

11 July 2025

1. India's First Commercial Graphene Production Plant Inaugurated in Kerala **Source: The Economic Times**

Context: In a significant boost to India's advanced manufacturing sector, the country's first commercial-scale graphene production facility was inaugurated today at the India Innovation Centre for Graphene (IICG) in Kochi, Kerala. The plant, a joint venture between Tata Steel and the Digital University Kerala, has an initial capacity of 100 tonnes per annum, making India one of the few countries with large-scale graphene production capabilities.



Significance

Graphene, a single layer of carbon atoms arranged in a hexagonal lattice, is hailed as a "wonder material" due to its extraordinary strength, flexibility, and conductivity. The new facility will produce high-quality graphene powder and graphene-polymer composites. These materials have wide-ranging applications, including in advanced batteries for electric vehicles, lightweight and strong aerospace components, flexible electronics, anti-corrosion coatings, and water purification membranes. The plant will cater to both domestic demand and export markets, aiming to reduce India's import dependency on advanced materials.

11 July 2025

Analysis

- The Minister for Science and Technology, present at the inauguration, described the facility as a cornerstone of the National Graphene Mission.
- He highlighted that the availability of locally produced, cost-effective graphene will spur research and product development across various industries.
- The IICG will also serve as an incubation centre, providing startups and MSMEs with access to graphene and the expertise to integrate it into their products, thereby fostering a complete "lab-to-fab" ecosystem for this next-generation material.

UPSC Syllabus Correlation:

GS Paper 3: Science and Technology- developments and their applications and effects in everyday life; Awareness in the fields of IT, Computers, robotics, nano-technology. Indigenization of technology and developing new technology

11 July 2025

2. Centre Launches National Urban Health Mission 2.0 with Focus on Digital Health, Source: PIB (Press Information Bureau)

Context: The Union Ministry of Health and Family Welfare today launched the second phase of the National Urban Health Mission (NUHM 2.0), with a renewed focus on leveraging digital technologies and addressing the health challenges of a rapidly urbanizing India. The mission, with an outlay of ₹75,000 crore over the next five years, aims to provide comprehensive and accessible primary healthcare services to the urban poor, particularly those living in slums and informal settlements.



Significance

- A key feature of NUHM 2.0 is the integration of the Ayushman Bharat Digital Mission (ABDM) framework.
- All Urban Primary Health Centres (U-PHCs) and Polyclinics will be digitized, and every citizen will be encouraged to create an Ayushman Bharat Health Account (ABHA).
- This will enable seamless access to medical records, tele-consultation services with specialists, and efficient management of public health programs.
- The mission will also establish a network of 'Smart Health Kiosks' in high-density urban areas, offering basic diagnostics and e-prescriptions.

11 July 2025

Analysis

- Another major focus is on non-communicable diseases (NCDs) like hypertension, diabetes, and certain cancers, which are on the rise in urban centres due to lifestyle changes.
- NUHM 2.0 will introduce robust screening, prevention, and management programs for NCDs.
- The mission also aims to strengthen urban disease surveillance systems to better predict and manage outbreaks of infectious diseases.
- It seeks to build health system resilience in cities, drawing lessons from the challenges faced during the COVID-19 pandemic.

UPSC Syllabus Correlation:

GS Paper 2: Issues relating to development and management of Social Sector/Services relating to Health, Education, Human Resources; Government policies and interventions for development in various sectors.

11 July 2025

3. India to Ratifies IMO Convention Regulate Ship Recycling

Source: Indian Express

Context: India, home to the world's largest ship recycling industry in Alang, Gujarat, has officially deposited its instrument of accession for the Hong Kong International Convention for the Safe and Environmentally Sound Recycling of Ships, 2009. The instrument was submitted to the International Maritime Organization (IMO) in London, making India a key contracting state to the convention, which is now set to enter into force globally in mid-2027.



Significance

- The Hong Kong Convention (HKC) sets comprehensive standards for ship recycling, ensuring that end-of-life vessels do not pose unnecessary risks to human health, safety, and the environment.
- It requires ship recycling facilities to meet stringent norms, including proper management of hazardous materials like asbestos, heavy metals, and ozone-depleting substances.
- It also mandates that ships carry an Inventory of Hazardous Materials (IHM).
- By ratifying the convention, India has committed to upgrading all its recycling yards to be HKC-compliant.
- This move is expected to transform the Alang shipbreaking yard, long criticized for its environmental and labour safety record.

11 July 2025

Analysis

- The government has already enacted the Recycling of Ships Act, 2019, to align domestic laws with the HKC.
- The ratification will provide Indian recycling yards with a competitive edge, as many global shipowners prefer to send their vessels to compliant facilities.
- This is expected to attract more business, enhance the industry's reputation, and significantly improve working conditions and environmental safeguards for the thousands employed in the sector.

UPSC Syllabus Correlation:

GS Paper 2: Important International institutions, agencies, and fora- their structure, mandate.

GS Paper 3: Conservation, environmental pollution, and degradation. Infrastructure: Ports.

11 July 2025

4. New Government Panel Recommends Framework for Gig Worker Social Security, Source: The Economic Times

Context: An expert committee constituted by the Ministry of Labour and Employment has submitted its report recommending a new, contributory social security framework specifically for gig and platform workers. The report addresses the long-standing ambiguity over the employment status of these workers, who are often classified as 'independent contractors' by aggregator platforms.



Significance

- The panel has proposed a 'third category' of worker status, distinct from traditional 'employee' and 'independent contractor', termed 'platform-dependent worker'.
- This classification would grant specific rights and social security benefits without imposing the full obligations of a traditional employer-employee relationship.
- The core recommendation is the creation of a 'Gig Workers' Social Security Fund'.
- This fund would be financed through a tripartite contribution model: a 1-2% levy on the annual turnover of aggregator platforms, a small contribution from the workers themselves, and a matching contribution from the central government.

11 July 2025

Analysis

- The funds would be used to provide benefits like health insurance, disability cover, old-age pensions, and upskilling programs.
- The report also suggests the creation of a national digital platform for registering all gig workers, which would ensure portability of benefits across different aggregator platforms.
- These recommendations, if accepted, would be a major amendment to the Code on Social Security, 2020, and could provide a safety net for an estimated 15 million gig workers in India, a number projected to grow significantly.

UPSC Syllabus Correlation:

GS Paper 2: Government policies and interventions for development in various sectors and issues arising out of their design and implementation; Welfare schemes for vulnerable sections of the population.

GS Paper 3: Indian Economy and issues relating to planning, mobilization of resources, growth, development, and employment.

11 July 2025

5. Cabinet Approves National Mission on Edible Oils - Palm Oil 2.0

Source: PIB (Press Information Bureau)

Context: The Union Cabinet, chaired by Prime Minister Narendra Modi, has given its approval for the second phase of the National Mission on Edible Oils - Oil Palm (NMEO-OP 2.0). This enhanced mission aims to drastically reduce India's heavy reliance on imported edible oils by further boosting domestic oil palm cultivation, with a special focus on the Northeast region and the Andaman & Nicobar Islands.



Significance

- Building on the first phase launched in 2021, NMEO-OP 2.0 has an increased financial outlay of ₹15,000 crore for the next five years.
- A key change is the introduction of a new 'Price Viability Mechanism' to provide farmers with a more stable and remunerative price, insulating them from fluctuations in the international Crude Palm Oil (CPO) market.
- The government will provide viability gap funding to pay the farmers a guaranteed price.
- The mission also increases the subsidy for planting materials and micro-irrigation systems, which are critical for water-intensive palm cultivation.

11 July 2025

Analysis

- The government aims to bring an additional 6.5 lakh hectares under oil palm cultivation, taking the total to 10 lakh hectares by 2029-30.
- Environmental concerns regarding monoculture and deforestation have been addressed by explicitly prohibiting the use of forest land and promoting cultivation on wasteland and fallow land.
- The mission is crucial for India's food security and for saving valuable foreign exchange, as edible oils constitute one of the country's largest food import items.

UPSC Syllabus Correlation:

GS Paper 3: Major crops cropping patterns in various parts of the country; Public Distribution System- objectives, functioning, limitations, revamping; Issues of buffer stocks and food security; Technology missions.

11 July 2025

6. Progress on India-Myanmar-Thailand Trilateral Highway Resumes

Source: Indian Express

Context: Work on the crucial India-Myanmar-Thailand (IMT) Trilateral Highway has resumed on the challenging Kalewa-Yagyi section in Myanmar, following a period of suspension due to security concerns and political instability in the region. The Ministry of External Affairs confirmed that a new security protocol has been established with local authorities in Myanmar to ensure the safety of construction workers and equipment.



Significance

- The 1,360-km-long highway, a cornerstone of India's 'Act East' policy, aims to connect Moreh in Manipur with Mae Sot in Thailand, passing through Myanmar.
- While the sections in India and Thailand are largely complete, progress on the Myanmar leg has been slow.
- The resumption of work on the 69 bridges and the approach roads in this section is a significant step towards completing the project.
- This will enhance land-based connectivity between India and the ASEAN bloc, boosting trade, tourism, and people-to-people ties.

11 July 2025

Analysis

- Officials state that the project is now being fast-tracked, with a revised completion target of late 2027.
- The IMT highway is envisioned as a "highway of opportunity," expected to unlock the economic potential of India's Northeast by linking it directly to the markets of Southeast Asia.
- Beyond economics, the project holds immense strategic value, providing a counter-narrative to China's Belt and Road Initiative (BRI) in the region and strengthening India's geopolitical presence.
- The successful completion of the highway could pave the way for its extension to Cambodia, Laos, and Vietnam.

UPSC Syllabus Correlation:

GS Paper 2: India and its neighborhood- relations; Bilateral, regional and global groupings and agreements involving India and/or affecting India's interests (ASEAN).

11 July 2025

7. National e-Governance Division (NeGD) releases 'AI for Governance' Ethical Framework, Source: Hindustan Times

Context: The National e-Governance Division (NeGD), under the Ministry of Electronics and Information Technology (MeitY), today released a comprehensive 'Ethical Framework for AI in Governance'. This framework provides guiding principles for the responsible design, development, and deployment of Artificial Intelligence (AI) systems in public services across India.



Significance

- The framework is built on seven core principles: Safety and Reliability, Inclusivity and Non-discrimination, Privacy and Security, Accountability and Transparency, Fairness, Explainability, and Promotion of Human Values.
- It mandates that all government AI projects must undergo a rigorous "AI Ethical Impact Assessment" before deployment.
- This assessment will evaluate potential biases in algorithms, data privacy risks, and the socio-economic impact on citizens.
- The framework strongly advocates for a "human-in-the-loop" approach, especially in critical decision-making processes in sectors like law enforcement, justice, and social benefit distribution, to prevent purely machine-driven errors.

11 July 2025

Analysis

- This move is part of the government's broader 'IndiaAI' mission, which aims to leverage AI for economic growth and social development.
- The framework is currently advisory but is expected to be made mandatory for all central and state government departments and agencies.
- It aims to build public trust in AI-powered governance and ensure that the technology is used to enhance efficiency and inclusion, rather than creating new forms of digital divides or discrimination.

UPSC Syllabus Correlation:

GS Paper 3: Awareness in the fields of IT, Computers, robotics, Science and Technology-developments and their applications and effects in everyday life.

GS Paper 4: Ethics and Human Interface: Essence, determinants and consequences of Ethics in human actions; Public/Civil service values and Ethics in Public administration.

11 July 2025

8. New Education Policy: Single Higher Education Regulator 'HECI' Bill Tabled in Parliament, Source: The Hindu

Context: The Union Education Minister today introduced the Higher Education Commission of India (HECI) Bill, 2025, in the Lok Sabha. The bill aims to establish a single, overarching regulatory body for higher education, a cornerstone reform proposed in the National Education Policy (NEP) 2020. The HECI is set to subsume existing regulatory bodies like the University Grants Commission (UGC) and the All India Council for Technical Education (AICTE).



Significance

- The proposed HECI will have four independent verticals to perform distinct functions. The National Higher Education Regulatory Council (NHERC) will act as the single-point regulator for all higher education institutions, excluding medical and legal education.
- The National Accreditation Council (NAC) will manage the accreditation process, moving it from an inspection-based system to one based on self-disclosure and transparency.
- The Higher Education Grants Council (HEGC) will be responsible for the funding and financing of universities and colleges.
- Finally, the General Education Council (GEC) will frame "graduate attributes," learning outcomes, and academic standards.

11 July 2025

Analysis

- The bill aims to end the fragmented regulatory landscape, reduce red tape, and promote autonomy and innovation in higher education institutions.
- It introduces a 'light but tight' regulatory framework.
- However, the bill has already drawn criticism from some states and academic bodies who fear that it could lead to over-centralization and erode the autonomy of state universities.
- The bill has been referred to the Parliamentary Standing Committee on Education for further examination and stakeholder consultation.

UPSC Syllabus Correlation:

GS Paper 2: Issues relating to development and management of Social Sector/Services relating to Health, Education, Human Resources; Government policies and interventions.

11 July 2025

9. 'Jal- Jeevan Mission-Urban' Achieves 75% Target Coverage

Source: PIB (Press Information Bureau)

Context: The Ministry of Housing and Urban Affairs announced today that the Jal Jeevan Mission-Urban (JJM-U) has successfully achieved 75% of its target, providing functional tap water connections to over 2 crore urban households since its launch. The mission, designed to provide universal coverage of water supply through functional taps in all statutory towns, is a critical component of the government's efforts to improve the quality of life in urban areas.



Significance

- The progress has been particularly strong in smaller and medium-sized towns.
- A key component of the mission's success has been the rejuvenation of urban water bodies and the promotion of a circular water economy, where treated wastewater is reused for non-potable purposes like industrial use and horticulture.
- This has reduced the strain on freshwater sources. The mission also focuses on developing city water balance plans and strengthening water quality testing and monitoring at the local level.
- The use of technology, including GIS mapping of water networks and smart water metering, has been instrumental in improving efficiency and reducing non-revenue water (NRW).

11 July 2025

Analysis

- The Ministry stated that it is on track to achieve the goal of 100% saturation, providing a piped water supply to all 4,378 statutory towns by the mission deadline of 2026.
- This achievement is crucial for public health, gender equality (as it reduces the drudgery of women fetching water), and the overall sustainable development of India's cities.

UPSC Syllabus Correlation:

GS Paper 1: Urbanization, its problems and their remedies.

GS Paper 2: Government policies and interventions for development in various sectors and issues arising out of their design and implementation; Welfare schemes for vulnerable sections.

11 July 2025

10. Indian Bio-Pharma Firm Develops Novel 'Broad-Spectrum' Antiviral Drug **Source: Hindustan Times**

Context: A Pune-based biopharmaceutical firm, in collaboration with the Indian Council of Medical Research (ICMR), has announced a breakthrough in the development of a novel, broad-spectrum antiviral drug. The drug, currently codenamed 'VIR-24', has shown high efficacy against a range of RNA viruses, including influenza strains, coronaviruses, and dengue, in advanced pre-clinical trials.



Significance

- The drug works by targeting a common enzyme that many RNA viruses use for replication, making it potentially effective against multiple pathogens and less susceptible to viral mutations.
- This is a significant departure from most existing antivirals, which are typically designed to target a specific virus. The research, published in the international journal 'Nature Medicine', has been hailed by the scientific community as a major step towards pandemic preparedness.
- The ability to deploy a single drug against a newly emerging viral threat could save crucial time in the early stages of an outbreak.

11 July 2025

Analysis

- The firm has received fast-track approval from the Central Drugs Standard Control Organisation (CDSCO) to begin Phase I human clinical trials.
- The government's National Bio-Pharma Mission has provided significant funding for the research and development process.
- If successful, this 'Made in India' drug could revolutionize the treatment of viral diseases and become a critical tool in the global fight against future pandemics, reinforcing India's reputation as the "pharmacy of the world."

UPSC Syllabus Correlation:

GS Paper 3: Achievements of Indians in science & technology; Indigenization of technology and developing new technology; Awareness in the fields of Bio-technology.

GS Paper 2: Issues relating to the development and management of Social Sector/Services relating to Health.