

DIA, DEOGHAR IAS ACADEMY

Daily News Feed

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Modi, Trump speak; U.S., India versions vary

U.S. President extends Deepavali greetings to Modi ahead of a possible meeting in Malaysia

President Trump says PM Modi has conveyed India's decision to stop purchasing Russian oil

Trump says call focused on trade deal, oil, and Pakistan; India denies Pakistan was discussed

Suhasini Haidar
NEW DELHI

Days ahead of a possible meeting in Kuala Lumpur, and amidst intense ongoing trade negotiations, U.S. President Donald Trump called Prime Minister Narendra Modi on Tuesday to extend Deepavali greetings, the leaders said. However, the two sides differed vastly in their comments following the call.

Mr. Modi referred to a united stance on terrorism, while Mr. Trump said the conversation focused on the trade deal, Russian oil, and ensuring "no war with Pakistan". However, government sources insisted that Pakistan was not discussed during the call.

For the fourth time in a week, the U.S. President said that Mr. Modi had conveyed the government's decision to cut its imports of Russian oil in an effort to end the Ukraine conflict, a claim he asserted in the presence of Indian Ambassador to Washington Vinay Kwatra, which was not refuted.

Trade talks

"I just spoke to your Prime Minister today," the U.S. President said on Tuesday, addressing the "people of India" directly in comments at the White House, where he held a special Deepavali celebration for prominent Indian-Americans and Indian Embassy officials.

"We had a great conversation. We talked about



trade. We talked about a lot of things, but mostly the world of trade. He's very interested in that," he added.

A few hours later, the Prime Minister thanked the U.S. President for his phone call and "warm Diwali greetings".

"On this festival of

lights, may our two great democracies continue to illuminate the world with hope and stand united against terrorism in all its forms," Mr. Modi said, without offering any further details.

No comment from MEA
The Ministry of External

Affairs did not comment on the discussion between the two leaders, who are both due to travel to Malaysia this weekend to attend ASEAN-related summits, including the East Asia Summit together.

The Ministry has thus far declined to confirm that Prime Minister will be visiting Kuala Lumpur for the summits, as well as the annual India-ASEAN Summit.

While side-stepping Mr. Trump's other comments, a government source pointedly denied that Mr. Trump and Mr. Modi had spoken about Pakistan, a sore point as the U.S. President has repeatedly claimed he mediated the India-Pakistan ceasefire despite India's denials.

Mr. Trump also said that

he had spoken to Mr. Modi earlier about "having no wars with Pakistan", suggesting again that he had used trade as a leverage to "talk [PM Modi] out of that".

On Russian oil

Addressing India's imports of Russian oil, Mr. Trump said that he believed India had already reduced its intake.

"[Mr. Modi] wants to see that war end as much as with Russia and Ukraine as much as I do. And as you know, they're not going to be buying too much oil. So, they've got it way back, and they're continuing to cut it way back," Mr. Trump said.

The government has not explicitly denied that it is reducing Russian oil im-

ports, although the Ministry of External Affairs said that the government would make decisions based on consumer prices and supply reliability.

Indian trade negotiators are believed to be speaking to their U.S. counterparts about a broader Free Trade agreement (FTA) which would include lowering U.S. tariffs, while India would also cut tariffs, increase market access for U.S. agricultural and other products, and give up its Russian oil imports.

It remains to be seen whether such a deal that is agreeable to both sides can be hammered out in time for an announcement of some sort on the sidelines of the ASEAN summits, to be held from October 26 to 28.

GS Paper 2 – International Relations

English Summary:

PM Modi and U.S. President Trump spoke ahead of the ASEAN Summit. Washington said the call focused on trade, Russian-oil imports, and Pakistan; New Delhi denied the Pakistan reference. The U.S. claims India is cutting Russian-oil imports and negotiating an FTA covering tariffs, market access, and energy cooperation.

Hindi Summary:

आसियान शिखर सम्मेलन से पहले पीएम मोदी और अमेरिकी राष्ट्रपति ट्रंप के बीच बातचीत में व्यापार, रूस से तेल आयात और पाकिस्तान के मुद्दे पर मतभेद दिखाई दिए। भारत ने कहा कि वार्ता केवल व्यापार और ऊर्जा सहयोग तक सीमित थी।

Exam Angle: India-U.S. FTA talks | Energy security | Balancing strategic autonomy vs Western pressure.

Deadly standoff

A timeline of the protest and unrest in Leh city, Ladakh

Sept. 10: LAB, KDA launch hunger strike in Leh

Sept. 24: Violence erupts in Leh; four killed, over 100 injured



Sept. 26: Climate activist Sonam Wangchuk, leading the strike, detained under NSA

Sept. 29: LAB and KDA cancel September 30 talks, demand judicial probe into killings

Oct. 17: MHA announces judicial enquiry

Oct. 19: Ladakh groups announce resumption of talks with MHA

Ladakh delegates offered terms of Article 371 by govt.

Vijaita Singh
NEW DELHI

A month after four persons, including a Kargil war veteran, were killed in police action against protestors seeking Ladakhi Statehood, civil society groups resumed talks on the region's status with Ministry of Home Affairs (MHA) officials on Wednesday.

The MHA officials indicated to the two groups – the Leh Apex Body (LAB) and the Kargil Democratic Alliance (KDA) – that special provisions guaranteed under Article 371 of the Constitution can be considered for Ladakh, people who attended the meeting told *The Hindu*.

However, both groups said they continued to demand inclusion under the Sixth Schedule of the Constitution, which recognises tribal status and provides a measure of autonomy and self-governance. They also continued to demand the release of Sonam Wangchuk and other protesters detained after last month's violence in Leh.

Article 371 deals with "Temporary, Transitional and Special Provisions", and exists under Part XXI of the Constitution. It is currently applicable in 12 States: Nagaland, Assam, Manipur, Mizoram, Maharashtra, Gujarat, Andhra

nachal Pradesh, Goa, Sikkim, and Karnataka.

Cherring Dorjay Lakruk, co-convenor of the LAB and the president of the influential Ladakh Buddhist Association, said the civil society groups were still holding out for Statehood. "It was indicated to us by MHA officials that Article 371 can be considered for Ladakh, but we were adamant on inclusion under the Sixth Schedule of the Constitution. The officials heard us patiently, took notes of our demands, and said they will come back to us soon. No assurance was given as they also need time to discuss," he said.

"We strongly demanded the release of Sonam Wangchuk and other detainees without any conditions. We also asked the MHA officials to provide compensation to the families of the four men killed in police firing and also to those injured during the incident," Mr. Lakruk said.

"It was suggested by the Ministry that safeguards available under Article 371 can be explored. However, we have demanded Sixth Schedule," confirmed Sajjad Kargili of the KDA.

The sub-committee is expected to meet again in the next ten-days, following which the high-powered committee led by Union Minister of State for Home Nityanand Rai will

GS Paper 2 – Polity & Governance / Federal Structure

English Summary:

After protests and deaths, MHA officials met Leh Apex Body & Kargil Democratic Alliance; offered safeguards under Article 371 instead of the Sixth Schedule. Delegates demanded Sixth Schedule status + release of detained activists.

Hindi Summary:

लद्दाख के नेताओं ने केंद्र से छठी अनुसूची के तहत स्वायत्तता की मांग दोहराई। गृह मंत्रालय ने अनुच्छेद 371 के विशेष प्रावधान का विकल्प सुझाया।

Exam Angle: Sixth Schedule vs Art. 371 | Autonomy debate | Post-UT federal adjustments.

Union govt. proposes mandatory labelling of synthetic AI-generated content on social media

Aroon Deep
NEW DELHI

The Electronics and Information Technology Ministry on Wednesday proposed mandatory disclosure and labelling of artificial intelligence (AI)-generated “synthetic” content on social media platforms.

The Ministry released a draft amendment to the Information Technology (Intermediary Guidelines and Digital Media Ethics Code) Rules, 2021, that requires social media companies to allow users to self-declare if the content they upload is AI-generated. In cases where users fail to make such declarations, platforms must proactively detect and label AI-generated content.

The declaration must

Disclosure mandate

The draft amendment to the Information Technology (Intermediary Guidelines and Digital Media Ethics Code) Rules, 2021, outlines the Ministry’s proposed approach to regulating synthetic content

■ All synthetic content — whether video, photo, audio, or text — must carry a disclosure

■ The disclosure should cover at least 10% of the surface area in all AI-generated audiovisual posts



■ Users must be given the option to self-declare AI-generated posts

cover 10% of the content’s area, and applies to all types of synthetic content, including text, video, and audio, and is not limited to photorealistic content, according to officials and the draft text.

“In Parliament as well as many other fora, people have demanded that something should be done

about the deepfakes which are harming society,” IT Minister Ashwini Vaishnaw told presspersons.

“People are using some prominent persons’ images and creating deepfakes, which are then affecting their personal lives, privacy as well as [creating] various misconceptions in society. So the step we

have taken is making sure that users get to know whether something is synthetic or real. Once users know, they can take a call. That distinction will be led through mandatory data labelling.”

The proposal marks a shift in the Ministry’s approach to synthetic content. It had previously contended that existing penalties against impersonation were sufficient to address the worst harms from AI-generated content. The proposal brings a long-foreshadowed “tweak” to that stand, a senior official said.

It says that “[w]here an intermediary offers a computer resource which may enable, permit, or facilitate the creation, generation, modification or alteration of information as

synthetically generated information, it shall ensure that every such information is prominently labelled or embedded with a permanent unique metadata or identifier, by whatever name called, in a manner that such label, metadata or identifier is visibly displayed or made audible in a prominent manner on or within that synthetically generated information, covering at least ten per cent of the surface area of the visual display”.

The Ministry has sought feedback on the draft amendment to the IT Rules till November 6. Officials claimed that in private conversations, social media platforms had indicated that they had the technical capabilities to implement what these rules require.

GS Paper 3 – Science & Tech / IT Governance

English Summary:

IT Ministry draft amendment to IT Rules 2021: all social-media platforms must ensure AI/synthetic content carries a visible label covering 10 % of area. Users must self-declare; platforms must auto-detect deepfakes.

Hindi Summary:

आईटी मंत्रालय ने सोशल मीडिया पर एआई से बने कंटेंट के अनिवार्य लेबलिंग का प्रस्ताव रखा। हर डीपफेक कंटेंट पर 10% क्षेत्रफल में ‘Synthetic Content’ का स्पष्ट चिह्न लगाना ज़रूरी होगा।

Exam Angle: Deepfake regulation | Ethical AI | Digital-media accountability.

Securing future

Through the Extreme Poverty Eradication Project launched in 2021, the Kerala government prepared micro-plans for every family

■ **1,03,099** individuals from **64,006** families identified as extremely poor

■ **21,263** families received essential documents

■ **3,913** families were provided new houses

■ **1,338** families were allotted land



■ **5,651** families received up to ₹2 lakh each for house renovation

■ **3,822** families got livelihood assistance

Kerala will officially be first State 'free of extreme poverty'

The Hindu Bureau

THIRUVANANTHAPURAM

Kerala Chief Minister Pinarayi Vijayan will officially declare the State free from extreme poverty at a function to be held at Central Stadium in the capital on November 1.

Actors Mohanlal, Mammootty and Kamal Haasan will be special guests at the event to which all State Ministers as well as Leader of the Opposition V.D. Satheesan will be invited, Minister for Local Self-Governments M.B. Rajesh said at a press conference in Thiruvananthapuram on Wednesday.

Mr. Rajesh said the extreme poverty eradication programme began in 2021 as one of the first Cabinet decisions of the Left Democratic Front (LDF) government.

"According to the NITI Aayog's study in 2021, Kerala is the State with the lowest poverty rate in the country with a poverty rate of 0.7% of the total population. The government took the lead in reaching out to

this small population and meeting their needs. Kerala will become the first State in the country to achieve this landmark," the Minister said.

Over 64,000 families

After ground-level surveys, 64,006 families across the State were identified as extremely poor, based on factors such as food, health, livelihood, and shelter.

Many marginalised people, whose names were not even on the voters' list and who did not even have a ration card or Aadhaar, were on this list. Micro plans on the immediate and long-term needs were prepared for each of the families. Essential documents were given to 21,263 individuals lacking these. Houses were provided to 3,913 families, land for 1,338 families, house repair works of up to ₹2 lakh each done for 5,651 families, he said.

"It is the result of a collective effort as all local bodies, including those ruled by the Opposition front, also had a role to play in this," Mr. Rajesh said.

GS Paper 2 – Social Justice / Welfare Schemes

English Summary:

LDF govt's 2021 programme lifted 64,000 families above extreme poverty via housing, land distribution, and livelihood schemes; to be declared Nov 1.

Hindi Summary:

केरल सरकार 2021 से चल रही गरीबी उन्मूलन योजना से 64 हजार परिवारों को उठा चुकी है; 1 नवंबर को राज्य को 'अत्यधिक गरीबी मुक्त' घोषित किया जाएगा।

Exam Angle: State-level poverty eradication model | NITI Aayog SDG index.

Indian Embassy in Kabul will help 'regional peace': Taliban spokesman

India restored diplomatic links with Kabul by upgrading Technical Mission into an embassy; Qatar has also introduced its Ambassador and special representative in its embassy in Kabul; Taliban administration welcomes both the moves

Kalol Bhattacharjee
NEW DELHI

The Taliban administration in Afghanistan has welcomed India's decision to upgrade the Indian Technical Mission in Kabul into an embassy. In a statement to *The Hindu*, the spokesman for international media for the Taliban administration, Suhail Shaheen, said the Indian move would help in building "regional peace".

"It is a rightful step to put bilateral relations on normal track, build trust, promote trade and cooperation and play a constructive role in regional peace. I welcome this decision and look forward to seeing good bilateral relations between Afghanistan and



As decided during the recent visit of Taliban Minister Amir Khan Muttaqi, India restored diplomatic links with Kabul on Tuesday. AFP

India," said Mr. Shaheen, who is also serving as Kabul's Ambassador to Qatar.

"It is an important and needed decision for relations between the two countries in various areas," he said.

India's move coincided

with Qatar's which also introduced its Ambassador and special representative in its embassy in Kabul on Tuesday. Zabihullah Mujahid, spokesperson of the Taliban administration, in an interview with the Afghan news outlet *Tolonews*

has welcomed both the Indian and Qatari moves to upgrade diplomatic ties.

As decided during the recent visit of Foreign Minister Amir Khan Muttaqi, India restored formal diplomatic links with Kabul on Tuesday by upgrading the Technical Mission into an embassy with "immediate effect". Official sources said this will lead to India appointing a CDA (chargé d'affaires) in the Indian embassy in Kabul.

"The Embassy of India in Kabul will further augment India's contribution to Afghanistan's comprehensive development, humanitarian assistance, and capacity building initiatives, in keeping with the priorities and aspirations of Afghan society," said the

Ministry of External Affairs (MEA) in the statement announcing the restoration of formal diplomatic contact with Taliban-administered Afghanistan.

India shut its embassy in Kabul and withdrew existing staff in August 2021 when law and order situation had broken down as Taliban overthrew the government of President Ashraf Ghani. The Indian consulates in Mazar-i-Sharif, Jalalabad, Kandahar and Herat had also been closed as the conflict intensified in early 2021.

India had sent a technical team to Kabul to run the mission on June 23, 2022 which was meant to facilitate humanitarian assistance and provide consular support.

GS Paper 2 – International Relations

English Summary:

India restored full diplomatic status to its Kabul mission; Taliban spokesman Suhail Shaheen called it a "rightful step for regional peace." India will post a Chargé d'Affaires and expand development aid.

Hindi Summary:

भारत ने काबुल में अपना दूतावास फिर से सक्रिय किया; तालिबान ने इसे "क्षेत्रीय शांति की दिशा में कदम" बताया।

Exam Angle: India-Afghanistan policy after 2021 | Balancing realism & values.

SC Collegium's shift in Justice Sreedharan's posting triggers judicial independence concerns

NEWS ANALYSIS

Krishnadas Rajagopal
NEW DELHI

The Supreme Court Collegium's unexpected change of mind to recommend a Madhya Pradesh High Court judge, Justice Atul Sreedharan, for the Allahabad High Court, in compliance with the Centre's wishes instead of an earlier proposal to shift him to Chhattisgarh, has brought back into focus executive interference in judicial appointments and transfers in constitutional courts.

An October 14 'bare-bones' collegium resolution does not reveal why the Supreme Court body gave up its earlier recommendation on Justice Sreedharan.

In August, the Supreme Court Collegium had recommended the transfer of the judge to the Chhattisgarh High Court, where he would have been the second senior-most judge.

In the Allahabad High Court, Justice Sreedharan would be seventh in seniority, and outside the High Court Collegium. The collegium has the power of veto, and could reiterate



the earlier August recommendation, following which the government would have to bend.

Justice Sreedharan's is not the first in recent years when the Supreme Court

Collegium has swayed to the government's wishes as far as transfer of judges were concerned. In 2018, the Centre objected to a collegium recommendation to appoint Justice Akil Kureshi, whose decision in the Gujarat 'fake' encounter cases had ruffled feathers, as Madhya Pradesh High Court Chief Justice. The collegium, instead, agreed to his appointment as Tripura High Court Chief Justice, a smaller court with four Judges. Though one of the senior most High Court judges, he was not considered for the Supreme Court.

In the J&K and Ladakh High Court, Justice Sreedharan was part of a Bench which struck down several preventive detention orders under the Public Safety Act.

He was repatriated to Madhya Pradesh in March 2025. Back in Madhya Pradesh, he was part of the Bench which had taken *suo motu* cognisance of remarks allegedly made by State Minister Vijay Shah against Colonel Sofiya Qureshi, who had briefed the media during Operation Sindoor, and ordered the registration of an FIR against the BJP leader.

GS Paper 2 – Polity / Judiciary / Separation of Powers

English Summary:

Collegium modified its earlier transfer of Justice Atul Sreedharan (from MP → Chhattisgarh) to Allahabad after Centre's objection, raising concerns about executive pressure in judicial transfers.

Hindi Summary:

सुप्रीम कोर्ट कॉलेजियम ने केंद्र के दबाव में न्यायमूर्ति अतुल श्रीधरन का स्थानांतरण बदल दिया, जिससे न्यायपालिका की स्वतंत्रता पर प्रश्न उठे।

Exam Angle: Judicial independence | NJAC precedent | Collegium vs Executive.



Great Green Wall in A.P. to save coastline from degradation

Since Andhra Pradesh's 1,053-km-long coastline is facing an increasing threat to livelihood and property losses, the government has decided to build a five-km-wide 'Great Green Wall of Andhra Pradesh' by 2030. According to official sources, the wall will be designed to protect three million-plus people by serving as a "living ecological shield," while promoting biodiversity, climate resilience, and sustainable development.

GS Paper 3 – Environment / Disaster Management

English Summary:

A.P. plans a five-km-wide coastal green belt to protect 3 million people and enhance biodiversity & climate resilience by 2030.

Hindi Summary:

आंध्र प्रदेश सरकार 2030 तक तटीय कटाव से बचाव के लिए 5 किमी चौड़ी 'ग्रीन वॉल' बनाएगी, जो 3 मिलियन लोगों को सुरक्षा देगी।

Exam Angle: Ecosystem-based coastal protection | Nature-based solutions.

When a parasitic wasp saved South's tapioca crops

Rishita Khanna
BENGALURU

Two years after scientists from the National Bureau of Agricultural Insect Resources (NBAIR), under the Indian Council of Agricultural Research (ICAR), released a tiny parasitic wasp into South India's tapioca fields, the crop that once faced near devastation from an invasive pest is now thriving again. Farmers in Tamil Nadu, Kerala, and Puducherry report that their tapioca harvests have returned to pre-outbreak levels. This marks a rare success in controlling a major agricultural pest without chemicals.

Cassava, better known as tapioca, is grown on



By 2024, ICAR-NBAIR scientists brought the pest under control, eliminating the need for chemical spray. SPECIAL ARRANGEMENT

about 1.73 lakh hectares in India, with Tamil Nadu and Kerala together contributing more than 90% of total production. Before the outbreak, yields averaged 35 tonnes per hectare, far above the global average of 10.76 tonnes, and India exported value-added tapioca products worth nearly ₹200 million annually, ac-

cording to NBAIR officials.

However, the mealybug's arrival in Thrissur, Kerala, in April 2020 changed this landscape. By 2021, nearly 1.43 lakh hectares were infested, and some areas of Tamil Nadu saw yields collapse to 5-12 tonnes per hectare. The pest fed on the plant sap, causing leaf curling, stunt-

ed growth, and poor tuber formation. With no effective local predators, the infestation escalated quickly and posed a serious economic threat to farmers, they said.

Chemical sprays were considered, but repeated pesticide use was costly, harmful to the environment, and unsustainable for small farmers. ICAR-NBAIR scientists instead turned to classical biological control, a strategy that introduces a natural enemy from the pest's native region to restore ecological balance. "Scientists identified a tiny parasitic wasp, *Anagyrus lopezi*, that specifically targets the cassava mealybug. The wasp lays its eggs inside the pest, and

the developing larvae consumes it from within, naturally reducing mealybug numbers without harming other crops," S.N. Sushil, Director, ICAR-NBAIR said.

The institute imported a shipment from the International Institute of Tropical Agriculture, West Africa.

ICAR-NBAIR set up three satellite mass-production centres, distributed over 200,000 parasitoids, and conducted 25 awareness programmes and multiple training sessions. By 2023-24, they had achieved remarkable results. Across the previously infested 1.43 lakh hectares, the mealybug is now under natural control and has eliminated the need for chemical sprays.

GS Paper 3 – Agriculture / Science & Tech

English Summary:

ICAR-NBAIR released parasitic wasp *Anagyrus lopezi* to combat cassava mealybug in Tamil Nadu & Kerala; by 2024 infestation contained without chemicals.

Hindi Summary:

आईसीएआर-एनबीआईआर वैज्ञानिकों ने टेपिओका फसल को नष्ट करने वाले कीट से निपटने के लिए एक परजीवी भृंग *Anagyrus lopezi* रिलीज किया, जिससे रासायनिक कीटनाशकों की जरूरत खत्म हो गई।

Exam Angle: Integrated Pest Management | Biocontrol | Sustainable Farming.

NHAI to deploy 3D sensors to identify potholes, road cracks across 23 States

Jagriti Chandra
NEW DELHI

In order to identify road defects, including potholes and cracks on road surfaces, the National Highways Authority of India (NHAI) will deploy advanced sensors and data acquisition systems across 23 States, covering a distance of over 20,000 km in order to take corrective action.

The move is being undertaken to improve the riding experience of commuters, a statement by the NHAI said.

The data collected by the Central government agency in-charge of developing and maintaining National Highways will help with the inventory of roads and the condition of their paving in order to take decisions on maintenance, asset management, infrastructure planning, and improving the safety and efficiency of the country's National Highways network across the country.

The exercise will involve deploying vehicles equipped with advanced sensors and data acquisition systems, including a 3D laser-based system, a global positioning system (GPS), and an electronic device that measures an object's acceleration and angular velocity.

"The data collected will be uploaded on the NHAI's AI (Artificial Intelligence)-based portal Data Lake,



Data on the status of roads shall be collected for all projects involving two- to eight-lane highways. FILE PHOTO

The data collected will be uploaded on the NHAI's AI-based portal Data Lake, where it will be analysed

where it will be analysed by a dedicated team of experts at NHAI to transform data into knowledge and subsequent actionable insights. Finally, the data collected at regular intervals as per Government of India guidelines shall be preserved for future technical purposes in Road Asset Management system in prescribed formats," the NHAI said.

The data shall be collected for all projects involving two- to eight-lane highways.

The data collection will

start before road development work starts, and thereafter, with a gap of six months. The NHAI has also invited bids for the project.

Separately, the NHAI has also been identifying "black spots" based on the accident reports received from the concerned State governments, which is based on the occurrence of a certain number of accidents involving fatalities and grievous injuries.

Of the 13,795 black spots identified on the National Highways in the country until March 2025, long-term rectification has been completed on 5,036 black spots. The Electronic Detailed Accident Report (e-DAR) project is a central repository for reporting and managing road accidents data.

GS Paper 3 – Infrastructure / Technology in Governance

English Summary:

NHAI will deploy 3-D laser sensors & AI Data Lake portal across 23 States to detect potholes and road cracks on 20,000 km of highways, improving maintenance planning.

Hindi Summary:

एनएचआई 23 राज्यों में 20 हजार किमी हाईवे पर 3-डी सेंसर लगाएगा ताकि गड्ढे एवं दरारें पहचानी जा सकें और रख-रखाव बेहतर हो।

Exam Angle: Smart Infrastructure | AI for Public Assets | Road Safety.

NFC develops tech to produce high-RRR Nb ingots and sheets

The Hindu Bureau

HYDERABAD

The Nuclear Fuel Complex (NFC) has announced that it has successfully developed the critical technology for production of high Residual Resistivity Ratio Niobium (high-RRR Nb) ingots and sheets here on Wednesday.

High-RRR Nb is a critical material required for a range of advanced accelerator programs aimed at strengthening India's capabilities in nuclear energy, materials research and critical applications.

Currently, high-RRR Nb is sourced from a few international vendors, resulting in supply-chain vulnerability and dependence for large-scale national accelerator programs. Only six countries are publicly known to have the technology to produce it – Brazil, the U.S., Japan, Germany/Austria, China, and Russia.

The NFC is planning the large-scale production of high-RRR Nb. This marks a major milestone towards achieving technological self-reliance in India's superconducting accelerator infrastructure.

GS Paper Mapping:

- **UPSC GS Paper 3:** Science & Technology – Indigenization of Technology; Achievements of Indians in Science & Technology; Nuclear & Strategic Technology.
- **BPSC Paper 5 / JPSC Paper 2:** Indian Science and Technology; Industrial Research & Strategic Materials.

English Summary:

The **Nuclear Fuel Complex (NFC)**, Hyderabad, has successfully developed indigenous technology for

producing **High Residual Resistivity Ratio (High-RRR) Niobium (Nb) ingots and sheets**. This is a **strategic material breakthrough** since High-RRR Nb is a **critical component** used in **superconducting accelerators**, essential for:

- **Nuclear energy programs,**
- **High-energy physics research,** and
- **Space and scientific instrumentation.**

Until now, India was **dependent on international vendors** — primarily **Brazil, the U.S., Japan, Germany/Austria, China, and Russia** — for sourcing high-purity Niobium, exposing national programs to supply-chain risks.

The success of NFC marks India's entry among a select group of nations capable of **producing high-RRR Nb domestically**, boosting **technological self-reliance** in strategic materials.

This innovation aligns with India's goals of **Atmanirbhar Bharat**, particularly in **nuclear and superconducting accelerator infrastructure**.

हिन्दी सारांश (Hindi Summary):

न्यूक्लियर फ्यूल कॉम्प्लेक्स (NFC), हैदराबाद ने **हाई रेजिडुअल रेजिस्टिविटी रेशियो (High-RRR) नियोबियम (Nb)** की **इंगट्स और शीट्स** के निर्माण की स्वदेशी तकनीक विकसित की है।

यह एक **रणनीतिक तकनीकी उपलब्धि** है, क्योंकि हाई-RRR नियोबियम का उपयोग

- **नाभिकीय ऊर्जा कार्यक्रमों,**
- **उच्च-ऊर्जा भौतिकी अनुसंधान,** और
- **अंतरिक्ष एवं वैज्ञानिक उपकरणों** में किया जाता है।

अब तक भारत को यह सामग्री **ब्राज़ील, अमेरिका, जापान, जर्मनी/ऑस्ट्रिया, चीन और रूस** से आयात करनी पड़ती थी।

इससे **आपूर्ति श्रृंखला (supply chain)** पर निर्भरता और जोखिम बढ़ता था।

NFC द्वारा इस तकनीक के विकास से भारत अब उन कुछ देशों में शामिल हो गया है जो स्वयं **High-RRR नियोबियम का उत्पादन** करने में सक्षम हैं।

यह उपलब्धि भारत को **वैज्ञानिक आत्मनिर्भरता** की दिशा में अग्रसर करती है, विशेषकर **नाभिकीय ऊर्जा और सुपरकंडक्टिंग एक्सेलेरेटर (accelerator)** क्षेत्र में।

Exam Key Points & Takeaways:

Aspect	Details
Institution	Nuclear Fuel Complex (NFC), Hyderabad – under Department of Atomic Energy (DAE).
Material Developed	High Residual Resistivity Ratio Niobium (High-RRR Nb).
Uses	Superconducting accelerators, nuclear energy, scientific research.
Significance	Reduces import dependence; enhances self-reliance in strategic materials.
Countries with Similar Capability	Brazil, U.S., Japan, Germany/Austria, China, Russia.
Alignment	Atmanirbhar Bharat, Make in India, Strategic Technology Independence.

Possible UPSC / BPSC Mains Question:

Q. India's development of indigenous High-RRR Niobium technology marks a step towards technological sovereignty in strategic materials. Discuss its importance for India's nuclear and scientific research programmes. (150 words)

India aims at self-reliance in solar physics, space weather

Solar activity has a massive impact on the earth, and our critical space infrastructure; understanding the processes that create these enormous eruptions is a necessary aspect of being able to predict space weather; to this end, India has placed its first space observatory at Lagrange point 1

Shreejaya Karantha

The sun has a profound influence on life on earth. It's the source of life as well as the motivation for the technological infrastructure that sustains modern society. Solar flares, coronal mass ejections, and energetic storms create space weather that affects satellites and astronauts in space, disrupting communications, navigation, and power grids on earth. Understanding how solar activity originates, evolves, and affects our space environment is thus vital for effective space weather forecasting.

Astronomers in India recently provided an overview of the current state of solar and space physics. They focused on key challenges that are expected to shape the field over the next decade and highlighted how the Indian scientific community will tackle them with help from existing expertise as well as upcoming facilities.

Their ideas were detailed in a paper published in the *Journal of Astrophysics and Astronomy*.

Solar tantrums

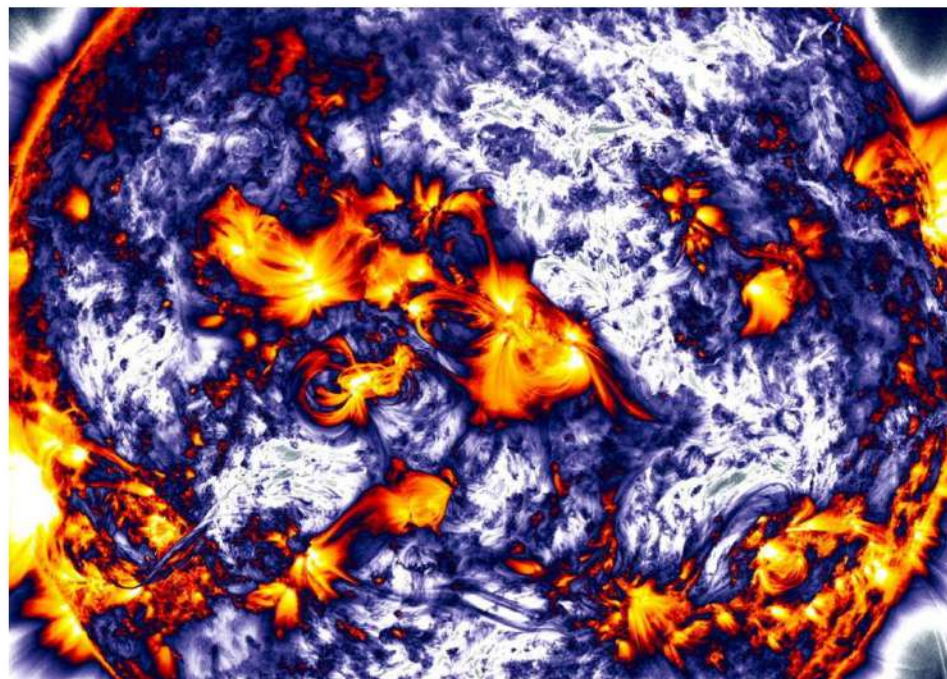
"The key scientific question is understanding solar eruptions, such as solar flares and coronal mass ejections (CMEs), and their potential impact on space assets like satellites orbiting earth," Vaibhav Pant, scientist at the Aryabhata Research Institute of Observational Sciences (ARIES) and second author of the paper, said. "Given our increasing reliance on space technologies, addressing this issue is of utmost urgency."

CMEs are sudden discharges of a large amount of plasma from the outermost part of the sun's atmosphere, known as the corona (Latin for 'crown'). Solar wind, on the other hand, is a continuous outflow of charged particles from the corona. A solar flare is a massive explosion on the sun, triggered by the rapid release of energy from twisted magnetic fields above sunspots, generating a burst of radiation across the electromagnetic spectrum, including radio waves, X-rays, and gamma rays.

Dr. Pant said several significant challenges complicate the study and prediction of CMEs and related solar phenomena. Key issues include the incomplete understanding of the connection between CMEs and the solar wind, the poorly defined magnetic structures of CMEs (which affect their motion), and the complex interactions with ambient solar magnetic fields that alter their orientation and affect the earth and other planets. Predicting solar flares is still challenging due to limited knowledge about how magnetic fields emerge from under the sun's surface.

Sun-watching strategies

In September 2023, the Indian Space Research Organisation (ISRO) launched Aditya-L1, India's first space observatory focused on the sun. Aditya-L1 is stationed 1.5 million km from earth at Lagrange point 1 (L1). Lagrange points are positions in space where gravitational forces between two bodies, like the sun and the earth, balance out the orbital motion of a smaller object, creating areas of relative stability that allow spacecraft to "hover" with minimal fuel use. There are five Lagrange points in the sun-earth system.



An image of the sun as seen through a gradient filter, which highlights the places experiencing the greatest physical changes. The orange arcs here are coronal loops — solar material constrained to travel along the star's complex magnetic field lines. GSFC/NASA

"Aditya-L1 is positioned at the L1 location, where it takes high-resolution images and spectra of the solar atmosphere. A number of exciting results have already been published from this mission," Dr. Pant said. "We should also consider deploying more [instruments] at other strategic locations, such as L4 and L5" — a suggestion articulated in the overview.

L1 is located on the line connecting the sun and the earth, so any eruption from the sun moving towards the earth will pass through it, and Aditya-L1 can detect it. The L4 point is 60° ahead of the earth's orbit, and L5 is 60° behind. So a spacecraft at L5 can observe solar regions before they rotate towards the earth, allowing them to detect solar activity and CMEs potentially before they occur.

Two spacecraft, one at L1 and another at L5, will function like "two eyes" observing the same solar events, allowing researchers to accurately compute the 3D trajectories of these phenomena, Dr. Pant said. Another spacecraft at the L4 point will create a triangular observation network with the earth at the centre. Using its data, physicists can better track eruptions and produce better estimates of when they arrive at the earth.

On the flip side, L4 and L5 are 30 million km from the earth, complicating data transmission. "Sending data will be slower compared to the L1 position, but if this challenge is mitigated, it would be a great technological demonstration by Indians," Dr. Pant said.

The Indian solar community is also working on enhancing ground-based facilities to observe the Sun.

"The Indian Institute of Astrophysics has proposed a two-metre-class ground-based telescope that will be instrumental in studying the sun's lower

India recently opened its space sector up to private companies. Aside from building satellites and launching rockets, their involvement also portends private-sector innovation in modelling solar storms and predicting space weather

atmosphere with high resolution," Dr. Pant said.

This upcoming project is called the National Large Solar Telescope. Its planned size makes it unsuitable for deployment in space.

Onward, sunward

The long-term vision of solar physics in India also includes plans to educate early-career researchers and young students on solar physics and to analyse Aditya-L1 data. To this end, ISRO and ARIES have been conducting workshops across India. Ten have been completed thus far, and an 11th one is scheduled for October at Pondicherry University.

"It was an amazing experience, and the workshop exposed me to a world of cutting-edge research and the top-level researchers leading these studies," said Hardik Medhi, a doctoral student at the National Centre for Radio Astronomy in Pune, who attended the third Aditya-L1 workshop.

Savitha M.S., an integrated MTech PhD student at the Indian Institute of Astrophysics, Bengaluru, attended the third and fifth Aditya-L1 workshops. She said: "This exposure not only broadened my knowledge but also strengthened my passion and determination to pursue research in solar physics."

The paper reported the involvement of

229 early-career Indian researchers in solar physics, both in India and abroad, plus 65 faculty members and scientists working in India. The authors stressed the need to expand the community by hiring new faculty members, developing academic programmes, engaging with the public, and fostering industry partnerships.

The authors also highlighted the need for a national network of advanced supercomputing facilities for computational astrophysics.

As telescopes and space missions improve, analysing and interpreting the data they collect will demand heavy physics-based simulations, rendering supercomputers very useful, if not essential.

Looking ahead, Dr. Pant expressed optimism that "in the next 10 to 15 years, we should be able to develop our own state-of-the-art prediction models for solar flares and the arrival times of coronal mass ejections (CMEs) on earth."

India recently opened its space sector up to private companies.

Aside from building satellites and launching rockets, their involvement also portends private-sector innovation in modelling solar storms and predicting space weather.

"These developments will make India self-reliant in understanding space weather and the solar-terrestrial relationship," Dr. Pant added.

With a community of experts, young researchers, new facilities, and numerous initiatives (many in the works), and now a long-term guiding vision, solar physics and space weather are expected to grow significantly in the coming years.

(Shreejaya Karantha is a freelance science writer. shreejayakaranth@gmail.com)

GS Paper Mapping:

- **UPSC GS Paper 3:** Science & Technology – Space Technology, Indigenisation of R&D, Achievements of Indians in Science & Technology.
 - **UPSC GS Paper 1:** Geography – Solar phenomena and their impact on Earth's environment.
 - **BPSC Paper 5 / JPSC Paper 2:** Space Research and Technological Developments in India.
-

English Summary:

The article highlights India's growing efforts to achieve **self-reliance in solar physics and space weather forecasting**, especially through indigenous missions like **Aditya-L1** and domestic research in solar studies.

Key Focus:

- The **Sun** influences life and technology on Earth — from communication and navigation to power grids.
- **Solar flares, Coronal Mass Ejections (CMEs), and solar winds** generate **space weather** that affects satellites and astronauts.
- Understanding and forecasting these events are crucial for **space safety, defence applications, and satellite management**.

Aditya-L1 Mission:

- India's first dedicated **solar observatory** launched by **ISRO** in **September 2023**.
- Positioned at the **Lagrange Point L1**, 1.5 million km from Earth, allowing **continuous observation of the Sun**.
- Monitors solar flares, CMEs, and solar wind activity to predict disturbances affecting Earth's magnetosphere.
- Scientists propose deploying future missions at **L4 and L5 points** for better solar monitoring.

Scientific Significance:

- **High-resolution imaging** of solar atmosphere and plasma dynamics.
- Understanding CME structures, solar magnetic field interactions, and space-weather evolution.
- Improved **forecasting of geomagnetic storms** that disrupt GPS, communication, and power infrastructure.

Domestic R&D and Human Resource Development:

- India is strengthening its solar research base through institutions like **ARIES, IUCAA, and ISRO's Space Science Programme Office**.
- Training programmes and workshops have been initiated for **young researchers and PhD students** to analyse solar data.
- The **Journal of Astrophysics and Astronomy** recently published findings outlining India's roadmap for future solar research and instrument development.

Private Sector Role:

- India's **space sector liberalisation** (post-2022) allows private entities to contribute not only in satellite manufacturing but also in **solar storm modelling and space-weather forecasting**.
- The **National Large Solar Telescope (NLST)** project will further expand India's data-driven capacity for solar research.

Long-Term Goal:

- Achieve **technological self-reliance in space-weather forecasting**, reduce dependence on foreign data.
 - Build India's capability in **supercomputing-based solar simulations and predictive space models**.
 - Foster public engagement, academic collaboration, and global partnerships in solar research.
-

हिन्दी सारांश (Hindi Summary):

भारत अब **सौर भौतिकी (Solar Physics)** और **अंतरिक्ष मौसम (Space Weather)** के क्षेत्र में आत्मनिर्भर बनने की दिशा में तेजी से आगे बढ़ रहा है।

मुख्य उद्देश्य:

- सूर्य के विस्फोटों (Solar Flares) और **कोरोनल मास इजेक्शन (CME)** से उत्पन्न ऊर्जा उपग्रहों, नेविगेशन सिस्टम

और बिजली ग्रीड पर गहरा प्रभाव डालती है।

- इन घटनाओं की भविष्यवाणी करना भारत की **अंतरिक्ष सुरक्षा और तकनीकी आत्मनिर्भरता** के लिए आवश्यक है।

आदित्य-L1 मिशन:

- सितंबर 2023 में **ISRO** द्वारा प्रक्षेपित भारत का पहला सौर मिशन।
- **Lagrange Point L1 (1.5 मिलियन किमी दूर)** पर स्थित, जहाँ से सूर्य का निरंतर अवलोकन संभव है।
- इसका उद्देश्य सूर्य की ऊर्जा विस्फोटों और **अंतरिक्ष मौसम** की निगरानी करना है।

वैज्ञानिक महत्व:

- सूर्य की बाहरी परतों (Corona) की उच्च-रिज़ॉल्यूशन इमेजिंग।
- CME की संरचना और सौर चुंबकीय क्षेत्रों की पारस्परिक क्रिया का अध्ययन।
- पृथ्वी पर प्रभाव डालने वाले **geomagnetic storms** की भविष्यवाणी करने की क्षमता।

भारत की अनुसंधान दिशा:

- **ARIES (Uttarakhand)** और **IUCAA (Pune)** जैसे संस्थान सौर अनुसंधान में अग्रणी हैं।
- युवा वैज्ञानिकों और छात्रों के लिए प्रशिक्षण कार्यक्रम चलाए जा रहे हैं।
- **National Large Solar Telescope (NLST)** परियोजना से अनुसंधान क्षमता और बढ़ेगी।

निजी क्षेत्र की भूमिका:

- अब निजी कंपनियाँ भी **अंतरिक्ष मिशनों, सैटेलाइट निर्माण, और सौर तूफ़ानों के मॉडलिंग** में भाग ले सकेंगी।
- भारत **वैज्ञानिक आत्मनिर्भरता और अंतरिक्ष डेटा के स्वदेशी उपयोग** की दिशा में अग्रसर है।

Key Takeaways for UPSC/BPSC/JPSC Notes:

Theme	Details
Mission	Aditya-L1 – India's 1st solar observatory at L1 point
Objective	Study solar flares, CMEs, solar winds, and space-weather prediction
Institutions	ISRO, ARIES, IUCAA
Private Role	Involvement in space research and predictive modelling
Long-term Goal	Self-reliance in solar physics and space-weather forecasting
Policy Link	Atmanirbhar Bharat in Space Science; Space Policy 2023

Possible Mains Question:

Q. "India's Aditya-L1 mission represents a major stride towards space-weather forecasting and self-reliance in solar physics." Discuss its scientific and strategic significance. (150 words)

Would you like me to turn this into a **bilingual UPSC Current Affairs Note (A4 PDF)** with diagrammatic representation of **Aditya-L1 orbit and Lagrange Points (L1–L5)** for class/test use?

Tapping the shine

India must step in as a supplier of solar power to sustain its industry

Among the successes that India can take reasonable credit for is cultivating a domestic solar power industry. Somewhere in 2017, the per unit cost of solar power fell below that of coal power, spurring new interest among businesses investing in ground-mounted solar projects. In 2024-25, the International Renewable Energy Agency reported that India generated 1,08,494 Gwh (gigawatt-hour) of solar energy, surpassing Japan's 96,459 Gwh, and making it the third largest producer of solar power behind only China and the United States. India's capacity to manufacture solar module panels rose from 2 GW (gigawatt) in 2014 to 100 GW in 2025, according to the Ministry of Renewable Energy. This is significant considering that India's domestically installed solar capacity is about 117 GW as of September. However, the actual manufacturing capacity is an optimistic projection and the effective production capacity currently is about 85 GW.

India has stated that as part of its climate commitments, it will source half of its power requirements in 2030 from non-fossil fuel sources. That is about 500 GW of which 250 GW-280 GW is expected to come from solar power. This means that India needs to add about 30 GW annually until 2030. However, India has effectively been able to add only about 17 GW-23 GW annually in the recent past. While in theory, internal production should be sufficient internally, modules made in India are anywhere from 1.5 to 2 times more expensive than those from China, simply because of its much larger capacity, control of the necessary raw material and far superior production lines. India, in its best performance, managed about 4 GW of export of solar modules to the U.S. in 2024 and that too, due to America's temporary restrictions. Compare that with China's annual export of around 236 GW in 2024. Therefore, the large manufacturing capacity that will come online in India in the next few years will likely struggle without new markets. In this context, India's overtures to be a 'solar supplier' to Africa, leveraging the flagship of the International Solar Alliance, is a good move. While India's PM Kusum scheme (solar power to rural India) and PM Surya Ghar scheme (rooftop solar in urban India) are yet to make substantial gains in terms of domestic adoption, they can serve as models to be pitched in Africa which, due to the lack of sufficient rural power, is able to tap only 4% of its arable land through irrigation, creating an opportunity for solar-powered India pumpsets. Though China still remains the dominant solar supplier in Africa too, India must be able to step in as a credible second player for a shot at the sustainability of its own industry.

GS Paper Mapping:

- **UPSC GS Paper 3:** Energy, Infrastructure, Environment, and Economy
 - **GS Paper 2:** International Relations (Energy Diplomacy – Africa & International Solar Alliance)
 - **BPSC Paper 5 / JPSC Paper 2:** Renewable Energy, Climate Commitments, and Sustainable Development
-

English Summary:

India has emerged as one of the world's largest producers of **solar energy**, credited for building a strong domestic solar-power ecosystem.

Solar Power Progress

- By **2024-25**, India generated **1,08,494 GWh** of solar energy — ranking **3rd globally** after **China and the U.S.** (IRENA data).
- **Installed solar capacity:** ~117 GW (as of September 2025).
- **Manufacturing capacity:** expanded from **2 GW (2014)** to **100 GW (2025)**, though effective output is about **85 GW**.

Challenges

- Domestic solar modules are **1.5–2× costlier** than Chinese ones due to higher input costs, smaller economies of scale, and limited access to raw materials (e.g. polysilicon).
- India adds **only 17–23 GW/year**, while it needs to install **~30 GW/year** to meet its **2030 target of 500 GW non-fossil capacity** (of which 250–280 GW from solar).
- India's exports (~4 GW in 2024) are minimal compared with **China's 236 GW** solar-module exports.

Strategic Opportunity

- India aims to become a **solar-supplier nation**, targeting **African markets** through the **International Solar Alliance (ISA)**.
- Domestic schemes like **PM-KUSUM** (rural solar pumps) and **PM-Surya Ghar** (urban rooftop solar) can serve as models for Africa.
- Africa uses only 4 % of its irrigable land with irrigation → a major opportunity for India's **solar-powered pump exports**.

Way Forward

- Encourage **low-cost manufacturing** via economies of scale and R&D.
 - Boost **solar exports to Africa, West Asia, and ASEAN** under ISA framework.
 - Integrate **domestic climate goals** with export-led growth in renewables.
-

हिन्दी सारांश (Hindi Summary):

भारत ने विश्व स्तर पर **सौर-ऊर्जा (Solar Energy)** उत्पादन में उल्लेखनीय प्रगति की है और अब यह **चीन और अमेरिका के बाद तीसरा सबसे बड़ा उत्पादक देश** है।

प्रमुख उपलब्धियाँ

- वर्ष 2024-25 में भारत ने **1,08,494 GWh** सौर-ऊर्जा उत्पन्न की।
- वर्तमान स्थापित क्षमता लगभग **117 GW** है।
- निर्माण (मैन्युफैक्चरिंग) क्षमता **2014 के 2 GW से बढ़कर 2025 में 100 GW** तक पहुँची, परंतु वास्तविक उत्पादन क्षमता **85 GW** के आसपास है।

मुख्य चुनौतियाँ

- भारतीय मॉड्यूल **चीनी मॉड्यूल से 1.5–2 गुना महंगे** हैं।
- **कच्चे माल (Polysilicon)** और उन्नत उत्पादन-प्रणालियों की कमी।
- भारत को लक्ष्य पूरा करने के लिए हर वर्ष **30 GW** जोड़ने की आवश्यकता है, जबकि वर्तमान दर **17–23 GW/वर्ष** है।
- भारत का निर्यात मात्र **4 GW (2024)** रहा, जबकि **चीन का 236 GW**।

रणनीतिक अवसर

- भारत अब **'सौर-आपूर्तिकर्ता' (solar supplier)** बनने की दिशा में अफ्रीकी देशों पर ध्यान केंद्रित कर रहा है।
- **अंतरराष्ट्रीय सौर गठबंधन (ISA)** के माध्यम से भारत अफ्रीका में **सौर पंपों और रूफटॉप योजनाओं** के निर्यात को बढ़ावा दे सकता है।

- **PM कुसुम और PM सूर्य घर** जैसी योजनाएँ अफ्रीका में मॉडल के रूप में प्रस्तुत की जा सकती हैं।
- **आगे की राह**
- **कम-लागत निर्माण और R&D नवाचार** को बढ़ावा।
- **अफ्रीका, पश्चिम एशिया व आसियान** को सौर निर्यात बढ़ाना।
- **जलवायु लक्ष्यों और नवीन ऊर्जा उद्योग के विस्तार** को एकीकृत करना।

Key Takeaways for UPSC/BPSC Notes:

Theme	Details
Data Source	International Renewable Energy Agency (IRENA 2025)
India's Rank (Solar Power)	3rd (after China & U.S.)
Installed Capacity (2025)	≈ 117 GW
2030 Target	500 GW non-fossil (≈ 250–280 GW solar)
Export Comparison (2024)	India – 4 GW vs China – 236 GW
Major Schemes	PM KUSUM & PM Surya Ghar
Global Initiative	International Solar Alliance (ISA)
Key Challenge	High production costs & lack of raw materials

Possible Mains Question:

Q. “India’s transition from a solar consumer to a global solar supplier is key to sustaining its renewable-energy industry.” Discuss in light of India’s International Solar Alliance diplomacy and domestic manufacturing capacity. *(150 words)*

A path for a battered and broken Himachal Pradesh

The Supreme Court of India's observations, recently, on the state of affairs in Himachal Pradesh, and a writ petition thereafter, have resonated with environmentalists in the State.

A notification about an addition of a green belt in the "Development Plan for Shimla Planning Area" was being contested in SLP(C) No.19426/2025 (*M/s Pristine Hotels and Resorts Pvt. Ltd. vs State of Himachal Pradesh and Anr.*) in the Court when Justices J.B. Pardiwala and R. Mahadevan voiced grave concern over the ecological disaster in the State.

"We want to impress upon the State Government and Union of India respectively that earning revenue is not everything. Revenue cannot be earned at the cost of environment and ecology. If things proceed, the way they are as on date, then the day is not far when the entire State of HP [Himachal Pradesh] may vanish in thin air from the map of the Country...."

The judges directed the Court registry to register a writ petition in public interest *vide* order dated July 28, 2025. The Court said that it had felt compelled to make the observations in the larger interest of the State and its inhabitants regarding severe ecological imbalances and other environmental conditions that have led to natural calamities over a period of years. The Court went on to hold the people of the State also responsible for the disastrous state of affairs.

This action by the Court fills us with hope as it is an intervention that could be the harbinger of a new era of development in the State. There is a need for course correction by both the State and its people.

Policy, but only on paper

It is ironic that there is a robust mandate in both the federal and State regulatory system for sustainable development; for development which is risk-informed, and risk averse. The problem is with the perfunctory, box-ticking manner in which these mandates are executed.

The Court needs to ensure that the State implements the collective mandate for environmental governance in the State, spread across a plethora of eloquent laws, policies, rules, regulations, strategies and vision documents. Honest and sincere actions are needed on the ground.

It would be appropriate if the Court gets in to, for example, the adequacy of the cumulative impact assessments of the basins as they need to be done in the right spirit so that hydropower development in a given basin can be regulated to minimise the overall impact of development on the ecosystems in the basin. For instance, 'does



Archana Vaidya

is a natural resource management and environment law consultant, and an advocate at the High Court of Himachal Pradesh

river mean only its water' is a question that needs serious consideration. Do run of the river hydropower projects also not fragment a river's ecosystem? Do they not alter nutrient and sediment transportation and the composition of aquatic flora and fauna of the river? Do all of these not have an impact on the socio-economic life of people around the river? Projects of up to 2MW are permitted even in eco-sensitive zones. Do they have no impact?

The building of highways

Justice would be done if the Court fixes accountability in the fiasco related to the National Highway project (Bilaspur-Manali-Leh) for which the detailed project report was purportedly made sitting in a drawing room. Constructing roads in what are geologically fragile and seismically susceptible mountainous areas is tricky business. The Ministry of Road Transport and Highways knew about the dangers of laying mountain roads and had issued a circular on March 23, 2018, which had restricted the width of hill roads to 5.5 metres keeping in mind the ecological issues.

Nothing seems to be done in a scientific manner on any National Highway being constructed in the State be it the alignment of highways, the cutting of the slopes, slope management, and debris deposit. The Environmental Impact Assessment has gaps as it is done in a 'box-ticking approach'; mostly, projects are broken up into smaller parts to escape the EIA altogether. Roads that have strategic importance should come under more stringent standards to make them all-weather, resilient and dependable roads rather than laying them as superhighways which either sink or get washed away every monsoon season.

Deforestation, excavation and tunnelling of the mountains using explosives and then dumping the waste into rivers are a sure recipe for disaster in these fragile mountain ecosystems.

Did the National Highways Authority of India (NHAI) do anything to mitigate landslides as advised collectively by the Central Road Research Institute, the Geological Survey of India and the National Disaster Management Authority when constructing any national highway in the State? Only the NHAI can tell the public if it consulted the 'Landslide Hazard, Vulnerability & Risk Atlas' for the state of Himachal Pradesh.

It is important to establish that 'Hazard, Vulnerabilities, Risk and Capabilities Assessment' studies (HVRCA), climate vulnerabilities and other such studies in the State have been done with requisite scientific rigour on the basis of credible granular data, both historic and current, which could be of help for short-, medium- and

long-term policy and governance actions.

The world has seen tremendous loss of life and property in the State following natural disasters, especially in 2023 and in 2025. It would be interesting to know if the construction around rivers, streams and *nullahs* has been regulated in the State. Has the State carried out flood plain zoning of its river systems? Have policymakers forgotten that the State is home to five mighty river systems – the Beas, Ravi, Sutlej, Yamuna and Chenab (Chandra and Bhaga)?

The State had relentless rainfall between August and September 2025, but can all these incidents be labelled as instances of cloud bursts especially when the India Meteorological Department has defined a cloud burst as an extreme weather event involving 100 mm (10 cm) or more of rainfall within one hour over an area of approximately 20 square kilometres to 30 sq. km?

The end result is this

Everything looks impressive when one looks at the interim report filed by the State. All the boxes have been ticked when it comes to formulating laws, policies, vision documents, plans and undertaking studies. The claim is that Himachal Pradesh was the first in the country to have banned the use of plastic, has a policy of buying back non-recyclable single-use plastic (SUP) waste, the first State to have environmental or e-flows in rivers, a hydro power policy, a payment for ecosystem services policy, a sustainable tourism development policy, an integrated master plan for sustainable tourism, and stringent building regulations. What purpose do all of these serve if the results are not visible on the ground?

In 2011, the Aryabhata Geo-Informatics & Space Application Centre (AGISAC) was set up in the State as, among other things, as a repository for all data on the State's environment, its natural and man-made resources, and data related to the impact of climate change to help government departments make evidence-based development decisions. Was this being followed?

Catastrophes that were once considered to be 'once-in-a-century events' are now regular occurrences and exacerbated by a faulty developmental model. In meeting the developmental aspirations of Himachal Pradesh, the only way forward is to pursue development that takes into account the projected impact of climate change and integrates disaster risk reduction in the planning stage.

The mandate of the law must be implemented in letter and spirit, with accountability in the system of governance.

The State needs to follow risk-informed and risk-averse development

GS Paper Mapping:

- **UPSC GS Paper 3:** Disaster Management, Environment, Conservation, Infrastructure Development
- **UPSC GS Paper 2:** Governance – Role of Judiciary & Policy Implementation
- **BPSC Paper 5 / JPSC Paper 2:** Environmental Issues, Disaster Preparedness, and Policy Analysis

English Summary:

The article discusses the **Supreme Court's intervention** in the environmental and developmental crisis facing **Himachal Pradesh**, emphasizing the need for **sustainable and risk-sensitive development** in ecologically fragile regions.

Judicial Context:

- The case pertains to "**Development Plan for Shimla Planning Area**" (SLP No. 19426/2025), involving *M/s Pristine Hotels and Resorts Pvt. Ltd. vs. State of Himachal Pradesh & Ors.*
- A Bench of Justices B.R. Gavai and K.V. Viswanathan expressed concern that reckless development could make Himachal Pradesh "**vanish into thin air.**"
- The Court ordered the Himachal Registry to register a **suo motu PIL** on the state's ecological degradation.

Key Environmental Concerns:

- Over-construction in fragile slopes, **hydropower expansion**, and **unregulated tourism**

- **infrastructure** have led to frequent **landslides, flash floods, and cloudbursts**.
- **Hydropower projects** often ignore cumulative environmental impacts, disturbing local rivers, flora, and fauna.
- Construction in eco-sensitive zones (like **Baspa, Sutlej, Ravi, Beas**) continues despite warnings.

Unscientific Development:

- Roads and hydropower tunnels have been built on unstable terrain, triggering **landslides and river erosion**.
- Environmental Impact Assessments (EIA) are often **superficial and bureaucratic**, ignoring scientific studies.
- Highway projects fragment slopes and forests; debris dumping worsens disaster vulnerability.

Policy Failures:

- Himachal Pradesh has many environment-friendly laws and policies (plastic ban, green building codes, tourism plans), but they exist **only on paper**.
- Implementation is poor due to **political apathy, weak enforcement, and lack of accountability**.
- Repeated **flash floods (2023, 2024)** and **cloudbursts** have destroyed lives and infrastructure, showing a governance gap.

Way Forward:

- Adopt **risk-informed, environment-sensitive planning** under the National Disaster Management Authority (NDMA) and Ministry of Environment.
- Use **GIS and satellite data** (Aryabhata Geo-Informatics & Space Application Centre – AGISAC) for mapping fragile zones.
- Integrate **disaster management, tourism regulation, and land-use planning**.
- Encourage **community participation**, resilient infrastructure, and **eco-tourism models**.

हिन्दी सारांश (Hindi Summary):

इस लेख में हिमाचल प्रदेश में हो रहे **पर्यावरणीय विनाश और अनियंत्रित विकास** पर **सुप्रीम कोर्ट की चिंता** को प्रमुखता दी गई है। अदालत ने कहा कि अगर यही स्थिति जारी रही तो “हिमाचल प्रदेश एक दिन हवा में गायब हो जाएगा।”

न्यायिक हस्तक्षेप:

- मामला “**डेवलपमेंट प्लान फॉर शिमला प्लानिंग एरिया (SLP No.19426/2025)**” से जुड़ा है।
- अदालत ने **राज्य सरकार और केंद्र** दोनों को चेताया कि **राजस्व वृद्धि पर्यावरण की कीमत पर नहीं हो सकती**।
- अदालत ने राज्य में पारिस्थितिक असंतुलन पर **स्वतः संज्ञान (suo motu PIL)** दायर करने का आदेश दिया।

मुख्य पर्यावरणीय मुद्दे:

- पहाड़ी ढलानों पर अंधाधुंध निर्माण, **हाइड्रोपावर परियोजनाएँ**, और **पर्यटन विकास** ने क्षेत्र को बार-बार आपदाओं की चपेट में ला दिया है।
- **नदियों और पारिस्थितिकी तंत्र** को नुकसान, जैव विविधता में गिरावट और **भूस्खलन (landslides)** की घटनाएँ बढ़ी हैं।

नीतिगत विफलताएँ:

- हिमाचल प्रदेश में **प्लास्टिक प्रतिबंध, हरित भवन नीति** जैसी कई योजनाएँ तो हैं, पर लागू नहीं हो रहीं।
- **EIA रिपोर्टें** औपचारिकता मात्र रह गई हैं; वैज्ञानिक आधार पर परीक्षण नहीं होता।
- **2023 और 2024** की भयंकर बारिश और क्लाउडबर्स्ट ने नीति की नाकामी उजागर कर दी।

आगे की राह:

- विकास के लिए **जोखिम-संवेदनशील (risk-informed)** दृष्टिकोण अपनाना होगा।
- **AGISAC और ISRO के उपग्रह आंकड़ों** से भू-संवेदनशील क्षेत्रों की मैपिंग की जाए।
- **पर्यावरण, पर्यटन और आपदा प्रबंधन विभागों** के बीच समन्वय स्थापित किया जाए।
- **स्थानीय समुदायों** को पर्यावरण संरक्षण और सतत विकास में भागीदार बनाया जाए।

Key Takeaways for UPSC/BPSC Notes:

Theme	Details
Judicial Case	<i>M/s Pristine Hotels and Resorts Pvt. Ltd. vs. State of Himachal Pradesh (2025)</i>
Concern Raised By	Supreme Court Bench – Justices B.R. Gavai & K.V. Viswanathan

Theme	Details
Issue	Over-construction, hydropower projects, ecological degradation
Keywords	Sustainable Development, Risk-informed Planning, EIA, Climate Resilience
Institutions Mentioned	NDMA, AGiSAC, Geological Survey of India, NHPC
Key Data	Rainfall ≥ 100 mm (cloudburst) causes devastation in 20–30 sq. km
State Measures	Plastic ban, Green Building Codes – Poor implementation

Possible Mains Question:

Q. “In ecologically fragile regions like Himachal Pradesh, unregulated development has compounded the impact of climate-induced disasters.” Discuss the need for risk-informed and sustainable development policies. (250 words)

The tailwinds from lower global oil prices

If asked about the most consequential current foreign trend for India, the replies may range from Gaza to Ukraine and even United States President Donald Trump's tariff war. But we are also approaching an even more impactful battle: for the global oil market. It is being waged between the Organization of the Petroleum Exporting Countries (OPEC)-Plus and the remaining oil exporters, with consumers playing an increasingly decisive part. Depending on who prevails, the gains for India, the world's third-largest importer, could vary from tangible to substantive.

Crude is the world's most valued commodity, with over 100 million barrels per day (mbpd) produced, nearly half of which is traded globally. Depending upon the prevailing unit price, the daily global crude trade currently tops \$3 billion. Thus, crude is not only a vital input for transport and petrochemicals; it is also a financial lubricant.

Consumption trends

Over the past two decades, technology and economics have had a profound and largely bearish impact on the oil market. From the supply side, new technological disruptions such as shale, horizontal drilling, and ultra-deep continental shelf drilling have greatly enhanced production.

On the other hand, global demand seems to be approaching a peak. While relatively robust growth in crude consumption continues in the Global South from a low base, the consumption of fossil fuels has been stagnant in the industrialised countries due to factors such as an anaemic post-COVID-19 economic recovery, climatic concerns and the growing popularity of electric vehicles (EVs). Thus, for example, in 2025, the global crude demand is expected to grow by 1.3 mbpd or 1.2%, with only a tenth of that coming from the 38 countries of the Organisation for Economic Co-operation and Development (OECD) with 46% of the world's GDP. Crucially, the consumption in China, the



Mahesh Sachdev

is a retired Indian Ambassador specialising in West Asia and oil affairs

world's largest importer, has been curbed largely by an economic slowdown and by the growth of EVs, which now account for half of the vehicles sold.

On the other hand, production of crude has surged by 5.6 mbpd last month over last year, with 3.1 mbpd coming from the OPEC+ (as it unwound COVID-19-era production cuts) and the rest mainly from higher production from (in order of their growth) the U.S., Canada, Brazil, Guyana and Argentina.

The resulting supply overhang is beginning to be felt. The Brent oil prices, currently at \$61 a barrel, have declined by 16% since the beginning of the year, with nearly half of that fall coming over the last month. The drop would have been even steeper but for the consumers leveraging the low prices to replenish their strategic petroleum reserves, and the producers hoarding over 100 million barrels of unsold crude on tankers on high seas.

Global events as disruptor

The decline is despite geopolitical disruptions such as the China-U.S. tariff war and concerted Ukrainian drone attacks on Russian hydrocarbon infrastructure. The looming supply glut has affected the inner dynamics of the OPEC+ group of producers: while Saudi Arabia, the leading exporter, wants to quickly unwind the remaining production cuts to regain its market share and reverse the revenue shortfall, Russia, under severe crude exports sanctions, favours a more gradual course.

There are several imponderables, however. First, although it is normal for producers and consumers to see the crude market differently, there is an unusually poignant dispute in the analyses this time. OPEC and the International Energy Agency (IEA), in their respective monthly reports in mid-October, reached diametrically opposite conclusions.

While OPEC sees the global supplies in 2026 being some 50,000 bpd short of the demand, the IEA projects an unprecedented overhang of 4

mbpd. The majority of other think-tanks largely agree with the IEA projection and predict an oversupplied market next year, with Brent prices declining to the low fifties per barrel, a further 10% to 20% fall from their current level.

Technical apart, the proverbially slippery oil market can also be affected by several geopolitical developments, including the end of sanctions on Russia, Iran and Venezuela, resumed West Asian tensions and the de-escalation of the Trumpian tariff wars.

Further, the International Monetary Fund's World Economic Outlook (WEO) released on October 16, describes the global economy as “in Flux, Prospects Remain Dim”, predicting a marginal slowdown of the global economic growth rates to 3.2% in 2025 and 3.1% in 2026, with risks to the downside. Further, it sees world trade growth come down to 2.9% in 2025-26, significantly slower than the 3.5% in 2024. Most of these factors tilt towards downside risk to the oil prices.

The outlook for India

The simultaneous decline in both oil price and the U.S. dollar it is priced in is likely to have a net positive impact on India. India's oil imports in 2024-25 were \$137 billion, and a dollar's decline in oil prices improves its current account deficit by \$1.6 billion.

It also reduces the subsidy burden and inflation. With the government keeping most of the gains from lower prices, the fiscal balance improves, boosting capital expenditure and giving a tailwind to growth.

The oil glut may also reduce the reliance on discounted Russian crude, thus removing the underlying cause for the tariff frictions with the U.S. On the flip side, the remittances, exports and investments may stagnate as the West Asian economies attenuate.

However, given the highly cyclical nature of the global oil market, any relief may be short-lived. India would be well advised to keep its consumption mitigation strategies on course.

But relief may be short-lived for India, given the cyclical nature of the oil market

GS Paper Mapping:

- **UPSC GS Paper 3:** Indian Economy – External Sector, Energy Security, Inflation & Fiscal Policy
- **UPSC GS Paper 2:** International Relations – West Asia, Geopolitical Trends & India's Energy Diplomacy
- **BPSC Paper 5 / JPSC Paper 2:** Indian Economy – Foreign Trade, Balance of Payments, Petroleum Dependency

English Summary:

This article by **Mahesh Sachdev (Retd. Ambassador)** analyses the **declining global crude oil prices** and their **economic implications for India and the world**.

1. Global Context:

- Crude oil remains the world's **most traded commodity**, with over **100 million barrels per day (mbpd)** produced, about half traded internationally.
 - Prices have declined significantly — **Brent crude fell to \$61/barrel**, a **16% fall** since the start of the year.
 - This drop stems from **increased production** by OPEC+, U.S., Brazil, and Guyana, and a **slower demand recovery** due to global economic slowdown and rising use of **electric vehicles (EVs)**.
-

2. Supply-Demand Trends:

- Global oil consumption growth has plateaued in industrial economies due to:
 - Post-COVID economic slowdown,
 - Rising climate concerns, and
 - EV adoption (in OECD countries ~46% of GDP).
 - The world's largest importer, the **U.S.**, has reduced dependence on crude due to domestic shale production and renewable energy.
-

3. Geopolitical Disruptions:

- The **China-U.S. tariff war**, **Russia-Ukraine conflict**, and **OPEC+ internal disagreements** have destabilized oil market balance.
 - **Saudi Arabia** seeks to maintain prices by cutting output, while **Russia** wants a slower adjustment due to sanctions.
 - Analysts disagree — OPEC and IEA gave **contradictory projections** for global oil prices in 2026 (ranging between **\$50-90/barrel**).
-

4. IMF and Global Economy Outlook:

- The **IMF's World Economic Outlook (Oct 2025)** forecasts:
 - **Global growth**: 3.2% (2025), 3.1% (2026)
 - **Risks tilted downward**, implying weak oil demand.
 - **World trade growth**: only **0.29% (2025-26)** vs. 3.5% in 2024.
-

IN 5. The Outlook for India:

- India is the **world's 3rd largest oil importer**; thus, declining crude prices have **multi-dimensional benefits**:
 1. **Reduced import bill**: Oil imports expected to fall by **\$137 billion (2024-25)**.
 2. **Current account deficit** likely to improve by **\$1.6 billion**.
 3. **Lower inflation** → ease in subsidy burden.
 4. **Fiscal space widens** → higher growth, better infrastructure spending.
 5. **Reduced rupee volatility** and improved macro-stability.
 - Additionally, it enables **diversification away from Russian crude** and **reduces friction with the West**, while improving **remittances and capital inflows**.
-

6. Caveat – Short-Lived Gains:

- Relief may be **temporary**, as future geopolitical tensions (e.g., Iran, Ukraine, or OPEC+ decisions) can trigger fresh spikes.
 - Sustained benefits depend on **energy diversification, storage infrastructure, and renewable capacity**.
-

हिन्दी सारांश (Hindi Summary):

यह लेख वैश्विक **कच्चे तेल की कीमतों में गिरावट** और उसके **भारत की अर्थव्यवस्था पर प्रभाव** का विश्लेषण करता है।

1. वैश्विक स्थिति:

- वर्तमान में कच्चे तेल की कीमतें **\$61 प्रति बैरल** तक गिर चुकी हैं।
- **OPEC+, अमेरिका, ब्राज़ील, और गयाना** द्वारा उत्पादन बढ़ाने से आपूर्ति में वृद्धि हुई है।
- **EV (इलेक्ट्रिक वाहन)** और आर्थिक मंदी के कारण माँग घट रही है।

2. उपभोग और उत्पादन प्रवृत्तियाँ:

- विकसित देशों में **तेल की खपत** स्थिर या घट रही है।
- **अमेरिका**, जो दुनिया का सबसे बड़ा उपभोक्ता था, अब **शेल ऑयल और नवीकरणीय ऊर्जा** पर निर्भर है।
- 3. **भू-राजनीतिक प्रभाव:**
 - **चीन-अमेरिका व्यापार युद्ध**, **रूस-यूक्रेन संघर्ष**, और **OPEC देशों के मतभेद** से बाजार अस्थिर हुआ है।
 - **सऊदी अरब** उत्पादन घटाना चाहता है जबकि **रूस** धीरे-धीरे संतुलन चाहता है।
- 4. **IMF का वैश्विक दृष्टिकोण:**
 - IMF के अनुसार 2025 में **वैश्विक वृद्धि 3.2%** और 2026 में **3.1%** रहने की संभावना है।
 - व्यापार वृद्धि दर भी घटकर **0.29%** रह जाएगी, जिससे तेल की माँग कमजोर रहेगी।
- IN 5. **भारत पर प्रभाव:**
 - भारत की तेल **आयात लागत** में भारी कमी आएगी — अनुमानित **\$137 अरब की बचत**।
 - **चालू खाते का घाटा (CAD)** \$1.6 अरब तक सुधर सकता है।
 - **मुद्रास्फीति** और **राजकोषीय दबाव** में कमी होगी।
 - **विकास दर**, **बुनियादी ढाँचे में निवेश**, और **वित्तीय स्थिरता** में सुधार होगा।
- 6. **लेकिन राहत अस्थायी:**
 - वैश्विक राजनीति, युद्ध या आपूर्ति संकट के चलते **तेल की कीमतें फिर बढ़ सकती हैं**।
 - दीर्घकालिक समाधान के लिए **नवीकरणीय ऊर्जा, भंडारण क्षमता और ऊर्जा विविधीकरण** आवश्यक है।

Key Takeaways for UPSC/BPSC Notes:

Aspect	Key Details
Brent Crude (Oct 2025)	\$61/barrel – 16% decline YTD
India's Oil Import Savings	\$137 billion (2024–25)
Current Account Benefit	+\$1.6 billion
IMF Global Growth Forecast	3.2% (2025), 3.1% (2026)
Geopolitical Factors	OPEC+ dispute, Russia-Ukraine war, U.S.-China tariffs
Domestic Impact	Reduced inflation, fiscal savings, stronger rupee
Risk	Short-term relief; long-term uncertainty from geopolitics

Possible Mains Question:

Q. “Falling global oil prices can act as a short-term windfall but pose long-term strategic challenges for India’s energy security.” Discuss. (250 words)

'OPEC output confusion must put floor under oil prices'



Bearish outlook: Traders have started to accept ultra bearish forecasts for supply and demand. REUTERS

OPINION

Ron Bousso
LONDON

Global oil prices are signalling that the market is tipping into a protracted period of oversupply, but the huge disparity in forecasts for OPEC's production will likely limit the sell-off.

Prompt front oil prices traded near \$61 a barrel on Tuesday, the lowest since May. But, just as importantly, futures contracts for February delivery have started trading at a pronounced discount to future prices. That means the market is now in a so-called contango structure, suggesting that traders have finally started to accept the ultra-bearish forecasts for supply and demand in the coming year.

Severe oil glut

The International Energy Agency (IEA) has for months warned that there will be a severe oil glut in 2025 and 2026, pointing to the ramp-up in production around the world, particularly from members of the OPEC+ alliance.

In the IEA's latest report released last week, the Paris-based agency forecast a surplus of 2.35 million barrels per day in 2025 and 4 million bpd, or nearly 4% of global demand, next year.

Investors had until recently failed to price in the expected glut. That's partly because OPEC analysts were, in contrast to the IEA, forecasting fairly balanced supply and demand this year and next. But it's mostly because OECD inventories were at relatively low levels earlier in the year while demand was holding up in the face of U.S. President Donald Trump's trade wars.

But that dynamic changed in August. Global observed inventories, which include supply from OECD countries and China as well as oil in transit at sea, hit a four-year high that month, having swollen by 225 million barrels from the start of the year, according to the IEA. The rapid increase is largely due to China's aggressive stockpiling since March, which continued in September, albeit at a slower rate.

OPEC enigma

This downturn feels less durable than those in the past, however, because of the uncertainty regarding OPEC's crude oil production. That's a huge blind spot as the group accounted for nearly 30% of global supply last year.

The range of estimates for OPEC production has widened significantly since the start of the year. Morgan Stanley noted in a recent report covering seven major agencies and consultancies. This range expanded to 2.5 million bpd in September, or around 9% of the group's production last month, after being negligible for years. While the wide spread may reflect divergent projections for oil demand, it is likely driven largely by uncertainty over the pace of OPEC's production increases this year following years of supply cuts.

Indeed, even OPEC itself appears unclear about its production. Kuwait's Oil Minister last week said the organisation would appoint a "top" consultant to visit member States and assess their production capacity in the coming months.

Shadow market

The IEA supply and demand figures suggest the world will face a staggeringly large glut until 2027 with few historical precedents outside of the imbalance created by the abrupt collapse in global demand in the wake of the 2020 COVID lockdowns.

But things might not be quite so grim. History tells us that when prices drop and contango kicks in, oil producers rein in spending, particularly companies operating in the U.S. shale basins, where new wells have to be drilled constantly to maintain or grow output.

Indeed, with current U.S. oil prices around \$57 a barrel, many shale drillers would already be unable to profitably drill new wells.

Of course, drilling activity has only modestly declined this year. The U.S. oil rig count has dropped by 13% to 418 since the start of the year to last week, according to energy services firm Baker Hughes. And the U.S. Energy Information Administration is still projecting crude output to rise from around 13.2 million bpd in 2024 to around 13.5 million bpd in 2025.

Moreover, major oil companies may plan to reduce spending in the face of lower prices, but the sector does not appear to be retrenching, suggesting boards do not expect a prolonged downturn.

(The opinions expressed here are those of the author, a columnist for Reuters.)

GS Paper Mapping:

- **UPSC GS Paper 3:** Indian Economy — Energy Sector, External Trade, Price Stability
 - **UPSC GS Paper 2:** International Relations — Global Energy Politics, OPEC & Strategic Interests
 - **BPSC Paper 5 / JPSC Paper 2:** Energy Economics, International Oil Market, Global Financial Trends
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English Summary:

The article, written by **Ron Bousso (London)**, analyses the **ongoing volatility in global oil markets** caused by **OPEC's uncertain production policy** and the **International Energy Agency's (IEA)** warning of a potential **oil glut** in 2025–2027.

1. Context and Market Situation:

- Global oil prices are showing signs of **oversupply**, with **Brent crude** trading near **\$61 per barrel** — its **lowest since May 2025**.
 - Futures contracts are trading **at a discount** (contango structure), indicating traders expect **further weakening of prices**.
 - The situation reflects a **bearish sentiment**, with traders accepting forecasts of prolonged oversupply in 2025–2026.
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2. The “Severe Oil Glut” Warning:

- The **IEA** projects an **oversupply of 2.35 million barrels/day in 2025 and 4 million barrels/day in 2026** — roughly **4% of global demand**.
 - The cause: rising output from **OPEC+ nations**, while global demand remains sluggish due to **slow economic recovery and rising EV adoption**.
 - Global inventories have increased by **225 million barrels** since January, reaching a **four-year high**.
 - **China's aggressive stockpiling** since March 2025 has also inflated supply in storage.
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3. OPEC's “Production Enigma”:

- A **wide disparity** exists among agencies estimating OPEC's production — a “blind spot” covering almost **30% of global supply**.
 - Example:
 - Morgan Stanley's recent estimates show **OPEC production around 2.5 million bpd higher than earlier assumptions** — about **9% of its total output**.
 - OPEC's lack of clarity on quota compliance and voluntary cuts has fueled **market uncertainty**.
 - Kuwait's Oil Minister admitted that **OPEC is internally divided** over production targets; consultations are ongoing to stabilize output.
-

4. Implications for the Global Market:

- If supply continues to outpace demand, oil markets could experience a **persistent glut until 2027**, according to IEA.
 - However, history suggests a possible rebound: when prices fall sharply, **U.S. shale drillers reduce new drilling**, leading to a supply correction.
 - Currently, with prices near **\$57/barrel**, many shale operators are **barely profitable**.
 - The **U.S. oil rig count** has already **fallen 13%** since January 2025, signaling early signs of contraction.
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5. Broader Economic and Strategic Outlook:

- Major oil companies may **cut exploration budgets** but are not yet panicking, suggesting **stability in medium term**.
- OPEC's confusion, combined with **demand slowdown** and **increased renewable energy adoption**, points to a **structural shift in global oil economics**.
- The article concludes that OPEC's internal disarray will **prevent a steep crash** (creating a “price floor”) but **limit sharp recoveries** as well.

हिन्दी सारांश (Hindi Summary):

यह लेख वैश्विक तेल बाजार में चल रही अनिश्चितता और OPEC की उत्पादन नीतियों की असमंजसता पर प्रकाश डालता है।

1. वर्तमान स्थिति:

- ब्रेट कूड की कीमत \$61 प्रति बैरल तक गिर चुकी है।
- फ्यूचर्स मार्केट “कॉन्टेंगो” स्थिति में है — यानी निवेशक आगे और गिरावट की संभावना देख रहे हैं।
- बाजार में आपूर्ति अधिक और मांग कमजोर है।

2. IEA की चेतावनी:

- अंतर्राष्ट्रीय ऊर्जा एजेंसी (IEA) के अनुसार, 2025 में 2.35 मिलियन बैरल/दिन और 2026 में 4 मिलियन बैरल/दिन की अधिशेष आपूर्ति होगी।
- यह वैश्विक मांग का 4% है।
- चीन ने मार्च 2025 से तेल का भारी भंडारण शुरू किया है, जिससे आपूर्ति और बढ़ी।

3. OPEC की ‘उत्पादन पहेली’:

- विभिन्न एजेंसियों के अनुमान में काफी अंतर है।
- OPEC+ देशों की उत्पादन नीतियाँ अस्पष्ट हैं।
- उदाहरण के लिए, मॉर्गन स्टैनली के अनुसार OPEC का उत्पादन अनुमान से 9% अधिक है।
- कुवैत के तेल मंत्री ने माना कि OPEC देशों में आंतरिक मतभेद हैं।

4. वैश्विक प्रभाव:

- IEA का कहना है कि 2027 तक तेल की अधिकता (glut) बनी रह सकती है।
- लेकिन इतिहास बताता है कि जब कीमतें गिरती हैं, तो अमेरिकी शेल कंपनियाँ उत्पादन घटा देती हैं, जिससे संतुलन लौट आता है।
- फिलहाल, \$57 प्रति बैरल पर कई शेल कंपनियाँ लाभ में नहीं हैं।
- अमेरिका की रिग संख्या 13% घट चुकी है।

5. निष्कर्ष:

- यदि स्थिति यही रही, तो बाजार में तेल की कीमतों पर निचली सीमा (floor price) बन सकती है।
- यानी कीमतें बहुत नीचे नहीं जाएँगी, लेकिन तेज़ी से ऊपर भी नहीं बढ़ेंगी।
- यह स्थिति ऊर्जा परिवर्तन (energy transition) की दिशा में वैश्विक अर्थव्यवस्था के पुनर्संरचना का संकेत देती है।

Key Takeaways for UPSC/BPSC Notes:

Theme	Key Facts
Brent Price (Oct 2025)	\$61/barrel (lowest since May 2025)
IEA Projection	Oil surplus: 2.35 mbpd (2025), 4 mbpd (2026)
OPEC Share in Global Supply	~30%
Major Producers	Saudi Arabia, Russia, Kuwait
Market Structure	Contango (futures > spot)
Impact on U.S. Shale	Unprofitable below \$57/barrel; rig count down 13%
Long-term Outlook	Oversupply till 2027; price floor around \$55–60/barrel
Geopolitical Angle	OPEC+ internal rift; China stockpiling; EV growth

Possible Mains Question:

Q. “The recent OPEC+ output uncertainties and falling crude prices signify structural shifts in the global energy market. Discuss their implications for India’s economy and energy security.” (250 words)

Iran ratifies law to join UN convention against terror finance

Agence France-Presse
TEHRAN

Iran ratified a law joining a United Nations convention against terror financing, local media reported on Wednesday, in hopes that it will lead to access to global banking, an easing of trade and relieving pressure on its sanctions-hit economy.

Iranian President Masoud Pezeshkian was elected last year on a promise to ease relations with the West and secure the lifting of sanctions that are hurting the economy.

His administration is trying to bring the country into line with the demands of the Financial Action Task Force (FATF), which monitors money laundering and terrorist financing.

Tehran has for years provided support to the Palestinian Hamas militant group, Lebanon's Hezbollah group, and Yemen's Houthis – all designated as “terrorist” groups by the U.S., along with Iran's Islamic Revolutionary Guard Corps (IRGC).

Iran was returned to the FATF blacklist of non-cooperative countries in 2020, which includes North Korea and Myanmar.

Along with heavy international sanctions, particularly by the U.S., Iran's inclusion on the blacklist has isolated the country's financial sector and severely restricted its access to the international banking system.

“President Masoud Pezeshkian has promulgated... the law on the Islamic Republic of Iran's accession to the International Convention for the Suppression of the Financing of Terrorism (CFT),” Tas-

Some in Iran argue that joining the CFT would grant enemy countries access to sensitive information

nim news agency said on Wednesday.

Joining the CFT treaty has been the subject of a heated debate in recent weeks, with ultra-conservatives arguing it could grant “enemy” countries access to sensitive economic and military information, particularly related to Iran's support of regional militant groups.

Iranian lawmaker Mahdi Shahriari said earlier this month that Iran's non-membership in the FATF and CFT had “created difficulties” in trade, including with key allies Russia and China, according to the pro-labour news agency ILNA.

Reformists and moderates in Tehran view compliance with FATF standards as a vital step toward reconnecting with the international banking system and stabilising the economy.

However, international sanctions remain the primary obstacle to Iran's global financial and trade activities.

Local media reported on Tuesday that an Iranian representative attended an FATF meeting in Paris for the first time in six years.

In September, the United Nations reimposed sanctions on Iran.

The move came after months of tense diplomacy aimed at reviving nuclear talks derailed since June, when Israeli and U.S. forces bombed Iranian nuclear facilities.

GS Paper Mapping:

- **UPSC GS Paper 2:** International Relations – Global & Regional Groupings, FATF, UN Conventions
 - **UPSC GS Paper 3:** Internal Security – Money Laundering, Terror Financing, Global Security Cooperation
 - **BPSC Paper 5 / JPSC Paper 2:** International Affairs, Global Security & Counterterrorism
-

English Summary:

Iran has ratified a law to join the **United Nations Convention for the Suppression of the Financing of Terrorism (CFT)**, aiming to **regain access to the international banking system** and **ease sanctions** crippling its economy.

1. Context & Objective:

- **Iranian President Masoud Pezeshkian** approved the law as part of his reformist agenda to revive Iran's economy and normalize relations with the West.
 - The move seeks compliance with the **Financial Action Task Force (FATF)**, which monitors money laundering and terror financing.
 - Joining the CFT could help Iran re-enter global financial markets and resume international trade.
-

2. FATF Background & Iran's Blacklisting:

- **Iran was blacklisted by FATF in 2020** for non-compliance with anti-terror and anti-money laundering norms — alongside **North Korea and Myanmar**.
 - The blacklisting severely restricted Iran's access to global finance and trade, isolating its economy.
 - Despite repeated reforms, **U.S. sanctions** remain a key obstacle to Iran's re-engagement with the global banking system.
-

3. Domestic Debate & Opposition:

- The CFT ratification has triggered **heated debate** within Iran:
 - **Reformists and moderates** argue that joining FATF norms is crucial to stabilize the economy and improve trade.
 - **Hardliners and ultra-conservatives** fear that joining CFT would **expose sensitive financial and military data** to “enemy” nations (referring to the U.S. and allies).
 - They worry it might compromise Iran's support for **regional militant groups** (like Hezbollah, Hamas, and Houthis), which Tehran considers “resistance groups” but the U.S. classifies as terrorist organizations.
-

4. International Implications:

- Compliance with FATF and CFT could enable **Iran to trade more freely with countries like Russia and China**, both facing Western sanctions.
 - It could help in **reviving Iran's nuclear negotiations** and reintegrating it into the **global financial architecture**.
 - However, **continuing UN and U.S. sanctions** remain the biggest hurdle to any tangible economic relief.
-

5. Diplomatic Developments:

- For the **first time in six years**, an Iranian delegate attended an FATF meeting in Paris.
 - Despite this progress, in **September 2025**, the **UN reimposed sanctions** on Iran after diplomatic efforts to revive nuclear talks failed, largely due to **U.S.-Israel pressure**.
-

हिन्दी सारांश (Hindi Summary):

ईरान ने संयुक्त राष्ट्र की “**Convention for the Suppression of the Financing of Terrorism (CFT)**” को मंजूरी दे दी है, ताकि उसे **वैश्विक बैंकिंग प्रणाली और व्यापार** में फिर से प्रवेश मिल सके और **प्रतिबंधों से राहत** मिले।

1. पृष्ठभूमि:

- राष्ट्रपति **मासूद पेज़ेशकियन** ने यह कानून पारित किया है ताकि पश्चिमी देशों के साथ संबंध सामान्य हो सकें।
- यह कदम **FATF (Financial Action Task Force)** के मानकों को पूरा करने के लिए उठाया गया है, जो **मनी**

लॉन्ड्रिंग और आतंक वित्तपोषण पर निगरानी रखता है।

2. FATF की पृष्ठभूमि:

- ईरान को 2020 में FATF की ब्लैकलिस्ट में डाला गया था।
- इसके कारण ईरान का वैश्विक वित्तीय प्रणाली तक पहुँच सीमित हो गई और उसकी अर्थव्यवस्था अलग-थलग पड़ गई।
- अमेरिकी प्रतिबंध अब भी ईरान की सबसे बड़ी आर्थिक बाधा बने हुए हैं।

3. घरेलू विरोध:

- सुधारवादी गुट FATF में शामिल होने को आर्थिक सुधार के लिए आवश्यक मानता है।
- वहीं कट्टरपंथी गुट का तर्क है कि इससे ईरान की संवेदनशील आर्थिक व सैन्य जानकारी “दुश्मन देशों” तक पहुँच जाएगी।
- ये गुट ईरान के हमास, हिज़बुल्लाह और हौथी जैसे “प्रतिरोध समूहों” को समर्थन जारी रखना चाहते हैं।

4. अंतरराष्ट्रीय प्रभाव:

- इस कदम से ईरान रूस और चीन जैसे देशों के साथ व्यापारिक संबंध मजबूत कर सकता है।
- FATF अनुपालन ईरान की परमाणु वार्ता और वैश्विक वित्तीय प्रणाली में पुनः प्रवेश का मार्ग खोल सकता है।
- लेकिन संयुक्त राष्ट्र और अमेरिकी प्रतिबंध अब भी बड़े अवरोध हैं।

5. हालिया घटनाक्रम:

- छह वर्षों में पहली बार ईरान ने FATF बैठक (पेरिस) में भाग लिया।
- हालांकि, सितंबर 2025 में संयुक्त राष्ट्र ने ईरान पर पुनः प्रतिबंध लगा दिए, क्योंकि अमेरिका और इज़राइल की आपत्तियों के चलते परमाणु वार्ता असफल रही।

Key Takeaways for UPSC/BPSC Notes:

Aspect	Key Details
Convention Joined	UN Convention for the Suppression of the Financing of Terrorism (CFT)
Supervisory Body	Financial Action Task Force (FATF)
Iran's FATF Status	Blacklisted since 2020 (along with North Korea & Myanmar)
Purpose of Ratification	To gain access to global banking & reduce sanctions impact
Domestic Politics	Reformists support; hardliners oppose citing national security risks
International Impact	Could improve Iran's trade with Russia, China; ease diplomatic isolation
Major Obstacle	U.S. & UN sanctions; distrust over Iran's militant support

Possible Mains Question:

Q. “Iran’s decision to join the UN Convention against terror financing marks a pragmatic shift in its foreign and economic policy. Discuss in the context of FATF compliance and regional geopolitics.” (250 words)

Imprisoned journalists win EU's top human rights award

Associated Press

BRUSSELS

Two journalists, one imprisoned in Belarus and the other in Georgia, have won the European Union's top human rights honour, the Sakharov Prize, European Parliament President Roberta Metsola announced on Wednesday.

Andrzej Poczobut is a correspondent for the influential Polish newspaper *Gazeta Wyborcza*. He was convicted of "harming Belarus' national security" and sentenced to eight years, which he is serving in the Novopolotsk penal colony.

Mzia Amaghlobeli, a prominent journalist who founded two of Georgia's independent media outlets, was convicted in August of slapping a police chief during an anti-go-



Long fight: Georgian journalist Mzia Amaghlobeli is one of the recipients of this year's Sakharov human rights prize. AFP

vernment protest.

She was sentenced to two years in prison in a case that was condemned by rights groups as an attempt to curb media freedom.

"Both are journalists currently in prison on trumped up charges simply for doing their work and for speaking out against injustice. Their courage has

made them symbols of the struggle for freedom and democracy," Ms. Metsola said at the parliament in Strasbourg, France.

The annual EU award, named after Soviet dissident Nobel Peace Prize laureate Andrei Sakharov, was created in 1988 to honour individuals or groups who defend human rights and basic freedoms.

GS Paper Mapping:

- **UPSC GS Paper 2:** International Relations — Global Institutions, Human Rights, Freedom of Press
- **UPSC GS Paper 4:** Ethics — Human Values, Courage, and Moral Integrity
- **BPSC Paper 5 / JPSC Paper 2:** International Affairs, Human Rights, and Global Democracy

English Summary:

The **European Union's top human rights honour — the Sakharov Prize for Freedom of Thought** — has been awarded to two imprisoned journalists from **Belarus** and **Georgia**, recognizing their courage in defending press freedom and democratic values.

1. About the Award:

- The **Sakharov Prize** is awarded annually by the **European Parliament** to individuals or groups defending **human rights and fundamental freedoms**.
 - It was established in **1988** and named after **Andrei Sakharov**, a Soviet physicist and Nobel Peace laureate who opposed totalitarianism.
 - The award reflects the EU's commitment to **democracy, freedom of expression, and rule of law**.
-

2. The Winners:

1. Andrzej Poczobut (Belarus):

- A journalist and correspondent for Poland's *Gazeta Wyborcza*.
- Convicted by Belarusian authorities for "harming national security."
- Sentenced to **8 years imprisonment** in the **Novopolotsk penal colony**.
- His arrest followed his reporting critical of Belarusian government actions.

2. Mzia Amaghlobeli (Georgia):

- Founder of **two independent media outlets** in Georgia.
 - Convicted in August for "slapping a police officer" during an anti-government protest.
 - Sentenced to **2 years in prison**, a verdict denounced by rights groups as **politically motivated** to suppress media freedom.
-

3. Broader Context:

- The **European Parliament President Roberta Metsola** stated that both journalists symbolize "**the struggle for freedom and democracy**."
 - Their imprisonment highlights growing global threats to **media independence, press freedom, and democratic dissent**, especially in post-Soviet states.
 - The EU uses such recognitions to promote **human rights diplomacy** and to pressure authoritarian regimes.
-

4. Relevance to International Affairs:

- The event underscores the EU's **soft power** approach through **humanitarian and rights-based diplomacy**.
 - It also draws attention to **shrinking media space** and the increasing use of **state power to silence journalists**.
 - Reflects ongoing **democratic backsliding** in Eastern Europe, where journalists are criminalized for dissent.
-

हिन्दी सारांश (Hindi Summary):

यूरोपीय संघ (EU) के सर्वोच्च मानवाधिकार सम्मान "सखारोव पुरस्कार" (Sakharov Prize for Freedom of Thought) से बेलारूस और जॉर्जिया के दो कैद पत्रकारों को सम्मानित किया गया है।

1. पुरस्कार के बारे में:

- यह पुरस्कार **1988 में यूरोपीय संसद (European Parliament)** द्वारा स्थापित किया गया था।
 - इसका नाम **अंद्रेई सखारोव** (सोवियत वैज्ञानिक और नोबेल शांति पुरस्कार विजेता) के नाम पर रखा गया है।
 - उद्देश्य: **मानवाधिकार, अभिव्यक्ति की स्वतंत्रता और लोकतांत्रिक मूल्यों की रक्षा करने वालों** को सम्मानित करना।
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2. विजेताओं के बारे में:

1. आंद्रेज पोज़ोबुत (बेलारूस):

- पोलिश अखबार *Gazeta Wyborcza* के संवाददाता।
- बेलारूस सरकार द्वारा "राष्ट्रीय सुरक्षा को नुकसान पहुँचाने" के आरोप में **8 वर्ष की सज़ा**।
- शासन विरोधी रिपोर्टिंग के लिए जेल में बंद हैं।

2. मज़िया अमग्लोबेली (जॉर्जिया):

- जॉर्जिया की दो स्वतंत्र मीडिया संस्थाओं की संस्थापक।

- सरकार विरोधी प्रदर्शन के दौरान एक पुलिस अधिकारी को थप्पड़ मारने के आरोप में 2 वर्ष की सज़ा।
- मानवाधिकार संगठनों ने इस मुकदमे को “मीडिया की आवाज़ दबाने का प्रयास” बताया है।

3. व्यापक परिप्रेक्ष्य:

- यूरोपीय संसद की अध्यक्ष रॉबर्टा मेटसोला के अनुसार ये दोनों पत्रकार “स्वतंत्रता और लोकतंत्र के संघर्ष के प्रतीक” हैं।
- यह घटना पूर्व-सोवियत देशों में मीडिया स्वतंत्रता और लोकतांत्रिक मूल्यों पर बढ़ते दमन को उजागर करती है।

4. अंतरराष्ट्रीय महत्व:

- यह पुरस्कार यूरोपीय संघ की सॉफ्ट पावर डिप्लोमेसी का उदाहरण है।
- इसके माध्यम से EU मानवाधिकार और अभिव्यक्ति की स्वतंत्रता के मुद्दों को वैश्विक मंच पर उठाता है।
- यह घटना पूर्वी यूरोप में बढ़ते अधिनायकवाद और पत्रकारों पर सरकारी कार्रवाई को भी उजागर करती है।

Key Takeaways for UPSC/BPSC Notes:

Theme	Key Details
Award	Sakharov Prize for Freedom of Thought (est. 1988)
Awarded by	European Parliament
Named After	Andrei Sakharov (Soviet physicist, Nobel laureate)
Recipients (2025)	Andrzej Poczobut (Belarus), Mzia Amaghlobeli (Georgia)
Purpose	To honour individuals defending human rights, democracy, and press freedom
Relevance	EU's human rights diplomacy, media freedom issues, authoritarian backlash in Eastern Europe

Possible Mains Question:

Q. “The European Union’s Sakharov Prize reflects the growing importance of soft power and human rights diplomacy in international relations.” Discuss with examples. (250 words)

China faces economic reality as top party leaders huddle on future strategy

Agence France-Presse
BEIJING

The top brass of China's ruling Communist Party is gathering in Beijing this week to devise a strategy that will steer the country through 2030 and shape its trade relationships.

Having risen from isolation and poverty just decades ago to become a technological and manufacturing superpower, China is now the world's second-largest economy, its exports filling global shipping lanes.

However, the challenges confronting leaders are considerable, with a rapidly ageing population, sluggish household spending and heightened trade frictions with the United States and its allies weighing down growth.

This week's "fourth plenum" of the Central Committee – focused on formulating the party's next five-year plan and scheduled to conclude on Thursday – is being closely watched for signs on how leaders intend to tackle those thorny issues.

But consumer sentiment in China – pummeled by the COVID-19 pandemic – remains cautious. “Both cyclical and structural factors are behind the weak private consumption,” analysts from ANZ Research wrote this week.

Persistent woes in the real estate sector, a relatively limited social safety net and a highly competitive job market are among factors dissuading consumers. Policy efforts that emerge from this week's meeting “are expected to address income inequality and limited social welfare coverage”, the ANZ Research note added.

Adding to the complexity, China's population has started to decline in recent years, despite Beijing ending its decades-long one-child policy in 2016.

Experts say this trend will result in a smaller workforce and changing consumption patterns over time.

The return of U.S. President Donald Trump to the White House this year, and his unpredictable tariff policies, have presented renewed challenges for China's export sector – a vital buoy for the economy.

So far, overseas shipments have withstood the pressure, in large part by diverting goods from the U.S. to alternative markets, especially in Southeast Asia. However, trade tensions between the world's top two economies remain unresolved, with Washington working to rally its allies against Beijing's new curbs in the strategic rare earths industry.



Observers are awaiting a potential in-person meeting between Donald Trump and China's President Xi Jinping. FILE PHOTO

Observers are awaiting a potential in-person meeting this month between Mr. Trump and China's President Xi Jinping.

China's edge in the mining and processing of critical rare earths gives it significant leverage in trade disputes, and experts say its supremacy in the vital sector is secure – at least for now.

“While efforts to break

China's dominance will intensify further, Beijing's grip is unlikely to be loosened in the short to medium term,” said a report on Tuesday by BMI, a unit of Fitch Solutions.

As party officials discuss economic challenges this week, Nomura analysts said in a recent report wrote, “the primary domestic challenge” during the next five-year period is “cleaning up the property market mess”.

The collapse of the real estate sector has dampened domestic demand for materials including steel, concrete and glass.

As party officials discuss economic challenges this week, Nomura analysts said in a recent report wrote, “the primary domestic challenge” during the next five-year period is “cleaning up the property market mess”.

“China Faces Economic Reality as Top Party Leaders Huddle on Future Strategy”

GS Paper Mapping:

- **UPSC GS Paper 2:** International Relations – China’s Political & Economic Policy
- **UPSC GS Paper 3:** Indian Economy – Global Economic Trends, Trade, and Growth Slowdown
- **BPSC Paper 5 / JPSC Paper 2:** World Economy, China’s Role in Global Trade

English Summary:

The Chinese Communist Party’s top leadership convened in Beijing this week for the **Fourth Plenum of the Central Committee**, to outline the **country’s economic and trade strategy up to**

2030.

After decades of rapid growth transforming China into the **world's second-largest economy**, the nation now faces **multiple economic headwinds** — slowing consumption, property crisis, demographic decline, and trade tensions with the U.S.

1. Consumer Slump:

- China's economy, long driven by **exports and state investment**, is struggling with **weak domestic consumption**.
- The **COVID-19 pandemic**, declining consumer confidence, and **sluggish household spending** have worsened the slowdown.
- Analysts cite **"cyclical and structural"** weaknesses:
 - Real estate sector crisis,
 - Aging population,
 - Limited social welfare coverage.

Experts recommend rebalancing growth toward **domestic consumption** and away from export dependence.

2. Property Market Crisis:

- The collapse of China's **real estate sector** has sharply reduced demand for **steel, cement, and glass**, hitting industrial production.
 - Real estate accounted for nearly **25% of GDP** before the downturn; its decline threatens employment and local government revenues.
 - **Nomura economists** call the next phase **"China's primary domestic challenge."**
-

3. Demographic Decline:

- After decades of the **one-child policy**, China's **working-age population** is shrinking.
 - The fertility rate has plummeted despite policy reversals in 2016.
 - A smaller workforce will alter **consumption patterns** and **slow growth** in coming decades.
-

4. Trade Friction with the U.S.:

- The **return of Donald Trump to the White House** (2025) and his **tariff unpredictability** have renewed pressure on Chinese exports.
 - The U.S. is also mobilizing allies to counter Beijing's dominance, particularly in the **rare earth minerals industry**.
 - Despite this, **China's export shipments remain strong**, buoyed by sales to **Southeast Asia** and other emerging markets.
 - A potential **Xi-Trump meeting** could define future trade dynamics.
-

5. Broader Economic Outlook:

- China's **manufacturing dominance** is unlikely to diminish soon, but its **growth model must evolve** from investment-led to **consumption-driven**.
 - Analysts suggest **policy reforms** to expand social welfare, improve household income, and stabilize the property sector.
 - **BMI (Fitch Solutions)** notes: "China's grip on global trade won't loosen soon, but domestic headwinds are structural."
-

हिन्दी सारांश (Hindi Summary):

चीनी कम्युनिस्ट पार्टी की उच्च समिति इस सप्ताह बीजिंग में "चौथे पूर्ण अधिवेशन (Fourth Plenum)" में देश की 2030 तक की आर्थिक और व्यापारिक रणनीति तय करने के लिए एकत्र हुई।

चीन, जो कभी गरीबी से उठकर दुनिया की दूसरी सबसे बड़ी अर्थव्यवस्था बना, अब गंभीर आर्थिक चुनौतियों का सामना कर रहा है —

कमज़ोर खपत, रियल एस्टेट संकट, जनसंख्या में गिरावट और अमेरिका के साथ व्यापार तनाव।

1. उपभोग में गिरावट (Consumer Slump):

- COVID-19 के बाद से घरेलू उपभोग में भारी कमी आई है।
- रियल एस्टेट संकट, बुजुर्ग जनसंख्या, और सीमित सामाजिक सुरक्षा ने स्थिति को बदतर बना दिया है।
- अब विशेषज्ञ “निर्यात-आधारित” से “घरेलू खपत आधारित” विकास मॉडल की ओर बदलाव की बात कर रहे हैं।

2. रियल एस्टेट संकट:

- चीन का रियल एस्टेट क्षेत्र ध्वस्त हो रहा है, जिससे स्टील, सीमेंट, और ग्लास की घरेलू मांग घट गई है।
- इससे स्थानीय सरकारों की आय और रोज़गार पर नकारात्मक असर पड़ा है।

3. जनसांख्यिकीय गिरावट:

- दशकों तक चली एक-बच्चा नीति (One-Child Policy) के बाद अब चीन की कार्यबल घट रही है।
- जनसंख्या घटने से भविष्य में उपभोग और विकास दर दोनों प्रभावित होंगे।

4. अमेरिका से व्यापार तनाव:

- डोनाल्ड ट्रंप की वापसी के बाद अमेरिकी टैरिफ नीतियाँ फिर अप्रत्याशित हो गई हैं।
- अमेरिका और उसके सहयोगी अब चीन के रेयर-अर्थ उद्योग पर नए प्रतिबंध लगा रहे हैं।
- फिर भी चीन की निर्यात वृद्धि दक्षिण-पूर्व एशिया में मजबूत बनी हुई है।

5. व्यापक दृष्टिकोण:

- चीन की वैश्विक औद्योगिक ताकत फिलहाल बरकरार है, परंतु उसके विकास मॉडल में परिवर्तन आवश्यक है।
- आने वाले वर्षों में चीन को सामाजिक सुरक्षा, आय वृद्धि और घरेलू निवेश सुधारों पर ध्यान देना होगा।
- BMI (Fitch Solutions) के अनुसार, “चीन की आर्थिक पकड़ बरकरार रहेगी, पर उसकी चुनौतियाँ दीर्घकालिक और संरचनात्मक हैं।”

Key Takeaways for UPSC/BPSC Notes:

Theme	Details
Meeting	4th Plenum of CPC Central Committee (2025)
Focus	China's 2030 economic strategy, trade, and domestic reforms
Major Challenges	Consumer slowdown, property crisis, aging population, trade friction
Trade Issue	Renewed tariff uncertainty under Trump; U.S.-China rare earth dispute
Demographic Issue	Post-one-child policy, falling fertility, shrinking workforce
Economic Model Shift	From export-driven to domestic consumption model
Key Report	BMI (Fitch Solutions), Nomura, ANZ Research

Possible Mains Question:

Q. “China’s ongoing economic transition from an export-led to a consumption-driven model has global implications. Analyse the challenges and opportunities this transition presents.” (250 words)