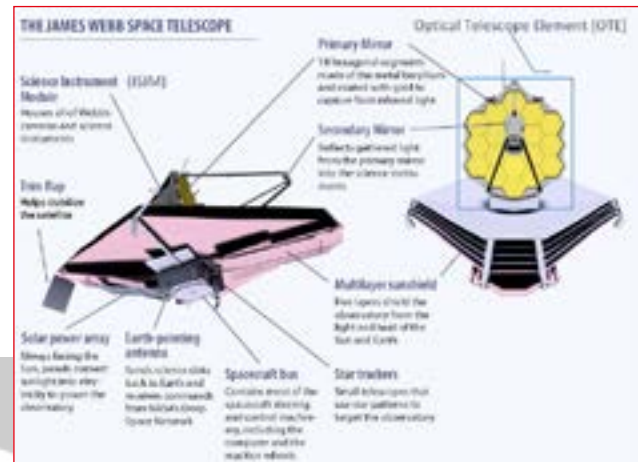
Why in News?

An **international team of astronomers**, including an **assistant professor** in the **Department of Space, Planetary & Astronomical Sciences & Engineering (SPASE)** at **IIT-Kanpur**, has **discovered a large exoplanet** revolving around a nearby star that is similar to our Sun.

Key Points

- According to the **scientific journal Nature**, the extrasolar planet known as **Epsilon Indi Ab, or Eps Ind Ab**, is classified as a **'super-Jupiter'** due to its **mass being at least six times greater than that of Jupiter**.
 - Eps Ind Ab is the **first mature exoplanet** (a planet outside our solar system) to be discovered using the **direct imaging technique**.
- Using the **James Webb Space Telescope's Mid-Infrared Instrument**, the international team of astronomers has **directly imaged a new exoplanet orbiting the K5V-type star Epsilon Indi A** (also known as HD 209100 or HI).

- The **direct imaging** of a nearby mature exoplanet represents a significant milestone in the field of space exploration.
- The recently identified **planet is situated 12 light-years from the Earth and is frigid**, with a **temperature around -1°C (30°F)**.
 - Its **orbit** is also tremendous, revolving around its star at a distance **28 times greater than the distance between the Earth and the Sun**.



Industrial Gain for Uttar Pradesh

Why in News?

The **Union Budget 2024** has been **positively received by entrepreneurs, industrialists, and businessmen in Uttar Pradesh**, who praised the finance minister's decisions as bold and promising.

- These are confident that Uttar Pradesh will benefit significantly, positioning itself as a manufacturing hub with a skilled workforce, increased support and spending across various sectors.

Key Points

- According to the sources, the allocation of **Rs 10 lakh crore** for **urban housing projects** aims to **address the shortage of affordable housing** in key cities of UP.
 - The **PM 2.0 Awas scheme** will **benefit low and middle income families**, while promoting rental housing through private partnerships will help alleviate urban slums.

Note:

- Prioritizing initiatives targeted at women is a praiseworthy step towards **promoting gender equality and empowerment**.
- The **nine key focus areas** covering agriculture, innovation, reforms, and other domains provide a clear blueprint for **sustainable progress**.
- **Raising the MUDRA loan limit from Rs 10 lakh to Rs 20 lakh** would provide substantial support to many small business owners in Uttar Pradesh.
 - The credit guarantee scheme for manufacturing sector participants would motivate them to **invest in new technologies and equipment**.
 - Streamlining **Goods and Services Tax (GST)** and **income tax** compliance processes would be **beneficial for start-ups and young business owners**.
- The allocation of Rs 1.52 lakh crore to the agriculture sector and the announcement of a **new cluster scheme to boost vegetable production to boost vegetable production** would **expand the production of pulses and oilseeds** through certification and branding in the Nation.

Pradhan Mantri Awas Yojana

- It was **launched on 25th June 2015**, with the intent to **provide housing for all in urban areas** by year 2022.
- It was **implemented by the Ministry of Housing and Urban Affairs**.
- **Features:**
 - **Addresses Urban housing shortage among the Urban Poor** including the Slum Dwellers by ensuring a pucca house to eligible urban poor.
 - The Mission **covers the entire urban area** consisting of Statutory Towns, Notified Planning Areas, Development Authorities, Special Area Development Authorities, Industrial Development Authorities or any such authority under State legislation which is entrusted with the functions of urban planning & regulations.
 - All houses under PMAY(U) **have basic amenities like toilets, water supply, electricity and kitchen**.
 - The Mission **promotes women empowerment** by providing the ownership of houses in the name of female members or in joint name.
 - **Preference is also given to differently abled persons, senior citizens, SCs, STs, OBCs, Minority, single women, transgender** and other weaker & vulnerable sections of the society.

Pradhan Mantri Mudra Yojana (PMMY)

- It was **launched by the government in 2015** for providing **loans up to Rs. 10 lakh to the non-corporate, non-farm small/micro-enterprises**.
- Funding Provision:
 - **MUDRA**, which stands for **Micro Units Development & Refinance Agency Ltd.**, is a financial institution set up by the Government.
 - It **provides funding** to the non-corporate small business sector **through various last-mile financial institutions** like Banks, **Non-Banking Financial Companies (NBFCs)** and **Micro Finance Institutions (MFIs)**.
 - MUDRA does **not lend directly to micro-entrepreneurs/individuals**.

Enhancing Farmers' Income Through Carbon Credits

Why in News?

The **Uttar Pradesh Government** aimed to boost farmers' income through **carbon credits** by encouraging participation in a **massive plantation drive** on **July 20**, during which **35.5 crore trees** were planted.

Key Points

- **Carbon Credits:** Farmers receive carbon credits based on the reduction in carbon emissions achieved through the trees they plant. For every ton of carbon dioxide emissions prevented, they earn financial benefits as an incentive.
 - **One carbon credit** typically represents **one ton of carbon dioxide equivalent (CO₂e)** that has been **reduced, removed, or offset** from the atmosphere.
- **Tree Types:** Planting fast-growing trees like **poplar, melia, dubia, and semal** allows farmers to earn additional income from carbon credits.
- **Credit Purchase:** These carbon credits are purchased every five years at a rate of six US dollars per credit.
- **Beneficiaries:** In the first phase, farmers from six divisions Gorakhpur, Lucknow, Bareilly, Meerut, Moradabad, and Saharanpur will benefit from carbon credits.
- **Incentives:** Between **2024 and 2026, 25,140 farmers** will receive incentives worth **Rs 202 crore**.

Note:

- **Division-wise Distribution:**
 - Gorakhpur: 2,406 farmers will receive Rs 34.66 crore.
 - Bareilly: 4,500 farmers will receive Rs 24.84 crore.
 - Lucknow: 2,512 farmers will receive Rs 21.26 crore.
 - Meerut: 3,754 farmers will receive Rs 21.67 crore.
 - Moradabad: 4,697 farmers will receive Rs 38.05 crore.
 - Saharanpur: 7,271 farmers will receive Rs 61.52 crore.
- **Estimated Carbon Credits:** A total of **42,19,369 carbon credits** are expected.
- **Future Phases:** The second phase will cover seven more divisions, and the third phase aims to include the entire state under carbon financing.
 - In the **second phase**, seven divisions, **Devipatan, Ayodhya, Jhansi, Mirzapur, Kanpur, Varanasi, and Aligarh** will be included.
 - The third phase aims to cover the entire state with **carbon financing**.
- **Carbon financing** assigns a **monetary value** to carbon emissions.

UP to Plant 3.72 Crore Saplings Along Riverbanks

Why in News?

The Uttar Pradesh government has launched the “**Ped Lagao, Ped Bachao Jan Abhiyan-2024**” campaign, aiming to plant 3,72,66,000 saplings along riverbanks across the state.

Key Points

- **Riverbanks Covered:**
 - **Ganga:** 77.5 lakh saplings will be planted on 5,096.42 hectares of land along the Ganga river.
 - **Yamuna:** 98.47 lakh saplings will be planted at 534 locations along the Yamuna river, covering 6,581.32 hectares.
 - **Hindon:** Four lakh saplings will beautify the Hindon river on 270.13 hectares.
- **Incentive Scheme:** In forest divisions along the Ganga, including **Prayagraj, Pratapgarh, Kaushambi, Fatehpur, Varanasi, Ghazipur, Mirzapur, Bhadohi, Kashi wildlife, and Ballia**, an incentive scheme funded

by the **National Mission for Clean Ganga** is being implemented.

- **Tree Varieties:** Various trees, including **Neem, Drumstick, Tamarind, Arjun, Jamun, Bel, Mango, Mahua, Teak, Sheesham, Guteel, Bamboo, Peepal, Pakkad, and Banyan**, will be planted along the riverbanks.
- **Medicinal Plants:** The initiative also promotes cultivating medicinal and aromatic plants on **2,500 hectares** of private land, supported by nurseries.
- This effort not only enhances the state’s green cover but also contributes to environmental conservation.

Kanwar Yatra

Why in News?

Recently, **the Supreme Court** halted the controversial orders from the **governments of Uttar Pradesh, Uttarakhand, and Madhya Pradesh**, which required the **display of owners’ names** at hotels, shops, eateries, and dhabas along the route of the **‘Kanwar yatra’ (holy expedition)**.

Key Points

- The Kanwar Yatra is a **Hindu pilgrimage** in the month of **Shravana**, by **Lord Shiva devotees**.
- The devotees **travel to pilgrimage places** like **Haridwar, Gaumukh, Gangotri** in Uttarakhand, **Sultanganj** in Bihar, **Prayagraj, Ayodhya, and Varanasi** in Uttar Pradesh, and return by carrying **Ganga** water in kanwars to seek the blessings of Shiva.
 - The water is offered to Shiva temples, including the **12 Jyotirlingas** across India and other shrines like the **Pura Mahadev Mandir** and **Augharnath** in Uttar Pradesh, the famous **Kashi Vishwanath temple**, and the **Baba Baidyanath Temple** in Deoghar, Jharkhand. The ritual is known as **Jal Abhishek**.

12 Jyotirlingas

- A Jyotirlinga is a **shrine where Lord Shiva is worshipped** in the form of a **Jyotirlingam**.
- Each Jyotirlinga is a **different manifestation of Lord Shiva**.
- There are currently **12 main Jyotirlingas in India**. These are:
 - **Somnath Jyotirlinga** in Gir, Gujarat

Note:

- **Mallikarjuna Jyotirlinga** in Srisailem, Andhra Pradesh
- **Mahakaleshwar Jyotirlinga** in Ujjain, Madhya Pradesh
- **Omkareshwar Jyotirlinga** in Khandwa, Madhya Pradesh
- **Baidyanath Jyotirlinga** in Deoghar, Jharkhand
- **Bhimashankar Jyotirlinga** in Maharashtra
- **Ramanathaswamy Jyotirlinga** in Rameshwaram, Tamil Nadu
- **Nageshwar Jyotirlinga** in Dwarka, Gujarat
- **Kashi Vishwanath Jyotirlinga** in Varanasi, Uttar Pradesh
- **Trimbakeshwar Jyotirlinga** in Nasik, Maharashtra
- **Kedarnath Jyotirlinga** in Rudraprayag, Uttarakhand
- **Ghrishneshwar Jyotirlinga** in Aurangabad, Maharashtra

Saushrutam 2024

Why in News?

Recently, The **Department of Shalya Tantra** at **All-India Institute of Ayurveda (AIIA)** successfully organised the **Second National Seminar SAUSHRUTAM Shalya Sangoshti** on the occasion of **Sushruta Jayanti-2024**.



Key Points

- **Sushruta Jayanti** is celebrated annually on **15th July** to honor Sushruta, the legendary **father of surgery**.
- He was an **ancient Indian surgeon from Kashi** (around 7th century BC) and is the author of '**Sushruta Samhita**', a comprehensive textbook on medicine and surgery.
- The Sushruta Samhita is organized into **five major sections**:
 - **Sutrasthana**: Primary principles dealing with basic principles of medical sciences and pharmacology;
 - **Nidana**: It deals with pathological concepts;
 - **Sarirasthana**: On human anatomy;
 - **Chikitsasthanam**: On medical and surgical management;
 - **Kalpasthanam**: On toxicology.

Early Lightning Detection System

Why in News?

According to the sources, The **Uttar Pradesh government** plans to establish an **early lightning detection and warning system**.

- This system **aims to avert casualties caused by lightning strikes** in the state, particularly during the monsoon period.

Key Points

- According to an **India Meteorological Department (IMD)** report **Uttar Pradesh ranks** among the states with the **highest lightning strike casualties in the country**.
- On the direction of the chief minister, the **State Disaster Management Authority (SDMA)**, decided to **set up a state-of-the-art lightning detection system** based on **time of arrival (ToA) technology**, which is more time and location accurate, across the state.
 - The **IMD currently relies on radar-based systems and satellite data** to warn about the possibility of lightning strikes in an area but it is **not considered a real-time warning**.
 - The **To A-based system can successfully detect and warn** about the possibility of lightning in a particular area at least **30 minutes in advance**.

Note:

- The **Uttar Pradesh Lightning Alert Management System** will be set up in **three phases**.
 - In the **first phase**, it will be implemented in **37 districts**.
 - It is expected to be set up in **20 and 18 districts** respectively in the **second and third phases**.

Radars (Radio Detection and Ranging)

- It is a device which **uses electromagnetic waves in the microwaves region** to detect **location (range & direction), altitude, intensity and movement** of moving and non-moving objects.

India Meteorological Department

- IMD was **established in 1875**. It is the **National Meteorological Service** of the country and the principal government agency in all **matters relating to meteorology and allied subjects**.
 - It works as an **agency of the Ministry of Earth Sciences** of the Government of India.
- It is headquartered in **New Delhi**.
- IMD is also one of the **six Regional Specialized Meteorological Centres** of the **World Meteorological Organization**.

New User Interface for Blind

Why in News?

Recently, Experts from the **Indian Institute of Information Technology (IIIT), Allahabad**, in collaboration with the **Karlsruhe Institute of Technology, Germany**, have created a **tool for blind and visually impaired individuals** to create and access chart images.

Key Points

- Blind people can **use this tool to search images and understand them with alternative texts (Alt-text) generated by Artificial Intelligence based software**.
- The research work discussed in a paper titled '**Alt4 Blind: A User Interface to Simplify Charts Alt-Text Creation**' is presented at an **international conference on computers helping people with special needs** in Linz, **Austria**.
 - **Alt-Text is manually crafted by authors**, but this approach frequently results in problems such as **oversimplification or overcomplexity**.

- Emerging trends have seen the adoption of AI technology for the generation of Alt-Text.
- The research presented an **online, open-source tool to enhance alt-text writing by using AI image retrieval**, making it more engaging.

Artificial Intelligence (AI)

- AI is defined as the **ability of machines and systems to acquire and apply knowledge and to carry out intelligent behaviour**.
 - The term "Artificial Intelligence" was **coined by John McCarthy**, an American computer scientist and cognitive scientist. He was one of the founders of the discipline of AI.
- It includes technologies like **machine learning, Deep Learning, Big Data, Neural Networks**, Computer vision, **Large Language Models** etc.
- The ideal characteristic of artificial intelligence is its ability to rationalize and take actions that have the best chance of achieving a specific goal.

Ultra High-Performance Concrete (UHPC)

Why in News?

According to the sources, The **Uttar Pradesh public works department (PWD)** will have a tie-up with **IIT-Kanpur** to **develop ultra high-performance concrete (UHPC)** after research and development.

Key Points

- Currently, **M60 cement grade** is used in most civil works in the state.
- UHPC, which has a **longer shelf life** and can be **4-6 times stronger than M60 grade**, and can significantly **reduce the department's carbon footprint**.
 - This reduction would be achieved by **using thinner sections and lower deck heights** during the construction of bridges, flyovers, elevated roads, railway overbridges, and other concrete-intensive infrastructure projects.
 - The product, developed using **nanotechnology**, is expected to be ready in three years.

Note:

Carbon Footprint

- According to the **World Health Organization (WHO)**, a carbon footprint is a **measure of the impact people's activities** have on the amount of carbon dioxide (CO₂) produced through the burning of fossil fuels and is **expressed as a weight of CO₂ emissions produced in tonnes**.
- It is **usually measured as tons of CO₂ emitted per year**, a number that can be supplemented by tons of CO₂-equivalent gases, including **methane, nitrous oxide, and other greenhouse gases**.
- It can be a broad measure or be applied to the actions of an individual, a family, an event, an organization, or even an entire nation.

Uttar Pradesh Dismiss Permit for Pruning Mango

Why in News?

Recently, the Uttar Pradesh government took a decision to **exempt state farmers from the requirement of getting permission** from any government department for pruning **mango trees**.

- Mango producers can simply prune the trees and reduce their height to enhance their productivity.

Key Points

- This decision simplifies **canopy management for old mango orchards**. It will **rejuvenate old mango orchards**, making them as productive as new ones.
 - In older orchards, **the growth of new leaves and branches which is crucial for flowering and fruiting has declined**.
 - Instead, **thick and tangled branches dominate, blocking sufficient light** from reaching the interior.
- These conditions result in **greater insect and disease infestations** and **complicate effective pesticide application**.
 - As a result, the sprayed pesticides often fail to reach the inner parts of the trees, causing increased pesticide use and environmental pollution.

- To tackle these problems, the **Central Institute of Subtropical Horticulture (CISH)** has developed an effective pruning technique for rejuvenating mango trees.
 - This method, called **pruning of tertiary branches** or table-top pruning, opens the tree's canopy, reduces its height, and **fosters a healthier environment**.
 - This pruning technique **enables trees to yield up to 100 kg per tree within just 2-3 years**, while also **reducing the need for excessive pesticide use**.

The Central Institute for Subtropical Horticulture (CISH)

- It was **started as Central Mango Research Station on September 4, 1972** under the aegis of the **Indian Institute of Horticultural Research, Bangalore**.
- The Institute, later renamed as Central Institute for Subtropical Horticulture (CISH) on June 14, 1995, is **servicing the nation on all aspects of research on subtropical fruits**.
- **Headquarter** of CISH is situated at **Lucknow, Uttar Pradesh**.

Surge in Sarus Crane Population

Why in News?

According to a census conducted by the State forest department, the population of **Sarus cranes** in Uttar Pradesh is rising.

Key Points

- The survey revealed that the **Etawah Forest Division recorded the highest number of Sarus cranes** at 3,289, an increase of 500.
 - While the **Mau Forest Division spotted six Sarus cranes for the first time in a decade**.
- In Uttar Pradesh, Sarus crane numbers have consistently risen over the years from 17,329 in 2021 to 19,188 in 2022, 19,522 in 2023, and 19,918 in 2024.

Note:

Sarus Crane



- The scientific name of Sarus Crane is *Grus Antigone*.
- It is the tallest flying bird in the world, standing 152-156 cm tall with a wingspan of 240cm.
- The Sarus crane has predominantly grey plumage with a naked red head and upper neck and pale red legs.
- It is known to mate for life with a single partner, and its breeding season coincides with heavy rains during the monsoon season.
- These are known to live in association with humans and well watered plains, marshland, ponds, and wetlands (like Dhanauri wetland in UP) which are suitable for their forage and nesting.
- Conservation Status:
- IUCN red list: Vulnerable
- Wildlife (Protection) Act, 1972: Schedule IV

Early Neurological Disorder Detection

Why in News?

According to the sources, the researchers at the [Indian Institute of Technology-Banaras Hindu University \(BHU\) Varanasi](#) have developed a groundbreaking 'lab-on-chip' device that can detect early-stage diseases with remarkable accuracy.

Key Points

- This innovative breakthrough holds the potential to transform healthcare by enabling faster and more reliable identification of neurological conditions like [Parkinson's disease](#), [depression](#), and [Schizophrenia](#).

- The innovation by the scientists at the **Nanomaterials for Electronics and Energy Devices (NEED) lab at IIT-BHU** has the potential to revolutionize the comprehension of brain function and pave the way for new treatments for [neurological disorders](#) at a very early stage.
- The newly developed device incorporating [metallic nanoparticle decorated atomically-thin, two-dimensional \(2D\) semiconductor](#) leverages advanced [Surface-Enhanced Raman Scattering \(SERS\)](#) technology.
 - This allows for the detection of minute concentrations of [neurotransmitters](#) like [dopamine](#) with unparalleled precision and speed.
- The implications of such innovation are profound, where developing novel materials and transforming them into a device could potentially support the various national missions of device manufacturing, as proposed by the Government of India.

Surface-Enhanced Raman Scattering (SERS)

- SERS is a commonly used sensing technique in which inelastic light scattering by molecules is greatly enhanced when the molecules are adsorbed onto corrugated metal surfaces such as silver or gold nanoparticles (NPs).
- It enhances the [Raman scattering light from molecules](#), thus leading to effective analysis of the molecules.

Parkinson's Disease

- Parkinson's disease is a progressive neurodegenerative disorder that impairs movement and can lead to immobility and dementia over time.
- The disease usually occurs in older people, but younger people can also be affected. Men are affected more often than women.
- The prevalence of Parkinson has doubled in the past 25 years. India shares around 10% of the global burden of [Parkinson's disease](#).

Schizophrenia

- It is a severe mental disorder, characterized by profound disruptions in thinking, affecting language, perception, and the sense of self. It affects more than 21 million people worldwide.
- Researchers believe that genetic as well as environmental factors such as exposure to viruses contribute to causation, and also life stressors may play a role in the disorder's onset and course.

Note:

No Registration Tax on Hybrid Cars

Why in News?

Recently, The Uttar Pradesh government has decided to **waive the registration tax on strong hybrid cars**. This decision is a significant **boost for green vehicles**.

Key Points

- This move will mainly benefit car manufacturers such as **Maruti Suzuki, Toyota Kirloskar Motor, and Honda Cars India**. Customers can save up to Rs 3.5 lakh.
- Uttar Pradesh imposes **8% road tax on vehicles under Rs 10 lakh and 10% tax on vehicles over Rs 10 lakh (ex-showroom)**.
 - The road tax waiver is not expected to greatly affect state revenue because of low hybrid vehicle sales.
- **Hybrid vehicle sales are gaining traction** due to factors such as **ease of ownership**, not needing dedicated charging infrastructure like **Electric Vehicles (EVs)**, **better mileage** than petrol cars, and **lower acquisition costs**.
 - In 2023, The state announced a **three-year tax and registration fee exemption for purchasing EVs**, with a five-year exemption for EVs manufactured within the state.

Hybrid Vehicles

- Hybrid vehicles combine a **traditional Internal Combustion Engine (ICE) with an Electric Propulsion system**, allowing the vehicle to operate using either or both power sources.
- There are different types of hybrid systems, but the most common ones include **parallel hybrids** (both the engine and electric motor can power the vehicle independently) and **series hybrids** (only the electric motor drives the wheels, while the engine generates electricity).

Uttar Pradesh to Become Self-Sufficient in Pulse Production

Why in News?

Uttar Pradesh aims to be **self-sufficient in pulse production in 3-4 years**, with a 36% increase since 2016.

The Government focuses on **Arhar, Urad, and Moong cultivation**.

Key Points

- During 2016-217 to 2023-2024, the production of pulses increased from 2.394 million metric tons to 3.255 million metric tons.
 - To increase pulse production 27,200 hectares of crop demonstrations will be organised under **the National Food Security Mission scheme**.
 - The target is set for the **distribution of 31,553 quintals of seeds** and the **production of 27,356 quintals of certified seeds**.
- To **ensure fair prices for the produce of pulse crops in the market**, the government is also ensuring the procurement of all these crops at **Minimum Support Price (MSP)**.
- According to the sources, **model pulse villages will be developed** in the leading pulse production districts of **Bundelkhand - Banda, Mahoba, Jalaun, Chitrakoot, and Lalitpur**.

National Food Security Mission (NFSM)

- Hybrid vehicles combine a **traditional Internal Combustion Engine (ICE) with an Electric Propulsion system**, allowing the vehicle to operate using either or both power sources.
- There are different types of hybrid systems, but the most common ones include **parallel hybrids** (both the engine and electric motor can power the vehicle independently) and **series hybrids** (only the electric motor drives the wheels, while the engine generates electricity).
- **NFSM** is a **Centrally Sponsored Scheme** launched in **2007** based on the recommendations of the agriculture sub-committee of **National Development Council (NDC)**.
- The committee pointed out the **need for improved agricultural extension services, technology transfer and decentralized planning** as a result of which NFSM was conceptualized as a mission mode program.

Note:

Minimum Support Price (MSP)

- MSP is the **guaranteed amount paid to farmers** when the **government buys their produce**.
- MSP is based on the recommendations of the **Commission for Agricultural Costs and Prices (CACP)**, which considers **various factors such as cost of production, demand and supply**, market price trends, inter-crop price parity, etc.
 - CACP is an attached office of the **Ministry of Agriculture and Farmers Welfare**. It came into existence in January 1965.
- The **Cabinet Committee on Economic Affairs (CCEA)** chaired by the Prime Minister of India takes the **final decision (approve) on the level of MSPs**.
- The MSP is aimed at ensuring **remunerative prices to growers for their produce** and encouraging **Crop Diversification**.

Devotees Take Out Lord Jagannath Rath Yatra

Why in News?

Recently, The grand **Rath Yatra of Lord Jagannath Swami Ji** was organized in Allahabad under the auspices of the Shri Jagannath Swami Rath Yatra Committee Kydganj.

Key Points

- The **Rath Yatra** commenced from the **Shri Jagannath Temple** situated on **Triveni Marg** in Kydganj.
 - In addition to the Nandi Ghosh Rath of Lord Jagannath, the chariots of Garuda Dev, Badri Vishal, Lord Ram, and Lord Dwarkadhish were also part of the procession.
 - Tableaus depicting Radha Krishna, Narsingh Avatar, and Damodar Leela were also included in the Rath Yatra.
- **Jagannath Rath Yatra** is an **annual Hindu festival that celebrates** the journey of **Lord Jagannath**, his elder brother **Lord Balabhadra**, and his younger sister **Goddess Subhadra** from their **home temple in Puri, Odisha** to their aunt's temple in Gundicha, about three kilometres away.
 - The **legend behind the festival** is that once, Goddess Subhadra expressed her desire to visit her aunt's place in Gundicha.

- To fulfill her wish, **Lord Jagannath and Lord Balabhadra decided to accompany her on a chariot ride**. This event is commemorated every year by taking the deities on a similar journey.
- The festival dates **back to at least the 12th century CE**, when the Jagannath temple was built by **King Anantavarman Chodaganga Deva**. However, some sources suggest that the festival was already in practice since ancient times.
- The festival is also known as **Festival of Chariots**, as the deities are carried on **three massive wooden chariots that are pulled by devotees with ropes**.
- It begins on the **second day of the bright fortnight of the month of Ashadha (June-July)** and lasts for **nine days**.

Jagannath Puri Temple



- It is one of the most impressive monuments of the **Indian State Odisha**.
 - This temple is known as the **"White Pagoda"** and is a part of **Char Dham pilgrimages (Badrinath, Dwaraka, Puri, Rameswaram)**.
- It is a **splendid example of Kalinga architecture**, which is characterised by **curvilinear towers, intricate carvings and ornate sculptures**.
 - The temple complex is surrounded by a high wall with four gates facing the four cardinal directions.
 - The main temple consists of four structures: the **vimana (sanctum)**, the **jagamohana (assembly hall)**, the **nata-mandira (festival hall)** and the **bhoga-mandapa (offering hall)**.
- Jagannath Puri temple is called **'Yamanika Tirtha'** where, according to the Hindu beliefs, the **power of 'Yama', the god of death has been nullified in Puri** due to the presence of Lord Jagannath.

Note:

Decline in Black Carbon Level in Varanasi

Why in News?

According to a study at [Banaras Hindu University \(BHU\)](#), an annual average decline of 0.47 micrograms per cubic metre in [carbon level](#) has been observed in **Varanasi and the central Indo-Gangetic plains**.

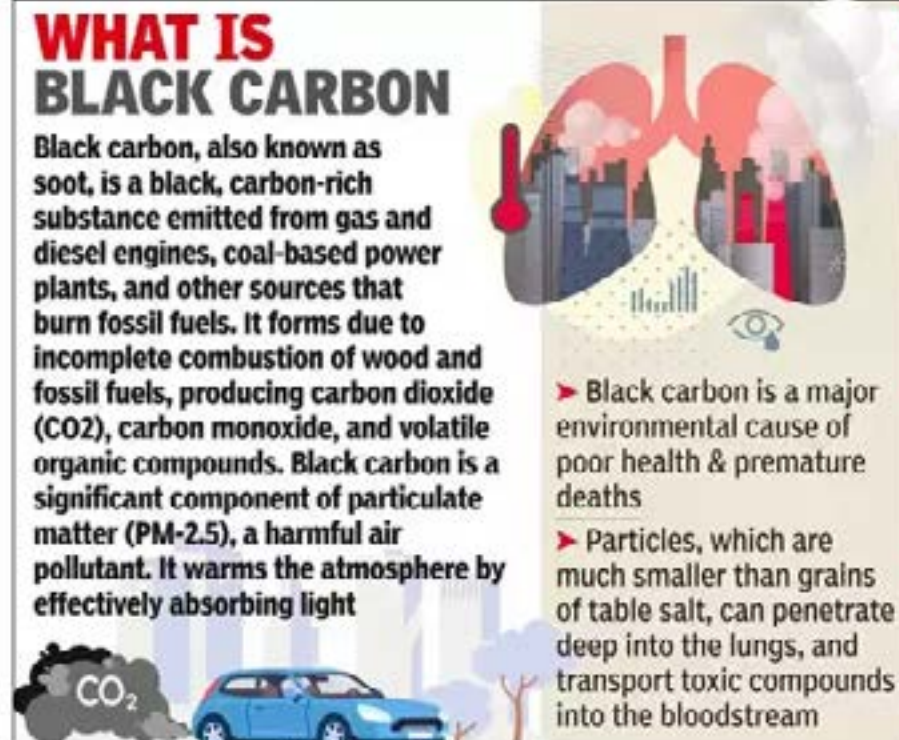
Key Points

- The study utilized black carbon data generated under the [Aerosol Radiative Forcing over India \(ARFI\) program](#) of the [Indian Space Research Organisation \(ISRO\)](#).
 - An analysis of a decade-long measurement of [black carbon mass concentration](#) was conducted at a representative location in the central Indo-Gangetic plain, Varanasi, **from 2009 to 2021**.

- The **purpose of this analysis** was to understand the **physical, optical, and radiative impact of black carbon in this region**.
- The study recorded an **average annual decrease of 0.47 micrograms per cubic metre in black carbon levels**.
 - Black carbon levels also showed a **consistent seasonal decline**, with a **post-monsoon average decrease of 1.86 micrograms per cubic metre** and a **pre-monsoon average decrease of 0.31 micrograms per cubic metre**.
- The study found that the black carbon in Varanasi and central Indo-Gangetic plains mostly **originates from distant sources, rather than local factors**.
 - These particles are transported over long distances from the lower and upper Indo-Gangetic plains, **Pakistan, the Middle East, and southern peninsular regions**.

WHAT IS BLACK CARBON

Black carbon, also known as soot, is a black, carbon-rich substance emitted from gas and diesel engines, coal-based power plants, and other sources that burn fossil fuels. It forms due to incomplete combustion of wood and fossil fuels, producing carbon dioxide (CO₂), carbon monoxide, and volatile organic compounds. Black carbon is a significant component of particulate matter (PM-2.5), a harmful air pollutant. It warms the atmosphere by effectively absorbing light



IMPACT ON HEALTH

- PM 2.5 air pollution is linked to lung diseases, stroke, heart attacks, chronic respiratory diseases like bronchitis, asthma, and premature deaths in adults suffering from heart & respiratory conditions
- It also affects children, contributing to premature deaths from acute lower respiratory infections like pneumonia
- These particles have been found in lungs, liver, and brain of unborn babies, potentially affecting early childhood development

- Black carbon is a major environmental cause of poor health & premature deaths
- Particles, which are much smaller than grains of table salt, can penetrate deep into the lungs, and transport toxic compounds into the bloodstream

Black Carbon

- Black Carbon (BC) is a **short-lived pollutant that is the second-largest contributor** to warming the planet behind [carbon dioxide \(CO₂\)](#).
- Unlike other [greenhouse gas emissions](#), BC is quickly washed out and can be eliminated from the atmosphere if emissions stop.
- Unlike historical carbon emissions it is also a localised source with greater local impact.
- Black carbon is a kind of an [aerosol](#).

Note:

Uttar Pradesh Government Defence Deals

Why in News?

Recently, the **Uttar Pradesh** government has signed more than **154 defence manufacturing deals worth Rs 25,000 crore**.

Key Points

- According to the Ministry of Defence (MoD), **India's annual defence production is Rs 1.27 trillion in 2023-24 (FY24)**, which is 16.7% higher than 2023.
- The defence projects are coming up in the mega **UP Defence Industrial Corridor (UPDIC)** spanning six nodes of **Lucknow, Kanpur, Jhansi, Aligarh, Chitrakoot and Agra districts**.
 - The Corridor's nodal agency **UP Expressway Industrial Development Authority (UPEIDA)** has signed **154 Memorandums of Understanding (MoUs) with different companies** such as **Adani Defence and Aerospace, BrahMos Aerospace, Defence Research & Development Organisation (DRDO)**, etc.
- Uttar Pradesh is actively promoting defence manufacturing to drive its **'Make in UP'** initiative.
 - The state aims to leverage its extensive **Micro, Small and Medium Enterprises (MSME)** base to catalyze this effort
- A total of **35,000 Kalashnikov AK-203 assault rifles, assembled at the Korwa factory in Amethi district of Uttar Pradesh**, have been given to the Indian Army by the **Indo-Russia Rifles Private Limited joint venture**.
- Another **Indo-Russia joint venture plant is coming up in Lucknow** to manufacture **BrahMos missiles** for the Indian defence forces.
 - BrahMos is a **joint venture between India's Defence Research and Development Organisation (DRDO) and Russia's NPOM (Non-Profit Organisation Mashinostroyeniya)** to develop next-generation **supersonic missiles** for the Indian forces.

Uttar Pradesh Defence Industrial Corridor (UPDIC)

- It is an **aspirational project that intends to reduce foreign dependence** on the Indian **Aerospace & Defence Sector**. It was **inaugurated in 2018**.
- The **Uttar Pradesh Expressways Industrial Development Authority (UPEIDA)** was made the **nodal agency to execute this project** in conjunction with various other state agencies.

The Uttar Pradesh Expressways Industrial Development Authority (UPEIDA)

- It is an **authority set up in 2007 by the Government of Uttar Pradesh to develop expressway projects in the state**.
- The headquarters of UPEIDA is **located at Paryatan Bhawan in Gomti Nagar, Lucknow**.

Kashi to Open Agri Junction Centres

Why in News?

According to the officials, **20 agri junction centres for trained youth agrarians** are to be opened in **Kashi**.

Key Points

- The district has been given a target of opening **20 agri junction centres for trained youth agrarians in the current financial year**.
- This **scheme was launched by the state government in 2016-17**. Between 2016-17 and 2023-24, a total of **104 centers** were opened, with **71 currently active**.
 - Any agriculture or agribusiness management graduates who hold degrees in agriculture and allied subjects such as **horticulture, animal husbandry, forestry, dairy, veterinary, poultry** and similar activities from any state or central university or any other university recognised by **Indian Council of Agricultural Research (ICAR)** or **University Grants Commission (UGC)** will be eligible to apply for establishment of agri junction centres.
- Apart from this, experienced diploma holders, intermediate qualified candidates in agriculture will be considered.

Note:

- After selection beneficiaries will also be given a 13-day training in **Rural Business Development Scheme (RIDP)**.
 - RIDP **provides grant funding through local development corporations** to support business relocation and expansion efforts.

The Indian Council of Agricultural Research (ICAR)

- It was **established on 16 July 1929** as a **registered society** under the **Societies Registration Act, 1860**.
- It is an **autonomous organisation** under the Department of Agricultural Research and Education (DARE), **Ministry of Agriculture and Farmers Welfare**, Government of India.
- It is headquartered at **New Delhi**.

University Grants Commission

- It came into existence on 28th December, 1953 and became a **statutory Organization of the Government of India by the University Grants Commission Act, 1956**, for the coordination, determination and maintenance of standards of teaching, examination and research in university education.
- The UGC operates under the **Ministry of Education**, the Central Government appoints a Chairman, a Vice-Chairman, and ten other members to the UGC.
 - The Chairman is chosen from people **who are not officers of the Central Government or any State Government**.

Uttar Pradesh to Set Up Crop-Specific Boards

Why in News?

Uttar Pradesh plans to establish **crop-specific commodity boards** as a step toward achieving the **goal of annual agro shipments worth Rs 50,000 crore**.

Key Points

- This initiative **aims to boost farm productivity, catalyze food processing, and re-energize the agro value chain** over the next four years.

- To generate employment, the government is promoting **agriculture-focused startups**.
- There is a huge demand for **horticultural produce** like strawberries, dragon fruit, and flowers in the state.
- State-level horticultural commodity boards would be set up on the lines of the **Spices Board of India**.
- **The Indian Chamber of Food and Agriculture (ICFA)** has **constituted the UP State Agriculture Council** to promote agro industry and exports.
 - It would **foster coordination between the government, agro experts, and farmers**.
 - The council will focus on **promoting sustainable agricultural practices**, enhancing market access, and supporting exports.
 - It will host a **'Agro World 2025' summit in February 2025 in Lucknow**.

Spices Board of India

- **Spices Board** was constituted on 26th February 1987 under the **Spices Board Act, 1986** with the merger of the erstwhile **Cardamom Board (1968)** and **Spices Export Promotion Council (1960)**.
- There are **five statutory Commodity Boards** under the Department of Commerce.
 - These Boards are responsible for **production, development and export of tea, coffee, rubber, spices and tobacco**.
- It is responsible for the **export promotion** of the **52 scheduled spices** and the **development of Cardamom**.
- Spices Board is the **flagship organisation** for the development and worldwide promotion of Indian spices.
- The Board is an **international link** between the Indian exporters and the importers abroad.

Indian Chamber of Food and Agriculture (ICFA)

- Formerly known as the Indian Council of Food and Agriculture, was **founded in 2015**.
- It is the **apex body in India**, working on **business, policy, and development agendas** while serving as a global platform for **trade facilitation, partnerships, technology, and agribusiness services**.

Note:

Putin Expresses Condolences for Hathras Stampede Tragedy

Why in News?

Recently, Russian President Vladimir Putin expressed condolences over the **stampede at a religious congregation in Uttar Pradesh** in which 121 people were killed.

- Stampede is an impulsive mass movement of a crowd that often results in injuries and deaths.

Key Points

- The stampede took place in **Hathras district of Uttar Pradesh**. The victims were part of the **crowd of thousands that had gathered near Phulrai village** in the Sikandrara area for the 'satsang' by a religious preacher.
- An **First Information Report (FIR)** has been filed by the Uttar Pradesh Police against the organizers of the religious congregation.
 - The organizers are **accused of hiding evidence and violating conditions** by allowing 2.5 lakh people to gather for the event, despite a permit for only 80,000 attendees.

First Information Report (FIR)

- It is a **written document** prepared by the police when they receive information about the commission of a **cognizable offence**.
- It is a report of **information that reaches the police first at that point of time** and that is why it is called the First Information Report.
- It is generally a complaint lodged with the police by the victim of a cognizable offence or by someone on his/her behalf. **Anyone can report the commission of a cognizable offence either orally or in writing.**
- The term FIR is **not defined in the Indian Penal Code (IPC), Code of Criminal Procedure (CrPC), 1973, or in any other law.**
 - However, in police regulations or rules, information recorded under **Section 154 of CrPC** is known as First Information Report (FIR).

Highest Tokens Through ABHA ID

Why in News?

Recently, **Uttar Pradesh** has set a record by **generating one crore tokens** through the **Ayushman Bharat Health Account (ABHA) ID**.

Key Points

- Uttar Pradesh is the only Indian state to have achieved the feat of generating a total of 1,43,00,000 tokens to date.
 - Following Uttar Pradesh, Andhra Pradesh stands second with 60,33,104 tokens generated, while Karnataka holds third place with 42,57,944 tokens.
- The **Indian Public Health Standards (IPHS) guidelines**, introduced in 2007 and latest update in 2022, **set quality benchmarks for public health facilities** from primary to secondary level health care facilities.
 - These standards ensure **consistent, accessible, and accountable healthcare** services nationwide.
 - The Health Ministry has created a **dashboard to help national, state, and district health institutions quickly monitor compliance with IPHS standards** and take necessary action.

Ayushman Bharat Health Accounts (ABHA)

- **ABHA ID is a unique 14-digit number** used to **link all the health records of a person**. It intends to create a digital health ecosystem & aims to **promote digitisation of healthcare**.
- Any individual can enroll in **Ayushman Bharat Digital Mission (ABDM)** to generate a Health ID or ABHA, free of cost.
- **Features:**
 - **Electronic Health Records (EHR):** ABHA integrates **electronic health records, facilitating the storage and retrieval of patient information**.
 - This helps in **maintaining medical histories** and streamlining healthcare delivery.
 - **Portability:** The accounts are designed to be **portable across various healthcare providers** empanelled under the **Ayushman Bharat Scheme**, allowing beneficiaries to access services seamlessly, regardless of their location.
 - **Transparency and Accountability:** By promoting digital transactions and maintaining electronic records, ABHA **enhances transparency and accountability in the healthcare system**.

Note:

Key Points

Details

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Summary

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