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Kerala rolls out free travel for women on KSRTC buses

The scheme will cover around 3,125 ordinary buses operated by the KSRTC in seven categories; CM says KSRTC will not face any financial burden due to the implementation of the scheme

PCS

The Hindu Bureau
THIRUVANANTHAPURAM

Billed as a significant step towards women's empowerment, the Kerala government on Monday launched its flagship 'Priyadarshini' free travel scheme for all women and transgender persons on ordinary buses operated by the Kerala State Road Transport Corporation (KSRTC).

Chief Minister V.D. Satheesan inaugurated the scheme at the Thampoor Central Bus Station around 9.30 a.m.

The scheme will cover around 3,125 ordinary buses operated by the KSRTC, although not all of them are in service due to operational constraints.



CM V.D. Satheesan, right, with Transport Minister C.P. John and other dignitaries during the launch of 'Priyadarshini' on Monday. PTI

Under the scheme, women and transgender persons can travel free of charge on seven categories of KSRTC ordinary services — ordinary, city ordinary, limited-stop ordinary, fair-stage ordinary, town-to-town, point-to-point, and Gramavandi services.

Terming the launch "a proud moment for Kerala," Mr. Satheesan said the free travel initiative was "not an act of generosity" towards women, but a well-crafted scheme that will have far-reaching socio-economic benefits. The KSRTC will not face any financial bur-

den due to the implementation of the scheme, he said.

During the initial phase, women and transgender passengers will be allowed to travel free of charge on ordinary bus services for the first 100 days. After a review of the scheme's performance, the government plans to extend the benefit to other categories of services.

A section of commuters alleged that the number of buses carrying the City Fast tag swelled overnight in Thiruvananthapuram city on Monday, depriving many passengers of the benefits of the scheme.

The authorities clarified that the scheme is not available on City Fast services in the first phase.

16J6. Kerala rolls out free travel for women on KSRTC buses केरल ने KSRTC बसों में महिलाओं के लिए निःशुल्क यात्रा योजना शुरू की

- Billed as a significant step towards **women's empowerment**, the **Kerala government** on Monday launched its flagship '**Priyadarshini**' free travel scheme for all women and transgender persons on ordinary buses operated by the **Kerala State Road Transport Corporation (KSRTC)**.

महिला सशक्तिकरण की दिशा में एक महत्वपूर्ण कदम के रूप में प्रस्तुत करते हुए, केरल सरकार ने सोमवार को केरल राज्य सड़क परिवहन निगम (KSRTC) द्वारा संचालित साधारण बसों में सभी महिलाओं और ट्रांसजेंडर व्यक्तियों के लिए अपनी प्रमुख 'प्रियदर्शिनी' निःशुल्क यात्रा योजना का शुभारंभ किया।

- Under the scheme, women and transgender persons can travel free of charge on seven categories of KSRTC ordinary services — **ordinary, city ordinary, limited-stop ordinary, fair-stage ordinary, town-to-town, point-to-point, and Gramavandi services**.

इस योजना के अंतर्गत महिलाएँ और ट्रांसजेंडर व्यक्ति KSRTC की सात श्रेणियों की साधारण सेवाओं — ऑर्डिनरी, सिटी ऑर्डिनरी, लिमिटेड-स्टॉप ऑर्डिनरी, फेयर-स्टेज ऑर्डिनरी, टाउन-टू-टाउन, पॉइंट-टू-पॉइंट तथा ग्रामवंडी सेवाओं — में निःशुल्क यात्रा कर सकेंगे।

- During the initial phase, women and transgender passengers will be allowed to travel free of charge on ordinary bus services for the first **100 days**.
प्रारंभिक चरण में महिलाओं और ट्रांसजेंडर यात्रियों को पहले **100 दिनों** तक साधारण बस सेवाओं में निःशुल्क यात्रा की अनुमति दी जाएगी।
- After a review of the scheme's performance, the government plans to extend the benefit to other categories of services.
योजना के प्रदर्शन की समीक्षा के बाद सरकार इस लाभ को अन्य श्रेणी की सेवाओं तक विस्तारित करने की योजना बना रही है।



PCS

Author-entrepreneur Indira Lankesh passes away at 83

Author Indira Lankesh, 83, died of age-related ailments at her residence in Bengaluru on Monday. She is survived by her daughter Kavita Lankesh and son Indrajith Lankesh. Her eldest daughter, Gauri Lankesh, was killed by members of an alleged Hindutva group in 2017. Indira's memoir *Hulimavu Mattu Nanu* is considered a landmark among memoirs by women in Kannada. She also founded Mayur Silks and Textiles, a successful saree shop, in 1979.

16J6. Author-entrepreneur Indira Lankesh passes away at 83

लेखिका-उद्यमी इंदिरा लंकेश का 83 वर्ष की आयु में निधन

- Author Indira Lankesh, 83, died of age-related ailments at her residence in Bengaluru on Monday.

लेखिका इंदिरा लंकेश, 83 वर्ष, का सोमवार को बेंगलुरु स्थित उनके आवास पर आयु-संबंधी स्वास्थ्य समस्याओं के कारण निधन हो गया।

- Indira's memoir *Hulimavu Mattu Nanu* is considered a landmark among memoirs by women in Kannada.

इंदिरा की आत्मकथात्मक कृति 'हुलिमावु मत्तु नानु' को कन्नड़ भाषा में महिलाओं द्वारा लिखे गए संस्मरण साहित्य की एक महत्वपूर्ण और मील का पत्थर मानी जाने वाली रचना माना जाता है।

16J6. U.K. govt. bans social media for children under 16

ब्रिटेन सरकार ने 16 वर्ष से कम आयु के बच्चों के लिए सोशल मीडिया पर प्रतिबंध लगाया

- Britain will ban children aged under 16 from using social media apps, including Snapchat, TikTok and YouTube, to protect them from harmful content and excessive screen time, Prime Minister Keir Starmer said on Monday.
ब्रिटेन 16 वर्ष से कम आयु के बच्चों को सोशल मीडिया ऐप्स जैसे स्नैपचैट, टिकटॉक और यूट्यूब का उपयोग करने से प्रतिबंधित करेगा, ताकि उन्हें हानिकारक सामग्री और अत्यधिक स्क्रीन समय से बचाया जा सके, यह बात सोमवार को प्रधानमंत्री कीर स्टार्मर ने कही।
- YouTube and Meta, the parent company of Facebook and Instagram, warned that a blanket ban could push kids into unregulated online spaces.
यूट्यूब और मेटा, जो फेसबुक और इंस्टाग्राम की मूल कंपनी है, ने चेतावनी दी कि ऐसा व्यापक प्रतिबंध बच्चों को अनियमित ऑनलाइन मंचों की ओर धकेल सकता है।
- The ban, which is expected to take effect early next year, makes the U.K. part of a growing global movement to tighten online safety for children.
यह प्रतिबंध, जिसके अगले वर्ष की शुरुआत में लागू होने की उम्मीद है, ब्रिटेन को बच्चों की ऑनलाइन सुरक्षा को मजबूत करने वाले बढ़ते वैश्विक अभियान का हिस्सा बनाता है।
- Australia, Canada, Brazil and Indonesia have introduced legislation or announced age-based restrictions or requirements for children's access to social media.
ऑस्ट्रेलिया, कनाडा, ब्राज़ील और इंडोनेशिया ने सोशल मीडिया तक बच्चों की पहुँच के लिए कानून बनाए हैं या आयु-आधारित प्रतिबंधों अथवा आवश्यकताओं की घोषणा की है।
- The U.K. said its ban will apply to platforms including Snapchat, TikTok, YouTube, Instagram, Facebook and X, but not YouTube Kids or messaging services like WhatsApp and Signal.
ब्रिटेन ने कहा कि उसका प्रतिबंध स्नैपचैट, टिकटॉक, यूट्यूब, इंस्टाग्राम, फेसबुक और एक्स जैसे प्लेटफॉर्म पर लागू होगा, लेकिन यूट्यूब किड्स या व्हाट्सएप और सिग्नल जैसी संदेश सेवाओं पर लागू नहीं होगा।

U.K. govt. bans social media for children under 16

PCS
Associated Press
LONDON

Britain will ban children aged under 16 from using social media apps, including Snapchat, TikTok and YouTube, to protect them from harmful content and excessive screen time, Prime Minister Keir Starmer said on Monday.

The plan was met with mixed reaction, with some praising Mr. Starmer for taking action and others questioning the effectiveness of a blanket ban.

YouTube and Meta, the parent company of Facebook and Instagram, warned that a blanket ban could push kids into unregulated online spaces.

Mr. Starmer acknowledged the challenges, but said: "I do believe we can enforce it."

"Every parent can see it with their own eyes. Social media is making children unhappy."

Global movement

The ban, which is expected to take effect early next year, makes the U.K. part of a growing global movement to tighten online safety for children.

Australia, Canada, Brazil and Indonesia have introduced legislation or announced age-based restrictions or requirements for children's access to social media.

The U.K. said its ban will apply to platforms including Snapchat, TikTok, YouTube, Instagram, Facebook and X, but not YouTube Kids or messaging services like WhatsApp and Signal.

Mr. Starmer stressed that enforcement action will target tech companies, not children.



GS Paper 1: History	16 June 2026
TOPICS COVERED	
16J6	QUIZ: Mona Lisa

Questions and Answers to the previous day's daily quiz: 1. Who is widely believed to be the woman depicted in the Mona Lisa? **Ans: Lisa**

Gherardini del Giocondo, the wife of Florentine merchant Francesco del Giocondo

2. Around what year is Leonardo da Vinci believed to have begun painting the Mona Lisa? **Ans: Around 1503**

3. What is the approximate size of the Mona Lisa? **Ans: About 77 cm × 53 cm (30 in × 21 in)**

4. Which artistic technique, heavily employed in the Mona Lisa, creates the painting's characteristic soft transitions between light and shadow? **Ans: Sfumato**

5. Which French king acquired the Mona Lisa for the royal collection? **Ans: King Francis I of France**

6. What major event in 1911 dramatically increased the painting's worldwide fame? **Ans: It's theft from the Louvre by Vincenzo Peruggia**

Visual: Which Italian Renaissance master executed this sketch of a young woman before a landscape, believed to have been directly influenced by Leonardo's Mona Lisa? **Ans: Raphael**

Early Birds: Prem Nath Tiwari | K.N. Viswanathan | Piyali Tuli | Tamal Biswas | Arun Kumar Singh

- However, **Leonardo continued refining the painting for many years, possibly until 1516–1517, carrying it with him to France.**

16J6. QUIZ

1. Who is widely believed to be the woman depicted in the Mona Lisa?

- The woman portrayed in Leonardo da Vinci's **Mona Lisa** is widely identified as **Lisa Gherardini del Giocondo**, the wife of Florentine silk merchant **Francesco del Giocondo**.

- Because of her husband's surname, the painting is also known as **La Gioconda** in Italian and **La Joconde** in French.

2. Around what year is Leonardo da Vinci believed to have begun painting the Mona Lisa?

- Most scholars agree that **Leonardo da Vinci** began painting the Mona Lisa around **1503** in Florence.

- Italian Renaissance.

3. What is the approximate size of the Mona Lisa?

- Despite its immense fame, the **Mona Lisa** is relatively small in size, measuring approximately **77 centimetres by 53 centimetres** (30 inches by 21 inches).
- The painting is **executed in oil on a poplar wood panel**, a common support used by Renaissance artists.

4. Which artistic technique, heavily employed in the Mona Lisa, creates the painting's characteristic soft transitions between light and shadow?

- The signature visual effect of the Mona Lisa comes from Leonardo's masterful use of **sfumato**, an Italian term meaning "smoky" or "softly blurred."
- This technique involves **applying multiple thin layers of translucent paint to create seamless transitions between light and dark areas without visible outlines.**
- **Sfumato** gives the portrait its lifelike quality and contributes to the famous ambiguity of Mona Lisa's smile and expression.
- **Leonardo's scientific understanding of optics and human vision enabled him to perfect this technique, making the painting one of the greatest achievements of Renaissance art.**

5. Which French king acquired the Mona Lisa for the royal collection?

- The **Mona Lisa** entered the French royal collection through **King Francis I of France**, one of the most influential patrons of Renaissance art.
- Francis I invited **Leonardo da Vinci** to France in **1516**, where the artist spent his final years at Clos Lucé near the Château d'Amboise.



- Leonardo brought the Mona Lisa with him, and after his death in 1519, the painting became part of the French royal collection.
- Over the centuries, it remained in royal residences before eventually becoming one of the most treasured works displayed in the **Louvre Museum** in Paris.

6. What major event in 1911 dramatically increased the painting's worldwide fame?

- The **Mona Lisa's** global fame increased dramatically after its sensational **theft from the Louvre Museum in 1911** by **Vincenzo Peruggia**, an Italian museum worker.
- Peruggia believed the painting should be returned to Italy and hid it for more than two years. The disappearance generated international headlines, turning the artwork into a worldwide cultural phenomenon.
- The **painting was recovered in Florence in 1913** and returned to France.

GS Paper 1: Society		16 June 2026
TOPICS COVERED		
16J6	Tribal body blocks installation of shivling near Om Parvat, says won't allow artificial structures जनजातीय संगठन ने ओम पर्वत के निकट शिवलिंग की स्थापना रोकी, कहा— कृत्रिम संरचनाओं की अनुमति नहीं दी जाएगी	
16J6	Politics over people जनहित से ऊपर राजनीति	

Tribal body blocks installation of shivling near Om Parvat, says won't allow artificial structures

GS I: Society

Press Trust of India
PITHORAGARH

The Rung community in a village in Vyans valley here on Monday refused to allow installation of a three-tonne shivling and Nandi in front of Om Parvat, stating they are "nature worshippers" who do not allow artificial structures on their land.

Rung is an indigenous tribal community residing primarily in border valleys of Dharchula in Uttarakhand's Pithoragarh district, known for their distinct cultural traditions of nature worship.

The Adi Kailash 20-20 Trust, an organisation claiming to work towards spreading Sanatana Dharma, had proposed installation of a shivling in the area.

The local administration intervened after the Rung



The administration cannot give permission to the trust until the gram sabha and tribal association agree to the installation of the idol

ASHISH JOSHI
Dharchula Sub-Divisional
Magistrate, Uttarakhand

Kalyan Sanstha raised an objection regarding the "unauthorised" import of religious installations into Vyans valley.

The matter escalated when the trust transported the three-tonne shivling and Nandi up to Garbadhar, 27 km beyond Dharchula, without consulting the local tribal community or obtaining permission from the local panchayat.

Prakash Gunjyal, president of Rung Kalyan Sans-

tha, Dharchula - representing the Rung people from the three valleys of Vyans, Darma, and Chaudans - said the installation violated their belief of worshipping Lord Shiva solely in his natural form. "Besides the violation of our belief of only worshipping natural forms, the installation of any artificial structure cannot be permitted on Amawasya, June 15," he said.

Dharchula Sub-Divisional Magistrate Ashish Joshi said the administration recalled the vehicle to Dharchula after learning that the group had not obtained permission from the gram sabha concerned and the Rung community. "It is a matter between the Rung community and the trust. The administration cannot give permission to the trust until the gram sabha and tribal association agree to it," the official said.

16J6. Tribal body blocks installation of shivling near Om Parvat, says won't allow artificial structures

जनजातीय संगठन ने ओम पर्वत के निकट शिवलिंग की स्थापना रोकी, कहा— कृत्रिम संरचनाओं की अनुमति नहीं दी जाएगी

- The **Rung community** in a village in **Vyans valley** here on Monday refused to allow installation of a three-tonne shivling and Nandi in front of **Om Parvat**, stating they are "nature worshippers" who do not allow artificial structures on their land.

व्यास घाटी के एक गाँव में रहने वाले **रांग समुदाय** ने सोमवार को **ओम पर्वत** के सामने तीन टन वजनी **शिवलिंग** और **नंदी** की स्थापना की अनुमति देने से इनकार कर दिया। उनका कहना था कि वे "प्रकृति उपासक" हैं और अपनी भूमि पर कृत्रिम संरचनाओं की अनुमति नहीं देते।

- **Rung** is an indigenous tribal community residing primarily in border valleys of **Dharchula in Uttarakhand's Pithoragarh district**, known for their distinct cultural traditions of nature



worship.

रांग एक स्वदेशी जनजातीय समुदाय है, जो मुख्यतः उत्तराखंड के पिथौरागढ़ जिले के धारचूला क्षेत्र की सीमावर्ती घाटियों में निवास करता है और अपनी विशिष्ट प्रकृति-पूजक सांस्कृतिक परंपराओं के लिए जाना जाता है।

GS I: Society: Population

Politics over people

Pragmatism should guide India's demographic governance

In constituting a panel to study demographic changes in India, the Centre was guided by a paranoid mindset that saw devious conspiracies everywhere. The move gave shape and substance to a thought expressed by Home Minister Amit Shah: "unnatural demographic change" is a "very significant challenge to the present and future of any nation". In his Independence Day address in 2025, Prime Minister Narendra Modi announced the proposal, characterising illegal infiltration as a "premeditated conspiracy" to alter India's demography. The committee, chaired by retired Supreme Court judge Justice P.P. Naolekar, is to assess demographic changes, examine patterns of abnormal population shifts among religious and social communities, and recommend a time-bound solution. Mr. Shah linked demographic changes not only to sovereignty but also to national security, law and order, "profound changes in social structure and the preservation of tribal society". According to the government, demographic shifts have affected public service delivery, local governance, resource distribution and social cohesion, and Justice Naolekar has said that the panel will also formulate a system for the custody and deportation of infiltrators.

It is indeed true that the management of population dynamics is a key instrument of governance. On June 14, Switzerland held a referendum and rejected a proposal to cap the country's population at 10 million. Across the world, immigration has become contentious, with unregulated cross-border movement seen as a challenge to sovereignty. Population management, however, is not entirely about illegal infiltration, and securitising demographic trends at the cost of all adjacent factors could do more harm than good. As the recent experience with the SIR of electoral rolls shows, facts about people would be seen as valid only to the extent that these are established through documentation. If this exercise creates a large stateless population with no country willing to accept them, it could result in a demographic deadlock rather than a solution. The fear of communal profiling of Muslims is real, and the Centre should also seriously consider whether the human costs are worth it. India faces major demographic challenges. Rising life expectancy and falling birth rates are changing the composition of India's population. There are concerns of India losing its demographic dividend, as the quality of education and health, and the evolving dynamics of work, remain very challenging. Migration continues to shape India's trajectory. Partition created three sovereign countries out of a geographical and cultural continuum, and its legacy included voluntary and involuntary movement of people. Sensitivity and a long-term view should guide India's demographic governance.

- Population management, however, is not entirely about illegal infiltration, and securitising demographic trends at the cost of all adjacent factors could do more harm than good. हालांकि, जनसंख्या प्रबंधन केवल अवैध घुसपैठ तक सीमित नहीं है, और जनसांख्यिकीय प्रवृत्तियों को अन्य सभी संबंधित कारकों की उपेक्षा करते हुए सुरक्षा के दृष्टिकोण से देखना लाभ से अधिक हानि पहुँचा सकता है।

16J6. Politics over people

जनहित से ऊपर राजनीति

- The move gave shape and substance to a thought expressed by Home Minister Amit Shah: "unnatural demographic change" is a "very significant challenge to the present and future of any nation".

इस कदम ने गृह मंत्री अमित शाह द्वारा व्यक्त उस विचार को स्वरूप और आधार प्रदान किया, जिसमें उन्होंने कहा था कि "अप्राकृतिक जनसांख्यिकीय परिवर्तन" किसी भी राष्ट्र के वर्तमान और भविष्य के लिए "एक अत्यंत महत्वपूर्ण चुनौती" है।

- The committee, chaired by retired Supreme Court judge Justice P.P. Naolekar, is to assess demographic changes, examine patterns of abnormal population shifts among religious and social communities, and recommend a time-bound solution.

सेवानिवृत्त सर्वोच्च न्यायालय के न्यायाधीश न्यायमूर्ति पी.पी. नाओलेकर की अध्यक्षता वाली समिति जनसांख्यिकीय परिवर्तनों का आकलन करेगी, धार्मिक एवं सामाजिक समुदायों के बीच असामान्य जनसंख्या परिवर्तनों के स्वरूप का अध्ययन करेगी तथा समयबद्ध समाधान सुझाएगी।

- Mr. Shah linked demographic changes not only to sovereignty but also to national security, law and order, "profound changes in social structure and the preservation of tribal society".

श्री शाह ने जनसांख्यिकीय परिवर्तनों को केवल संप्रभुता से ही नहीं, बल्कि राष्ट्रीय सुरक्षा, कानून एवं व्यवस्था, "सामाजिक संरचना में गहरे परिवर्तन तथा जनजातीय समाज के संरक्षण" से भी जोड़ा।

- According to the government, demographic shifts have affected public service delivery, local governance, resource distribution and social cohesion, and Justice Naolekar has said that the panel will also formulate a system for the custody and deportation of infiltrators.

सरकार के अनुसार, जनसांख्यिकीय परिवर्तनों ने सार्वजनिक सेवाओं की आपूर्ति, स्थानीय शासन, संसाधनों के वितरण तथा सामाजिक एकता को प्रभावित किया है, और न्यायमूर्ति नाओलेकर ने कहा है कि समिति घुसपैठियों की हिरासत और निर्वासन के लिए भी एक प्रणाली तैयार करेगी।

- On June 14, Switzerland held a referendum and rejected a proposal to cap the country's population at 10 million.

14 जून को स्विट्जरलैंड ने एक जनमत-संग्रह आयोजित किया और देश की जनसंख्या को 10 मिलियन तक सीमित करने के प्रस्ताव को अस्वीकार कर दिया।

- Across the world, immigration has become contentious, with unregulated cross-border movement seen as a challenge to sovereignty. विश्वभर में आवाजाही को संप्रभुता के लिए चुनौती के रूप में देखा जा रहा है।



- If this exercise creates a large stateless population with no country willing to accept them, it could result in a demographic deadlock rather than a solution.
यदि यह प्रक्रिया बड़ी संख्या में ऐसे राज्यविहीन लोगों को जन्म देती है जिन्हें स्वीकार करने के लिए कोई देश तैयार न हो, तो यह समाधान के बजाय जनसांख्यिकीय गतिरोध उत्पन्न कर सकती है।
- The fear of communal profiling of Muslims is real, and the Centre should also seriously consider whether the human costs are worth it.
मुसलमानों के सांप्रदायिक प्रोफाइलिंग के भय को नज़रअंदाज़ नहीं किया जा सकता, और केंद्र सरकार को यह भी गंभीरता से विचार करना चाहिए कि इसकी मानवीय लागत उचित है या नहीं।
- Rising life expectancy and falling birth rates are changing the composition of India's population.
बढ़ती जीवन प्रत्याशा और घटती जन्म दरें भारत की जनसंख्या की संरचना को बदल रही हैं।
- There are concerns of India losing its demographic dividend, as the quality of education and health, and the evolving dynamics of work, remain very challenging.
भारत के अपने जनसांख्यिकीय लाभान्श को खोने की आशंका व्यक्त की जा रही है, क्योंकि शिक्षा और स्वास्थ्य की गुणवत्ता तथा कार्य-क्षेत्र की बदलती गतिशीलताएँ अभी भी अत्यंत चुनौतीपूर्ण बनी हुई हैं।
- Partition created three sovereign countries out of a geographical and cultural continuum, and its legacy included voluntary and involuntary movement of people.
विभाजन ने एक भौगोलिक एवं सांस्कृतिक निरंतरता से तीन संप्रभु देशों का निर्माण किया, और इसकी विरासत में लोगों का स्वैच्छिक तथा अनैच्छिक विस्थापन भी शामिल था।

GS Paper 1: Geography		16 June 2026
TOPICS COVERED		
16J6	When a small town sends one of its own to Raisina Hill जब कोई छोटा नगर अपने ही एक व्यक्ति को रायसीना हिल्स तक पहुँचाता है	
16J6	Russian strikes across Ukraine kill 11, famed monastery in Kyiv catches fire यूक्रेन में रूसी हमलों से 11 लोगों की मौत, कीव का प्रसिद्ध मठ आग की चपेट में आया	

When a small town sends one of its own to Raisina Hill

GS I: Geography
Satyastnar Bani
BHUBANESWAR

What happens when a nondescript town produces the occupant of India's highest office? Transformation becomes inevitable. If even a fraction of the projects lined up materialise, Rairangpur in Odisha, the hometown of President Droupadi Murmu, will have a compelling story to tell. With just over a year left in her tenure, the town is poised to host some of the country's prominent educational institutions and a slate of development projects. Her tribal-dominated Mayurbhanj district is also set to receive a share of the investments.

Some of the projects are likely to be announced during the scheduled visit of the President and Prime Minister Narendra Modi to Mayurbhanj this week.

A Government Ayurvedic Medical College and Hospital will be set up on 50 acres identified under Rairangpur Tahasil.

The Odisha government has accorded approval for the establishment of a second campus of the Indian Institute of Forest Management at Rairangpur. An area of 134.89 acres in Suli-duma and Kusumi villages under Kusumi Tahasil in Mayurbhanj has been identified for the institute.

In-principle approval has been granted for the establishment of an Indian Institute of Information Technology at Rairangpur, which will function under Maharaja Sriram Chandra Maharaja Deo University, Baripada. The State Higher Education Department has released a one-time capital grant of ₹1,67,25,600 toward non-recurring expenditure for the institute's initial establishment.



Some projects are likely to be announced during the scheduled visit of President Droupadi Murmu to Mayurbhanj this week. FILE PHOTO

A Central Tribal University has also been proposed for Rairangpur. The Higher Education Department has identified 70.79 acres in Bijatala block near Rairangpur for the purpose. At Nuagaon in Rairangpur, 25 acres have been identified for an AI-

IMS Bhubaneswar satellite centre. A Central Agricultural and Horticulture College of the Odisha University of Agriculture and Technology will be established in Rairangpur.

The State Industries and MSME Department has been requested to provide the necessary guidance for

establishing IT park infrastructure at Bamanghaty near Rairangpur.

The Principal Chief Conservator of Forests has been requested to involve the Wildlife Institute of India in preparing a dossier for the nomination of Similipal National Park as a UNESCO World Heritage Site.

A proposal has also been submitted for setting up a world-class skill university on the lines of Shri Vishwakarma Skill University, Palwal, Haryana, at Rairangpur.

The Union Ministry of Civil Aviation has allocated ₹45 crore for operationalising flights between Rairangpur and Rourkela once the Dandbose airstrip is ready. Sports infrastructure, including a national-level sports complex, an archery complex and an international-standard indoor stadium, has also

been proposed for Rairangpur.

The government has proposed increasing the area under irrigation in the district to 60% from the present 37%.

Several other projects, including a National Institute of Design, a major office of the Postal Department, a Mayurbhanj campus of the College of Fisheries, girls' hostels in the district and the development of Rairangpur as a separate police district, have also been proposed. In addition, some industrial projects have been proposed for Rairangpur.

The proposals to establish institutions of higher education in and around Rairangpur are being viewed as a tribute to Ms. Murmu's perseverance and journey from the region to the country's highest constitutional office.

16J6. When a small town sends one of its own to Raisina Hill

जब कोई छोटा नगर अपने ही एक व्यक्ति को रायसीना हिल्स तक पहुँचाता है



- If even a fraction of the projects lined up materialise, **Rairangpur in Odisha**, the hometown of President **Droupadi Murmu**, will have a compelling story to tell.
यदि प्रस्तावित परियोजनाओं का एक छोटा भाग भी साकार हो जाता है, तो ओडिशा का रायरंगपुर, जो राष्ट्रपति **द्रौपदी मुर्मू** का गृह नगर है, एक प्रेरक विकास गाथा प्रस्तुत करेगा।
- Her tribal-dominated **Mayurbhanj district** is also set to receive a share of the investments.
उनका जनजातीय बहुल **मयूरभंज जिला** भी इन निवेशों का लाभ प्राप्त करने जा रहा है।
- The Odisha government has accorded approval for the establishment of a second campus of the **Indian Institute of Forest Management at Rairangpur**.
ओडिशा सरकार ने रायरंगपुर में **भारतीय वन प्रबंधन संस्थान** के दूसरे परिसर की स्थापना को स्वीकृति प्रदान कर दी है।
- **A Central Tribal University** has also been proposed for Rairangpur.
रायरंगपुर में एक **केंद्रीय जनजातीय विश्वविद्यालय** स्थापित करने का भी प्रस्ताव है।
- The **Principal Chief Conservator of Forests** has been requested to involve the **Wildlife Institute of India** in preparing a dossier for the nomination of **Similipal National Park as a UNESCO World Heritage Site**.
प्रधान मुख्य वन संरक्षक से भारतीय वन्यजीव संस्थान को **सिमिलिपाल राष्ट्रीय उद्यान** को **यूनेस्को विश्व धरोहर स्थल** के रूप में नामित करने हेतु दस्तावेज तैयार करने की प्रक्रिया में शामिल करने का अनुरोध किया गया है।

Russian strikes across Ukraine kill 11, famed monastery in Kyiv catches fire

Moscow fires hundreds of drones and dozens of missiles in overnight barrage; Zelenskyy calls for increased pressure from G7 leaders and global partners after air assault; Ukrainian drone strike kills three people in **Russia's Tula region**, officials say

GS I: Geography
Agence France-Presse
KYIV

An overnight Russian barrage of missiles killed at least 11 people across Ukraine and sparked a fire at one of the most important Orthodox monasteries in the capital, Kyiv said on Monday.

In response to the assault, Ukrainian President Volodymyr Zelenskyy called for more pressure on Moscow from G7 leaders, who were gathering at a summit in France.

The violence killed five people and wounded 34 in the capital as a fire broke out on the grounds of the Kyiv-Pechersk Lavra UNESCO world heritage site, setting ablaze the roof of its Dormition Cathedral.



Rescue dawn: Emergency responders in action at the Dormition Cathedral following a Russian strike in Kyiv on Monday. AP

CO world heritage site, setting ablaze the roof of its Dormition Cathedral.

"This is one of Russia's most serious crimes against Christian culture to date," Mr. Zelenskyy said on social media.

The UN's cultural agency UNESCO condemned the air raid, saying that "the strike reportedly caused significant damage to the exterior and interior of the cathedral".

After he visited the site,

Mr. Zelenskyy said two Russian drones "deliberately" targeted Kyiv's monastery quarter.

'Outdated U.S. missile'
Russia's military said it had carried out a "massive strike" on military sites in Kyiv, as well as the Kharkiv and Dnipro regions, but denied targeting the Lavra, saying it was hit by an outdated U.S. Patriot air defence missile.

Moscow fired 70 missiles and 611 drones, mainly targeting the capital, Ukraine's air force said, adding that it had downed 50 of the missiles and 582 drones.

In total, 11 people were killed in the overnight bar-

rage, including five in the northeastern city of Kharkiv.

Founded in the 11th century, the site holds huge significance for Orthodox believers in both Ukraine and Russia.

Kyiv's Metropolitan Epiphanius, who heads the Ukrainian Orthodox Church, denounced the attack. "What more must the Kremlin antichrist do for the world to realise that decisive action must be taken to stop Russian terror against Ukraine?"

In Russia, a Ukrainian drone strike also killed three people and wounded three others in the city of Tula, local authorities said on Monday.

16J6. Russian strikes across Ukraine kill 11, famed monastery in Kyiv catches fire

यूक्रेन में रूसी हमलों से 11 लोगों की मौत, कीव का प्रसिद्ध मठ आग की चपेट में आया



- Moscow fires hundreds of drones and dozens of missiles in overnight barrage; Zelenskyy calls for increased pressure from G7 leaders and global partners after air assault; Ukrainian drone strike kills three people in **Russia's Tula region**, officials say
मॉस्को ने रातभर में सैकड़ों ड्रोन और दर्जनों मिसाइलें दागीं; हवाई हमले के बाद ज़ेलेंस्की ने G7 नेताओं और वैश्विक साझेदारों से रूस पर अधिक दबाव डालने का आह्वान किया; अधिकारियों के अनुसार यूक्रेनी ड्रोन हमले में रूस के तुला क्षेत्र में तीन लोगों की मौत हुई
- The violence killed five people and wounded 34 in the capital as a fire broke out on the grounds of the **Kyiv-Pechersk Lavra UNESCO World Heritage Site**, setting ablaze the roof of its **Dormition Cathedral**.
हिंसा में राजधानी में पांच लोगों की मौत हो गई और 34 घायल हो गए, जबकि कीव-पेचेर्स्क लाव्रा यूनेस्को विश्व धरोहर स्थल के परिसर में आग लग गई, जिससे उसके डॉर्मिशन कैथेड्रल की छत जल उठी।
- **Russia's military** said it had carried out a "massive strike" on military sites in **Kyiv, as well as the Kharkiv and Dnipro regions**, but denied targeting the **Lavra**, saying it was hit by an outdated **U.S. Patriot air defence missile**.
रूसी सेना ने कहा कि उसने कीव, खार्किव और ड्नीप्रो क्षेत्रों में सैन्य ठिकानों पर "व्यापक हमला" किया, लेकिन लाव्रा को निशाना बनाने से इनकार करते हुए कहा कि वह एक पुरानी अमेरिकी पैट्रियट वायु रक्षा मिसाइल से प्रभावित हुआ था।
- Founded in the **11th century**, the site holds huge significance for **Orthodox believers** in both **Ukraine and Russia**.
11वीं शताब्दी में स्थापित यह स्थल यूक्रेन और रूस दोनों के ऑर्थोडॉक्स श्रद्धालुओं के लिए अत्यधिक महत्व रखता है।

GS Paper II: Polity		01 June 2026
TOPICS COVERED		
16J6	SC seeks govt. response to plea on RTE quota in Punjab पंजाब में RTE कोटा संबंधी याचिका पर सुप्रीम कोर्ट ने सरकार से जवाब मांगा	
16J6	Peace with peace शांति के माध्यम से शांति	



GS II: Polity

SC seeks govt. response to plea on RTE quota in Punjab

The Supreme Court on Monday sought responses from the Centre and the Punjab government on a plea alleging failure to implement the Right of Children to Free and Compulsory Education Act, 2009 in Punjab, particularly the mandate under Section 12(1)(c) requiring private unaided schools to reserve 25% of entry-level seats for children from weaker sections and disadvantaged groups. At the outset of the hearing, a Bench of Chief Justice Surya Kant and Justice V. Mohana asked the petitioner, who runs an NGO and appeared at the court in person, whether he had conducted any survey to substantiate the allegations. The petitioner submitted that the law remained unimplemented in Punjab for the past 15 years.

16J6. SC seeks govt. response to plea on RTE quota in Punjab
पंजाब में RTE कोटा संबंधी याचिका पर सुप्रीम कोर्ट ने सरकार से जवाब मांगा



- The **Supreme Court** on Monday sought responses from the **Centre** and the **Punjab government** on a plea alleging failure to implement the **Right of Children to Free and Compulsory Education Act, 2009** in Punjab, particularly the mandate under **Section 12(1)(c)** requiring private unaided schools to reserve **25% of entry-level seats** for children from weaker sections and disadvantaged groups.

सुप्रीम कोर्ट ने सोमवार को केंद्र सरकार और पंजाब सरकार से उस याचिका पर जवाब मांगा, जिसमें पंजाब में बच्चों का निःशुल्क एवं अनिवार्य शिक्षा का अधिकार अधिनियम, 2009 (RTE Act) को लागू करने में विफलता का आरोप लगाया गया है, विशेष रूप से धारा 12(1)(c) के उस प्रावधान को लेकर, जिसके तहत निजी

गैर-सहायता प्राप्त विद्यालयों में प्रवेश स्तर की 25% सीटें कमजोर वर्गों और वंचित समूहों के बच्चों के लिए आरक्षित करना अनिवार्य है।

GS II: Polity

Peace with peace

Preventive detentions are misused by the state in the name of order

In *Chander Pal Singh*, a matter involving preventive proceedings, the Allahabad High Court has simultaneously addressed a part of the criminal justice system that often receives less attention than ordinary criminal proceedings and the more overbearing reality of mechanisms designed to avert disturbances having gradually become instruments to deprive people of liberty. The state has the power to intervene before a crime occurs if it is reasonably apprehensive that a person is a threat to public order. However, it has acquired a habit of exercising that power routinely, resulting in detentions without any substantive criminal charge. The High Court's order was based, the Bench said, on a "highly irresponsible" deprivation of personal liberties in Uttar Pradesh, where police officers and executive magistrates were using preventive powers to incarcerate individuals on the basis of arguably minor apprehensions. In *Chander Pal Singh* as well, the petitioner, a physically challenged Dalit advocate, had been arrested over a petty dispute with a neighbour. The Bench said that between May 2025 and April 2026, around 2,500 people were reportedly subjected to preventive detention proceedings in Ghaziabad, despite a 2021 State policy to guide the exercise of such powers.

The guidelines in response are commendable; if implemented appropriately, they could reduce the use of preventive incarceration in neighbourhood and property disputes; require executive magistrates to justify their decisions; encourage constitutional challenges to unlawful preventive detention; and generate appellate scrutiny of the compensation framework. They may also snap at the heels of magistrates who cite unspecified "communal tensions" to jail protesters and who impose prohibitively unaffordable bonds for release. Further, even if the ruling does not directly impinge on the detention of activist Sonam Wangchuk under the NSA, it critiques the idea of using the excuse of maintaining peace to silence dissent and reminds the state that it still has a responsibility to maintain peace with peace. The ruling may also apply to workers and activists recently detained in New Delhi if held under Sections 126 or 170 of the BNSS without valid grounds. That said, implementing the ruling will be difficult. The Bench said that compensation for unlawful detention can be recovered from the salary of the magistrate concerned and/or police officer following a disciplinary hearing. However, the executive has been historically reluctant to penalise its personnel. Second, executive magistrates are part of the State administration and their careers may depend on maintaining 'peace' as the State defines it. Addressing these barriers could reform preventive proceedings in India.

16J6. Peace with peace शांति के माध्यम से शांति

- The state has the power to intervene before a crime occurs if it is reasonably apprehensive that a person is a threat to public order.

राज्य के पास अपराध घटित होने से पूर्व हस्तक्षेप करने की शक्ति होती है, यदि उसे यह युक्तिसंगत आशंका हो कि कोई व्यक्ति लोक व्यवस्था के लिए खतरा बन सकता है।

- However, it has acquired a habit of exercising that power routinely, resulting in detentions without any substantive criminal charge. हालाँकि, राज्य ने इस शक्ति का नियमित रूप से प्रयोग करने की प्रवृत्ति विकसित कर ली है, जिसके परिणामस्वरूप बिना किसी ठोस आपराधिक आरोप के लोगों को निरुद्ध किया जाता है।

- The High Court's order was based, the Bench said, on a "highly irresponsible" deprivation of personal liberties in Uttar Pradesh, where police officers and executive magistrates were using preventive powers to incarcerate individuals on the basis of arguably minor apprehensions. पीठ ने कहा कि उच्च न्यायालय का आदेश उत्तर प्रदेश में व्यक्तिगत स्वतंत्रताओं के "अत्यंत गैर-जिम्मेदाराना" हनन पर आधारित था, जहाँ पुलिस अधिकारी और कार्यपालिका मजिस्ट्रेट मामूली आशंकाओं के आधार पर लोगों को कारावास में भेजने हेतु निवारक शक्तियों का उपयोग कर रहे थे।

- In *Chander Pal Singh* as well, the petitioner, a physically challenged Dalit advocate, had been arrested over a petty dispute with a neighbour.

चंदर पाल सिंह मामले में भी याचिकाकर्ता, जो एक दिव्यांग दलित अधिवक्ता थे, को पड़ोसी के साथ एक मामूली विवाद के कारण गिरफ्तार किया गया था।

- The Bench said that between May 2025 and April 2026, around 2,500 people were reportedly subjected to preventive detention proceedings in Ghaziabad, despite a 2021 State policy to guide the exercise of such powers.

पीठ ने कहा कि मई 2025 से अप्रैल 2026 के बीच गाज़ियाबाद में लगभग 2,500 लोगों को निवारक निरोध कार्यवाहियों का सामना करना पड़ा, जबकि ऐसी शक्तियों के

प्रयोग को निर्देशित करने हेतु वर्ष 2021 की राज्य नीति पहले से मौजूद थी।

- The guidelines in response are commendable; if implemented appropriately, they could reduce the use of preventive incarceration in neighbourhood and property disputes; require executive magistrates to justify their decisions; encourage constitutional challenges to unlawful preventive detention; and generate appellate scrutiny of the compensation framework.



इस संदर्भ में जारी दिशानिर्देश सराहनीय हैं; यदि उनका उचित क्रियान्वयन किया जाए, तो वे पड़ोस और संपत्ति संबंधी विवादों में निवारक कारावास के उपयोग को कम कर सकते हैं; कार्यपालिका मजिस्ट्रेटों को अपने निर्णयों का औचित्य सिद्ध करने के लिए बाध्य कर सकते हैं; अवैध निवारक निरोध के विरुद्ध संवैधानिक चुनौतियों को प्रोत्साहित कर सकते हैं; तथा क्षतिपूर्ति व्यवस्था की अपीलीय समीक्षा सुनिश्चित कर सकते हैं।

- They may also snap at the heels of magistrates who cite unspecified “communal tensions” to jail protesters and who impose prohibitively unaffordable bonds for release.

वे उन मजिस्ट्रेटों पर भी अंकुश लगा सकते हैं जो अस्पष्ट “सांप्रदायिक तनावों” का हवाला देकर प्रदर्शनकारियों को जेल भेजते हैं तथा रिहाई के लिए अत्यधिक महँची और वहन न की जा सकने वाली जमानती शर्तें लगाते हैं।

- Further, even if the ruling does not directly impinge on the detention of activist **Sonam Wangchuk** under the **NSA**, it critiques the idea of using the excuse of maintaining peace to silence dissent and reminds the state that it still has a responsibility to maintain peace with peace.

इसके अतिरिक्त, यद्यपि यह निर्णय **राष्ट्रीय सुरक्षा अधिनियम (NSA)** के अंतर्गत कार्यकर्ता **सोनम वांगचुक** की निरुद्धि को प्रत्यक्ष रूप से प्रभावित नहीं करता, फिर भी यह शांति बनाए रखने के बहाने असहमति को दबाने की प्रवृत्ति की आलोचना करता है तथा राज्य को स्मरण कराता है कि उसकी जिम्मेदारी शांति के माध्यम से शांति बनाए रखने की भी है।

- The ruling may also apply to workers and activists recently detained in **New Delhi** if held under **Sections 126 or 170** of the **BNSS** without valid grounds.

यदि हाल ही में **नई दिल्ली** में निरुद्ध किए गए श्रमिकों और कार्यकर्ताओं को **BNSS** की धारा **126** या **170** के अंतर्गत बिना वैध आधार के हिरासत में रखा गया है, तो यह निर्णय उन पर भी लागू हो सकता है।

- The Bench said that **compensation for unlawful detention can be recovered from the salary of the magistrate concerned and/or police officer following a disciplinary hearing.**

पीठ ने कहा कि अवैध निरोध के लिए दी जाने वाली क्षतिपूर्ति संबंधित मजिस्ट्रेट और/या पुलिस अधिकारी के वेतन से, अनुशासनात्मक सुनवाई के बाद, वसूल की जा सकती है।

- However, the executive has been historically reluctant to penalise its personnel.
हालाँकि, कार्यपालिका ऐतिहासिक रूप से अपने अधिकारियों को दंडित करने के प्रति अनिच्छुक रही है।

- Second, **executive magistrates are part of the State administration and their careers may depend on maintaining ‘peace’ as the State defines it.**

दूसरे, कार्यपालिका मजिस्ट्रेट राज्य प्रशासन का हिस्सा होते हैं और उनका कैरियर उस ‘शांति’ को बनाए रखने पर निर्भर हो सकता है, जिसकी परिभाषा राज्य स्वयं निर्धारित करता है।

GS Paper II: Governance		16 June 2026
TOPICS COVERED		
16J6	Indian seafarers not to be deployed in conflict zones: DGS डीजीएस ने कहा, भारतीय नाविकों को संघर्ष क्षेत्रों में तैनात नहीं किया जाएगा	
16J6	Social media, video platforms surpass traditional outlets as leading news sources: report रिपोर्ट: सोशल मीडिया और वीडियो प्लेटफॉर्म प्रमुख समाचार स्रोतों के रूप में पारंपरिक माध्यमों से आगे निकले	



Indian seafarers not to be deployed in conflict zones: DGS

GS II: Governance

S. Vijay Kumar
CHENNAI

The Directorate General of Shipping (DGS) has advised maritime recruitment and placement agencies not to deploy Indian seafarers to conflict zones until further notice. However, companies may carry out crew changes in emergency situations with the consent of the crew.

The safety advisory sent to all stakeholders comes days after three Indian seafarers were killed in a U.S. strike on *Settebello* off the coast of Oman. The shipping regulator said recent developments in the Gulf region, particularly in and around the Strait of Hormuz and the Gulf of Oman, had resulted in multiple security incidents involving merchant vessels carrying Indian seafarers.

Navigational warnings
Incidents involving *Marivex*, *Settebello* and *Jaiveer* during the past few days highlighted the increasing risks faced by commercial ships operating in the re-

gion. The DGS directed masters of vessels operating in or transiting through the Gulf region, including the Strait of Hormuz, to maintain heightened security awareness, closely monitor navigational warnings issued by security agencies, and implement all applicable ship security measures.

"This Directorate further reiterates that all Recruitment and Placement Service License (RPSL) companies and shipping companies are advised not to deploy or send Indian seafarers to conflict areas until further orders."

The DGS said it was closely monitoring the evolving situation in coordination with various Ministries, the Indian Navy and other stakeholders to ensure safety and welfare.

The DGS urged all maritime stakeholders to exercise the highest degree of vigilance and caution while operating in the conflict zone and to promptly report any incident involving Indian seafarers to the authorities concerned.

16J6. Indian seafarers not to be deployed in conflict zones: DGS

डीजीएस ने कहा, भारतीय नाविकों को संघर्ष क्षेत्रों में तैनात नहीं किया जाएगा

- The Directorate General of Shipping (DGS) has advised maritime recruitment and placement agencies not to deploy Indian seafarers to conflict zones until further notice.

नौवहन महानिदेशालय (DGS) ने समुद्री भर्ती एवं नियुक्ति एजेंसियों को अगले आदेश तक भारतीय नाविकों को संघर्ष क्षेत्रों में तैनात न करने की सलाह दी है।

- However, companies may carry out crew changes in emergency situations with the consent of the crew.

हालाँकि, आपातकालीन परिस्थितियों में कंपनियाँ चालक दल की सहमति से क्रू परिवर्तन कर सकती हैं।

- The safety advisory sent to all stakeholders comes days after three Indian seafarers were killed in a U.S. strike on *Settebello* off the coast of Oman.

सभी हितधारकों को जारी यह सुरक्षा परामर्श ओमान तट के निकट सेट्टेबेलो पर हुए अमेरिकी हमले में तीन भारतीय नाविकों की मृत्यु के कुछ दिनों बाद जारी किया गया है।

- The shipping regulator said recent developments in the Gulf region, particularly in and around the Strait of Hormuz and the Gulf of Oman, had resulted in multiple security incidents involving merchant vessels carrying Indian seafarers.

नौवहन नियामक ने कहा कि खाड़ी क्षेत्र, विशेषकर होर्मुज़ जलडमरूमध्य और ओमान की खाड़ी के आसपास हाल के घटनाक्रमों के कारण भारतीय नाविकों को ले जाने वाले व्यापारिक जहाजों से संबंधित अनेक सुरक्षा घटनाएँ सामने आई हैं।

Navigational Warnings

नौवहन संबंधी चेतावनियाँ

- Incidents involving *Marivex*, *Settebello* and *Jaiveer* during the past few days highlighted the increasing risks faced by commercial ships operating in the region.

पिछले कुछ दिनों में मारिवेक्स, सेट्टेबेलो और जलवीर से जुड़ी घटनाओं ने इस क्षेत्र में परिचालन कर रहे वाणिज्यिक जहाजों के समक्ष बढ़ते जोखिमों को उजागर किया है।

- The DGS directed masters of vessels operating in or transiting through the Gulf region, including the Strait of Hormuz, to maintain heightened security awareness, closely monitor navigational warnings issued by security agencies, and implement all applicable ship security measures.

DGS ने खाड़ी क्षेत्र, जिसमें होर्मुज़ जलडमरूमध्य भी शामिल है, में संचालित या वहाँ से गुजरने वाले जहाजों के कप्तानों को उच्च स्तर की सुरक्षा सतर्कता बनाए रखने, सुरक्षा एजेंसियों द्वारा जारी नौवहन चेतावनियों की निरंतर निगरानी करने तथा सभी लागू जहाज सुरक्षा उपायों को लागू करने का निर्देश दिया है।



- “This Directorate further reiterates that all **Recruitment and Placement Service License (RPSL)** companies and shipping companies are advised not to deploy or send Indian seafarers to conflict areas until further orders.”
“यह निदेशालय पुनः स्पष्ट करता है कि सभी **रिक्लूटमेंट एंड प्लेसमेंट सर्विस लाइसेंस (RPSL)** कंपनियों तथा शिपिंग कंपनियों को अगले आदेश तक भारतीय नाविकों को संघर्ष क्षेत्रों में तैनात या भेजने से बचने की सलाह दी जाती है।”
- The DGS said it was closely monitoring the evolving situation in coordination with various Ministries, the **Indian Navy** and other stakeholders to ensure safety and welfare.
DGS ने कहा कि वह सुरक्षा और कल्याण सुनिश्चित करने के लिए विभिन्न मंत्रालयों, **भारतीय नौसेना** तथा अन्य हितधारकों के साथ समन्वय में स्थिति पर लगातार निगरानी रख रहा है।
- The DGS urged all maritime stakeholders to exercise the highest degree of vigilance and caution while operating in the conflict zone and to promptly report any incident involving Indian seafarers to the authorities concerned.
DGS ने सभी समुद्री हितधारकों से संघर्ष क्षेत्रों में कार्य करते समय उच्चतम स्तर की सतर्कता और सावधानी बरतने तथा भारतीय नाविकों से जुड़ी किसी भी घटना की तुरंत संबंधित प्राधिकरणों को सूचना देने का आग्रह किया है।

Social media, video platforms surpass traditional outlets as leading news sources: report

GS II: Governance
The Hindu Bureau
CHENNAI

Trust in news is at its lowest level globally since 2015, as interest in news dwindles; at the same time, more people around the world are accessing news through third-party platforms, such as social media and video networks, rather than through websites and television channels of established news brands, according to the 15th edition of the Reuters Institute's Digital News Report.

The report, produced in collaboration with the Asian College of Journalism, Chennai, is based on an online survey of nearly one lakh people across 48 markets worldwide.

Consumption patterns have changed, the study found, with audiences' growing disengagement with news; even so, trust in established news brands

and support for the idea of impartial news persist.

However, globally, social media and video networks – Facebook, Instagram, TikTok, and YouTube – have overtaken news organisations' own websites and apps as the most widely used means of accessing news.

The proportion of people using social media and video networks as their primary source of news has also risen; while this trend is more evident among younger audiences, it is prevalent across all age groups, the study found.

It also found that the younger generations are unlikely to acquire the news habits of their parents, such as reading a newspaper.

In fact, older audiences are moving towards the consumption habits of younger audiences, the study found.

There has also been a

rise in the use of AI chatbots as a means of accessing news, the study found, with 10% of respondents globally now using them. This is especially true among audiences below 35 years of age.

Less trust in news

Paradoxically, while traditional news sources decline amid the emergence of platforms, people are also more concerned about misinformation and put less trust in the news they come across.

There has been a marked rise in the consumption of online news videos. The study found that 77% of its global sample consume online news videos every week.

These people are, however, consuming them not on news websites or apps but on third-party platforms such as YouTube, Instagram, TikTok, and Facebook.

16J6. Social media, video platforms surpass traditional outlets as leading news sources: report

रिपोर्ट: सोशल मीडिया और वीडियो प्लेटफॉर्म प्रमुख समाचार स्रोतों के रूप में पारंपरिक माध्यमों से आगे निकले

• Trust in news is at its lowest level globally since **2015**, as interest in news dwindles.
समाचारों में रुचि घटने के साथ-साथ वैश्विक स्तर पर समाचारों पर विश्वास 2015 के बाद अपने सबसे निचले स्तर पर पहुँच गया है।

• At the same time, more people around the world are accessing news through **third-party platforms**, such as social media and video networks, rather than through websites and television channels of established news brands, according to the **15th edition of the Reuters Institute's Digital News Report**.

साथ ही, रॉयटर्स इंस्टीट्यूट की डिजिटल न्यूज़ रिपोर्ट के 15वें संस्करण के

अनुसार, विश्वभर में अधिक लोग स्थापित समाचार संस्थानों की वेबसाइटों और टेलीविज़न चैनलों के बजाय **तृतीय-पक्ष मंचों**, जैसे सोशल मीडिया और वीडियो नेटवर्कों, के माध्यम से समाचार प्राप्त कर रहे हैं।

- The report, produced in collaboration with the **Asian College of Journalism, Chennai**, is based on an online survey of nearly **one lakh people** across **48 markets** worldwide.
एशियन कॉलेज ऑफ जर्नलिज्म, चेन्नई के सहयोग से तैयार की गई यह रिपोर्ट विश्व के **48 बाज़ारों** में लगभग **एक लाख लोगों** के ऑनलाइन सर्वेक्षण पर आधारित है।

Changing Consumption Patterns

समाचार उपभोग के बदलते स्वरूप

- Consumption patterns have changed, the study found, with audiences' growing disengagement with news.
अध्ययन में पाया गया कि समाचार उपभोग के स्वरूप में परिवर्तन आया है और दर्शकों की समाचारों से दूरी लगातार बढ़ रही है।
- Even so, trust in established news brands and support for the idea of **impartial news** persist.
फिर भी, स्थापित समाचार संस्थानों पर विश्वास तथा **निष्पक्ष समाचार** की अवधारणा के प्रति समर्थन अभी भी बना हुआ है।
- However, globally, social media and video networks — **Facebook, Instagram, TikTok, and YouTube** — have overtaken news organisations' own websites and apps as the most widely used means of accessing news.
हालाँकि, वैश्विक स्तर पर **फेसबुक, इंस्टाग्राम, टिकटॉक और यूट्यूब** जैसे सोशल मीडिया एवं वीडियो मंच समाचार प्राप्त करने के सबसे अधिक उपयोग किए जाने वाले माध्यम बन गए हैं और उन्होंने समाचार संस्थानों की वेबसाइटों एवं ऐप्स को पीछे छोड़ दिया है।
- The proportion of people using social media and video networks as their primary source of news has also risen.
समाचार के प्राथमिक स्रोत के रूप में सोशल मीडिया और वीडियो नेटवर्कों का उपयोग करने वाले लोगों का अनुपात भी बढ़ा है।
- While this trend is more evident among younger audiences, it is prevalent across all age groups, the study found.
अध्ययन के अनुसार, यह प्रवृत्ति युवाओं में अधिक स्पष्ट है, किन्तु सभी आयु वर्गों में देखने को मिल रही है।
- It also found that the younger generations are unlikely to acquire the news habits of their parents, such as reading a newspaper.
अध्ययन में यह भी पाया गया कि नई पीढ़ियाँ अपने माता-पिता की समाचार संबंधी आदतों, जैसे समाचार पत्र पढ़ना, को अपनाने की संभावना कम रखती हैं।
- In fact, older audiences are moving towards the consumption habits of younger audiences, the study found.
वास्तव में, अध्ययन के अनुसार वृद्ध दर्शक भी युवाओं जैसी समाचार उपभोग की आदतों की ओर बढ़ रहे हैं।

Rise of AI and Online News Videos

एआई और ऑनलाइन समाचार वीडियो का बढ़ता प्रभाव

- There has also been a rise in the use of **AI chatbots** as a means of accessing news, the study found, with **10% of respondents globally** now using them.
अध्ययन में पाया गया कि समाचार प्राप्त करने के माध्यम के रूप में **एआई चैटबॉट्स** का उपयोग भी बढ़ रहा है और वैश्विक स्तर पर **10% उत्तरदाता** अब इनका उपयोग कर रहे हैं।
- This is especially true among audiences below **35 years of age**.
यह प्रवृत्ति विशेष रूप से **35 वर्ष से कम आयु** के लोगों में अधिक देखी गई।

Less Trust in News

समाचारों पर घटता विश्वास



- Paradoxically, while traditional news sources decline amid the emergence of platforms, people are also more concerned about **misinformation** and put less trust in the news they come across.
 विरोधाभासी रूप से, जहाँ एक ओर पारंपरिक समाचार स्रोतों का महत्व घट रहा है, वहीं दूसरी ओर लोग **भ्रामक सूचना (Misinformation)** को लेकर अधिक चिंतित हैं और उन्हें प्राप्त होने वाले समाचारों पर कम विश्वास कर रहे हैं।
- There has been a marked rise in the consumption of **online news videos**.
ऑनलाइन समाचार वीडियो के उपभोग में उल्लेखनीय वृद्धि दर्ज की गई है।
- The study found that **77%** of its global sample consume online news videos every week.
 अध्ययन में पाया गया कि वैश्विक नमूने के **77% लोग** प्रत्येक सप्ताह ऑनलाइन समाचार वीडियो देखते हैं।
- These people are, however, consuming them not on news websites or apps but on third-party platforms such as **YouTube, Instagram, TikTok, and Facebook**.
 हालाँकि, ये लोग समाचार वीडियो समाचार वेबसाइटों या ऐप्स पर नहीं, बल्कि **यूट्यूब, इंस्टाग्राम, टिकटॉक और फेसबुक** जैसे तृतीय-पक्ष मंचों पर देख रहे हैं।

GS Paper II: International Relations		01 June 2026
TOPICS COVERED		
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U.S., Iran reach deal to end war, re-open Strait

Preliminary deal signed digitally on Sunday, says U.S. V-P; in person signing in Geneva on June 19

Release of assets, reparations part of deal; will collect navigation fee in the Strait, says Tehran

Military operations including in Lebanon halted; American naval blockade on Iran also terminated

GS II: IR
Stanley Johny

The U.S. and Iran have reached a preliminary agreement to end the war, lift blockades in the Strait of Hormuz and the Gulf of Oman, and launch substantive negotiations on Tehran's nuclear programme and the Western sanctions, the two countries announced on Monday. The agreement was signed digitally on Sunday, U.S. Vice-President J.D. Vance said, while Iran and Pakistan said an in-person signing ceremony would be held in Geneva, Switzerland, on June 19.

U.S. President Donald Trump said during a media interaction in France, where he arrived on Monday for the G7 meeting, that Mr. Vance will lead the country's delegation for the signing ceremony.

"The deal with the Islamic Republic of Iran is now complete... I hereby



A commuter flashes a victory sign in front of a banner that reads 'Thank you Iran' near Beirut, Lebanon, on Monday. REUTERS

fully authorise the toll-free opening of the Strait of Hormuz, and... authorise the immediate removal of the United States Naval blockade," Mr. Trump earlier wrote in a social media post. "Ships of the world, start your engines. Let the oil flow!" he added.

Iran's Supreme National Security Council confirmed that Tehran and Washington had finalised the text of the 'memorandum of understanding' on ending the war, while its

dum of understanding' on ending the war, while its Foreign Ministry said releasing frozen assets and paying war reparations were "essential" parts of the deal. "The American side has committed to taking measures in both areas," Foreign Ministry spokesperson Esmail Baqaei said at a press briefing on Monday. Tehran would not collect tolls from ships but fees for navigation ser-

Vessels cautious despite Trump's announcement

CHENNAI While U.S. President Donald Trump on Monday said he had authorised the re-opening of the Strait of Hormuz and the removal of the U.S. blockade while announcing the deal with Iran, data suggested that traffic through the Strait remained limited. » PAGE 4

Modi welcomes deal, expresses hope for stability

LONDON Prime Minister Narendra Modi on Monday welcomed the agreement between Iran and the U.S. to end the conflict in West Asia and expressed hope that the deal would restore peace and stability in the region while ensuring freedom of navigation. » PAGE 4

postponed until after the other side has implemented its commitments under the memorandum", the secretary added.

U.S. officials say the deal would extend the ceasefire by 60 days during which time talks on the core issues would be held.

Iran took control of the strait, a critical waterway connecting the Persian Gulf with the Arabian Sea, after the U.S. and Israel launched the war on February 28. Mr. Trump announced a blockade in the Gulf of Oman of Iranian ports on April 12, after negotiations between the two sides in Islamabad failed to reach any breakthrough.

"This Great Deal will bring Peace and Security to the whole Region. With the opening of the Strait upon the signing of the Deal on Friday, for purposes of mine removal, oil will flow on both ends again for the Region, and the World," Mr. Trump wrote

in another post.

He said on Monday evening that "ships are starting to move, many loaded up with oil, out of the Strait of Hormuz."

Pakistan Prime Minister Shehbaz Sharif also confirmed the agreement, adding that "both sides have declared the immediate and permanent termination of military operations on all fronts, including in Lebanon."

Iran's Mehr news agency reported that the deal would see release of \$24 billion in frozen Iranian assets during the 60-day negotiation period. But U.S. officials, including Mr. Trump and Mr. Vance have insisted that no cash would be paid to Iran upon signing the agreement.

The report also claimed final negotiations would not begin until half of the frozen assets are released and the blockade is lifted. The final text of the agreement is yet to be released.

16J6. U.S., Iran reach deal to end war, re-open Strait

अमेरिका और ईरान युद्ध समाप्त करने तथा जलडमरूमध्य को पुनः खोलने पर समझौते पर पहुँचे

- The **U.S.** and **Iran** have reached a preliminary agreement to end the war, lift blockades in the **Strait of Hormuz** and the **Gulf of Oman**, and launch substantive negotiations on **Tehran's nuclear programme** and the **Western sanctions**, the two countries announced on Monday. **अमेरिका और ईरान युद्ध समाप्त करने, होर्मुज़ जलडमरूमध्य तथा ओमान की खाड़ी में नाकेबंदियों को हटाने और तेहरान के परमाणु कार्यक्रम तथा पश्चिमी प्रतिबंधों पर सार्थक वार्ता शुरू करने के लिए एक प्रारंभिक समझौते पर पहुँच गए हैं, यह घोषणा दोनों देशों ने सोमवार को की।**

- The agreement was signed digitally on Sunday, **U.S. Vice-President J.D. Vance** said, while Iran and Pakistan said an in-person signing ceremony would be held in **Geneva, Switzerland**, on June 19.

अमेरिकी उपराष्ट्रपति जे.डी. वेंस ने कहा कि इस समझौते पर रविवार को डिजिटल रूप से हस्ताक्षर किए गए, जबकि ईरान और पाकिस्तान ने कहा कि 19 जून को जिनेवा, स्विट्जरलैंड में प्रत्यक्ष हस्ताक्षर समारोह आयोजित किया जाएगा।

- **U.S. President Donald Trump** said during a media interaction in France, where he arrived on Monday for the **G7 meeting**, that Mr. Vance will lead the country's delegation for the signing ceremony.

अमेरिकी राष्ट्रपति डोनाल्ड ट्रंप ने फ्रांस में मीडिया से बातचीत के दौरान, जहाँ वे सोमवार को G7 बैठक में भाग लेने पहुँचे थे, कहा कि श्री वेंस हस्ताक्षर समारोह में अमेरिकी प्रतिनिधिमंडल का नेतृत्व करेंगे।

- "The deal with the **Islamic Republic of Iran** is now complete... I hereby fully authorise the toll-free opening of the **Strait of Hormuz**, and... authorise the immediate removal of the **United States Naval blockade**," Mr. Trump earlier wrote in a social media post.

"इस्लामी गणराज्य ईरान के साथ समझौता अब पूर्ण हो चुका है... मैं होर्मुज़ जलडमरूमध्य को बिना शुल्क खोले जाने की पूर्ण अनुमति देता हूँ और... संयुक्त राज्य नौसैनिक नाकेबंदी को तत्काल हटाने की अनुमति देता हूँ," श्री ट्रंप ने पहले एक सोशल मीडिया पोस्ट में लिखा।

- "Ships of the world, start your engines. Let the oil flow!" he added. उन्होंने आगे कहा, "दुनिया के जहाजों, अपने इंजन चालू करो। तेल को बहने दो!"

- Iran's **Supreme National Security Council** confirmed that Tehran and Washington had finalised the text of the '**memorandum of understanding**' on ending the war, while its



Foreign Ministry said releasing frozen assets and paying war reparations were “essential” parts of the deal.

ईरान की **सर्वोच्च राष्ट्रीय सुरक्षा परिषद** ने पुष्टि की कि तेहरान और वॉशिंगटन ने युद्ध समाप्त करने संबंधी **‘समझौता ज्ञापन’** के पाठ को अंतिम रूप दे दिया है, जबकि उसके विदेश मंत्रालय ने कहा कि जमे हुए परिसंपत्तियों की रिहाई और युद्ध क्षतिपूर्ति का भुगतान समझौते के “अनिवार्य” भाग हैं।

- “The American side has committed to taking measures in both areas,” **Foreign Ministry spokesperson Esmail Baqaei** said at a press briefing on Monday.
“अमेरिकी पक्ष ने दोनों क्षेत्रों में कदम उठाने की प्रतिबद्धता व्यक्त की है,” **विदेश मंत्रालय के प्रवक्ता इस्माइल बकाई** ने सोमवार को प्रेस वार्ता में कहा।
- Tehran would not collect tolls from ships but fees for navigation services and environmental upkeep would be charged, the Ministry added.
मंत्रालय ने कहा कि तेहरान जहाजों से टोल नहीं वसूलेगा, लेकिन नौवहन सेवाओं और पर्यावरण संरक्षण हेतु शुल्क लिया जाएगा।
- “We have always maintained that we do not seek to collect transit tolls, but fees for navigation services, environmental protection, ship insurance and other necessary services will be charged,” Mr. Baqaei said on Monday.
श्री बकाई ने सोमवार को कहा, “हम हमेशा से यह कहते रहे हैं कि हमारा उद्देश्य पारगमन शुल्क लेना नहीं है, बल्कि नौवहन सेवाओं, पर्यावरण संरक्षण, जहाज बीमा और अन्य आवश्यक सेवाओं के लिए शुल्क लिया जाएगा।”
- “Under the agreements reached, the war and military operations on all fronts, including **Lebanon**, are ended immediately and permanently.”
“हासिल समझौतों के तहत **लेबनान** सहित सभी मोर्चों पर युद्ध और सैन्य अभियान तत्काल और स्थायी रूप से समाप्त कर दिए गए हैं।”
- “Furthermore, the naval blockade against Iran is terminated immediately and completely,” read a statement issued by the Council Secretariat, which doesn’t say anything about the **Strait of Hormuz**.
परिषद सचिवालय द्वारा जारी बयान में कहा गया, “इसके अतिरिक्त, ईरान के विरुद्ध नौसैनिक नाकेबंदी तत्काल और पूर्ण रूप से समाप्त कर दी गई है,” हालाँकि इसमें **होर्मुज़ जलडमरूमध्य** के बारे में कुछ नहीं कहा गया।
- Talks for a final agreement, which would involve Iran’s nuclear programme and sanctions, “will be postponed until after the other side has implemented its commitments under the memorandum”, the secretariat added.
सचिवालय ने कहा कि अंतिम समझौते के लिए वार्ता, जिसमें ईरान का परमाणु कार्यक्रम और प्रतिबंध शामिल होंगे, “दूसरे पक्ष द्वारा ज्ञापन के अंतर्गत अपनी प्रतिबद्धताओं को लागू किए जाने के बाद तक स्थगित रहेगी।”
- **U.S.** officials say the deal would extend the ceasefire by **60 days** during which time talks on the core issues would be held.
अमेरिकी अधिकारियों का कहना है कि यह समझौता युद्धविराम को **60 दिनों** तक बढ़ाएगा, जिसके दौरान मुख्य मुद्दों पर वार्ता होगी।
- Iran took control of the strait, a critical waterway connecting the **Persian Gulf** with the **Arabian Sea**, after the U.S. and Israel launched the war on February 28.
28 फरवरी को अमेरिका और इज़राइल द्वारा युद्ध शुरू किए जाने के बाद ईरान ने उस जलडमरूमध्य का नियंत्रण अपने हाथ में ले लिया था, जो **फारस की खाड़ी** को **अरब सागर** से जोड़ने वाला एक अत्यंत महत्वपूर्ण जलमार्ग है।
- Mr. Trump announced a blockade in the **Gulf of Oman** of Iranian ports on April 12, after negotiations between the two sides in **Islamabad** failed to reach any breakthrough.
दोनों पक्षों के बीच **इस्लामाबाद** में हुई वार्ता में कोई सफलता न मिलने के बाद श्री ट्रंप ने 12 अप्रैल को **ओमान की खाड़ी** में ईरानी बंदरगाहों की नाकेबंदी की घोषणा की थी।

- “This Great Deal will bring Peace and Security to the whole Region.”
“यह महान समझौता पूरे क्षेत्र में शांति और सुरक्षा लाएगा।”
- “With the opening of the Strait upon the signing of the Deal on Friday, for purposes of mine removal, oil will flow on both ends again for the Region, and the World!” Mr. Trump wrote in another post.
श्री ट्रंप ने एक अन्य पोस्ट में लिखा, “शुक्रवार को समझौते पर हस्ताक्षर होने के बाद जलडमरूमध्य को खदानों को हटाने के उद्देश्य से खोला जाएगा और क्षेत्र तथा विश्व के लिए दोनों दिशाओं में फिर से तेल का प्रवाह शुरू होगा।”
- He said on Monday evening that “ships are starting to move, many loaded up with oil, out of the **Strait of Hormuz**.”
उन्होंने सोमवार शाम कहा कि “होर्मुज़ जलडमरूमध्य से जहाज निकलना शुरू हो गए हैं, जिनमें से कई तेल से लदे हुए हैं।”
- **Pakistan Prime Minister Shehbaz Sharif** also confirmed the agreement, adding that “both sides have declared the immediate and permanent termination of military operations on all fronts, including in Lebanon.”
पाकिस्तान के प्रधानमंत्री शहबाज़ शरीफ ने भी समझौते की पुष्टि करते हुए कहा कि “दोनों पक्षों ने लेबनान सहित सभी मोर्चों पर सैन्य अभियानों की तत्काल और स्थायी समाप्ति की घोषणा की है।”
- Iran’s **Mehr News Agency** reported that the deal would see release of **\$24 billion** in frozen Iranian assets during the 60-day negotiation period.
ईरान की मेहर समाचार एजेंसी ने बताया कि इस समझौते के अंतर्गत 60 दिनों की वार्ता अवधि के दौरान ईरान की जमी हुई परिसंपत्तियों में से **24 अरब डॉलर** जारी किए जाएंगे।
- But U.S. officials, including Mr. Trump and Mr. Vance, have insisted that no cash would be paid to Iran upon signing the agreement.
हालाँकि अमेरिकी अधिकारियों, जिनमें श्री ट्रंप और श्री वेंस शामिल हैं, ने जोर देकर कहा है कि समझौते पर हस्ताक्षर होते ही ईरान को कोई नकद राशि नहीं दी जाएगी।
- The report also claimed final negotiations would not begin until half of the frozen assets are released and the blockade is lifted.
रिपोर्ट में यह भी दावा किया गया कि अंतिम वार्ता तब तक शुरू नहीं होगी जब तक जमी हुई परिसंपत्तियों का आधा भाग जारी नहीं कर दिया जाता और नाकेबंदी समाप्त नहीं कर दी जाती।
- The final text of the agreement is yet to be released.
समझौते का अंतिम पाठ अभी जारी किया जाना शेष है।



India and Slovakia expand ties with a series of MoUs from defence to education

GS II: IR
Sriram Lakshman
LONDON

India and Slovakia on Monday expanded their bilateral relationship with memoranda of understanding (MoUs) across defence, labour mobility, education, digital tech, and other sectors, officially branding their relationship a 'Comprehensive Partnership'.

"Held an excellent meeting with Prime Minister [Robert] Fico. This is indeed a very special moment for the India-Slovakia friendship," Prime Minister Narendra Modi said following bilateral talks in the Slovakian capital of Bratislava. The Prime Minister is here for a little over 24 hours – the first visit by an Indian Prime Minister since the founding of Slovakia in 1993.

"Our talks covered cooperation in sectors like automobiles, railways, advanced manufacturing, and green technology. The India-EU Free Trade Agreement will also add momentum to our partnership," the Prime Minister said.

The countries committed to significantly boost two-way trade and investment across areas such as the automotive, electronic, and advance manufacturing industries.

The labour migration MoU signed seeks to facilitate mobility and the exchange of information between the authorities in both countries, as per the joint statement. The two sides also agreed to conclude a social security agreement in this regard.

An MoU between the Higher Education Ministries of the two countries



Prime Minister Narendra Modi with his Slovak counterpart Robert Fico at the Bratislava Castle in Slovakia on Monday. REUTERS

to facilitate academic and institutional linkages was also signed.

Mr. Modi and Mr. Fico agreed to promote the mobility of students and researchers – especially in STEM fields and humanities.

Action against terrorists

The formation of a Joint Working Group on Terrorism was agreed by Mr. Modi and Mr. Fico, with the two leaders "strongly" condemning the April 2025 terror attacks in Pahalgam.

They agreed to work towards the adoption of the Comprehensive Convention on International Terrorism within the United Nations framework.

The two leaders called for action against terrorists, including those in the UN Security Council 1267 Sanctions Committee list and the sponsors of terrorism.

The two sides reaffirmed their support for multilateralism and called for UN reform, including the UNSC, with an expansion of the permanent and non-permanent seats on the Council.

Slovakia has continued to support India's quest for a permanent seat on the UNSC and "reaffirmed its constructive approach" to India's membership to the Nuclear Suppliers Group, as per the joint statement.

Defence and security cooperation would be "one of the key pillars" of the India-Slovakia relationship, as per the joint statement.

The two sides signed a Letter of Intent to promote defence cooperation – a move welcomed by Mr. Modi and Mr. Fico in their press statements. Through this framework, the governments would seek to collaborate more in defence technologies, defence industrial cooperation, capacity building, and research and development.

The two governments signed an MoU on digital technologies to provide structure to their digital cooperation, as they committed to deepening collaboration in AI, semiconductors and start-ups.

They also agreed to explore cooperation in emerging fields, including the Internet of Things and 6G standardisation.

16J6. India and Slovakia expand ties with a series of MoUs from defence to education

भारत और स्लोवाकिया ने रक्षा से लेकर शिक्षा तक अनेक समझौता ज्ञापनों के माध्यम से संबंधों का विस्तार किया

• India and Slovakia on Monday expanded their bilateral relationship with memoranda of understanding (MoUs) across defence, labour mobility, education, digital tech, and other sectors, officially branding their relationship a 'Comprehensive Partnership'.

भारत और स्लोवाकिया ने सोमवार को रक्षा, श्रम गतिशीलता, शिक्षा, डिजिटल प्रौद्योगिकी तथा अन्य क्षेत्रों में समझौता ज्ञापनों (MoUs) के माध्यम से अपने द्विपक्षीय संबंधों का विस्तार किया और आधिकारिक रूप से अपने संबंधों को 'व्यापक साझेदारी' (Comprehensive Partnership) का स्वरूप प्रदान किया।

• "Held an excellent meeting with Prime Minister Robert Fico. This is indeed a very special moment for the India-Slovakia friendship," Prime Minister Narendra Modi said following bilateral talks in the Slovakian capital of Bratislava.

"प्रधानमंत्री रॉबर्ट फिको के साथ अत्यंत उत्कृष्ट बैठक हुई। यह वास्तव में भारत-स्लोवाकिया मैत्री के लिए एक विशेष क्षण है," प्रधानमंत्री नरेन्द्र मोदी ने स्लोवाकिया की राजधानी ब्रातिस्लावा में द्विपक्षीय वार्ता के बाद कहा।

• The Prime Minister is here for a little over 24 hours — the first visit by an Indian Prime Minister since the founding of Slovakia in 1993.

प्रधानमंत्री लगभग 24 घंटे से अधिक समय के लिए यहाँ हैं — यह 1993 में स्लोवाकिया की स्थापना के बाद किसी भारतीय प्रधानमंत्री की पहली यात्रा है।

• "Our talks covered cooperation in sectors like automobiles, railways,

advanced manufacturing, and green technology."

"हमारी वार्ताओं में ऑटोमोबाइल, रेलवे, उन्नत विनिर्माण तथा हरित प्रौद्योगिकी जैसे क्षेत्रों में सहयोग पर चर्चा हुई।"

• "The India-EU Free Trade Agreement will also add momentum to our partnership," the Prime Minister said.

प्रधानमंत्री ने कहा, "भारत-यूरोपीय संघ मुक्त व्यापार समझौता भी हमारी साझेदारी को नई गति प्रदान करेगा।"

- The countries committed to significantly boost two-way trade and investment across areas such as the automotive, electronic, and advanced manufacturing industries.
दोनों देशों ने ऑटोमोबाइल, इलेक्ट्रॉनिक्स तथा उन्नत विनिर्माण उद्योगों सहित विभिन्न क्षेत्रों में द्विपक्षीय व्यापार और निवेश को उल्लेखनीय रूप से बढ़ाने की प्रतिबद्धता व्यक्त की।
- The labour migration **MoU** signed seeks to facilitate mobility and the exchange of information between the authorities in both countries, as per the joint statement.
संयुक्त वक्तव्य के अनुसार, हस्ताक्षरित **श्रम प्रवासन समझौता** जापन दोनों देशों के अधिकारियों के बीच श्रमिकों की आवाजाही और सूचना के आदान-प्रदान को सुगम बनाने का प्रयास करता है।
- The two sides also agreed to conclude a **social security agreement** in this regard.
दोनों पक्षों ने इस संबंध में एक **सामाजिक सुरक्षा समझौते** को अंतिम रूप देने पर भी सहमति व्यक्त की।
- An **MoU** between the Higher Education Ministries of the two countries to facilitate academic and institutional linkages was also signed.
शैक्षणिक और संस्थागत संबंधों को प्रोत्साहित करने के लिए दोनों देशों के उच्च शिक्षा मंत्रालयों के बीच एक **समझौता जापन** पर भी हस्ताक्षर किए गए।
- Mr. Modi and Mr. Fico agreed to promote the mobility of students and researchers — especially in **STEM fields** and humanities.
श्री मोदी और श्री फिको ने छात्रों और शोधकर्ताओं की गतिशीलता को बढ़ावा देने पर सहमति व्यक्त की, विशेषकर **STEM क्षेत्रों** और मानविकी विषयों में।

Action Against Terrorists

आतंकवादियों के विरुद्ध कार्रवाई

- The formation of a **Joint Working Group on Terrorism** was agreed by Mr. Modi and Mr. Fico, with the two leaders “strongly” condemning the April 2025 terror attacks in **Pahalgam**.
श्री मोदी और श्री फिको ने **आतंकवाद पर संयुक्त कार्य समूह** के गठन पर सहमति व्यक्त की तथा दोनों नेताओं ने अप्रैल 2025 में **पहलगाम** में हुए आतंकवादी हमलों की “कड़े शब्दों में” निंदा की।
- They agreed to work towards the adoption of the **Comprehensive Convention on International Terrorism** within the **United Nations** framework.
उन्होंने **संयुक्त राष्ट्र** के ढाँचे के अंतर्गत **अंतरराष्ट्रीय आतंकवाद पर व्यापक अभिसमय** को अपनाने की दिशा में कार्य करने पर सहमति व्यक्त की।
- The two leaders called for action against terrorists, including those in the **UN Security Council 1267 Sanctions Committee** list and the sponsors of terrorism.
दोनों नेताओं ने आतंकवादियों तथा आतंकवाद को समर्थन देने वालों के विरुद्ध कार्रवाई का आह्वान किया, जिनमें **संयुक्त राष्ट्र सुरक्षा परिषद की 1267 प्रतिबंध समिति** की सूची में शामिल व्यक्ति भी शामिल हैं।
- The two sides reaffirmed their support for **multilateralism** and called for **UN reform**, including the **UN Security Council (UNSC)**, with an expansion of the permanent and non-permanent seats on the Council.
दोनों पक्षों ने **बहुपक्षवाद** के प्रति अपने समर्थन की पुनः पुष्टि की और **संयुक्त राष्ट्र सुधार**, विशेषकर **संयुक्त राष्ट्र सुरक्षा परिषद (UNSC)** में स्थायी तथा अस्थायी सीटों के विस्तार की आवश्यकता पर बल दिया।
- Slovakia has continued to support India's quest for a permanent seat on the **UNSC** and “reaffirmed its constructive approach” to India's membership of the **Nuclear Suppliers Group (NSG)**, as per the joint statement.
संयुक्त वक्तव्य के अनुसार, स्लोवाकिया ने **UNSC** में भारत की स्थायी सदस्यता की आकांक्षा का समर्थन जारी रखा है और **न्यूक्लियर सप्लायर्स ग्रुप (NSG)** की सदस्यता के प्रति भारत के लिए अपने “रचनात्मक दृष्टिकोण” की पुनः पुष्टि की है।

Defence and Security Cooperation

रक्षा एवं सुरक्षा सहयोग

- Defence and security cooperation would be “one of the key pillars” of the **India-Slovakia relationship**, as per the joint statement.
संयुक्त वक्तव्य के अनुसार, रक्षा और सुरक्षा सहयोग **भारत-स्लोवाकिया संबंधों** के “प्रमुख स्तंभों” में से एक होगा।
- The two sides signed a **Letter of Intent** to promote defence cooperation — a move welcomed by Mr. Modi and Mr. Fico in their press statements.
दोनों पक्षों ने रक्षा सहयोग को बढ़ावा देने के लिए एक **आशय पत्र (Letter of Intent)** पर हस्ताक्षर किए, जिसका स्वागत श्री मोदी और श्री फिको ने अपने प्रेस वक्तव्यों में किया।
- Through this framework, the governments would seek to collaborate more in defence technologies, defence industrial cooperation, capacity building, and research and development.
इस ढाँचे के माध्यम से दोनों सरकारें रक्षा प्रौद्योगिकियों, रक्षा औद्योगिक सहयोग, क्षमता निर्माण तथा अनुसंधान एवं विकास में अधिक सहयोग करने का प्रयास करेंगी।
- The two governments signed an **MoU on digital technologies** to provide structure to their digital cooperation, as they committed to deepening collaboration in **Artificial Intelligence (AI)**, semiconductors and start-ups.
दोनों सरकारों ने डिजिटल सहयोग को संरचित करने के लिए **डिजिटल प्रौद्योगिकियों पर एक समझौता ज्ञापन** पर हस्ताक्षर किए और **कृत्रिम बुद्धिमत्ता (AI)**, सेमीकंडक्टर तथा स्टार्ट-अप क्षेत्रों में सहयोग को गहरा करने की प्रतिबद्धता व्यक्त की।
- They also agreed to explore cooperation in emerging fields, including the **Internet of Things (IoT)** and **6G standardisation**.
उन्होंने **इंटरनेट ऑफ थिंग्स (IoT)** तथा **6G मानकीकरण** सहित उभरते क्षेत्रों में सहयोग की संभावनाओं का भी अन्वेषण करने पर सहमति व्यक्त की।

GS Paper III: Economy		16 June 2026
TOPICS COVERED		
16J6	India's goods exports hit record high of \$45.2 billion in May; trade deficit widens मई में भारत का वस्तु निर्यात 45.2 अरब डॉलर के रिकॉर्ड उच्च स्तर पर पहुँचा; व्यापार घाटा बढ़ा	
16J6	A.P. to partner with Google to create AI-cloud task force आंध्र प्रदेश एआई-क्लाउड कार्यबल के गठन हेतु गूगल के साथ साझेदारी करेगा	
16J6	Centre hikes windfall tax on diesel, aviation fuel exports केंद्र ने डीज़ल और विमानन ईंधन के निर्यात पर विंडफॉल टैक्स बढ़ाया	
16J6	Marginal increase in unemployment rate in May मई में बेरोज़गारी दर में मामूली वृद्धि	
16J6	WPI inflation jumps to 9.7% in May on surging fuel prices ईंधन कीमतों में उछाल के कारण मई में WPI मुद्रास्फीति 9.7% तक पहुंची	
16J6	Why an Iran peace deal won't pull the Japanese yen back from the brink ईरान शांति समझौता जापानी येन को संकट के किनारे से वापस क्यों नहीं ला पाएगा	
16J6	China bonds emerge as surprise haven on war युद्ध के दौरान चीनी बॉन्ड एक अप्रत्याशित सुरक्षित निवेश विकल्प के रूप में उभरे	



India's goods exports hit record high of \$45.2 billion in May; trade deficit widens

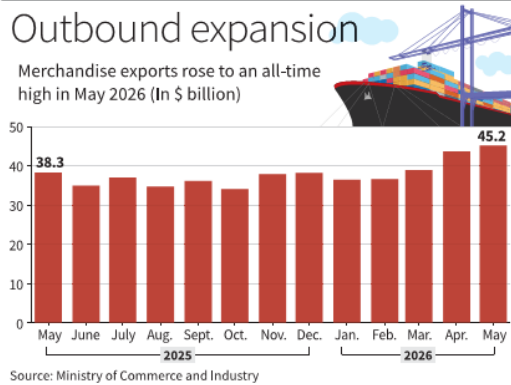
GS III: Economy
T.C.A. Sharad Raghavan
NEW DELHI

India's merchandise exports have jumped to a record high of \$45.2 billion in May 2026, 18% higher than \$38.3 billion in May last year, according to official data. Services exports rose 13.2% during the same period, to \$36.8 billion in May 2026.

However, despite this, India's overall trade deficit widened to \$10.5 billion from \$6.8 billion in May last year due to a sharper growth in imports of both goods and services.

Broad-based increase

The data released by the Ministry of Commerce and Industry show that India's merchandise exports rose in May, due to higher ship-



ments to Singapore, China, the U.K., Tanzania, Bangladesh, Germany, and South Africa, among others. This increase was also relatively broad-based in terms of sectors, with both petroleum and several non-petroleum sectors seeing strong growth in exports.

Within merchandise exports, the electronic goods sector saw exports growing 11.6% to \$5.1 billion in May 2026.

The organic and inorganic chemicals sector similarly saw exports grow by 12.7% to \$2.7 billion during the same period.

Notably, the engineering goods category saw exports jumping 24.5% in May 2026 to \$12.3 billion. The gems and jewellery sector, too, saw a growth in exports of 6.7% to \$2.5 billion in May 2026.

Overall, the data show India's non-petroleum exports grew 10.5% to \$70.7 billion in the first two months of this financial year.

Imports grow faster

India's merchandise imports jumped 22.1% to \$73.4 billion in May 2026. As a result, the merchandise trade deficit stood at \$28.2 billion in May this year, 25% higher than in May 2025.

Services imports, too, grew 14.1% in May 2026 to \$19.1 billion.

16J6. India's goods exports hit record high of \$45.2 billion in May; trade deficit widens

मई में भारत का वस्तु निर्यात 45.2 अरब डॉलर के रिकॉर्ड उच्च स्तर पर पहुँचा; व्यापार घाटा बढ़ा

India's Merchandise Exports Reach Record High

भारत का माल निर्यात रिकॉर्ड उच्च स्तर पर पहुँचा

- India's **merchandise exports** have jumped to a record high of **\$45.2 billion** in May 2026, 18% higher than **\$38.3 billion** in May last year, according to official data. आधिकारिक आँकड़ों के अनुसार, भारत का **माल निर्यात (Merchandise Exports)** मई 2026 में बढ़कर रिकॉर्ड **45.2 अरब डॉलर** पर पहुँच गया, जो पिछले वर्ष मई में दर्ज **38.3 अरब डॉलर** की तुलना में 18% अधिक है।
- Services exports** rose 13.2% during the same period, to **\$36.8 billion** in May 2026. इसी अवधि में **सेवा निर्यात (Services Exports)** 13.2% बढ़कर मई 2026 में **36.8 अरब डॉलर** हो गया।
- However, despite this, India's overall **trade deficit** widened to **\$10.5 billion** from **\$6.8 billion** in May last year due to a sharper growth in imports of both goods and services. हालाँकि, इसके बावजूद वस्तुओं और सेवाओं दोनों के आयात में अधिक तीव्र वृद्धि के कारण भारत का कुल **व्यापार घाटा (Trade Deficit)** पिछले वर्ष मई के **6.8 अरब डॉलर** से बढ़कर **10.5 अरब डॉलर** हो गया।

Broad-based Increase

व्यापक आधार पर वृद्धि

- The data released by the **Ministry of Commerce and Industry** show that India's merchandise exports rose in May, due to higher shipments to **Singapore, China, the U.K.,**



Tanzania, Bangladesh, Germany, and South Africa, among others.

वाणिज्य एवं उद्योग मंत्रालय द्वारा जारी आँकड़ों से पता चलता है कि मई में भारत के माल निर्यात में वृद्धि हुई, जिसका प्रमुख कारण सिंगापुर, चीन, यूनाइटेड किंगडम, तंज़ानिया, बांग्लादेश, जर्मनी और दक्षिण अफ्रीका सहित विभिन्न देशों को अधिक निर्यात रहा।

- This increase was also relatively broad-based in terms of sectors, with both **petroleum** and several **non-petroleum sectors** seeing strong growth in exports.
यह वृद्धि विभिन्न क्षेत्रों में भी व्यापक रही, जहाँ **पेट्रोलियम** तथा कई **गैर-पेट्रोलियम** क्षेत्रों में निर्यात में उल्लेखनीय वृद्धि दर्ज की गई।
- Within merchandise exports, the **electronic goods sector** saw exports growing 11.6% to **\$5.1 billion** in May 2026.
माल निर्यात के अंतर्गत **इलेक्ट्रॉनिक वस्तु** क्षेत्र का निर्यात 11.6% बढ़कर मई 2026 में **5.1 अरब डॉलर** हो गया।
- The **organic and inorganic chemicals sector** similarly saw exports grow by 12.7% to **\$2.7 billion** during the same period.
इसी प्रकार **कार्बनिक और अकार्बनिक रसायन** क्षेत्र का निर्यात 12.7% बढ़कर **2.7 अरब डॉलर** हो गया।
- Notably, the **engineering goods** category saw exports jumping 24.5% in May 2026 to **\$12.3 billion**.
विशेष रूप से **इंजीनियरिंग वस्तुओं** के निर्यात में 24.5% की वृद्धि दर्ज की गई और यह मई 2026 में **12.3 अरब डॉलर** तक पहुँच गया।
- The **gems and jewellery sector**, too, saw a growth in exports of 6.7% to **\$2.5 billion** in May 2026.
रत्न एवं आभूषण क्षेत्र के निर्यात में भी 6.7% की वृद्धि हुई और यह मई 2026 में **2.5 अरब डॉलर** तक पहुँच गया।
- Overall, the data show India's **non-petroleum exports** grew 10.5% to **\$70.7 billion** in the first two months of this financial year.
समग्र रूप से आँकड़े दर्शाते हैं कि चालू वित्तीय वर्ष के पहले दो महीनों में भारत का **गैर-पेट्रोलियम निर्यात** 10.5% बढ़कर **70.7 अरब डॉलर** हो गया।

Imports Grow Faster

A.P. to partner with Google to create AI-cloud task force

GS III: Economy
The Hindu Bureau
VIJAYAWADA

Andhra Pradesh Chief Minister N. Chandrababu Naidu held a series of high-level meetings with global technology, logistics, urban development and academic institutions on Monday, the first day of his two-day visit to Singapore, seeking investments and strategic partnerships for the State's development.

A key outcome of the visit was an agreement between the Andhra Pradesh government and Google to establish a special task force to explore cooperation in artificial intelligence (AI), cloud computing and digital governance.

During his meeting with Google Asia-Pacific president Karan Bhajwa, the



N. Chandrababu Naidu

Chief Minister outlined his vision of transforming Andhra Pradesh into a major hub for AI, data centres and digital infrastructure. He invited Google to partner with the State in strengthening digital governance and real-time governance systems through advanced cloud technologies.

Mr. Naidu also sought Google's support for large-

scale skill development programmes in AI, machine learning and cloud computing.

Logistics parks

The Chief Minister also met representatives of YCH Logistics Group and discussed the establishment of logistics parks and a modern supply chain city in Andhra Pradesh. In another meeting, Mr. Naidu invited UN-Habitat Executive Director Anacláudia Rossbach to establish a Centre of Excellence in Andhra Pradesh.

The visit forms part of Andhra Pradesh's efforts to attract global investments and position the State as a leading destination for technology, education, logistics and sustainable urban development.

आयात में अधिक तीव्र वृद्धि

- India's **merchandise imports** jumped 22.1% to **\$73.4 billion** in May 2026.

भारत का **माल आयात (Merchandise Imports)** मई 2026 में 22.1% बढ़कर **73.4 अरब डॉलर** हो गया।

• As a result, the **merchandise trade deficit** stood at **\$28.2 billion** in May this year, 25% higher than in May 2025.
इसके परिणामस्वरूप, इस वर्ष मई में **माल व्यापार घाटा (Merchandise Trade Deficit)** **28.2 अरब डॉलर** रहा, जो मई 2025 की तुलना में 25% अधिक है।

• **Services imports**, too, grew 14.1% in May 2026 to **\$19.1 billion**.
सेवा आयात (Services Imports) में भी वृद्धि

दर्ज की गई और यह मई 2026 में 14.1% बढ़कर **19.1 अरब डॉलर** हो गया।

16J6. A.P. to partner with Google to create AI-cloud task force आंध्र प्रदेश एआई-क्लाउड कार्यबल के गठन हेतु गूगल के साथ साझेदारी करेगा

- **Andhra Pradesh Chief Minister N. Chandrababu Naidu** held a series of high-level meetings with global technology, logistics, urban development and academic institutions on Monday, the first day of his two-day visit to **Singapore**, seeking investments and strategic partnerships for the State's development.
आंध्र प्रदेश के मुख्यमंत्री एन. चंद्रबाबू नायडू ने अपनी दो दिवसीय **सिंगापुर** यात्रा के पहले दिन सोमवार को वैश्विक प्रौद्योगिकी, लॉजिस्टिक्स, शहरी विकास और शैक्षणिक संस्थानों के प्रतिनिधियों के साथ उच्चस्तरीय बैठकें कीं, जिनका उद्देश्य राज्य के विकास हेतु निवेश और रणनीतिक साझेदारियाँ प्राप्त करना था।
- A key outcome of the visit was an agreement between the **Andhra Pradesh government** and **Google** to establish a special task force to explore cooperation in **artificial intelligence (AI)**, cloud computing and digital governance.
इस यात्रा का एक प्रमुख परिणाम **आंध्र प्रदेश सरकार** और **Google** के बीच हुआ समझौता रहा, जिसके तहत **कृत्रिम बुद्धिमत्ता (AI)**, क्लाउड कंप्यूटिंग और डिजिटल प्रशासन के क्षेत्रों में सहयोग की संभावनाओं का अध्ययन करने के लिए एक विशेष कार्यबल स्थापित किया जाएगा।
- During his meeting with **Google Asia-Pacific president Karan Bhajwa**, the Chief Minister outlined his vision of transforming Andhra Pradesh into a major hub for AI, data centres and digital infrastructure.
गूगल एशिया-प्रशांत के अध्यक्ष करण भजवा के साथ अपनी बैठक के दौरान मुख्यमंत्री ने आंध्र प्रदेश को AI, डेटा सेंटर और डिजिटल अवसंरचना का एक प्रमुख केंद्र बनाने की अपनी परिकल्पना प्रस्तुत की।
- He invited Google to partner with the State in strengthening digital governance and real-time governance systems through advanced cloud technologies.
उन्होंने Google को उन्नत क्लाउड प्रौद्योगिकियों के माध्यम से डिजिटल प्रशासन और रीयल-टाइम शासन प्रणालियों को सुदृढ़ बनाने में राज्य के साथ साझेदारी करने का आमंत्रण दिया।
- Mr. Naidu also sought Google's support for large-scale skill development programmes in **AI, machine learning and cloud computing**.
श्री नायडू ने **AI, मशीन लर्निंग और क्लाउड कंप्यूटिंग** के क्षेत्रों में बड़े पैमाने पर कौशल विकास कार्यक्रमों के लिए भी Google का सहयोग माँगा।

Logistics Parks लॉजिस्टिक्स पार्क

- The Chief Minister also met representatives of **YCH Logistics Group** and discussed the establishment of logistics parks and a modern supply chain city in Andhra Pradesh.
मुख्यमंत्री ने **YCH लॉजिस्टिक्स समूह** के प्रतिनिधियों से भी मुलाकात की और आंध्र प्रदेश में लॉजिस्टिक्स पार्क तथा एक आधुनिक आपूर्ति श्रृंखला नगर की स्थापना पर चर्चा की।
- In another meeting, Mr. Naidu invited **UN-Habitat Executive Director Anacláudia Rossbach** to establish a **Centre of Excellence** in Andhra Pradesh.
एक अन्य बैठक में श्री नायडू ने **यूएन-हैबिटेट की कार्यकारी निदेशक अनाक्लाउडिया रोसबाख** को आंध्र प्रदेश में एक **सेंटर ऑफ एक्सीलेंस** स्थापित करने का आमंत्रण दिया।
- The visit forms part of Andhra Pradesh's efforts to attract global investments and position the State as a leading destination for technology, education, logistics and sustainable urban development.
यह यात्रा वैश्विक निवेश आकर्षित करने तथा आंध्र प्रदेश को प्रौद्योगिकी, शिक्षा, लॉजिस्टिक्स और सतत शहरी विकास के लिए एक अग्रणी गंतव्य के रूप में स्थापित करने के राज्य के प्रयासों का हिस्सा है।



GS III: Economy

Centre hikes windfall tax on diesel, aviation fuel exports

The government on Monday hiked windfall gains tax on exports of diesel and aviation turbine fuel (ATF), while retaining the levy on petrol for the fortnight beginning June 16. The rate of special additional excise duty (SAED) on export of diesel will be ₹14 a litre, up from ₹13.5 a litre at present. The SAED on export of ATF will be ₹12.5 a litre, up from ₹9.5 a litre. There is no change in the rate of duty on exports of petrol and it continues to be at ₹1.5 a litre. The Finance Ministry, in a notification, said the duty hikes would be effective from June 16. Also, there is no change in the existing duty rates on petrol and diesel cleared for domestic consumption. PTI

16J6. Centre hikes windfall tax on diesel, aviation fuel exports

केंद्र ने डीज़ल और विमानन ईंधन के निर्यात पर विंडफॉल टैक्स बढ़ाया

Government Hikes Windfall Gains Tax on Diesel and ATF Exports

सरकार ने डीज़ल और एटीएफ निर्यात पर विंडफॉल गेन टैक्स बढ़ाया

- The government on Monday hiked **windfall gains tax** on exports of **diesel** and **aviation turbine fuel (ATF)**, while retaining the levy on **petrol** for the fortnight beginning June 16. सरकार ने सोमवार को डीज़ल और एविएशन टर्बाइन फ्यूल (ATF) के निर्यात पर विंडफॉल गेन टैक्स बढ़ा दिया, जबकि 16 जून से शुरू होने वाले पखवाड़े के लिए पेट्रोल पर लागू कर को यथावत रखा।

- The rate of **Special Additional Excise Duty (SAED)** on export of diesel will be **₹14 per litre**, up from **₹13.5 per litre** at present. डीज़ल के निर्यात पर विशेष अतिरिक्त उत्पाद शुल्क (SAED) की दर वर्तमान ₹13.5 प्रति लीटर से बढ़ाकर ₹14 प्रति लीटर कर दी गई है।
- The **SAED** on export of **ATF** will be **₹12.5 per litre**, up from **₹9.5 per litre**. **ATF** के निर्यात पर **SAED** की दर ₹9.5 प्रति लीटर से बढ़ाकर ₹12.5 प्रति लीटर कर दी गई है।
- There is no change in the rate of duty on exports of **petrol** and it continues to be at **₹1.5 per litre**. पेट्रोल के निर्यात पर शुल्क दर में कोई परिवर्तन नहीं किया गया है और यह ₹1.5 प्रति लीटर पर यथावत बनी हुई है।
- The **Finance Ministry**, in a notification, said the duty hikes would be effective from **June 16**. **वित्त मंत्रालय** ने एक अधिसूचना में कहा कि बढ़ी हुई शुल्क दरें 16 जून से प्रभावी होंगी।
- Also, there is no change in the existing duty rates on **petrol** and **diesel** cleared for domestic consumption. इसके अतिरिक्त, घरेलू उपभोग के लिए जारी किए जाने वाले पेट्रोल और डीज़ल पर लागू वर्तमान शुल्क दरों में कोई परिवर्तन नहीं किया गया है।

Marginal increase in unemployment rate in May

GS III: Economy

The Hindu Bureau
NEW DELHI

The unemployment rate (UR) in the country increased by 0.3 percentage points to 5.5% in May compared with April, according to the Periodic Labour Force Survey (PLFS), released by the Ministry of Statistics and Programme Implementation in New Delhi on Monday.

While rural unemployment increased from 4.6% in April to 5.1% in May, urban unemployment decreased marginally from 6.6% in April to 6.4% in May. The unemployment rate among rural males of 15 years and above was 5.2% during May. For rural females in the same age group, it was 4.7%. In urban areas, the unemployment rate among females was 8.2% compared with 5.9% observed for males.

The Labour Force Participation Rate for persons aged 15 years and above stood at 54.4% in May. It was 55% in April.

16J6. Marginal increase in unemployment rate in May

मई में बेरोज़गारी दर में मामूली वृद्धि



- The **unemployment rate (UR)** in the country increased by **0.3 percentage points** to **5.5%** in May compared with April, according to the **Periodic Labour Force Survey (PLFS)** released by the **Ministry of Statistics and Programme Implementation** in New Delhi on Monday.
सोमवार को नई दिल्ली में सांख्यिकी एवं कार्यक्रम कार्यान्वयन मंत्रालय द्वारा जारी आवधिक श्रम बल सर्वेक्षण (PLFS) के अनुसार, देश की बेरोज़गारी दर (UR) अप्रैल की तुलना में 0.3 प्रतिशत अंक बढ़कर मई में 5.5% हो गई।
- While **rural unemployment** increased from **4.6%** in April to **5.1%** in May, **urban unemployment** decreased marginally from **6.6%** in April to **6.4%** in May.
जहाँ ग्रामीण बेरोज़गारी अप्रैल के 4.6% से बढ़कर मई में 5.1% हो गई, वहीं शहरी बेरोज़गारी अप्रैल के 6.6% से मामूली रूप से घटकर मई में 6.4% रह गई।
- The unemployment rate among **rural males of 15 years and above** was **5.2%** during May.
मई के दौरान 15 वर्ष और उससे अधिक आयु के ग्रामीण पुरुषों में बेरोज़गारी दर 5.2% दर्ज की गई।
- For **rural females** in the same age group, it was **4.7%**.
उसी आयु वर्ग की ग्रामीण महिलाओं में यह दर 4.7% रही।
- In urban areas, the unemployment rate among **females** was **8.2%** compared with **5.9%** observed for **males**.
शहरी क्षेत्रों में महिलाओं की बेरोज़गारी दर 8.2% रही, जबकि पुरुषों के लिए यह 5.9% दर्ज की गई।
- The **Labour Force Participation Rate (LFPR)** for persons aged **15 years and above** stood at **54.4%** in May.
15 वर्ष और उससे अधिक आयु के व्यक्तियों के लिए श्रम बल भागीदारी दर (LFPR) मई में 54.4% रही।
- It was **55%** in April.
अप्रैल में यह दर 55% थी।

WPI inflation jumps to 9.7% in May on surging fuel prices

16J6. WPI inflation jumps to 9.7% in May on surging fuel prices

ईंधन कीमतों में उछाल के कारण मई में WPI मुद्रास्फीति 9.7% तक पहुंची

Govt. releases new series of Wholesale Price Index with an updated base year of 2022-23 along with new producer price indices in line with global best practices and IMF recommendations

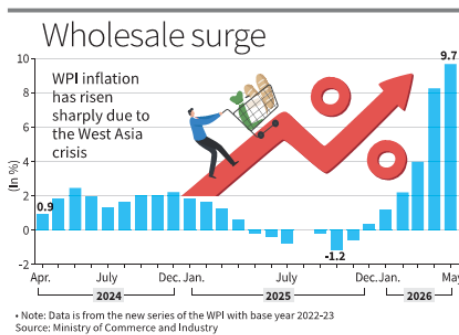
GS III: Economy

T.C.A. Sharad Raghavan
NEW DELHI

Inflation at the wholesale level rose to 9.7% in May 2026, primarily driven by surging prices of crude oil, natural gas, mineral oils and to a smaller extent, manufactured products, according to official data.

The Ministry of Commerce and Industry on Monday released the new series of the Wholesale Price Index (WPI) with an updated base year of 2022-23 and wider ambit of goods measured. Due to the base year update, a historical comparison further back than April 2024 is not available. The May 2026 inflation rate is the highest since at least then.

Along with the new WPI, the Commerce Ministry also released the first editions of its **Output Producer Price Index (OPPI)**, **Input Producer Price**



Index (IPPI), and Service Producer Price Index (Service PPI) of seven services – Banking, Securities Transaction, Insurance, Management of Pension Funds, Railways, Passenger Air, and Telecom.

WPI to be phased out
The government also said that the Producer Price Index (PPI) will replace the WPI in five years.

“Considering the wide

usage of WPI in price escalation clauses, this index will be released for five years from the date of its release, along with PPI, and will be discontinued thereafter,” the Commerce Ministry said in its release. “This would give sufficient time to users to switch from WPI to PPI.”

It added that the transition from WPI to PPI is in line with the global best practices adopted by ad-

vanced economies and the recommendations of the IMF.

The surge in the WPI in May 2026 was driven overwhelmingly by soaring fuel prices that month as a result of the West Asia crisis.

Inflation in the crude oil and natural gas category jumped to 61.5% in May 2026, from 56.3% in the previous month. While this is a reflection of the elevated global oil and gas prices, it is also a result of a low base, since the new series of the WPI shows prices in this category contracted by 15.5% in May last year.

Similarly, inflation in the mineral oils category accelerated to 49.8% in May 2026 from 40.7% in April. Here, too, prices had contracted in May last year.

The WPI shows that inflation in the manufacturing and food segments also quickened in May 2026, albeit not as quickly as for fuel.

• Govt. releases new series of Wholesale Price Index with an updated base year of 2022-23 along with new producer price indices in line with global best practices and IMF recommendations

सरकार ने 2022-23 को नए आधार वर्ष के रूप में अपनाते हुए थोक मूल्य सूचकांक (WPI) की नई श्रृंखला तथा वैश्विक सर्वोत्तम प्रथाओं और IMF की सिफारिशों के अनुरूप



नए उत्पादक मूल्य सूचकांक जारी किए

- Inflation at the **wholesale level** rose to **9.7%** in May 2026, primarily driven by surging prices of **crude oil, natural gas, mineral oils** and to a smaller extent, **manufactured products**, according to official data.
आधिकारिक आंकड़ों के अनुसार मई 2026 में **थोक स्तर की मुद्रास्फीति** बढ़कर **9.7%** हो गई, जिसका मुख्य कारण **कच्चे तेल, प्राकृतिक गैस, खनिज तेलों** तथा कुछ हद तक **विनिर्मित उत्पादों** की कीमतों में तेज वृद्धि रही।
- The **Ministry of Commerce and Industry** on Monday released the new series of the **Wholesale Price Index (WPI)** with an updated base year of **2022-23** and wider ambit of goods measured.
वाणिज्य एवं उद्योग मंत्रालय ने सोमवार को **2022-23** को नए आधार वर्ष के रूप में अपनाते हुए **थोक मूल्य सूचकांक (WPI)** की नई श्रृंखला जारी की, जिसमें वस्तुओं का दायरा भी विस्तृत किया गया है।
- Due to the base year update, a historical comparison further back than April 2024 is not available.
आधार वर्ष में परिवर्तन के कारण अप्रैल 2024 से पहले की अवधि की ऐतिहासिक तुलना उपलब्ध नहीं है।
- The May 2026 inflation rate is the highest since at least then.
मई 2026 की मुद्रास्फीति दर कम-से-कम उस अवधि के बाद से सबसे अधिक है।
- Along with the new **WPI**, the Commerce Ministry also released the first editions of its **Output Producer Price Index (OPPI)**, **Input Producer Price Index (IPPI)**, and **Service Producer Price Index (Service PPI)** of seven services — **Banking, Securities Transaction, Insurance, Management of Pension Funds, Railways, Passenger Air, and Telecom**.
नए **WPI** के साथ वाणिज्य मंत्रालय ने **आउटपुट प्रोड्यूसर प्राइस इंडेक्स (OPPI)**, **ट्रायल इनपुट प्रोड्यूसर प्राइस इंडेक्स (IPPI)** तथा सात सेवाओं — **बैंकिंग, प्रतिभूति लेन-देन, बीमा, पेंशन फंड प्रबंधन, रेलवे, यात्री विमानन और दूरसंचार** — के लिए **सर्विस प्रोड्यूसर प्राइस इंडेक्स (Service PPI)** का पहला संस्करण भी जारी किया।

WPI to be phased out

WPI को चरणबद्ध तरीके से समाप्त किया जाएगा

- The government also said that the **Producer Price Index (PPI)** will replace the **WPI** in five years.
सरकार ने यह भी कहा कि **उत्पादक मूल्य सूचकांक (PPI)** अगले पाँच वर्षों में **WPI** का स्थान लेगा।
- "Considering the wide usage of **WPI** in price escalation clauses, this index will be released for five years from the date of its release, along with **PPI**, and will be discontinued thereafter," the Commerce Ministry said in its release.
वाणिज्य मंत्रालय ने अपने वक्तव्य में कहा, "मूल्य वृद्धि संबंधी प्रावधानों में **WPI** के व्यापक उपयोग को देखते हुए, इसे **PPI** के साथ इसके जारी होने की तिथि से पाँच वर्षों तक प्रकाशित किया जाएगा और इसके बाद इसे बंद कर दिया जाएगा।"
- "This would give sufficient time to users to switch from **WPI** to **PPI**."
"इससे उपयोगकर्ताओं को **WPI** से **PPI** में परिवर्तन के लिए पर्याप्त समय मिलेगा।"
- It added that the transition from **WPI** to **PPI** is in line with the global best practices adopted by advanced economies and the recommendations of the **IMF**.
मंत्रालय ने कहा कि **WPI** से **PPI** में परिवर्तन उन्नत अर्थव्यवस्थाओं द्वारा अपनाई गई वैश्विक सर्वोत्तम प्रथाओं और **IMF** की सिफारिशों के अनुरूप है।
- The surge in the **WPI** in May 2026 was driven overwhelmingly by soaring **fuel prices** that month as a result of the **West Asia crisis**.
मई 2026 में **WPI** में वृद्धि का मुख्य कारण **पश्चिम एशिया संकट** के परिणामस्वरूप उस महीने **ईंधन की कीमतों** में भारी वृद्धि थी।

- Inflation in the **crude oil and natural gas** category jumped to **61.5%** in May 2026, from **56.3%** in the previous month.
कच्चे तेल और प्राकृतिक गैस श्रेणी में मुद्रास्फीति मई 2026 में बढ़कर **61.5%** हो गई, जो पिछले महीने **56.3%** थी।
- While this is a reflection of the elevated global oil and gas prices, it is also a result of a low base, since the new series of the **WPI** shows prices in this category contracted by **15.5%** in May last year.
यद्यपि यह वैश्विक तेल और गैस कीमतों में वृद्धि को दर्शाता है, लेकिन यह निम्न आधार प्रभाव का भी परिणाम है, क्योंकि **WPI** की नई श्रृंखला के अनुसार इस श्रेणी में पिछले वर्ष मई में कीमतों में **15.5%** की गिरावट दर्ज की गई थी।
- Similarly, inflation in the **mineral oils** category accelerated to **49.8%** in May 2026 from **40.7%** in April.
इसी प्रकार **खनिज तेलों** की श्रेणी में मुद्रास्फीति अप्रैल के **40.7%** से बढ़कर मई 2026 में **49.8%** हो गई।
- Here, too, prices had contracted in May last year.
यहाँ भी पिछले वर्ष मई में कीमतों में गिरावट दर्ज की गई थी।
- The **WPI** shows that inflation in the **manufacturing** and **food** segments also quickened in May 2026, albeit not as quickly as for fuel.
WPI दर्शाता है कि मई 2026 में **विनिर्माण** और **खाद्य** क्षेत्रों में भी मुद्रास्फीति बढ़ी, हालांकि यह वृद्धि ईंधन क्षेत्र की तुलना में कम तीव्र थी।

GS Paper III: Science and Technology		16 June 2026
TOPICS COVERED		
16J6	AI is helping patients understand cancer but misunderstand doctors एआई रोगियों को कैंसर समझने में सहायता कर रहा है, लेकिन चिकित्सकों को गलत समझने की प्रवृत्ति भी बढ़ा रहा है।	
16J6	AI falls short on extreme weather forecasting चरम मौसम की भविष्यवाणी करने में एआई अभी भी अपेक्षित स्तर तक सफल नहीं है।	
16J6	QUIZ: Gravitational lensing	
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AI is helping patients understand cancer but misunderstand doctors

Patients are increasingly informed but often misinformed; they have information without context, they trust algorithms that sound intelligent but lack accountability; they are sceptical of doctors who try to add nuance because the algorithm validated their simpler interpretation

SS III S&T

Narayana Subramaniam

I am an oncologist. I have watched large language models (LLMs) do something I have been trying to do for years: make cancer comprehensible.

A patient sits across from me with newly diagnosed cancer. I used to explain the PDL1 status and the role of neoadjuvant therapy, where patients get immunotherapy first followed by surgery – terms that meant nothing. Their eyes would often glaze but they would nod and leave confused, forced to google terms that would lead them to worst-case scenarios or fraudulent clinics.

Now, they come in having asked ChatGPT or Claude to explain their pathology report. “So PDL1-positive means my cancer may respond well to specific treatment and have higher cure rates?” they ask. Overnight, we are having an intelligent conversation instead of me trying to translate oncology into English.

That is extraordinary and has been genuinely useful for cancer care.

The real excitement

What thrills me most is clinical trial access. I have patients who understand why a phase II trial for immunotherapy might be appropriate for their metastatic melanoma. They have read ChatGPT’s explanation of what a trial protocol means, what endpoints are being measured, what side effects to watch for. Informed consent is now informed in a way that would not have been remotely possible five years ago.

A man with advanced salivary gland cancer asked me about the open clinical trials that I hadn’t even mentioned yet. He had asked ChatGPT about maintenance therapy options and the algorithm had directed him to trial data. He understood why novel therapies made sense in his situation. He wasn’t just following my recommendation; he understood the science behind it. This represents patients becoming medically literate enough to participate in their own care.

The guidelines themselves are now being simplified by LLMs into language that does not require an oncology degree to understand. A patient with cancer can ask ChatGPT to explain the staging system, treatment options, and surveillance protocols. They arrive at appointments educated and aware.

This democratisation of cancer knowledge is important, especially in India, where accessing oncologists is itself challenging for many. A patient in a tier-2 city can understand what treatment options exist even before traveling to see a specialist.

Known and unknown unknowns

However, just removing the information asymmetry does not change the fact that information is not judgment. And judgment is what is hardest for us to convey.

A patient comes in with stage II oral cancer. ChatGPT has explained that stage II is “intermediate risk”. My recommendation is surgery followed by radiotherapy. The patient asks: “But why can’t I just do surgery and skip



The democratisation of cancer knowledge is important, especially in India, where accessing oncologists is itself challenging for many. ANGIOLA HARRY/UNSPLASH

radiotherapy? ChatGPT said radiotherapy has significant side effects.” The LLM gave her valid information and even explained that some stage II oral cancers don’t need radiotherapy. But it couldn’t tell her that her specific tumour with its specific characteristics had a 30% recurrence risk without radiotherapy and 10% with it. That difference is life-years. Making that judgement requires knowing her values, her tolerance for toxicity, and her specific cancer biology. An LLM cannot do that.

According to one JAMA study on diagnostic accuracy, when LLMs encounter complex cases requiring contextual reasoning, their accuracy drops significantly, well below the level of an experienced physician.

What troubles me most is something we are witnessing in real time: the widening trust gap between doctor and patient.

I tell a patient with stage IV cancer that chemotherapy is unlikely to be curative but might extend life by months and improve quality of life. The patient pulls up what ChatGPT said: “Chemotherapy can cause severe nausea, hair loss, infections, and heart damage. Many people pursue alternative medicine instead.”

Both statements are true – but they are not equivalent.

The LLM has presented information without medical judgment. It has essentially validated scepticism about chemotherapy without context about whether, in this specific situation, the risk-benefit ratio favours treatment. The patient now does not trust my recommendation. They think I am pushing toxic drugs for profit while the LLM is being more honest.

Mental health studies have found that a sizeable proportion of people using LLMs for mental health questions reported worsening outcomes. But more alarming: some even avoid professional help

According to one JAMA study on diagnostic accuracy, when LLMs encounter complex cases requiring contextual reasoning, their accuracy drops significantly, well below the level of an experienced physician

because the LLM made them feel understood. In oncology, delay is often catastrophic. I have seen patients postpone cancer evaluation because they felt the LLM had validated their “wait and see” approach.

Judging what is right

A 52-year-old asked ChatGPT about a lung nodule found incidentally on a CT scan. The LLM explained that most lung nodules are benign. The patient was reassured and did not follow up. Eighteen months later, he has stage III lung cancer that was likely stage I when he first noticed it. The LLM provided accurate population-level statistics without context about what his nodule required.

Another patient with breast cancer asked an LLM about stopping hormone therapy after three years. The algorithm discussed “natural approaches” and how some women manage without medication. She stopped and soon relapsed. When asked why she stopped, she said the LLM made it sound optional. But it was not optional for her.

These are stories of real patients harmed by a tool we have unleashed without fully understanding how to control it.

Further, I am not convinced these tools will ever be able to do what actually matters in medicine: judging what is right for the individual sitting in front of us, not what is statistically true for most populations.

I am not worried that LLMs will replace

oncologists. Our knowledge can be packaged and replicated. Our judgment, forged in uncertainty, built on seeing what happens when you are wrong, tempered by real consequences, cannot be. That is the gap algorithms cannot close.

Biased tools

What worries me is the middle ground we have reached. Patients are increasingly informed but often misinformed. They have information without context. They trust algorithms that sound intelligent but lack accountability. They are sceptical of doctors who try to add nuance because the algorithm validated their simpler interpretation. And we are doing this with almost no tracking of outcomes.

Peer-reviewed research has warned that LLMs chatbots designed for engagement can inadvertently validate harmful behaviour, posing risks to vulnerable users. In oncology, are patients making different treatment decisions? Are outcomes changing? We do not know.

I still believe LLMs can be valuable tools in cancer care. They are already breaking down barriers to democratising knowledge. But we need to stop pretending they are neutral. They are sycophantic by design, trained to be agreeable rather than challenging. They cannot examine a patient or order a biopsy or follow someone over time. And we need to rebuild something I see eroding: patients understanding that a doctor who disagrees with them might not be defensive or greedy. They might be using judgment informed by years of seeing how these decisions play out.

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16J6. AI is helping patients understand cancer but misunderstand doctors

एआई रोगियों को कैंसर समझने में सहायता कर रहा है, लेकिन चिकित्सकों को गलत समझने की प्रवृत्ति भी बढ़ा रहा है।



- I used to explain the **PDL1 status** and the role of **neoadjuvant therapy**, where patients get **immunotherapy** first followed by surgery — terms that meant nothing.
मैं पहले **PDL1 स्थिति** और **नियोएडजुवंट थेरेपी** की भूमिका समझाता था, जिसमें रोगियों को पहले **इम्यूनोथेरेपी** दी जाती है और उसके बाद शल्यचिकित्सा की जाती है — ऐसे शब्द जिनका उनके लिए कोई अर्थ नहीं होता था।
- “So **PDL1-positive** means my cancer may respond well to specific treatment and have higher cure rates?” they ask.
“तो **PDL1-पॉजिटिव** होने का अर्थ है कि मेरा कैंसर विशेष उपचार के प्रति अच्छी प्रतिक्रिया दे सकता है और इसके ठीक होने की संभावना अधिक हो सकती है?” वे पूछते हैं।
- I have patients who understand why a **phase II trial for immunotherapy** might be appropriate for their **metastatic melanoma**.
मेरे पास ऐसे रोगी हैं जो समझते हैं कि **मेटास्टेटिक मेलानोमा** के लिए **इम्यूनोथेरेपी** का **फेज-II परीक्षण** उनके लिए उपयुक्त क्यों हो सकता है।
- Informed consent** is now informed in a way that would not have been remotely possible five years ago.
सूचित सहमति अब उस स्तर पर सूचित हो गई है, जो पाँच वर्ष पहले किसी भी रूप में संभव नहीं था।
- A man with advanced **salivary gland cancer** asked me about the **open clinical trials** that I hadn't even mentioned yet.
उन्नत अवस्था के **लार ग्रंथि कैंसर** से पीड़ित एक व्यक्ति ने मुझसे उन खुले क्लिनिकल परीक्षणों के बारे में पूछा जिनका मैंने अभी तक उल्लेख भी नहीं किया था।
- He wasn't just following my recommendation; he understood the science behind it.**
वह केवल मेरी सिफारिश का पालन नहीं कर रहा था; वह उसके पीछे के विज्ञान को भी समझ रहा था।
- This represents patients becoming medically literate enough to participate in their own care.**
यह दर्शाता है कि रोगी अपनी चिकित्सा देखभाल में भाग लेने के लिए पर्याप्त रूप से चिकित्सकीय रूप से साक्षर बन रहे हैं।
- The **guidelines themselves are now being simplified by LLMs into language that does not require an oncology degree to understand.**
अब दिशानिर्देशों को स्वयं **LLMs** द्वारा ऐसी भाषा में सरल बनाया जा रहा है जिसे समझने के लिए ऑन्कोलॉजी की डिग्री की आवश्यकता नहीं है।
- A patient with cancer can ask ChatGPT to explain the staging system, treatment options, and surveillance protocols.**
कैंसर से पीड़ित कोई रोगी ChatGPT से स्टेजिंग प्रणाली, उपचार विकल्पों और निगरानी प्रोटोकॉल की व्याख्या करने के लिए कह सकता है।
- This **democratisation of cancer knowledge** is important, especially in **India**, where accessing oncologists is itself challenging for many.
कैंसर संबंधी ज्ञान का यह लोकतंत्रीकरण महत्वपूर्ण है, विशेषकर **भारत** में, जहाँ अनेक लोगों के लिए ऑन्कोलॉजिस्ट तक पहुँचना ही चुनौतीपूर्ण है।
- My recommendation is surgery followed by **radiotherapy**.
मेरी सिफारिश शल्यचिकित्सा के बाद **रेडियोथेरेपी** की है।
- The LLM gave her valid information and even explained that **some stage II oral cancers don't need radiotherapy.**
LLM ने उसे सही जानकारी दी और यह भी समझाया कि कुछ स्टेज-II मुख कैंसरों में रेडियोथेरेपी की आवश्यकता नहीं होती।
- But it couldn't tell her that her specific tumour with its specific characteristics had a 30% recurrence risk without radiotherapy and 10% with it.**
लेकिन वह उसे यह नहीं बता सका कि उसके विशेष ट्यूमर की विशिष्ट विशेषताओं के कारण रेडियोथेरेपी के बिना पुनरावृत्ति का जोखिम 30% था और रेडियोथेरेपी के साथ 10%।

- That difference is life-years.
यह अंतर जीवन के अनेक वर्षों का अंतर है।
- Making that judgement requires knowing her values, her tolerance for toxicity, and her specific cancer biology.
ऐसा निर्णय लेने के लिए उसके मूल्यों, दुष्प्रभावों को सहन करने की क्षमता और उसके कैंसर की विशिष्ट जैविक प्रकृति को जानना आवश्यक है।
- According to one **JAMA study** on diagnostic accuracy, when LLMs encounter complex cases requiring contextual reasoning, their accuracy drops significantly, well below the level of an experienced physician.
नैदानिक सटीकता पर आधारित एक **JAMA अध्ययन** के अनुसार, जब LLMs ऐसे जटिल मामलों का सामना करते हैं जिनमें संदर्भगत तर्क की आवश्यकता होती है, तो उनकी सटीकता में उल्लेखनीय गिरावट आती है और वह एक अनुभवी चिकित्सक के स्तर से काफी नीचे चली जाती है।
- What troubles me most is something we are witnessing in real time: the widening trust gap between doctor and patient.
जो बात मुझे सबसे अधिक चिंतित करती है, वह है वह स्थिति जिसे हम वास्तविक समय में देख रहे हैं: डॉक्टर और रोगी के बीच बढ़ती हुई विश्वास की खाई।
- I tell a patient with stage IV cancer that chemotherapy is unlikely to be curative but might extend life by months and improve quality of life.
मैं स्टेज-IV कैंसर से पीड़ित एक रोगी को बताता हूँ कि कीमोथेरेपी से रोग के पूर्णतः ठीक होने की संभावना कम है, किन्तु यह जीवन को कुछ महीनों तक बढ़ा सकती है और जीवन की गुणवत्ता में सुधार कर सकती है।
- The patient pulls up what ChatGPT said: "Chemotherapy can cause severe nausea, hair loss, infections, and heart damage."
रोगी ChatGPT द्वारा कही गई बात दिखाता है: "कीमोथेरेपी से गंभीर मतली, बाल झड़ना, संक्रमण तथा हृदय को क्षति हो सकती है।"
- Many people pursue alternative medicine instead."
इसके स्थान पर अनेक लोग वैकल्पिक चिकित्सा पद्धतियों का सहारा लेते हैं।"
- It has essentially validated scepticism about chemotherapy without context about whether, in this specific situation, the risk-benefit ratio favours treatment.
इसने मूलतः कीमोथेरेपी के प्रति संदेह को वैधता प्रदान कर दी है, बिना यह संदर्भ दिए कि इस विशेष परिस्थिति में जोखिम-लाभ अनुपात उपचार के पक्ष में है या नहीं।
- They think I am pushing toxic drugs for profit while the LLM is being more honest.
उन्हें लगता है कि मैं लाभ कमाने के लिए विषैले औषधीय उपचार को बढ़ावा दे रहा हूँ, जबकि LLM अधिक ईमानदार है।
- Eighteen months later, he has stage III lung cancer that was likely stage I when he first noticed it.
अठारह महीने बाद उसे स्टेज-III फेफड़े का कैंसर पाया गया, जो संभवतः पहली बार ध्यान में आने पर स्टेज-I में था।
- Another patient with breast cancer asked an LLM about stopping hormone therapy after three years.
स्तन कैंसर से पीड़ित एक अन्य रोगी ने तीन वर्ष बाद हार्मोन थेरेपी बंद करने के विषय में LLM से पूछा।
- The algorithm discussed "natural approaches" and how some women manage without medication.
एल्गोरिदम ने "प्राकृतिक उपायों" तथा यह चर्चा की कि कुछ महिलाएँ बिना दवा के भी अपना प्रबंधन कर लेती हैं।
- These are stories of real patients harmed by a tool we have unleashed without fully understanding how to control it.
ये उन वास्तविक रोगियों की कहानियाँ हैं जिन्हें ऐसे उपकरण से हानि पहुँची जिसे हमने उसके नियंत्रण के तरीकों को पूरी तरह समझे बिना व्यापक रूप से उपयोग में ला दिया है।

- Patients are increasingly informed but often misinformed.
रोगी पहले की अपेक्षा अधिक जानकारी रखते हैं, किन्तु अक्सर गलत जानकारी से भी प्रभावित होते हैं।
- They have information without context.
उनके पास जानकारी है, किन्तु उसका संदर्भ नहीं है।
- They trust algorithms that sound intelligent but lack accountability.
वे ऐसे एल्गोरिदम पर विश्वास करते हैं जो बुद्धिमत्तापूर्ण प्रतीत होते हैं, किन्तु जिनमें उत्तरदायित्व का अभाव है।
- They are sceptical of doctors who try to add nuance because the algorithm validated their simpler interpretation.
वे उन चिकित्सकों के प्रति संदेह रखते हैं जो विषय की जटिलताओं को समझाने का प्रयास करते हैं, क्योंकि एल्गोरिदम ने उनकी सरल व्याख्या को पहले ही सही ठहरा दिया होता है।
- They cannot examine a patient or order a biopsy or follow someone over time.
वे किसी रोगी की शारीरिक जाँच नहीं कर सकते, बायोप्सी का आदेश नहीं दे सकते और न ही समय के साथ किसी रोगी की स्थिति का प्रत्यक्ष अनुगमन कर सकते हैं।

AI falls short on extreme weather forecasting

GS III: S&T
Vasudevan Mukunth

In the last two years, artificial intelligence (AI) has moved from science fiction to the frontlines of computer science, mathematics, and engineering, among others. Its consequences have been particularly pronounced in the domain of weather forecasting, where models from companies like Google and Huawei have proved faster and often more accurate than the large supercomputers we have relied on for decades.

However, a new study published in *Science Advances* suggests that when it comes to the most dangerous weather events, AI still has a lot to learn.

In the study, researchers from Germany and Switzerland compared several leading AI weather models, including GraphCast, Pangu-Weather, and Fuxi, against the world's gold standard for traditional forecasting: the high-resolution (HRES) model of the European Centre for Medium-Range Weather Forecasts.

AI models are trained to look for patterns based on historical weather data so when weather does something completely unprecedented AI models have no basis to anticipate it

They found that while the AI models excelled at predicting 'normal' weather and even moderate extremes, they consistently failed to accurately predict events that would shatter records.

Traditional models are based on physics, and use complex mathematical equations to describe how air and heat move, how moisture turns into rain, and so on. Because they rely literally on the laws of nature, they can anticipate a scenario even if it has never happened before. However, AI models are data-driven. They are trained to look for patterns based on 40 years of historical weather data (1979-2017), so when the weather does something completely unprecedented – like a record-setting heatwave – the AI models have no basis to anticipate it.

This is called an extrapolation problem: that is, AI is great at interpolating, or predicting things within the range of what it has seen, but it struggles to predict things far outside of its training data.

The researchers also tested the models on record-breaking heat, cold, and wind events from 2018 and 2020 and found that the AI models systematically underestimated both the frequency and the intensity of these events.

For example, during an extreme heatwave, the AI models tended to predict temperatures that were significantly lower than what actually occurred. Specifically, they responded as if there was an invisible 'cap' on how high the temperature could go. And the more a record was broken by, the larger the AI models' error became.

If a study or a policy is based on AI models that predict a severe heatwave but the actual temperature is even higher, the disaster response could be inadequate. Early warning systems for heatwaves, floods, and storms still require the highest possible accuracy during extreme weather to save lives.

"Given the remarkably fast evolution of AI models in recent years, there are promising ways to further improve these models even for forecasting record-breaking extremes," the authors wrote. "Nevertheless, the current generation still underperforms HRES exactly during the potentially most impactful weather events, including record-breaking heat and cold events."

मानक माने जाने वाले European Centre for Medium-Range Weather Forecasts के उच्च-रिज़ॉल्यूशन (HRES) मॉडल से की।

- They found that while the AI models excelled at predicting 'normal' weather and even moderate extremes, they consistently failed to accurately predict events that would shatter records.

- And we need to rebuild something I see eroding: patients understanding that a doctor who disagrees with them might not be defensive or greedy.
और हमें उस चीज़ का पुनर्निर्माण करना होगा जिसे मैं धीरे-धीरे क्षीण होते हुए देख रहा हूँ:

रोगियों की यह समझ कि उनसे असहमति रखने वाला चिकित्सक आवश्यक नहीं कि रक्षात्मक या लालची हो।

16J6. AI falls short on extreme weather forecasting

चरम मौसम की भविष्यवाणी करने में एआई अभी भी अपेक्षित स्तर तक सफल नहीं है।

Artificial Intelligence and Extreme Weather Forecasting

कृत्रिम बुद्धिमत्ता और चरम मौसम पूर्वानुमान

- In the study, researchers from Germany and Switzerland compared several leading AI weather models, including GraphCast, Pangu-Weather, and Fuxi, against the world's gold standard for traditional forecasting: the high-resolution (HRES) model of the European Centre for Medium-Range Weather Forecasts.

इस अध्ययन में जर्मनी और स्विट्ज़रलैंड के शोधकर्ताओं ने कई प्रमुख AI मौसम मॉडलों, जिनमें GraphCast, Pangu-Weather और Fuxi शामिल हैं, की तुलना पारंपरिक मौसम पूर्वानुमान के वैश्विक



उन्होंने पाया कि जहाँ AI मॉडल 'सामान्य' मौसम और यहाँ तक कि मध्यम स्तर की चरम घटनाओं का पूर्वानुमान लगाने में उत्कृष्ट थे, वहीं वे रिकॉर्ड तोड़ने वाली घटनाओं का सटीक पूर्वानुमान लगाने में लगातार विफल रहे।

- Traditional models are based on **physics**, and use complex mathematical equations to describe how air and heat move, how moisture turns into rain, and so on.
पारंपरिक मॉडल भौतिकी पर आधारित होते हैं और यह वर्णन करने के लिए जटिल गणितीय समीकरणों का उपयोग करते हैं कि वायु और ऊष्मा कैसे संचरित होती हैं, नमी वर्षा में कैसे परिवर्तित होती है, आदि।
- They are trained to look for patterns based on 40 years of historical weather data (1979-2017), so when the weather does something completely unprecedented — like a record-setting heatwave — the AI models have no basis to anticipate it.
उन्हें 40 वर्षों के ऐतिहासिक मौसमीय आँकड़ों (1979-2017) के आधार पर प्रतिरूपों की पहचान करने के लिए प्रशिक्षित किया जाता है, इसलिए जब मौसम कोई पूर्णतः अभूतपूर्व घटना प्रदर्शित करता है — जैसे रिकॉर्ड तोड़ने वाली हीटवेव — तब AI मॉडलों के पास उसका पूर्वानुमान लगाने का कोई आधार नहीं होता।
- This is called an **extrapolation problem**: that is, AI is great at **interpolating**, or predicting things within the range of what it has seen, but it struggles to predict things far outside of its training data.
इसे **एक्सट्रापोलेशन समस्या** कहा जाता है; अर्थात् AI इंटरपोलेशन करने में अत्यंत सक्षम है, यानी उन घटनाओं का पूर्वानुमान लगाने में जो उसके अनुभव किए गए दायरे के भीतर हों, किन्तु वह अपने प्रशिक्षण डेटा की सीमा से बहुत बाहर की घटनाओं का पूर्वानुमान लगाने में कठिनाई अनुभव करता है।
- **Early warning systems** for heatwaves, floods, and storms still require the highest possible accuracy during extreme weather to save lives.
हीटवेव, बाढ़ और तूफानों के लिए **प्रारंभिक चेतावनी प्रणालियों** को जीवन बचाने हेतु चरम मौसम के दौरान अभी भी सर्वोच्च संभव सटीकता की आवश्यकता होती है।

Answers to June 4 quiz:

1. The phenomenon where light is magnified by gravity –
Ans: Gravitational lensing

2. Spacecraft designed to be pushed forward by light – **Ans: Light-sail**

3. Light that appears near surfaces, fades rapidly away from it – **Ans: Evanescent waves**

4. How light's electric field moves when it's circularly polarised – **Ans: Rotates**

5. Space acquired this property due to ultra-strong magnetic fields – **Ans: Birefringent**

Visual: **Rayleigh scattering**

First contact: Utsav Kaushal
Ranjan | Tamal Biswas | K.N.
Viswanathan | Shreya Kapoor |
Anmol Agrawal

16J6. QUIZ

1. The phenomenon where light is magnified by gravity

Answer: Gravitational Lensing

- **Gravitational lensing** is a phenomenon predicted by **Albert Einstein's General Theory of Relativity**.
- It occurs when the gravitational field of a massive object, such as a galaxy or galaxy cluster, bends the path of light coming from a more distant object.
- This bending can magnify, distort, or even create multiple images of the background source.

2. Spacecraft designed to be pushed forward by light

Answer: Light-Sail

- A **light-sail** (or solar sail) is a spacecraft propulsion system that uses the pressure exerted by light photons to generate motion. Unlike conventional rockets, light-sails require no onboard fuel for propulsion.
- They use large, highly reflective sails that capture momentum from sunlight or powerful laser beams.

3. Light that appears near surfaces and fades rapidly away from it



Answer: Evanescent Waves

- **Evanescent waves** are electromagnetic waves that form near the boundary between two different media when light undergoes total internal reflection.
- Unlike ordinary light waves, they do not travel far into the second medium. Instead, their intensity decreases exponentially with distance from the surface.

4. How light's electric field moves when it's circularly polarised

Answer: Rotates

- In **circularly polarised light**, the electric field vector continuously **rotates** as the light wave propagates through space. Instead of oscillating in a single plane, as in linearly polarised light, the electric field traces a circular path around the direction of travel.

5. Space acquired this property due to ultra-strong magnetic fields

Answer: Birefringent

- Under extremely intense magnetic fields, empty space can become **birefringent**, a phenomenon known as **vacuum birefringence**.
- According to **Quantum Electrodynamics (QED)**, powerful magnetic fields can alter the behaviour of virtual particles in a vacuum, causing light with different polarisations to travel differently.
- As a result, space behaves similarly to a birefringent crystal, splitting light into components with distinct properties.
- This effect is expected near highly magnetised neutron stars called **magnetars**, whose magnetic fields are trillions of times stronger than Earth's.
- Observational evidence for vacuum birefringence has provided important support for fundamental predictions of modern quantum physics.



Technology drives India-France strategic convergence

GS III: S&T

It is a measure of the importance that Prime Minister Narendra Modi and French President Emmanuel Macron attach to the India-France relationship that they are meeting again in France, on the sidelines of the G-7 Summit in Evian (June 15-17), barely months after Mr. Macron's visit to India for the India AI Impact Summit 2026 in New Delhi in February. During that visit, the two leaders jointly inaugurated the India-France Year of Innovation 2026.

In normal diplomacy, such announcements often take time to translate into action. It is therefore notable that Mr. Modi and Mr. Macron are already moving swiftly to advance bilateral technology cooperation. They jointly inaugurated the "Bharat Innovates" event in Nice (June 14-16), bringing together leading Indian start-ups and venture capital funds. Mr. Modi will then attend the VivaTech Summit in Paris on June 18, Europe's largest technology and start-up event, underscoring the growing India-France technology partnership.

The new pillars of partnership

The India-France relationship is constantly evolving and is consequently being updated by the two leaders who are committed to the cause.

While the recently elevated Special Global Strategic Partnership has always included traditional areas such as defence, nuclear and space, it is the focus on tech and innovation that is now exciting for the relationship.

This focus will include cyberspace, Artificial Intelligence (AI), health care, sustainable development, creative economy, education and research. These are new facets of the evolving and dynamic relationship and will no doubt take



Mohan Kumar
Former Indian Ambassador to France and now Dean/Professor at O.P. Jindal Global University

Technology and innovation power the next phase of India-France ties

ties to greater heights. Tech and innovation has tremendous mutual advantages for both sides. France has some of the best state-of-the-art technology in aerospace, AI, robotics, biotech, health care, green tech and sustainable development, besides being a European hub for the digital economy.

It is not hard to see how India can not only benefit from access to technology in these areas but also bring its own added value in terms of frugal innovation, start-ups, digital public infrastructure and biotech, just to name a few. The possibilities are endless. It must be hoped that the two tech summits – "Bharat Innovates" and the "Vivatech" – will enable the private sector on both sides to come up with substantive collaborative arrangements.

Defence, space and Africa

The two leaders are also expected to take stock of the special strategic partnership. There are a number of dossiers which can benefit from their political and strategic guidance. The first is certainly the idea of the co-designing and co-production of defence platforms which must be expedited. Progress is also desirable in emerging areas such as small modular reactors, joint satellite development and human flight programmes.

The potential for Franco-Indian cooperation in Africa has not been fully exploited and this must get the attention of both sides. This becomes even more important in light of the postponement of the India-Africa Forum Summit (May 2026) due to the Ebola crisis in Africa. The two leaders will doubtless exchange views on the ongoing conflicts: in Ukraine and in Iran, which have

adversely and disproportionately affected countries of the Global South.

Mr. Modi's Europe visit (June 13-18, 2026) also includes a state visit to Slovakia, the first-ever visit by an Indian Prime Minister to Slovakia since its independence in 1993.

Watching the 'DIO debate'

France, as the current chair of the G-7, will host the G-7 summit in Evian from June 15 to 17, 2026. It is difficult to imagine a G-7 summit without India being invited, and Mr. Modi's participation is particularly important given the geopolitical turbulence of the present moment. United States President Donald Trump is also expected to attend it. While attention will naturally focus on the possibility of a Modi-Trump meeting, any interaction may not be a substantive one, given the G-7 atmospherics.

More important is the evolving role of the G-7 itself in global geopolitics. With the G-20 having lost some of its momentum in recent years, discussions have resurfaced about expanding the G-7 into a DIO – a grouping of 10 major democracies. Whether, and how soon, such a transformation materialises remains uncertain, but it is a development India will need to watch closely.

At the end of the day, two middle powers – India and France – which set great store by strategic autonomy, have a fundamental role to play in contributing to geopolitical stability and ensuring a smooth transition to a multipolar world. In that sense, Mr. Modi and Mr. Macron shoulder a significant responsibility.

The views expressed are personal

16J6. Technology drives India-France strategic convergence

प्रौद्योगिकी भारत-फ्रांस सामरिक अभिसरण को गति प्रदान कर रही है।

- It is a measure of the importance that Prime Minister **Narendra Modi** and French President **Emmanuel Macron** attach to the **India-France relationship** that they are meeting again in France, on the sidelines of the **G-7 Summit in Evian** (June 15-17), barely months after Mr. Macron's visit to India for the **India AI Impact Summit 2026** in **New Delhi** in February. यह इस बात का प्रमाण है कि प्रधानमंत्री नरेन्द्र मोदी और फ्रांस के राष्ट्रपति इमैनुएल मैक्रों भारत-फ्रांस संबंधों को कितना महत्व देते हैं कि वे फरवरी में नई दिल्ली में आयोजित इंडिया एआई इम्पैक्ट समिट 2026 के लिए श्री मैक्रों की भारत यात्रा के कुछ ही महीनों बाद, एवियन (15-17 जून) में आयोजित जी-7 शिखर सम्मेलन के अवसर पर पुनः फ्रांस में मिल रहे हैं।
- During that visit, the two leaders jointly inaugurated the **India-France Year of Innovation 2026**. उस यात्रा के दौरान दोनों नेताओं ने संयुक्त रूप से **भारत-फ्रांस नवाचार वर्ष 2026** का उद्घाटन किया था।
- In normal diplomacy, such announcements often take time to translate into action. सामान्य कूटनीति में ऐसी घोषणाओं को व्यवहारिक रूप लेने में प्रायः समय लगता है।
- It is therefore notable that Mr. Modi and Mr. Macron are already moving swiftly to advance bilateral **technology cooperation**. इसलिए यह उल्लेखनीय है कि श्री मोदी और श्री मैक्रों द्विपक्षीय प्रौद्योगिकी सहयोग को आगे बढ़ाने के लिए पहले ही तीव्र गति से कार्य कर रहे हैं।
- They jointly inaugurated the "**Bharat Innovates**" event in **Nice** (June 14-16), bringing together leading Indian start-ups and venture capital funds. उन्होंने नीस (14-16 जून) में आयोजित "**भारत इनोवेट्स**" कार्यक्रम का संयुक्त रूप से उद्घाटन किया, जिसमें भारत के प्रमुख स्टार्ट-अप और वेंचर कैपिटल फंड एकत्र हुए।
- Mr. Modi will then attend the **VivaTech Summit** in **Paris** on June 18, Europe's largest technology and start-up event, underscoring the growing **India-France technology partnership**. इसके बाद श्री मोदी 18 जून को पेरिस में आयोजित विवाटेक शिखर सम्मेलन में भाग लेंगे, जो यूरोप का सबसे

बड़ा प्रौद्योगिकी और स्टार्ट-अप आयोजन है तथा बढ़ती हुई भारत-फ्रांस प्रौद्योगिकी साझेदारी को रेखांकित करता है।

The New Pillars of Partnership

साझेदारी के नए स्तंभ

- The **India-French relationship** is constantly evolving and is consequently being updated by the two leaders who are committed to the cause.
भारत-फ्रांस संबंध निरंतर विकसित हो रहे हैं और इसी कारण इस उद्देश्य के प्रति प्रतिबद्ध दोनों नेता इन्हें समयानुकूल नया स्वरूप प्रदान कर रहे हैं।
- While the recently elevated **Special Global Strategic Partnership** has always included traditional areas such as defence, nuclear and space, it is the focus on **technology and innovation** that is now exciting for the relationship.
यद्यपि हाल ही में उन्नत की गई विशेष वैश्विक सामरिक साझेदारी में रक्षा, परमाणु ऊर्जा और अंतरिक्ष जैसे पारंपरिक क्षेत्र सदैव शामिल रहे हैं, किन्तु अब प्रौद्योगिकी और नवाचार पर केंद्रित दृष्टिकोण इस संबंध को नई ऊर्जा प्रदान कर रहा है।
- This focus will include **cyberspace, Artificial Intelligence (AI), health care, sustainable development, creative economy, education and research**.
इस प्राथमिकता में साइबर स्पेस, कृत्रिम बुद्धिमत्ता (AI), स्वास्थ्य सेवा, सतत विकास, रचनात्मक अर्थव्यवस्था, शिक्षा और अनुसंधान जैसे क्षेत्र शामिल होंगे।
- These are new facets of the evolving and dynamic relationship and will no doubt take ties to greater heights.
ये विकसित होते और गतिशील संबंधों के नए आयाम हैं और निस्संदेह दोनों देशों के संबंधों को नई ऊँचाइयों तक ले जाएँगे।
- **Technology and innovation** has tremendous mutual advantages for both sides.
प्रौद्योगिकी और नवाचार दोनों पक्षों के लिए अत्यधिक पारस्परिक लाभ प्रदान करते हैं।
- France has some of the best state-of-the-art technology in **aerospace, AI, robotics, biotech, health care, green tech and sustainable development**, besides being a European hub for the digital economy.
फ्रांस के पास एयरोस्पेस, AI, रोबोटिक्स, जैव-प्रौद्योगिकी, स्वास्थ्य सेवा, हरित प्रौद्योगिकी और सतत विकास के क्षेत्रों में अत्याधुनिक तकनीक उपलब्ध है, साथ ही वह डिजिटल अर्थव्यवस्था का एक प्रमुख यूरोपीय केंद्र भी है।
- It is not hard to see how India can not only benefit from access to technology in these areas but also bring its own added value in terms of **frugal innovation, start-ups, digital public infrastructure and biotech**, just to name a few.
यह समझना कठिन नहीं है कि भारत इन क्षेत्रों की प्रौद्योगिकियों तक पहुँच से लाभान्वित होने के साथ-साथ मितव्ययी नवाचार, स्टार्ट-अप, डिजिटल सार्वजनिक अवसंरचना और जैव-प्रौद्योगिकी जैसे क्षेत्रों में अपना विशिष्ट योगदान भी दे सकता है।
- The possibilities are endless.
संभावनाएँ असीमित हैं।
- It must be hoped that the two tech summits — “**Bharat Innovates**” and “**VivaTech**” — will enable the private sector on both sides to come up with substantive collaborative arrangements.
यह आशा की जानी चाहिए कि दोनों प्रौद्योगिकी शिखर सम्मेलन — “**भारत इनोवेट्स**” और “**विवाटेक**” — दोनों देशों के निजी क्षेत्रों को सार्थक सहयोगात्मक व्यवस्थाएँ विकसित करने के लिए प्रोत्साहित करेंगे।

Defence, Space and Africa

रक्षा, अंतरिक्ष और अफ्रीका



- The two leaders are also expected to take stock of the **Special Strategic Partnership**. दोनों नेताओं से **विशेष सामरिक साझेदारी** की प्रगति की समीक्षा करने की भी अपेक्षा की जा रही है।
- There are a number of dossiers which can benefit from their political and strategic guidance. ऐसे अनेक विषय हैं जिन्हें उनके राजनीतिक और सामरिक मार्गदर्शन से लाभ मिल सकता है।
- The first is certainly the idea of the **co-designing and co-production of defence platforms** which must be expedited.
सबसे प्रमुख विषय **रक्षा प्लेटफॉर्मों के संयुक्त अभिकल्पन और संयुक्त उत्पादन** की अवधारणा है, जिसे शीघ्र गति प्रदान की जानी चाहिए।
- Progress is also desirable in emerging areas such as **small modular reactors, joint satellite development and human flight programmes**.
इसके अतिरिक्त **लघु मॉड्यूलर रिएक्टरों, संयुक्त उपग्रह विकास तथा मानव अंतरिक्ष उड़ान कार्यक्रमों** जैसे उभरते क्षेत्रों में भी प्रगति अपेक्षित है।
- The potential for **Franco-Indian cooperation in Africa** has not been fully exploited and this must get the attention of both sides.
अफ्रीका में भारत-फ्रांस सहयोग की संभावनाओं का अभी तक पूर्ण उपयोग नहीं हो पाया है और इस विषय पर दोनों पक्षों को विशेष ध्यान देना चाहिए।
- This becomes even more important in light of the postponement of the **India-Africa Forum Summit** (May 2026) due to the **Ebola crisis** in Africa.
अफ्रीका में **इबोला संकट** के कारण **भारत-अफ्रीका फोरम शिखर सम्मेलन** (मई 2026) के स्थगित होने के परिप्रेक्ष्य में यह और भी अधिक महत्वपूर्ण हो जाता है।
- The two leaders will doubtless exchange views on the ongoing conflicts: in **Ukraine** and in **Iran**, which have adversely and disproportionately affected countries of the **Global South**.
दोनों नेता निस्संदेह **यूक्रेन और ईरान** में जारी संघर्षों पर विचार-विमर्श करेंगे, जिनका **वैश्विक दक्षिण (Global South)** के देशों पर प्रतिकूल और असमान रूप से अधिक प्रभाव पड़ा है।
- Mr. Modi's **Europe visit** (June 13-18, 2026) also includes a state visit to **Slovakia**, the first-ever visit by an Indian Prime Minister to Slovakia since its independence in 1993.
श्री मोदी की **यूरोप यात्रा** (13-18 जून, 2026) में **स्लोवाकिया** की राजकीय यात्रा भी शामिल है, जो 1993 में उसकी स्वतंत्रता के बाद किसी भारतीय प्रधानमंत्री की पहली यात्रा होगी।

Watching the 'D10 Debate'

'D10 बहस' पर निगाह

- France, as the current chair of the **G-7**, will host the **G-7 Summit** in **Evian** from June 15 to 17, 2026.
जी-7 के वर्तमान अध्यक्ष के रूप में फ्रांस 15 से 17 जून, 2026 तक **एवियन में जी-7 शिखर सम्मेलन** की मेजबानी करेगा।
- It is difficult to imagine a G-7 summit without India being invited, and Mr. Modi's participation is particularly important given the geopolitical turbulence of the present moment.
भारत की भागीदारी के बिना किसी जी-7 शिखर सम्मेलन की कल्पना करना कठिन है, और वर्तमान भू-राजनीतिक अस्थिरता को देखते हुए श्री मोदी की भागीदारी विशेष रूप से महत्वपूर्ण है।
- United States President Donald Trump** is also expected to attend it.
संयुक्त राज्य अमेरिका के राष्ट्रपति डोनाल्ड ट्रम्प के भी इसमें भाग लेने की संभावना है।
- While attention will naturally focus on the possibility of a **Modi-Trump meeting**, any interaction may not be a substantive one, given the G-7 atmospherics.
यद्यपि स्वाभाविक रूप से **मोदी-ट्रम्प बैठक** की संभावना पर ध्यान केंद्रित रहेगा, किन्तु जी-7 के समग्र वातावरण को देखते हुए किसी भी बातचीत के अत्यधिक सारगर्भित होने की संभावना कम है।
- More important is the evolving role of the **G-7** itself in global geopolitics.
इससे भी अधिक महत्वपूर्ण वैश्विक भू-राजनीति में स्वयं **जी-7** की बदलती भूमिका है।

- With the **G-20** having lost some of its momentum in recent years, discussions have resurfaced about expanding the G-7 into a **D10** — a grouping of 10 major democracies. हाल के वर्षों में जी-20 की गति कुछ कम होने के कारण जी-7 को विस्तारित करके **D10** — अर्थात् 10 प्रमुख लोकतांत्रिक देशों के समूह — में परिवर्तित करने संबंधी चर्चाएँ पुनः उभरकर सामने आई हैं।
- Whether, and how soon, such a transformation materialises remains uncertain, but it is a development India will need to watch closely. ऐसा परिवर्तन होगा या नहीं, तथा यदि होगा तो कितनी शीघ्रता से होगा, यह अभी अनिश्चित है; किन्तु यह ऐसा घटनाक्रम है जिस पर भारत को निकटता से नज़र रखनी होगी।
- At the end of the day, two **middle powers** — **India and France** — which set great store by **strategic autonomy**, have a fundamental role to play in contributing to geopolitical stability and ensuring a smooth transition to a **multipolar world**. अंततः दो मध्यम शक्तियाँ — भारत और फ्रांस — जो रणनीतिक स्वायत्तता को अत्यधिक महत्व देती हैं, भू-राजनीतिक स्थिरता में योगदान देने तथा बहुध्रुवीय विश्व की ओर सुचारु संक्रमण सुनिश्चित करने में महत्वपूर्ण भूमिका निभाती हैं।
- In that sense, Mr. Modi and Mr. Macron shoulder a significant responsibility. इस दृष्टि से श्री मोदी और श्री मैक्रॉन एक महत्वपूर्ण उत्तरदायित्व वहन करते हैं।

Novartis launches therapy to treat prostate cancer

GS III: S&T
The Hindu Bureau
MUMBAI

For better cancer care in India, Novartis India has announced the launch of Pluvicto (lutetium (177Lu) vipivotide tetraxetan), the country's first regulatory authority approved radioligand therapy for eligible patients with Prostate-Specific Membrane Antigen (PSMA)-positive prostate cancer.

Designed to precisely target prostate cancer cells while minimising exposure to healthy tissues, Pluvicto introduces a new treatment approach for metastatic prostate cancer, the company said.

Judith Love, Region Head Asia Pacific Middle East Africa, Novartis, said,

Pluvicto is designed to precisely target prostate cancer cells, minimising exposure to healthy tissues

"India is a priority market for Novartis, with growing momentum in precision oncology and advanced cancer care. The introduction of Pluvicto marks a meaningful step forward - bringing globally approved innovation closer to patients who need more targeted treatment options."

"What makes this launch especially impactful is not just the science, but the opportunity to expand access through India's growing nuclear medicine infrastructure. We

remain committed to enabling access to next-generation treatments, and I'm excited about the difference Pluvicto can make for patients in India," he added.

Amitabh Dube, Country President and Managing Director, Novartis India, said, "In India, a large proportion of prostate cancer patients continue to be diagnosed only after the disease has progressed to a metastatic stage, limiting treatment options and impacting quality of life."

"With the launch of Pluvicto, we are bringing a globally recognized radioligand therapy platform to India at a time when the need for precision oncology solutions is increasing rapidly," he said.

16J6. Novartis launches therapy to treat prostate cancer

नोवार्टिस ने प्रोस्टेट कैंसर के उपचार के लिए नई थेरेपी लॉन्च की

• For better cancer care in India, **Novartis India** has announced the launch of **Pluvicto (lutetium (177Lu) vipivotide tetraxetan)**, the country's first regulatory authority approved **radioligand therapy** for eligible patients with **Prostate-Specific Membrane Antigen (PSMA)-positive prostate cancer**.

भारत में बेहतर कैंसर देखभाल के लिए नोवार्टिस इंडिया ने **Pluvicto (lutetium (177Lu) vipivotide tetraxetan)** के लॉन्च की घोषणा की है, जो प्रोस्टेट-स्पेसिफिक मेम्ब्रेन एंटीजन (PSMA)-पॉजिटिव प्रोस्टेट कैंसर के पात्र रोगियों के लिए देश की पहली नियामक प्राधिकरण

द्वारा स्वीकृत रेडियोलिगेंड थेरेपी है।

- Designed to precisely target **prostate cancer cells** while minimising exposure to healthy tissues, **Pluvicto** introduces a new treatment approach for **metastatic prostate cancer**, the company said. कंपनी ने कहा कि **Pluvicto** को स्वस्थ ऊतकों पर प्रभाव को न्यूनतम रखते हुए प्रोस्टेट कैंसर कोशिकाओं को सटीक रूप से लक्ष्य बनाने के लिए डिज़ाइन किया गया है और यह मेटास्टेटिक प्रोस्टेट कैंसर के लिए एक नई उपचार पद्धति प्रस्तुत करता है।
- **Judith Love, Region Head Asia Pacific Middle East Africa, Novartis**, said, "India is a priority market for **Novartis**, with growing momentum in **precision oncology** and advanced cancer care."



जूडिथ लव, रीजन हेड एशिया पैसिफिक, मध्य पूर्व और अफ्रीका, नोवार्टिस, ने कहा, “नोवार्टिस के लिए भारत एक प्राथमिकता वाला बाजार है, जहाँ प्रिंसीपल ऑन्कोलॉजी और उन्नत कैंसर देखभाल में तेजी से प्रगति हो रही है।”

- “The introduction of **Pluvicto** marks a meaningful step forward – bringing globally approved innovation closer to patients who need more targeted treatment options.”
“**Pluvicto** की शुरुआत एक महत्वपूर्ण प्रगति का प्रतीक है, जो वैश्विक स्तर पर स्वीकृत नवाचार को उन रोगियों के और निकट लाती है जिन्हें अधिक लक्षित उपचार विकल्पों की आवश्यकता है।”
- “What makes this launch especially impactful is not just the science, but the opportunity to expand access through India’s growing **nuclear medicine infrastructure**.
“इस लॉन्च को विशेष रूप से प्रभावशाली बनाने वाली बात केवल इसका विज्ञान नहीं है, बल्कि भारत के बढ़ते **न्यूक्लियर मेडिसिन इन्फ्रास्ट्रक्चर** के माध्यम से इसकी पहुंच का विस्तार करने का अवसर भी है।”
- “We remain committed to enabling access to **next-generation treatments**, and I’m excited about the difference **Pluvicto** can make for patients in India,” he added.
उन्होंने आगे कहा, “हम **अगली पीढ़ी के उपचारों** तक पहुंच सुनिश्चित करने के लिए प्रतिबद्ध हैं और मैं इस बात को लेकर उत्साहित हूँ कि **Pluvicto** भारत के रोगियों के लिए कितना बड़ा बदलाव ला सकता है।”
- **Amitabh Dube, Country President and Managing Director, Novartis India**, said, “In India, a large proportion of **prostate cancer patients** continue to be diagnosed only after the disease has progressed to a **metastatic stage**, limiting treatment options and impacting quality of life.”
अमिताभ दुबे, कंट्री प्रेसिडेंट एवं प्रबंध निदेशक, नोवार्टिस इंडिया, ने कहा, “भारत में **प्रोस्टेट कैंसर** के रोगियों का एक बड़ा हिस्सा तब निदान किया जाता है जब बीमारी **मेटास्टेटिक चरण** तक पहुंच चुकी होती है, जिससे उपचार विकल्प सीमित हो जाते हैं और जीवन की गुणवत्ता प्रभावित होती है।”
- “With the launch of **Pluvicto**, we are bringing a globally recognized **radioligand therapy platform** to India at a time when the need for **precision oncology solutions** is increasing rapidly,” he said.
उन्होंने कहा, “**Pluvicto** के लॉन्च के साथ हम भारत में एक वैश्विक स्तर पर मान्यता प्राप्त **रेडियोलिगेण्ड थेरेपी प्लेटफॉर्म** ला रहे हैं, ऐसे समय में जब **प्रिंसीपल ऑन्कोलॉजी समाधानों** की आवश्यकता तेजी से बढ़ रही है।”

GS Paper III: Environment		16 June 2026
TOPICS COVERED		
16J6	Centre issues alert on potential drone attacks on vital installations केंद्र ने महत्वपूर्ण प्रतिष्ठानों पर संभावित ड्रोन हमलों को लेकर चेतावनी जारी की	

Heatwaves, ozone raise cardiac death risk: study

Peer-reviewed study reports that surface ozone reaches 85-110 micrograms per cubic metre in northern India during heatwaves; exceeds the WHO guideline of 70 micrograms per cubic metre

GS III: Environment

Jacob Koshy
NEW DELHI

While surface ozone — a pollutant harmful to the heart and lungs — already exceeds safe limits across much of India in the hot pre-monsoon months, a new study finds that heatwaves push it to still higher levels, thus adding several hundred deaths to a far larger toll that the study links to ozone across the season.

The peer-reviewed study, published in the Nature Portfolio journal *npj Clean Air* on June 12, reports that surface ozone reaches 85-110 micrograms per cubic metre in northern India during heatwaves and exceeds the World Health Organization guideline of 70 micrograms per cubic metre in every region of the country. The levels fall back within three to four days of a heatwave ending.

Because ozone level stays high for much of the season, the study attributes a large number of deaths to it even outside



Surface ozone is not released directly but forms when sunlight drives a reaction among other pollutants. SHIV KUMAR PUSHPAKAR

heatwaves. During the heatwave days of 2024, it links about 26,500 deaths from ischaemic heart disease and chronic obstructive pulmonary disease (COPD) to ozone exposure.

However, such health conditions are present before as well as after the heat too. The heatwave's contribution to the toll is the rise in it over the preceding days: about 490 additional heart-disease deaths and 342 from COPD, or roughly 830 in all.

The overall numbers are so large mainly because of how they are calculated.

They are not directly counted. The study applies a small increase in an individual's risk of dying from these two common diseases to India's population of more than a billion; even a slight per-person risk, spread across so many people and two of the country's leading causes of death, adds up to tens of thousands.

The authors note that the mortality figures had to be modelled, as continuous ground-level ozone measurements were not available for the specific heatwave days in many affected cities. Therefore,

the estimates rely on the assumed relationship between ozone exposure and disease rather than direct observation.

Surface ozone is not released directly but forms when sunlight drives a reaction among other pollutants, a process that speeds up in heat. "Ozone is very harmful, while NO₂ (nitrogen dioxide) and HCHO (formaldehyde) directly damage the respiratory system," the authors write, referring to two of the gases involved in forming ozone.

The authors describe the work as the first comprehensive, long-term, and country-wide assessment of surface ozone during heatwaves in India, noting that previous studies were largely limited to individual cities or regions. They counted 188 heatwave events over the two decades with most severe years — 2010, 2016, 2019, and 2024 — following strong El Niño episodes. The Western Himalayas recorded the steepest long-term rise in ozone level.

16J6. Heatwaves, ozone raise cardiac death risk: study

अध्ययन: लू और ओज़ोन हृदय संबंधी मृत्यु के जोखिम को बढ़ाते हैं

- While **surface ozone** — a pollutant harmful to the heart and lungs — already exceeds safe limits across much of India in the hot pre-monsoon months, a new study finds that **heatwaves** push it to still higher levels, thus adding several hundred deaths to a far larger toll that the study links to ozone across the season.

जबकि **सतही ओज़ोन (Surface Ozone)** — हृदय और फेफड़ों के लिए हानिकारक एक प्रदूषक — भारत के अधिकांश हिस्सों में ग्री-मानसून की गर्म अवधि के दौरान पहले ही सुरक्षित सीमा से ऊपर रहता है, एक नए अध्ययन में पाया गया है कि **हीटवेव** इसकी मात्रा को और अधिक बढ़ा देती है, जिससे पूरे मौसम में ओज़ोन से जुड़ी बड़ी मृत्यु संख्या में कई सौ अतिरिक्त मौतें जुड़ जाती हैं।

- The peer-reviewed study, published in the Nature Portfolio journal *npj Clean Air* on June 12, reports that surface ozone reaches **85-110 micrograms per cubic metre** in northern India during heatwaves and exceeds the **World Health Organization (WHO)** guideline of **70 micrograms per cubic metre** in every region of the country.

12 जून को नेचर पोर्टफोलियो की पत्रिका *npj Clean Air* में प्रकाशित सहकर्मी-समीक्षित अध्ययन के अनुसार, हीटवेव के दौरान उत्तरी भारत में सतही ओज़ोन का स्तर **85-110 माइक्रोग्राम प्रति घन मीटर** तक

पहुँच जाता है और देश के प्रत्येक क्षेत्र में विश्व स्वास्थ्य संगठन (WHO) द्वारा निर्धारित 70 माइक्रोग्राम प्रति घन मीटर की सीमा को पार कर जाता है।

- The levels fall back within three to four days of a heatwave ending.
हीटवेव समाप्त होने के तीन से चार दिनों के भीतर इसका स्तर पुनः कम हो जाता है।
- Because ozone level stays high for much of the season, the study attributes a large number of deaths to it even outside heatwaves.
चूँकि पूरे मौसम में ओज़ोन का स्तर ऊँचा बना रहता है, इसलिए अध्ययन हीटवेव की अवधि के बाहर भी बड़ी संख्या में मौतों को इससे जोड़ता है।
- During the heatwave days of 2024, it links about 26,500 deaths from ischaemic heart disease and chronic obstructive pulmonary disease (COPD) to ozone exposure.
वर्ष 2024 की हीटवेव अवधि के दौरान अध्ययन ने इस्कीमिक हृदय रोग और क्रॉनिक ऑब्सट्रक्टिव पल्मोनरी डिज़ीज़ (COPD) से हुई लगभग 26,500 मौतों को ओज़ोन के संपर्क से जोड़ा है।
- However, such health conditions are present before as well as after the heat too.
हालाँकि, ये स्वास्थ्य स्थितियाँ केवल हीटवेव के दौरान ही नहीं बल्कि उससे पहले और बाद में भी मौजूद रहती हैं।
- The heatwave's contribution to the toll is the rise in it over the preceding days: about 490 additional heart-disease deaths and 342 from COPD, or roughly 830 in all.
मृत्यु संख्या में हीटवेव का अतिरिक्त योगदान पूर्ववर्ती दिनों की तुलना में ओज़ोन स्तर में वृद्धि के कारण है, जिससे लगभग 490 अतिरिक्त हृदय रोग मृत्यु तथा 342 COPD मृत्यु, अर्थात् कुल मिलाकर लगभग 830 अतिरिक्त मौतें, हुईं।
- The overall numbers are so large mainly because of how they are calculated.
कुल संख्या इतनी बड़ी मुख्यतः इसलिए दिखाई देती है क्योंकि इसकी गणना की पद्धति ऐसी है।
- They are not directly counted.
इनकी प्रत्यक्ष गणना नहीं की जाती।
- The study applies a small increase in an individual's risk of dying from these two common diseases to India's population of more than a billion; even a slight per-person risk, spread across so many people and two of the country's leading causes of death, adds up to tens of thousands.
अध्ययन इन दो सामान्य बीमारियों से मृत्यु के व्यक्तिगत जोखिम में हुई छोटी वृद्धि को भारत की एक अरब से अधिक आबादी पर लागू करता है; प्रति व्यक्ति जोखिम में मामूली वृद्धि भी इतनी बड़ी आबादी और मृत्यु के प्रमुख कारणों पर लागू होने से हजारों मौतों का अनुमान उत्पन्न करती है।
- The authors note that the mortality figures had to be modelled, as continuous ground-level ozone measurements were not available for the specific heatwave days in many affected cities.
लेखकों ने उल्लेख किया है कि मृत्यु संबंधी आँकड़ों का मॉडल आधारित अनुमान लगाना पड़ा क्योंकि अनेक प्रभावित शहरों में विशिष्ट हीटवेव दिनों के लिए सतत भूतलीय ओज़ोन मापन उपलब्ध नहीं थे।
- Therefore, the estimates rely on the assumed relationship between ozone exposure and disease rather than direct observation.
अतः ये अनुमान प्रत्यक्ष अवलोकन के बजाय ओज़ोन संपर्क और रोग के बीच माने गए संबंध पर आधारित हैं।
- Surface ozone is not released directly but forms when sunlight drives a reaction among other pollutants, a process that speeds up in heat.
सतही ओज़ोन सीधे उत्सर्जित नहीं होती, बल्कि सूर्य के प्रकाश द्वारा अन्य प्रदूषकों के बीच होने वाली रासायनिक प्रतिक्रिया से बनती है, और यह प्रक्रिया अधिक तापमान में तेज हो जाती है।
- "Ozone is very harmful, while NO₂ (Nitrogen Dioxide) and HCHO (Formaldehyde) directly damage the respiratory system," the authors write, referring to two of the gases involved in forming ozone.
लेखकों ने लिखा है कि "ओज़ोन अत्यंत हानिकारक है, जबकि NO₂ (नाइट्रोजन डाइऑक्साइड) और HCHO



(फॉर्मलिडाइड) सीधे श्वसन तंत्र को क्षति पहुँचाते हैं," और ये दोनों गैसों ओज़ोन निर्माण की प्रक्रिया में शामिल होती हैं।

- The authors describe the work as the first comprehensive, long-term, and country-wide assessment of surface ozone during heatwaves in India, noting that previous studies were largely limited to individual cities or regions.
लेखकों ने इस शोध को भारत में हीटवेव के दौरान सतही ओज़ोन का पहला व्यापक, दीर्घकालिक और देशव्यापी आकलन बताया है, क्योंकि पूर्ववर्ती अध्ययन मुख्यतः कुछ शहरों या क्षेत्रों तक सीमित थे।
- They counted **188 heatwave events** over the two decades with most severe years — **2010, 2016, 2019, and 2024** — following strong **El Niño** episodes.
उन्होंने दो दशकों में **188 हीटवेव घटनाओं** की गणना की, जिनमें **2010, 2016, 2019 और 2024** सबसे गंभीर वर्ष रहे, और ये सभी प्रबल **एल नीनो** घटनाओं के बाद आए।
- The **Western Himalayas** recorded the steepest long-term rise in ozone level.
पश्चिमी हिमालय क्षेत्र में ओज़ोन स्तर में दीर्घकालिक रूप से सबसे तीव्र वृद्धि दर्ज की गई।

GS Paper III: Internal Security		16 June 2026
TOPICS COVERED		
16J6	Centre issues alert on potential drone attacks on vital installations केंद्र ने महत्वपूर्ण प्रतिष्ठानों पर संभावित ड्रोन हमलों को लेकर चेतावनी जारी की	
16J6	Drone revolution and modern warfare ड्रोन क्रांति और आधुनिक युद्धकला	

Centre issues alert on potential drone attacks on vital installations

GS III: Internal Security

S. Vijay Kumar
CHENNAI

The Union government has warned of possible rogue drone attacks targeting vital installations along the borders, prompting security agencies to work on deploying counter-drone technology systems to safeguard critical assets across the country.

According to official sources, the Marine Security Wing of the Ministry of Ports, Shipping and Waterways issued the alert on the emerging drone threat at Vital Assets and Vital Installations (VAVIs) located around the land and sea borders. It was stated that the current geo-political situation across the world



V.O. Chidambaram Port was the first port to implement advanced anti-drone systems to protect infrastructure. FILE PHOTO

had demonstrated that hostile drones could disrupt operations of critical VAVIs.

"There is an urgent need to take concrete steps to safeguard our assets, especially those located near the borders from rogue drones by installing Anti-Drone Systems," the com-

munication said. In view of the emerging threat, the Ministry of Home Affairs had constituted the Anti Rogue Drone Technology Committee in the Border Security Force for evaluation and certification of new technology systems for the evaluation and certification of counter-rogue

drone technology systems for deployment in India. The force is in the process of installing anti-drone systems in Punjab along the Pakistan border for which trials had already started, the sources said.

In February, 2026, the V.O. Chidambaram Port Authority in Thoothukudi, Tamil Nadu, had become the first port in the country to initiate the implementation of advanced Anti-Drone System as part of measures to protect the critical port infrastructure. The port signed an agreement with the Central Electronics Limited, Department of Scientific and Industrial Research, Ministry of Science and Technology.

16J6. Centre issues alert on potential drone attacks on vital installations

केंद्र ने महत्वपूर्ण प्रतिष्ठानों पर संभावित ड्रोन हमलों को लेकर चेतावनी जारी की

- The **Union government** has warned of possible **rogue drone attacks** targeting vital installations along the borders, prompting security agencies to work on deploying **counter-drone technology systems** to safeguard critical assets across the country.

केंद्र सरकार ने सीमावर्ती क्षेत्रों में स्थित महत्वपूर्ण प्रतिष्ठानों पर संभावित दुष्ट ड्रोन (Rogue Drone) हमलों की चेतावनी दी है, जिसके बाद सुरक्षा एजेंसियों देशभर की महत्वपूर्ण परिसंपत्तियों की सुरक्षा के लिए काउंटर-ड्रोन प्रौद्योगिकी प्रणालियों की तैनाती पर कार्य कर रही हैं।

- According to official sources, the **Marine Security Wing** of the **Ministry of Ports, Shipping and Waterways** issued the alert on the emerging drone threat at **Vital Assets and Vital Installations (VAVIs)** located around the land and sea borders.
आधिकारिक स्रोतों के अनुसार, **पत्तन, पोत परिवहन और जलमार्ग मंत्रालय** के **समुद्री सुरक्षा प्रकोष्ठ** ने भूमि एवं

समुद्री सीमाओं के निकट स्थित महत्वपूर्ण परिसंपत्तियों एवं महत्वपूर्ण प्रतिष्ठानों (VAVIs) पर उभरते ड्रोन खतरे को लेकर यह चेतावनी जारी की है।

- It was stated that the current **geo-political situation** across the world had demonstrated that hostile drones could disrupt operations of critical VAVIs.

यह कहा गया कि वर्तमान वैश्विक भूराजनैतिक परिस्थितियों ने यह प्रदर्शित कर दिया है कि शत्रुतापूर्ण ड्रोन महत्वपूर्ण VAVI परिसंपत्तियों और प्रतिष्ठानों के संचालन को बाधित कर सकते हैं।

- “There is an urgent need to take concrete steps to safeguard our assets, especially those located near the borders from rogue drones by installing **Anti-Drone Systems**,” the communication said.

संचार में कहा गया, “विशेष रूप से सीमाओं के निकट स्थित हमारी परिसंपत्तियों को दुष्ट ड्रोन से सुरक्षित रखने के लिए **एंटी-ड्रोन प्रणालियों** की स्थापना सहित ठोस कदम उठाने की तत्काल आवश्यकता है।”

- In view of the emerging threat, the **Ministry of Home Affairs (MHA)** had constituted the **Anti Rogue Drone Technology Committee** in the **Border Security Force (BSF)** for evaluation and certification of new technology systems for the deployment of counter-rogue drone technology systems in India.

उभरते खतरे को देखते हुए गृह मंत्रालय (MHA) ने सीमा सुरक्षा बल (BSF) में एंटी रोग ड्रोन टेक्नोलॉजी समिति का गठन किया है, जिसका उद्देश्य भारत में तैनाती हेतु नई काउंटर-रोग ड्रोन प्रौद्योगिकी प्रणालियों का मूल्यांकन एवं प्रमाणीकरण करना है।

- The force is in the process of installing anti-drone systems in **Punjab** along the **Pakistan border** for which trials had already started, the sources said.

सूत्रों के अनुसार, बल पाकिस्तान सीमा से लगे पंजाब क्षेत्र में एंटी-ड्रोन प्रणालियों की स्थापना की प्रक्रिया में है, जिसके लिए परीक्षण पहले ही प्रारंभ किए जा चुके हैं।

- In **February 2026**, the **V.O. Chidambaranar Port Authority** in **Thoothukudi, Tamil Nadu**, had become the first port in the country to initiate the implementation of an advanced **Anti-Drone System** as part of measures to protect critical port infrastructure.

फरवरी 2026 में तमिलनाडु के तूथीकोरिन (Thoothukudi) स्थित वी.ओ. चिदंबरनार पोर्ट प्राधिकरण देश का पहला बंदरगाह बना, जिसने महत्वपूर्ण बंदरगाह अवसंरचना की सुरक्षा के लिए उन्नत एंटी-ड्रोन प्रणाली लागू करने की पहल की।

- The port signed an agreement with **Central Electronics Limited (CEL)**, under the **Department of Scientific and Industrial Research (DSIR)**, Ministry of Science and Technology.

इस बंदरगाह ने विज्ञान एवं प्रौद्योगिकी मंत्रालय के अधीन वैज्ञानिक एवं औद्योगिक अनुसंधान विभाग (DSIR) की इकाई सेंट्रल इलेक्ट्रॉनिक्स लिमिटेड (CEL) के साथ एक समझौते पर हस्ताक्षर किए।



Drone revolution and modern warfare

The wars in Ukraine, Lebanon and West Asia have shown how drones have become central to modern warfare: as cheap, mass-produced unmanned systems proliferate, military power is increasingly shaped by industrial scale, technological adaptation and the ability to build, deploy and counter drones

SS III: Internal Security: Defence

EXPLAINER

Rahul Bedi

For decades, military power has been defined by the scale and sophistication of conventional arsenals – combat aircraft, tanks, artillery, warships, air-defence systems, precision-guided missiles, and other high-end assets.

End of superiority
In this environment, battlefield superiority belonged to armies with technologically advanced platforms and equipment, sophisticated intelligence networks, and large budgets. Smaller militaries and non-state actors, by contrast, were largely confined to asymmetric tactics that relied on guerrilla warfare, ambushes, and other unconventional methods to offset their opponents' superior firepower and operational dominance.

But the ongoing wars in Ukraine and Lebanon, together with the wider U.S.-Israel-Iran theatre of conflict, have irrevocably shattered this paradigm, demonstrating that commercially derived drones – mass-produced at scale, rapidly reconfigured for multiple operational roles, and widely deployed – have become a defining feature of contemporary warfare. Performing functions ranging from intelligence, surveillance, and reconnaissance (ISR) and target acquisition to precision strikes, artillery spotting, electronic warfare, and logistics support, they have evolved from auxiliary assets into central instruments of military operations.

In doing so, they have transformed the 21st-century battlespace into an environment of persistent visibility and rapid engagement, where front lines remain continuously exposed, and rear areas can no longer be assumed secure, as multiple types of Unmanned Aerial Systems (UAS) can locate, track, and strike targets with unprecedented speed and precision.

Across these concurrent theatres of conflict, the widespread – and in some cases decisive – employment of drones has challenged established assumptions about how military power is generated and applied, reshaping doctrine, force structures, and future warfighting concepts. The consequence has been the emergence of a continuous and interconnected battlespace in which no position is truly beyond reach, and no movement can safely assume it will remain concealed for long, as detection is increasingly followed by rapid engagement and destruction.

Ukraine drone war

Nowhere has this transformation been more visible than in Ukraine, where Russia's 'Special Military Operation' launched in February 2022, as a conventional war involving combat aircraft, tanks and artillery, evolved within two years into the world's first industrial-scale, drone-intensive conflict.

From the earliest stages of the Russian invasion, Ukraine rapidly adapted commercially available drones – originally designed for civilian purposes such as aerial photography, mapping, and basic surveillance – alongside a limited number of pre-existing military Unmanned Aerial Vehicle (UAV) assets into improvised reconnaissance and strike systems.

What had initially functioned as a support tool for intelligence gathering and



From the earliest stages of Russian invasion, Ukraine adapted commercially available drones. FILE PHOTO

guiding artillery fire quickly evolved into a decisive combat capability, as small quadcopters and First-Person View (FPV) drones were progressively weaponised and deployed as low-cost, precision-guided munitions. This shift marked a fundamental transformation in how unmanned systems were used on the battlefield: from passive information-gathering platforms to active instruments of destruction. By around 2024, drones had become fully integrated into almost every layer of Ukrainian combat, ranging from tactical battlefield surveillance to frontline targeting and deep-strike missions against logistics hubs, supply routes, and rear-area infrastructure.

The operational template that emerged from this experience in Ukraine was subsequently replicated, albeit to varying degrees and in different forms, across the continuing West Asian conflicts, underscoring the growing centrality of drones to contemporary warfare.

FPV revolution

At the heart of Ukraine's drone revolution is the FPV system – an inexpensive, commercially available platform originally designed for recreational racing and aerial photography. Controlled through a live video feed transmitted from an onboard camera to virtual-reality-style goggles worn by their operators, FPV systems offer exceptional precision, manoeuvrability, and responsiveness.

These were then rapidly transformed into a broad spectrum of combat systems, including FPV strike drones, bombers, interceptors, and long-range attack variants. Among the most prominent are heavy-lift hexacopter Vampire drones – nicknamed 'Baba Yaga' by Russian forces after the fearsome figure from Slavic folklore – alongside a vast number of improvised modular platforms, assembled in multiple workshops across Ukraine.

The most common are FPV kamikaze or strike drones, inexpensive quadcopters carrying explosive payloads such as modified rocket-propelled grenade warheads or purpose-built munitions, flown directly into targets as disposable precision-guided missiles. Their extremely low cost has radically reshaped battlefield economics which enable systems worth only a few hundred dollars to destroy armoured vehicles and equipment valued in the millions.

These systems operate within a broader Ukrainian deep-strike drone architecture that includes loitering munitions such as RAM II and UJ-31 Zozulya. The latter functions as an aerially deployed 'parasite drone', carried by the Ukrainian-designed multi-purpose UJ-22 Airborne long-range UAV's, enabling penetration of contested airspace under intensive electronic warfare conditions and extending operational reach. RAM II, by contrast, is a short-range precision loitering munition employed in coordination with reconnaissance drones like the locally developed Shark and PD-2, with improved variants offering greater range and endurance to expand their engagement envelope against air defence systems and rear-area targets.

Also included within Ukraine's expanding drone inventory are bomber drones – largely adapted from commercial DJI Mavic 3 and DJI Matrice 300 RTK quadcopter platforms originally designed for aerial photography, surveying and industrial applications – which carry and release grenades, anti-tank mines and improvised munitions. Unlike kamikaze systems, they survive missions and can conduct multiple sorties, making them particularly effective against trenches, bunkers and other static positions.

Alongside these, Ukraine fields FPV-based strike systems like Pegasus and long-range, one-way attack drones designed to strike deep inside Russian territory against logistics hubs, airbases and critical infrastructure, far beyond the frontline. In practice, however, the distinction between FPV strike drones and loitering munitions has become increasingly blurred, with many FPV-based thermal and night-vision-equipped variants for round-the-clock operations.

But, Ukraine's most significant innovation has been the emergence of fibre-optic FPV drones, an electronic warfare (EW)-resistant class of systems. Unlike conventional drones, which rely on radio-frequency links vulnerable to jamming, these platforms transmit commands and video through ultra-thin fibre-optic cables that spool out during flight, rendering electronic interference largely ineffective. In heavily contested electromagnetic environments, this capability restores a significant operational advantage to drone operators by enabling missions to be conducted

largely free from electronic disruption.

Regional drone networks

Meanwhile, unlike Ukraine, Hezbollah's offensive UAS capability is primarily built around Iranian-supplied platforms with limited local modification, relying heavily on systems like Ababil, Mohajer, and Shahed series. These platforms provide a layered operational architecture spanning ISR and strike functions. Within this framework, the Mohajer-4 and Shahed-129 provide tiered-ISR coverage across medium- to long-ranges, while the Shahed-136 loitering munition fulfils a 'dedicated' one-way strike role across a wider regional theatre.

More recently, Hezbollah has also adopted jamming-resistant fibre-optic FPV drones, enabling operations in heavily contested electromagnetic environments and enhancing close-range reconnaissance and precision strike effectiveness despite extensive Israeli EW measures.

In response, the Israel Defence Forces (IDF) in Lebanon have developed a layered counter-drone architecture, integrating EW systems, specialised radar arrays, and experimental platforms like the AI-enabled Iron Drone Raider, designed to neutralise low-altitude UAVs through kinetic, non-explosive interception methods such as net capture – by which a physical net is deployed to entangle and disable an incoming drone mid-air – or direct collision, rather than costly missile engagements. Alongside this, the IDF operates a multi-tiered UAV force structure combining long-endurance Heron systems for persistent ISR with armed drones and loitering munitions integrated into reconnaissance-strike complexes for rapid engagement.

Iran, for its part, constitutes a third and structurally distinct model of drone warfare.

Rather than employing drones solely as tactical assets, the Islamic Revolutionary Guard Corps (IRGC) integrates them into a broader strategy of deterrence, coercion, and power projection against the U.S.-Israel combine and their regional partners across West Asia.

Through indigenous systems such as Shahed drone variants, alongside platforms supplied to proxy forces across Iraq, Syria, Lebanon, and Yemen, the IRGC has demonstrated an ability to threaten military bases, critical infrastructure, and naval assets across West Asia at relatively low cost.

Economy shift

Thus, across ongoing wars and conflicts, the drone revolution is defined as much by economics as technology. Cheap, mass-produced unmanned systems are swiftly and irreversibly replacing reliance on expensive platforms, complex logistics, and specialised military structures, shifting the advantage toward the scale, speed, and production capacity of UAS ecosystems.

Warfare, therefore, is increasingly becoming a test of industrial endurance and relentless technological adaptation, where success depends on the ability to build, deploy, and counter fast-evolving, continuously reconfigured drone systems. And, in this rapidly evolving battlespace, drones are no longer just weapons, but the very infrastructure of modern-day war – shaping how conflicts are surveilled, fought, sustained, and ultimately decided.

(Rahul Bedi is a journalist based in New Delhi and Chandigarh specialising in military, defence and security matters)

THE GIST

Ukraine has pioneered industrial-scale drone warfare, integrating FPV drones, loitering munitions, bomber drones and fibre-optic systems across reconnaissance, targeting and deep-strike missions.

Low-cost FPV strike drones have transformed battlefield economics, enabling systems worth a few hundred dollars to destroy armoured vehicles and equipment valued in the millions.

The widespread adoption of drones has challenged traditional assumptions about military power, creating a continuous battlespace where detection is increasingly followed by rapid engagement and destruction.

16J6. Drone revolution and modern warfare

ड्रोन क्रांति और आधुनिक युद्धकला

- The wars in **Ukraine, Lebanon and West Asia** have shown how **drones** have become central to **modern warfare**.

यूक्रेन, लेबनान और पश्चिम एशिया के युद्धों ने यह प्रदर्शित किया है कि ड्रोन किस प्रकार आधुनिक युद्धकला के केंद्र में आ गए हैं।

- As cheap, **mass-produced unmanned systems** proliferate, **military power** is increasingly shaped by **industrial scale**, **technological adaptation** and the ability to **build, deploy and counter drones**.
जैसे-जैसे सस्ते और बड़े पैमाने पर निर्मित मानवरहित प्रणालियों का प्रसार बढ़ रहा है, सैन्य शक्ति का स्वरूप अधिकाधिक औद्योगिक क्षमता, तकनीकी अनुकूलन तथा ड्रोन के निर्माण, तैनाती और उनका मुकाबला करने की क्षमता से निर्धारित हो रहा है।

End of Superiority

श्रेष्ठता के पारंपरिक प्रतिमान का अंत

- For decades, **military power** has been defined by the scale and sophistication of conventional arsenals — combat aircraft, tanks, artillery, warships, air-defence systems, precision-guided missiles, and other high-end assets.
दशकों तक सैन्य शक्ति को पारंपरिक हथियारों की मात्रा और तकनीकी परिष्कृतता के आधार पर परिभाषित किया जाता रहा है — जैसे लड़ाकू विमान, टैंक, तोपखाना, युद्धपोत, वायु-रक्षा प्रणालियाँ, सटीक-निर्देशित मिसाइलें और अन्य उन्नत सैन्य संसाधन।
- In this environment, battlefield superiority belonged to armies with technologically advanced platforms and equipment, sophisticated intelligence networks, and large budgets.
इस वातावरण में युद्धक्षेत्र में श्रेष्ठता उन सेनाओं को प्राप्त होती थी जिनके पास तकनीकी रूप से उन्नत प्लेटफॉर्म, आधुनिक उपकरण, परिष्कृत खुफिया तंत्र और विशाल बजट होते थे।
- Smaller militaries and non-state actors, by contrast, were largely confined to asymmetric tactics that relied on guerrilla warfare, ambushes, and other unconventional methods to offset their opponents' superior firepower and operational dominance.
इसके विपरीत, छोटी सेनाएँ और गैर-राज्यीय तत्व मुख्यतः असममित रणनीतियों तक सीमित रहते थे, जिनमें गुरिल्ला युद्ध, घात लगाकर हमला और अन्य अपरंपरागत तरीके शामिल थे, ताकि वे अपने विरोधियों की अधिक मारक क्षमता और संचालनात्मक श्रेष्ठता का संतुलन बना सकें।
- But the ongoing wars in **Ukraine** and **Lebanon**, together with the wider **U.S.–Israel–Iran** theatre of conflict, have irrevocably shattered this paradigm, demonstrating that commercially derived **drones** have become a defining feature of contemporary warfare.
किन्तु यूक्रेन और लेबनान में जारी युद्धों के साथ-साथ व्यापक अमेरिका-इज़राइल-ईरान संघर्ष ने इस प्रतिमान को स्थायी रूप से तोड़ दिया है और यह प्रदर्शित किया है कि व्यावसायिक रूप से विकसित ड्रोन आधुनिक युद्ध की एक प्रमुख विशेषता बन चुके हैं।
- Mass-produced at scale, rapidly reconfigured for multiple operational roles, and widely deployed, they have become a defining feature of contemporary warfare.
बड़े पैमाने पर निर्मित, विभिन्न परिचालन भूमिकाओं के लिए शीघ्रता से अनुकूलित और व्यापक रूप से तैनात किए जाने वाले ये ड्रोन समकालीन युद्ध का प्रमुख तत्व बन गए हैं।
- Performing functions ranging from **intelligence, surveillance, and reconnaissance (ISR)** and target acquisition to precision strikes, artillery spotting, electronic warfare, and logistics support, they have evolved from auxiliary assets into central instruments of military operations.
खुफिया जानकारी, निगरानी और टोही (ISR), लक्ष्य पहचान, सटीक हमले, तोपखाना निर्देशन, इलेक्ट्रॉनिक युद्ध तथा रसद सहायता जैसी भूमिकाएँ निभाते हुए ये सहायक साधनों से विकसित होकर सैन्य अभियानों के केंद्रीय उपकरण बन गए हैं।
- In doing so, they have transformed the **21st-century battlespace** into an environment of persistent visibility and rapid engagement.
इस प्रक्रिया में उन्होंने 21वीं सदी के युद्धक्षेत्र को निरंतर निगरानी और त्वरित आक्रमण वाले वातावरण में परिवर्तित कर दिया है।
- Front lines remain continuously exposed, and rear areas can no longer be assumed secure, as multiple types of **Unmanned Aerial Systems (UAS)** can locate, track, and strike targets

with unprecedented speed and precision.

अग्रिम मोर्चे निरंतर उजागर रहते हैं और पीछे के क्षेत्र अब सुरक्षित नहीं माने जा सकते, क्योंकि विभिन्न प्रकार की मानवरहित हवाई प्रणालियाँ (UAS) अभूतपूर्व गति और सटीकता के साथ लक्ष्यों का पता लगा सकती हैं, उनका पीछा कर सकती हैं और उन पर हमला कर सकती हैं।

- Across these concurrent theatres of conflict, the widespread — and in some cases decisive — employment of drones has challenged established assumptions about how military power is generated and applied.
इन समानांतर संघर्ष क्षेत्रों में ड्रोन के व्यापक और कुछ मामलों में निर्णायक उपयोग ने इस धारणा को चुनौती दी है कि सैन्य शक्ति कैसे उत्पन्न और प्रयोग की जाती है।
- They are reshaping doctrine, force structures, and future warfighting concepts.
वे सैन्य सिद्धांतों, बल संरचनाओं और भविष्य के युद्ध संबंधी अवधारणाओं को पुनर्परिभाषित कर रहे हैं।
- The consequence has been the emergence of a continuous and interconnected battlespace in which no position is truly beyond reach, and no movement can safely assume it will remain concealed for long.
इसके परिणामस्वरूप एक निरंतर और परस्पर जुड़ा हुआ युद्धक्षेत्र उभरा है जिसमें कोई भी स्थान वास्तव में पहुँच से बाहर नहीं है और कोई भी गतिविधि लंबे समय तक गुप्त रहने की आशा नहीं कर सकती।
- Detection is increasingly followed by rapid engagement and destruction.
अब लक्ष्य की पहचान के बाद प्रायः शीघ्र हमला और विनाश होता है।

Ukraine Drone War

यूक्रेन का ड्रोन युद्ध

- Nowhere has this transformation been more visible than in **Ukraine**, where **Russia's 'Special Military Operation'**, launched in February 2022 as a conventional war involving combat aircraft, tanks and artillery, evolved within two years into the world's first industrial-scale, drone-intensive conflict.
यह परिवर्तन सबसे स्पष्ट रूप से **यूक्रेन** में दिखाई दिया, जहाँ फरवरी 2022 में शुरू किया गया **रूस का 'विशेष सैन्य अभियान'**, जो प्रारंभ में लड़ाकू विमानों, टैंकों और तोपखाने पर आधारित पारंपरिक युद्ध था, दो वर्षों के भीतर विश्व के पहले औद्योगिक स्तर के ड्रोन-प्रधान संघर्ष में बदल गया।
- From the earliest stages of the Russian invasion, Ukraine rapidly adapted commercially available drones — originally designed for civilian purposes such as aerial photography, mapping, and basic surveillance — alongside a limited number of pre-existing military **Unmanned Aerial Vehicle (UAV)** assets into improvised reconnaissance and strike systems.
रूसी आक्रमण के प्रारंभिक चरण से ही यूक्रेन ने व्यावसायिक रूप से उपलब्ध ड्रोन — जो मूलतः हवाई फोटोग्राफी, मानचित्रण और सामान्य निगरानी जैसे नागरिक उद्देश्यों के लिए बनाए गए थे — तथा सीमित संख्या में उपलब्ध सैन्य मानवरहित हवाई वाहन (UAV) को त्वरित रूप से टोही और आक्रमण प्रणालियों में परिवर्तित कर दिया।
- What had initially functioned as a support tool for intelligence gathering and guiding artillery fire quickly evolved into a decisive combat capability.
जो प्रारंभ में खुफिया जानकारी एकत्र करने और तोपखाने के हमलों का मार्गदर्शन करने के लिए उपयोग किए जाते थे, वे शीघ्र ही निर्णायक युद्धक क्षमता में बदल गए।
- Small **quadcopters** and **First-Person View (FPV) drones** were progressively weaponised and deployed as low-cost, precision-guided munitions.
छोटे **क्वाडकोप्टर** और **फर्स्ट-पर्सन व्यू (FPV) ड्रोन** क्रमशः हथियारों में परिवर्तित किए गए और कम लागत वाले सटीक-निर्देशित हथियारों के रूप में तैनात किए गए।
- This shift marked a fundamental transformation in how unmanned systems were used on the battlefield: from passive information-gathering platforms to active instruments of destruction.
इस परिवर्तन ने युद्धक्षेत्र में मानवरहित प्रणालियों के उपयोग की प्रकृति को मूल रूप से बदल दिया — निष्क्रिय सूचना-संग्रह मंचों से सक्रिय विनाशकारी उपकरणों तक।



- By around 2024, drones had become fully integrated into almost every layer of Ukrainian combat, ranging from tactical battlefield surveillance to frontline targeting and deep-strike missions against logistics hubs, supply routes, and rear-area infrastructure.
लगभग 2024 तक ड्रोन यूक्रेनी युद्ध संचालन के लगभग प्रत्येक स्तर में पूरी तरह एकीकृत हो चुके थे, जिनका उपयोग सामरिक निगरानी से लेकर अग्रिम मोर्चे के लक्ष्य निर्धारण और रसद केंद्रों, आपूर्ति मार्गों तथा पीछे के बुनियादी ढाँचे पर गहरे हमलों तक किया जाने लगा।
- The operational template that emerged from this experience in Ukraine was subsequently replicated, albeit to varying degrees and in different forms, across the continuing **West Asian conflicts**.
यूक्रेन के इस अनुभव से जो संचालनात्मक मॉडल विकसित हुआ, उसे बाद में विभिन्न रूपों और अलग-अलग स्तरों पर जारी **पश्चिम एशियाई संघर्षों** में भी अपनाया गया।
- This underscores the growing centrality of **drones** to contemporary warfare.
यह तथ्य आधुनिक युद्ध में ड्रोन की बढ़ती केंद्रीय भूमिका को रेखांकित करता है।

FPV Revolution

एफपीवी क्रांति

- At the heart of **Ukraine's drone revolution** is the **FPV (First-Person View) system** — an inexpensive, commercially available platform originally designed for recreational racing and aerial photography.
यूक्रेन की ड्रोन क्रांति के केंद्र में **एफपीवी (फर्स्ट-पर्सन व्यू) प्रणाली** है — एक कम लागत वाला, व्यावसायिक रूप से उपलब्ध मंच, जिसे मूल रूप से मनोरंजक रेसिंग और हवाई फोटोग्राफी के लिए विकसित किया गया था।
- Controlled through a live video feed transmitted from an onboard camera to virtual-reality-style goggles worn by their operators, FPV systems offer exceptional precision, manoeuvrability, and responsiveness.
ऑनबोर्ड कैमरे से प्राप्त लाइव वीडियो फीड को संचालकों द्वारा पहने गए वर्चुअल-रियलिटी शैली के चश्मों तक पहुँचाकर नियंत्रित किए जाने वाले एफपीवी सिस्टम असाधारण सटीकता, गतिशीलता और त्वरित प्रतिक्रिया क्षमता प्रदान करते हैं।
- These were then rapidly transformed into a broad spectrum of combat systems, including **FPV strike drones, bombers, interceptors, and long-range attack variants**.
इसके बाद इन्हें तीव्र गति से विभिन्न प्रकार की युद्ध प्रणालियों में परिवर्तित किया गया, जिनमें **एफपीवी स्ट्राइक ड्रोन, बमवर्षक ड्रोन, इंटरसेप्टर तथा लंबी दूरी के आक्रमणकारी संस्करण** शामिल हैं।
- Among the most prominent are heavy-lift **hexacopter Vampire drones** — nicknamed "**Baba Yaga**" by Russian forces after the fearsome figure from Slavic folklore — alongside a vast number of improvised modular platforms, assembled in multiple workshops across Ukraine.
इनमें भारी भार वहन करने वाले **हेक्साकोप्टर वैम्पायर ड्रोन** प्रमुख हैं, जिन्हें रूसी सेनाओं ने स्लाव लोककथाओं के भयावह पात्र के नाम पर "**बाबा यागा**" नाम दिया है। इनके अतिरिक्त यूक्रेन भर की अनेक कार्यशालाओं में निर्मित बड़ी संख्या में मॉड्यूलर और तदर्थ प्लेटफॉर्म भी शामिल हैं।
- The most common are **FPV kamikaze or strike drones**, inexpensive quadcopters carrying explosive payloads such as modified rocket-propelled grenade warheads or purpose-built munitions, flown directly into targets as disposable precision-guided missiles.
सबसे सामान्य प्रकार **एफपीवी कामिकाज़े अथवा स्ट्राइक ड्रोन** हैं, जो कम लागत वाले क्वाडकोप्टर होते हैं और संशोधित रॉकेट-प्रोपेल्ड ग्रेनेड वारहेड या विशेष रूप से निर्मित विस्फोटक सामग्री लेकर सीधे लक्ष्य पर प्रहार करते हैं, मानो वे एक बार उपयोग किए जाने वाले सटीक-निर्देशित मिसाइल हों।
- Their extremely low cost has radically reshaped **battlefield economics**, enabling systems worth only a few hundred dollars to destroy armoured vehicles and equipment valued in the millions.
इनकी अत्यंत कम लागत ने **युद्धक्षेत्र की अर्थव्यवस्था** को मूल रूप से बदल दिया है, जिससे कुछ सौ डॉलर मूल्य की प्रणालियाँ लाखों डॉलर मूल्य वाले बख्तरबंद वाहनों और उपकरणों को नष्ट करने में सक्षम हो गई हैं।

- These systems operate within a broader Ukrainian **deep-strike drone architecture** that includes loitering munitions such as **RAM II** and **UJ-31 Zozulya**.
ये प्रणालियाँ यूक्रेन की व्यापक **डीप-स्ट्राइक ड्रोन संरचना** का हिस्सा हैं, जिसमें **RAM II** और **UJ-31 ज़ोजुल्या** जैसी लोटरिंग म्यूनिशन प्रणालियाँ शामिल हैं।
- The latter functions as an aerially deployed “**parasite drone**,” carried by the Ukrainian-designed multi-purpose **UJ-22 Airborne** long-range UAVs, enabling penetration of contested airspace under intensive electronic warfare conditions and extending operational reach.
UJ-31 ज़ोजुल्या एक हवाई रूप से तैनात “**पैरासाइट ड्रोन**” के रूप में कार्य करता है, जिसे यूक्रेन द्वारा विकसित बहुउद्देश्यीय **UJ-22 एयरबोर्न** लंबी दूरी के UAV द्वारा ले जाया जाता है। यह तीव्र इलेक्ट्रॉनिक युद्ध परिस्थितियों में भी विवादित वायुक्षेत्र में प्रवेश कर संचालन की पहुँच को विस्तारित करता है।
- **RAM II**, by contrast, is a short-range precision loitering munition employed in coordination with reconnaissance drones like the locally developed **Shark** and **PD-2**.
इसके विपरीत, **RAM II** एक अल्प-दूरी की सटीक लोटरिंग म्यूनिशन है, जिसका उपयोग स्थानीय रूप से विकसित **शार्क** और **PD-2** जैसे टोही ड्रोन के साथ समन्वय में किया जाता है।
- Improved variants offer greater range and endurance to expand their engagement envelope against air defence systems and rear-area targets.
इसके उन्नत संस्करण अधिक दूरी और सहनशीलता प्रदान करते हैं, जिससे वायु-रक्षा प्रणालियों और पीछे के क्षेत्रों में स्थित लक्ष्यों के विरुद्ध उनकी प्रभावशीलता बढ़ जाती है।
- Also included within Ukraine’s expanding drone inventory are **bomber drones**, largely adapted from commercial **DJI Mavic 3** and **DJI Matrice 300 RTK** quadcopter platforms originally designed for aerial photography, surveying and industrial applications.
यूक्रेन के विस्तारित ड्रोन भंडार में **बमवर्षक ड्रोन** भी शामिल हैं, जिन्हें मुख्यतः **DJI Mavic 3** और **DJI Matrice 300 RTK** जैसे व्यावसायिक क्वाडकोप्टर प्लेटफॉर्मों से अनुकूलित किया गया है, जिन्हें मूल रूप से हवाई फोटोग्राफी, सर्वेक्षण और औद्योगिक उपयोगों के लिए बनाया गया था।
- These carry and release grenades, anti-tank mines and improvised munitions.
ये ग्रेनेड, टैंक-रोधी बारूदी सुरंगें तथा अन्य तदर्थ विस्फोटक सामग्री ले जाकर गिराते हैं।
- Unlike kamikaze systems, they survive missions and can conduct multiple sorties, making them particularly effective against trenches, bunkers and other static positions.
कामिकाज़े प्रणालियों के विपरीत, ये मिशन के बाद सुरक्षित लौट आते हैं और अनेक अभियानों में पुनः उपयोग किए जा सकते हैं, जिससे वे खाइयों, बंकरों और अन्य स्थिर सैन्य ठिकानों के विरुद्ध विशेष रूप से प्रभावी बनते हैं।
- Alongside these, Ukraine fields **FPV-based strike systems** like **Pegasus** and long-range, one-way attack drones designed to strike deep inside Russian territory against logistics hubs, airbases and critical infrastructure, far beyond the frontline.
इसके अतिरिक्त, यूक्रेन **पेगासस** जैसे **एफपीवी-आधारित स्ट्राइक सिस्टम** तथा लंबी दूरी के एकतरफा आक्रमणकारी ड्रोन भी संचालित करता है, जिन्हें रूस के भीतर गहराई तक स्थित रसद केंद्रों, वायुसेना अड्डों और महत्वपूर्ण अवसंरचना पर हमला करने के लिए विकसित किया गया है।
- In practice, however, the distinction between FPV strike drones and **loitering munitions** has become increasingly blurred.
व्यावहारिक रूप से, एफपीवी स्ट्राइक ड्रोन और **लोटरिंग म्यूनिशन** के बीच का अंतर लगातार कम होता जा रहा है।
- Many FPV-based variants are now equipped with **thermal imaging** and **night-vision systems** for round-the-clock operations.
अब अनेक एफपीवी-आधारित संस्करण **थर्मल इमेजिंग** और **नाइट-विजन प्रणालियों** से लैस हैं, जिससे वे चौबीसों घंटे संचालन करने में सक्षम हैं।
- But Ukraine’s most significant innovation has been the emergence of **fibre-optic FPV drones**, an **electronic warfare (EW)-resistant** class of systems.

किन्तु यूक्रेन का सबसे महत्वपूर्ण नवाचार **फाइबर-ऑप्टिक एफपीवी ड्रोन** का विकास है, जो **इलेक्ट्रॉनिक युद्ध (EW)** प्रतिरोधी प्रणालियों की एक नई श्रेणी है।

- Unlike conventional drones, which rely on radio-frequency links vulnerable to jamming, these platforms transmit commands and video through ultra-thin **fibre-optic cables** that spool out during flight, rendering electronic interference largely ineffective.
पारंपरिक ड्रोन, जो रेडियो-फ्रीक्वेंसी संकेतों पर निर्भर होते हैं और जैमिंग के प्रति संवेदनशील होते हैं, उनसे भिन्न ये प्लेटफॉर्म अत्यंत पतले **फाइबर-ऑप्टिक केबलों** के माध्यम से आदेश और वीडियो संकेत भेजते हैं, जो उड़ान के दौरान खुलते जाते हैं और इलेक्ट्रॉनिक हस्तक्षेप को लगभग निष्प्रभावी बना देते हैं।
- In heavily contested **electromagnetic environments**, this capability restores a significant operational advantage to drone operators by enabling missions to be conducted largely free from electronic disruption.
अत्यधिक प्रतिस्पर्धी **विद्युत-चुंबकीय वातावरणों** में यह क्षमता ड्रोन संचालकों को महत्वपूर्ण संचालनात्मक बढ़त प्रदान करती है, क्योंकि इससे मिशनों को इलेक्ट्रॉनिक व्यवधानों से लगभग मुक्त होकर संचालित किया जा सकता है।

Regional Drone Networks

क्षेत्रीय ड्रोन नेटवर्क

- Meanwhile, unlike **Ukraine**, **Hezbollah's** offensive **Unmanned Aerial Systems (UAS)** capability is primarily built around **Iranian-supplied platforms** with limited local modification, relying heavily on systems like **Ababil, Mohajer, and Shahed** series.
इस बीच, **यूक्रेन** के विपरीत, **हिज़बुल्लाह** की आक्रामक **मानवरहित हवाई प्रणाली (UAS)** क्षमता मुख्यतः **ईरान द्वारा उपलब्ध कराए गए प्लेटफॉर्मों** पर आधारित है, जिनमें स्थानीय स्तर पर सीमित संशोधन किए गए हैं, और जो प्रमुख रूप से **अबाबील, मोहाजेर तथा शाहेद** श्रृंखला की प्रणालियों पर निर्भर हैं।
- These platforms provide a layered operational architecture spanning **ISR** and strike functions. ये प्लेटफॉर्म **खुफिया, निगरानी और टोही (ISR)** तथा आक्रमण संबंधी कार्यों को समाहित करने वाली बहुस्तरीय संचालनात्मक संरचना प्रदान करते हैं।
- Within this framework, the **Mohajer-4** and **Shahed-129** provide tiered-ISR coverage across medium- to long-ranges, while the **Shahed-136 loitering munition** fulfils a 'dedicated' one-way strike role across a wider regional theatre.
इस संरचना के अंतर्गत **मोहाजेर-4** और **शाहेद-129** मध्यम से लंबी दूरी तक चरणबद्ध ISR कवरेज प्रदान करते हैं, जबकि **शाहेद-136 लोटरिंग म्यूनिशन** व्यापक क्षेत्रीय परिदृश्य में एक समर्पित एकतरफा आक्रमणकारी भूमिका निभाता है।
- More recently, **Hezbollah** has also adopted **jamming-resistant fibre-optic FPV drones**, enabling operations in heavily contested electromagnetic environments and enhancing close-range reconnaissance and precision strike effectiveness despite extensive Israeli **electronic warfare (EW)** measures.
हाल के समय में **हिज़बुल्लाह** ने **जैमिंग-प्रतिरोधी फाइबर-ऑप्टिक एफपीवी ड्रोन** भी अपनाए हैं, जो अत्यधिक प्रतिस्पर्धी विद्युत-चुंबकीय वातावरण में संचालन को संभव बनाते हैं तथा व्यापक **इज़राइली इलेक्ट्रॉनिक युद्ध (EW)** उपायों के बावजूद निकट-दूरी की टोही और सटीक आक्रमण क्षमता को बढ़ाते हैं।
- In response, the **Israel Defence Forces (IDF)** in **Lebanon** have developed a layered **counter-drone architecture**, integrating EW systems, specialised radar arrays, and experimental platforms like the **AI-enabled Iron Drone Raider**.
इसके प्रत्युत्तर में **लेबनान** में तैनात **इज़राइल रक्षा बल (IDF)** ने एक बहुस्तरीय **ड्रोन-रोधी संरचना** विकसित की है, जिसमें EW प्रणालियाँ, विशेषीकृत रडार नेटवर्क तथा **AI-सक्षम आयरन ड्रोन रेडर** जैसे प्रयोगात्मक प्लेटफॉर्म शामिल हैं।
- This system is designed to neutralise low-altitude UAVs through kinetic, non-explosive interception methods such as **net capture** — by which a physical net is deployed to entangle and disable an incoming drone mid-air — or direct collision, rather than costly missile



engagements.

यह प्रणाली निम्न ऊँचाई पर उड़ने वाले UAVs को नेट कैप्चर जैसी गतिज, गैर-विस्फोटक अवरोधन तकनीकों के माध्यम से निष्क्रिय करने के लिए विकसित की गई है, जिसमें हवा में ही एक जाल तैनात कर आने वाले ड्रोन को उलझाकर निष्क्रिय किया जाता है, अथवा प्रत्यक्ष टक्कर का उपयोग किया जाता है, ताकि महँगी मिसाइलों का प्रयोग न करना पड़े।

- Alongside this, the IDF operates a multi-tiered **UAV force structure** combining long-endurance **Heron systems** for persistent ISR with armed drones and loitering munitions integrated into reconnaissance-strike complexes for rapid engagement. इसके साथ ही, IDF एक बहुस्तरीय **UAV बल संरचना** संचालित करता है, जिसमें दीर्घकालिक ISR के लिए **हेरॉन प्रणाली**, सशस्त्र ड्रोन तथा लोटरिंग म्यूनिशन शामिल हैं, जिन्हें त्वरित आक्रमण हेतु टोही-आक्रमण परिसरों में एकीकृत किया गया है।
- Iran**, for its part, constitutes a third and structurally distinct model of drone warfare. दूसरी ओर, **ईरान** ड्रोन युद्ध का एक तीसरा और संरचनात्मक रूप से भिन्न मॉडल प्रस्तुत करता है।
- Rather than employing drones solely as tactical assets, the **Islamic Revolutionary Guard Corps (IRGC)** integrates them into a broader strategy of deterrence, coercion, and power projection against the **U.S.-Israel** combine and their regional partners across **West Asia**. ड्रोन को केवल सामरिक संसाधन के रूप में उपयोग करने के बजाय, **इस्लामिक रिवोल्यूशनरी गार्ड कॉर्प्स (IRGC)** उन्हें **अमेरिका-इज़राइल** गठजोड़ तथा उनके **पश्चिम एशिया** स्थित साझेदारों के विरुद्ध प्रतिरोध, दबाव और शक्ति-प्रदर्शन की व्यापक रणनीति में सम्मिलित करता है।
- Through indigenous systems such as **Shahed drone variants**, alongside platforms supplied to proxy forces across **Iraq, Syria, Lebanon, and Yemen**, the IRGC has demonstrated an ability to threaten military bases, critical infrastructure, and naval assets across West Asia at relatively low cost. **शाहेद ड्रोन** के विभिन्न स्वदेशी संस्करणों तथा **इराक, सीरिया, लेबनान और यमन** में सहयोगी समूहों को उपलब्ध कराए गए प्लेटफॉर्मों के माध्यम से IRGC ने अपेक्षाकृत कम लागत पर सैन्य अड्डों, महत्वपूर्ण अवसंरचनाओं और नौसैनिक संसाधनों को खतरे में डालने की क्षमता प्रदर्शित की है।

Economy Shift

आर्थिक प्रतिमान में परिवर्तन

- Thus, across ongoing wars and conflicts, the **drone revolution** is defined as much by economics as technology. इस प्रकार, वर्तमान युद्धों और संघर्षों में **ड्रोन क्रांति** केवल तकनीक ही नहीं, बल्कि अर्थशास्त्र द्वारा भी परिभाषित होती है।
- Cheap, mass-produced unmanned systems are swiftly and irreversibly replacing reliance on expensive platforms, complex logistics, and specialised military structures, shifting the advantage toward the scale, speed, and production capacity of **UAS ecosystems**. कम लागत वाले और बड़े पैमाने पर निर्मित मानवरहित सिस्टम महँगे प्लेटफॉर्मों, जटिल रसद व्यवस्थाओं और विशेष सैन्य संरचनाओं पर निर्भरता को तेज़ी से और स्थायी रूप से प्रतिस्थापित कर रहे हैं, जिससे बढ़त **UAS पारिस्थितिक तंत्रों** की मात्रा, गति और उत्पादन क्षमता की ओर स्थानांतरित हो रही है।
- Warfare, therefore, is increasingly becoming a test of **industrial endurance** and relentless technological adaptation, where success depends on the ability to build, deploy, and counter fast-evolving, continuously reconfigured drone systems. फलस्वरूप, युद्ध अब बढ़ते हुए **औद्योगिक सहनशक्ति** और निरंतर तकनीकी अनुकूलन की परीक्षा बनता जा रहा है, जहाँ सफलता तीव्र गति से विकसित हो रही और लगातार पुनर्संरचित ड्रोन प्रणालियों के निर्माण, तैनाती और प्रतिरोध की क्षमता पर निर्भर करती है।
- And, in this rapidly evolving battlespace, drones are no longer just weapons, but the very **infrastructure of modern-day war** — shaping how conflicts are surveilled, fought, sustained, and ultimately decided.



और इस तीव्र गति से बदलते युद्धक्षेत्र में, ड्रोन अब केवल हथियार नहीं रह गए हैं, बल्कि वे आधुनिक युद्ध की मूलभूत अवसंरचना बन चुके हैं, जो यह निर्धारित कर रहे हैं कि संघर्ष की निगरानी कैसे की जाएगी, युद्ध कैसे लड़ा जाएगा, उसे कैसे बनाए रखा जाएगा और अंततः उसका परिणाम कैसे तय होगा।

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