



DAILY CURRENT AFFAIRS-

1. GOBARdhan Scheme
2. Three Essential Medicines Classified as Carcinogenic by IARC
3. Jammu And Kashmir — The Elusive Quest For Statehood
4. Global Warming: Picking Speed
5. Indigenous African Swine Fever (ASF) Vaccine Developed by ICAR Bolsters India's Biosecurity

1. GOBARdhan Scheme

Source: PIB

Why in News?

The Union Cabinet has approved the GOBARdhan Scheme with a financial outlay of ₹23,731 crore for the period 2026–27 to 2035–36 to accelerate Compressed Biogas (CBG) production, promote scientific management of organic waste, strengthen India's energy security, and support the transition towards a circular bioeconomy.

Key Features

- A unified circular bioenergy framework has been approved to integrate the complete Compressed Biogas value chain, from feedstock collection to production, transportation and marketing.
- The scheme, originally launched in 2018 under the Swachh Bharat Mission (Grameen), has been upgraded into a national bioenergy programme under the Ministry of Petroleum and Natural Gas.
- A financial outlay of ₹23,731 crore has been earmarked for implementation over a ten-year period from FY 2026–27 to FY 2035–36.

- A phased Compressed Biogas blending obligation has been introduced for City Gas Distribution entities, requiring procurement of 3% in FY 2026–27, 4% in FY 2027–28 and 5% from FY 2028–29 onwards.
- An administered procurement price of ₹2,110 per MMBTU has been fixed to ensure long-term price certainty and encourage private investment.
- Capital assistance of up to ₹2 crore per tonne per day of installed capacity will be provided for eligible greenfield Compressed Biogas projects.
- A dedicated credit guarantee mechanism and pipeline infrastructure support have been incorporated to improve project viability and facilitate market access.
- An Innovation Challenge Fund has been created to promote indigenous technologies, feedstock mapping and district-level bioenergy planning.
- A diversified feedstock base comprising cattle dung, agricultural residue, municipal organic waste, press mud and other biodegradable waste has been adopted to maximize bioenergy production.

Objectives

- The scheme seeks to substantially enhance domestic production of Compressed Biogas and reduce India's dependence on imported natural gas.
- A major focus has been placed on converting organic waste into clean energy and value-added organic manure through a circular economy approach.
- The programme aims to provide an additional and sustainable source of income to farmers through utilization of agricultural residue and livestock waste.
- An important environmental objective is to reduce methane emissions, crop residue burning and indiscriminate disposal of biodegradable waste.

Significance

- The initiative strengthens India's long-term energy security by promoting indigenous production of renewable gaseous fuel.
- A major boost is expected for the circular economy by converting waste streams into commercially valuable energy resources.
- The production of Fermented Organic Manure is expected to improve soil fertility while reducing dependence on chemical fertilizers.
- The scheme supports the objectives of Swachh Bharat Mission (Grameen), National Bioenergy Programme and India's Net Zero commitments.

- An estimated 1.5 lakh employment opportunities are expected to be generated across biomass collection, logistics, plant operations and allied industries.
- Greater participation of the private sector is expected through assured market access, stable pricing and financial incentives.

Challenges

- A consistent supply of quality biomass feedstock remains essential for ensuring uninterrupted operation of Compressed Biogas plants.
- Adequate pipeline connectivity and distribution infrastructure will be critical for large-scale commercialization.
- Higher capital requirements may continue to affect investment decisions despite government incentives.
- Effective coordination among farmers, urban local bodies, industries and energy companies will determine successful implementation.

UPSC Prelims Practice Question

Q. With reference to the GOBARdhan Scheme, consider the following statements:

1. It promotes the conversion of biodegradable waste into Compressed Biogas and organic manure.
2. The expanded scheme is implemented by the Ministry of Petroleum and Natural Gas.
3. City Gas Distribution entities are mandated to procure Compressed Biogas under phased blending targets.

Which of the statements given above is/are correct?

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

Answer: (d)

UPSC Mains Practice Question

Q. Discuss the significance of the GOBARdhan Scheme in promoting a circular bioeconomy in India. How can the scheme contribute to energy security, waste management and sustainable rural development? (10 Marks, 150 Words)

2.Three Essential Medicines Classified as Carcinogenic by IARC

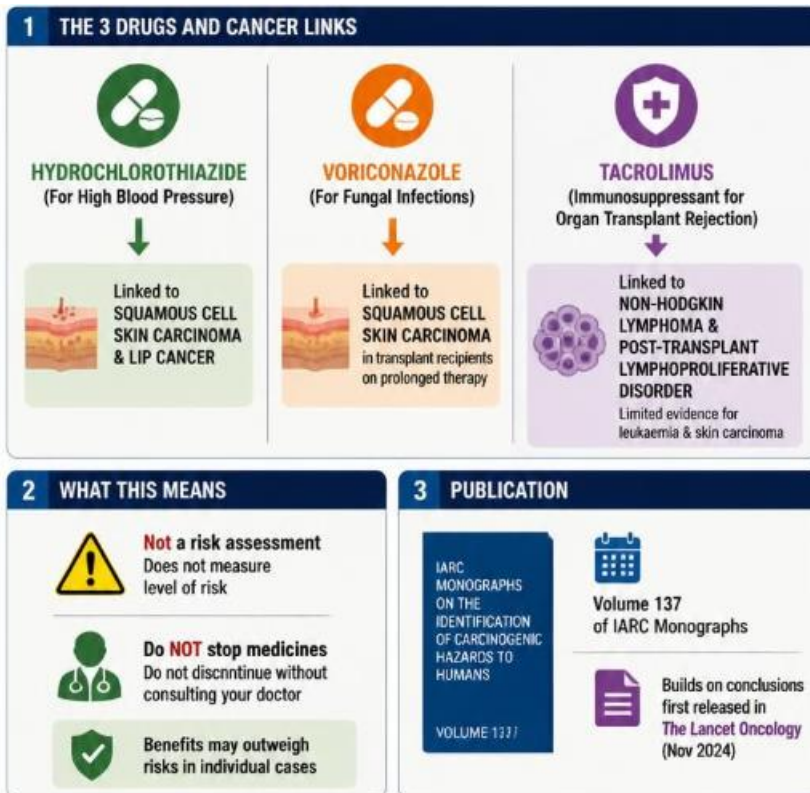
Source: The Hindu

Why in News?

The International Agency for Research on Cancer (IARC), the cancer research arm of the World Health Organization (WHO), has classified three widely used medicines—hydrochlorothiazide, voriconazole and tacrolimus—as "carcinogenic to humans" (Group 1), based on sufficient evidence linking their long-term use to specific cancers.

Key Highlights

- An evaluation by the International Agency for Research on Cancer has placed hydrochlorothiazide, voriconazole and tacrolimus under Group 1 (Carcinogenic to Humans).
- All three medicines are included in the WHO Model List of Essential Medicines and continue to play an important role in the management of several life-threatening conditions.
- Hydrochlorothiazide, a commonly prescribed antihypertensive drug, has been associated with squamous cell carcinoma of the skin and lip cancer, particularly after prolonged exposure.
- Voriconazole, an antifungal medicine used mainly in immunocompromised patients, has been linked to squamous cell skin carcinoma, especially among organ transplant recipients receiving long-term therapy.
- Tacrolimus, an immunosuppressant widely used after organ transplantation, has been associated with non-Hodgkin lymphoma and post-transplant lymphoproliferative disorder, with limited evidence for skin cancer and leukaemia.
- The latest assessment has been published in Volume 137 of the IARC Monographs, based on scientific evidence reviewed by international experts.



Understanding IARC Classification

- The International Agency for Research on Cancer functions as the specialized cancer research agency of the World Health Organization and evaluates substances for their potential to cause cancer.
- The IARC classification represents hazard identification, indicating whether an agent is capable of causing cancer under certain circumstances, rather than measuring the actual risk associated with normal medical use.
- Group 1 includes agents for which sufficient scientific evidence exists to establish carcinogenicity in humans.
- Medical decisions regarding these medicines continue to depend on individual risk-benefit assessment, as their therapeutic benefits may substantially outweigh potential long-term risks.

WHO Model List of Essential Medicines

- The WHO Model List of Essential Medicines identifies medicines that satisfy the priority healthcare needs of populations and should be available at all times in adequate quantities, assured quality and affordable prices.
- The Expert Committee selects medicines based on public health relevance, clinical efficacy, safety and comparative cost-effectiveness.

- The latest revision comprises the 24th WHO Model List of Essential Medicines and the 10th Essential Medicines List for Children, released in September 2025.
- Recent additions to the list include medicines for diabetes, cancer, rare diseases and vaccines against Ebola, Mpox, Hepatitis E and Malaria.

Concerns for India

- Irrational prescribing and over-the-counter availability of certain medicines may increase unnecessary exposure among patients.
- Poor adherence to standard treatment guidelines and inadequate patient counselling remain important public health concerns.
- Greater pharmacovigilance, rational drug use and periodic review of long-term prescriptions are essential to minimize adverse outcomes.
- Patients are advised not to discontinue prescribed medicines without medical consultation, as abrupt withdrawal may pose greater health risks than the potential carcinogenic effects.

UPSC Prelims Practice Question

Q. With reference to the International Agency for Research on Cancer (IARC), consider the following statements:

1. IARC is a specialized cancer research agency of the World Health Organization.
2. Group 1 classification indicates that an agent has sufficient evidence of causing cancer in humans.
3. A Group 1 classification automatically implies that the medicine should be withdrawn from clinical use.

Which of the statements given above is/are correct?

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

Answer: (a)

UPSC Mains Practice Question

Q. Discuss the significance of the WHO Model List of Essential Medicines in improving public health outcomes. In this context, explain the implications of IARC's carcinogenic

classification of certain essential medicines for healthcare policy and pharmacovigilance.
(10 Marks, 150 Words)

3.Jammu And Kashmir — The Elusive Quest For Statehood

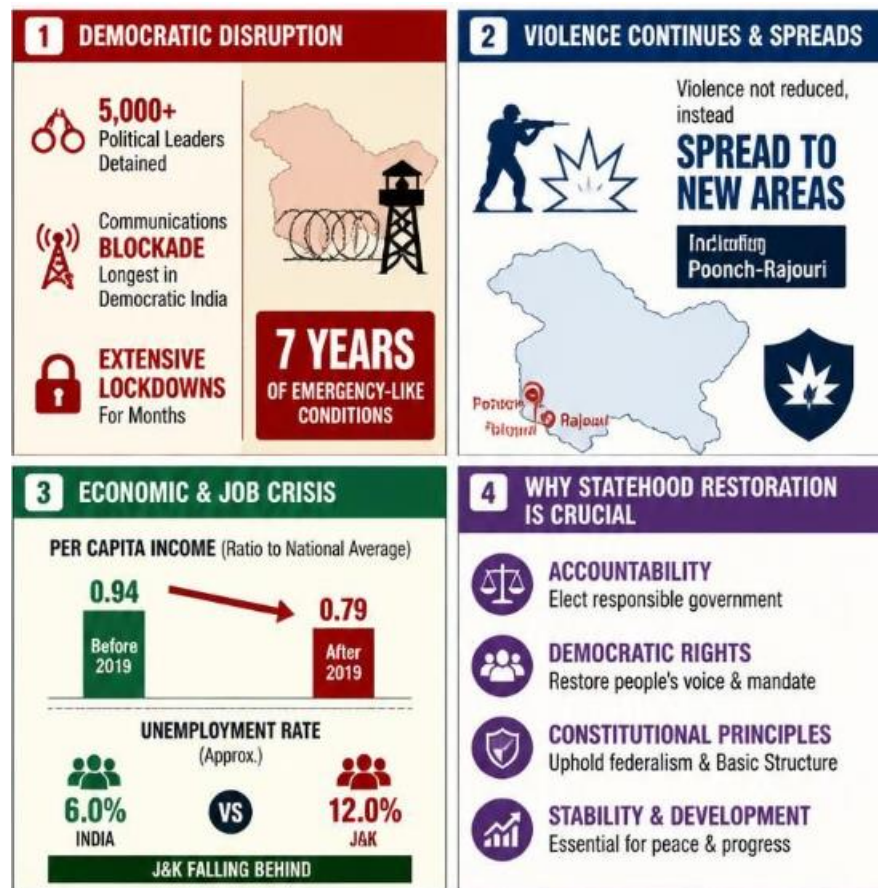
Source: The Hindu

Why in News?

Seven years post Article 370 revocation, J&K grapples with continued direct rule, economic decline, and security challenges, intensifying calls for statehood restoration and democratic accountability.

Key Highlights:

- August 5 marks seven years since **Article 370**, granting special status to Jammu and Kashmir, was revoked.
- August 9 will mark seven years since Jammu and Kashmir lost its **Statehood** following the **Jammu and Kashmir Reorganisation Act, 2019**.
- The 2019 actions were accompanied by extensive lockdowns, detention of over 5,000 political leaders, and a communications blockade.
- Contrary to government claims, violence has continued and spread to new areas like Poonch-Rajouri.
- Jammu and Kashmir's per capita income ratio to the national average has fallen, and unemployment remains nearly double the national average.
- A renewed campaign by political parties is underway for the restoration of **Statehood** to ensure accountability.



The Genesis: Why was it created?

Post-1947, Article 370 was drafted as a "temporary provision" in Part XXI of the Constitution. It granted the erstwhile state of **Jammu and Kashmir (J&K)** a unique degree of autonomy, allowing it to have its own Constitution, a separate flag, and jurisdiction over all matters except **Defense, Foreign Affairs, Finance, and Communications**.

The 2019 Landmark Shift

On **August 5, 2019**, the Government of India effectively revoked the special status of J&K through a Presidential Order (**C.O. 272** and **C.O. 273**).

- **Status Change:** The state was bifurcated into two Union Territories (UTs): **Jammu & Kashmir** (with a legislature) and **Ladakh** (without a legislature).
- **Full Integration:** All provisions of the Indian Constitution now apply to the region, and the separate J&K Constitution stands repealed.

- **Article 35A:** This provision, which empowered the J&K legislature to define "permanent residents" and grant them exclusive rights to land and jobs, was also scrapped.

The Supreme Court Verdict (2023)

In the landmark "**In Re: Article 370**" case, a five-judge Constitution Bench led by CJI D.Y. Chandrachud unanimously upheld the abrogation. The Court established three critical legal points:

1. **No Internal Sovereignty:** J&K did not retain any element of sovereignty after signing the Instrument of Accession.
2. **Temporary Character:** The article was always meant to be temporary, intended for constitutional integration, not for permanent separation.
3. **Presidential Power:** The President had the authority to issue the order without the concurrence of a non-existent State Constituent Assembly.

Detailed Insights:

- The revocation of **Article 370** was executed by executive fiat through the Governor, and **Statehood** was removed by legislative fiat without consulting the people of J&K.
- This marked the first time an Indian State lost its **Statehood** since Delhi in 1956, raising concerns about constitutional principles.
- The actions are viewed by some as a violation of India's constitutional principles and potentially the **Basic Structure Doctrine**.
- The **Supreme Court of India** has not yet set a timeline for the restoration of **Statehood**, despite acknowledging the need for it.
- Emergency-like conditions, including direct rule and security measures, have persisted in J&K for seven years, exceeding typical constitutional limits for such impositions.
- The **Lieutenant-Governor**, an appointed official, currently controls the administration, police, and prosecutors, and holds emergency powers over telecommunications.
- J&K has experienced "ugly firsts" such as the widespread use of pellet guns in 2016 and communal delimitation in 2022.
- The 2024 elections saw a majority for the pluralist National Conference-Congress alliance, indicating a desire for democratic representation

4.Global Warming: Picking Speed

Source: The Hindu

Why in News?

A recent study published in *Geophysical Research Letters* has confirmed that global warming is accelerating, with scientists projecting that the Earth's average temperature could breach the 1.5°C threshold by around 2030, driven primarily by rising greenhouse gas emissions and the declining cooling effect of atmospheric aerosols.

Key Findings

- A comprehensive analysis of five major global temperature datasets confirms that the rate of global warming has increased significantly since 2015.
- The latest assessment indicates with over 98% confidence that the acceleration in warming represents a genuine long-term trend rather than natural climatic variability.
- A projected breach of the 1.5°C warming threshold around 2030 highlights the narrowing window for achieving the Paris Agreement's climate goals.
- A reduction in atmospheric aerosol pollution has contributed to the recent acceleration by weakening the temporary cooling effect that previously masked part of greenhouse gas-induced warming.
- Greenhouse gas emissions continue to remain the dominant driver of rising global temperatures despite improvements in air quality.

Reasons Behind the Accelerated Warming

- A continuous increase in atmospheric concentrations of carbon dioxide, methane and nitrous oxide has intensified the greenhouse effect.
- A significant decline in sulphate aerosols due to cleaner industrial emissions and stricter air pollution controls has reduced the Earth's ability to reflect incoming solar radiation.
- A removal of short-term natural climate fluctuations, including volcanic eruptions and other climatic oscillations, enabled researchers to isolate the long-term warming trend more accurately.
- A growing accumulation of heat in the oceans has further amplified global temperature rise through increased heat storage and release.

Major GHGs: A Comparative View

The following table summarizes the primary gases according to their Global Warming Potential (GWP) and recent trends observed in 2024-25.

Gas	Primary Source	GWP (100-yr)	2024-25 Status
Carbon Dioxide (CO ₂)	Fossil fuels, Deforestation	1	Growth slowing; peaked in some G20 nations.
Methane (CH ₄)	Paddy fields, Livestock, Landfills	~28-30	At an all-time high; 1.03% increase in 2025.
Nitrous Oxide (N ₂ O)	Fertilizers, Industrial processes	~265-273	Rising steadily; driven by intensive agriculture.
F-Gases (HFCs, SF ₆)	Refrigerants, Electronics	1,000s to 23,000	Four-fold increase since 1990; strict Kigali monitoring.

Role of Aerosols

- Atmospheric aerosols are tiny solid or liquid particles suspended in the atmosphere that generally reflect sunlight and increase cloud reflectivity, producing a temporary cooling effect.
- Reduced aerosol concentrations improve air quality and public health but simultaneously expose the full warming impact of accumulated greenhouse gases.
- Unlike greenhouse gases, aerosols remain in the atmosphere only for a few days or weeks, making their cooling effect short-lived.

Paris Agreement and the 1.5°C Target

- The Paris Agreement, adopted under the UNFCCC in 2015, aims to hold the increase in global average temperature well below 2°C while pursuing efforts to limit warming to 1.5°C above pre-industrial levels.
- The 1.5°C threshold is considered critical because exceeding it substantially increases the risks of irreversible climate impacts and biodiversity loss.
- Nationally Determined Contributions (NDCs) remain the primary mechanism through which countries commit to reducing greenhouse gas emissions.

UPSC Prelims Practice Question

Q. With reference to atmospheric aerosols, consider the following statements:

1. Atmospheric aerosols generally produce a cooling effect by reflecting incoming solar radiation.
2. Aerosols remain in the atmosphere much longer than carbon dioxide.
3. A reduction in aerosol pollution can increase the rate of global warming in the short term.

Which of the statements given above is/are correct?

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

Answer: (b)

UPSC Mains Practice Question

Q. Recent scientific studies indicate that global warming is accelerating despite improvements in air quality. Discuss the role of greenhouse gases and atmospheric aerosols in influencing global temperatures. Also examine the implications of crossing the 1.5°C warming threshold for climate governance. (15 Marks, 250 Words)

5.Indigenous African Swine Fever (ASF) Vaccine Developed by ICAR Bolsters India's Biosecurity

Source: The Hindu

Why in News?

ICAR-NIHSAD develops India's first indigenous MA-104 cell line-based live attenuated African Swine Fever vaccine, bolstering biosecurity and protecting pig farmers' livelihoods.

Key Highlights:

- India has developed its first indigenous **MA-104_Cell_Line-Based Live Attenuated African Swine Fever (ASF) Vaccine** for pigs.
- The vaccine was developed by **ICAR–National Institute of High Security Animal Diseases (ICAR-NIHSAD)**, Bhopal.

- **African Swine Fever (ASF)**, caused by **African Swine Fever Virus (ASFV)**, was first detected in India in 2020, causing significant economic losses.
- The vaccine has undergone comprehensive laboratory and field validation, proving its safety and efficacy.
- This breakthrough aims to reduce pig mortality, minimize economic losses, and strengthen India's animal health security.

Detailed Insights:

- **African Swine Fever (ASF)** is a devastating trans-boundary animal disease with mortality rates approaching 100% in domestic and wild pigs.
- Outbreaks in India, particularly in the North-Eastern region, have led to massive pig mortality and livelihood losses for farmers.
- Estimated losses include ₹276 crore in Assam (2020-21) and ₹982 crore in Mizoram (up to 2025).
- The indigenous vaccine uses an attenuated **ASFV Genotype II** virus with unique gene deletions in the **MA-104 cell line**.
- It is administered as a 1 mL intramuscular injection, followed by a booster dose 14 days later, for pigs above eight weeks of age.
- This development eliminates dependence on proprietary manufacturing platforms used by other commercially licensed ASF vaccines, reducing production costs.

