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INSIDE THIS COMPILATION

WEEK 1	29 August – 4 September 2026 · 37 stories	3
WEEK 2	5 – 11 September 2026 · 34 stories.....	84
WEEK 3	12 – 18 September 2026 · 28 stories.....	166
WEEK 4	19 – 25 September 2026 · 34 stories.....	211

Each week opens with its own divider and contents page. Click any line to jump to it.



SITOK IAS

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NOW, A NEW WEEK BEGINS

WEEK 1

29 August – 4 September 2026

37 PIB stories · Honorary mentions & practice questions

Week 1 of 4



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29 August – 4 September 2026

01	'RAKSHA' Defence Diplomacy Document — India's 10-Year Strategic Roadmap	5
02	India-Belgium Defence Bilateral — Co-Development and Co-Production	6
03	16th Aero India 2027 Announced — Bengaluru, February 8-12	8
04	LOKAYAN 2026 — INS Sudarshini Arrives in Barcelona	9
05	PM Modi's State Visit to Uzbekistan — Joint Statement, Outcomes + UPI in Uzbekistan	10
06	PM at 26th SCO Summit, Bishkek — Bilaterals with Russia, Kyrgyz Republic, Armenia, Iran	12
07	India-Chile CEPA Negotiations Advance	14
08	India-Belgium Joint Statement — Strategic Partnership Outcomes	15
09	India Q1 FY2026-27 GDP — 7.8% Growth	17
10	India Sovereign Credit Rating Upgraded to 'A-' — Japan Credit Rating Agency	19
11	GIFT IFSC — \$52.8 Billion FCNR(B) Mobilised; International Banking Hub	20
12	NLMC E-Auction of 459 RINL Land Parcels — Visakhapatnam	22
13	GSLV-F17 Successfully Launches EOS-05	24
14	C-DOT Unveils 14 Indigenous Quantum Products for Communication Security	26
15	Century-Old Thermodynamic Limit on Heat-to-Electricity Conversion Surpassed	28
16	Legal Metrology (Indian Standard Time) Rules, 2026 — 'One Nation, One Time'	29
17	CSIR-CRRI 60% RAP Technology on NH-716 — Recycled Asphalt Pavement Landmark	31
18	BIO-NIVESH Launched — Catalysing Biotech Investment and Scale-Up	33
19	Tiny Molecular Switch — Nature-Inspired Biomaterials for Self-Powered Healthcare	34
20	Zero-Emission Shipping Corridors — Ports Ministry Pushes Green Fuel Readiness	36
21	Agentic AI Skilling — NIELIT and Intel India Launch National Programme	38
22	Swachh Sagar, Surakshit Sagar 2026 — 5th Edition, Ocean Conservation Movement	39
23	Tiger Landscapes Workshop — Conservation, Bioeconomy and Ecotourism	41
24	Home Secretary Reviews Himalayan States' GLOF and Snow Avalanche Preparedness	43
25	Indo-German Environment Forum — Knowledge, Solutions, Institutional Capacity	45
26	Allied and Healthcare Education — UGC Notifies 33 New Degrees Under NCAHP	47
27	Mission Rangeen Machhli 2031 — Strategic Action Plan for Ornamental Fisheries	48
28	PM-JANMAN Review + DA-JGUA — Tribal Development Initiatives	50
29	SUMAN Roadmap 2030 — Accelerating Maternal and Newborn Care	52
30	Civil Aviation — Hub and Spoke International Flights from Ahmedabad	54
31	Backgrounder: Pradhan Mantri Fasal Bima Yojana + Per Drop More Crop	56
32	Backgrounder: India's Higher Education Sector	57
33	Backgrounder: Cyber-Physical Systems	59
34	Backgrounder: Geothermal Energy	61
35	Backgrounder: Decentralised Grain Storage in Cooperative Sector	63
36	Backgrounder: Districts as Export Hubs	65
37	Backgrounder: Understanding India's Q1 FY2026-27 GDP Estimates	67
Honorary Mentions		69
Practice Questions		75
10 Prelims Questions — UPSC Style		75
2 Mains Questions and Model Answers		79
Prelims Answers and Explanations		80



'RAKSHA' Defence Diplomacy Document – India's 10-Year Strategic Roadmap

Ministry: Ministry of Defence

PIB Date: 3 September 2026

Easy Explanation

Raksha Mantri Rajnath Singh unveiled 'RAKSHA' – India's first formal defence diplomacy document – outlining a strategic vision for global defence partnerships over the next decade. This is a landmark step: India has never before codified its defence engagement philosophy in a single published document. What does RAKSHA articulate? A framework for defence exports, defence industrial partnerships, military-to-military cooperation, and technology collaboration with partner nations. It signals India's shift from being a defence importer to a defence partner – from a transactional relationship with arms suppliers to structural, co-development-based defence ties. The document comes days after India-Belgium bilateral talks that specifically focused on co-development and co-production – the very model RAKSHA envisions globally.

Key Terms

Term	Definition
RAKSHA document	India's first formal defence diplomacy framework; 10-year vision; covers defence exports, co-development, military-to-military cooperation, technology partnerships; released by Raksha Mantri September 2026
Defence diplomacy	Use of defence and military instruments to advance foreign policy; includes joint exercises, arms exports, base access, military training, arms transfers; India's defence exports = \$2.8 billion (FY2024-25), target \$5 billion by 2028-29
From importer to partner	India historically world's largest arms importer; RAKSHA signals pivot – from buying weapons to co-developing them with partners; aligned with 'Make in India' in defence, Atmanirbhar Bharat
Co-development / co-production	Joint design and manufacture of defence systems between two countries; India-France (MMRCA 2.0 discussions), India-USA (GE F414 engine ToT), India-Israel (missile systems); RAKSHA formalises this as India's preferred engagement model



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India-Belgium defence	India and Belgium called for deeper defence industrial collaboration – co-development, co-production; RAKSHA provides the strategic framework within which such bilateral ties fit
DPSUs + private sector	Defence Public Sector Undertakings (HAL, BEL, BDL, BEML) + private sector (Tata, L&T, Bharat Forge) form India's defence industrial base; RAKSHA envisions both as vehicles for international defence partnerships
Strategic autonomy dimension	India's defence diplomacy explicitly non-aligned – partners across geopolitical blocs (USA, Russia, France, Israel, UAE); RAKSHA reinforces multi-alignment as India's defence partnership philosophy

UPSC Relevance

- UPSC angle: RAKSHA is a direct output of India's Atmanirbhar Bharat in defence – connects DPP 2020, DPEPP 2020, \$5B export target, defence corridor policy, and DRDO ToT (last week) into a single strategic vision document
- Prelims: India's defence export target = \$5 billion by 2028-29; current = \$2.8 billion FY2024-25; RAKSHA = first formal defence diplomacy document; released September 2026
- Mains GS2/GS3: India's shift from 'strategic buyer' to 'defence partner' – implications for strategic autonomy, Make in India, bilateral relations with key partners
- Link to Belgium bilateral: India-Belgium joint call for co-development came same week as RAKSHA – Belgium = NATO member, EU's defence industrial hub (FN Herstal, Safran Belgium); signals India's defence pivot toward European co-production

India-Belgium Defence Bilateral – Co-Development and Co-Production

Ministry: Ministry of Defence

PIB Date: 3 September 2026

Easy Explanation

Raksha Mantri Rajnath Singh held bilateral talks with Belgium's Defence Minister. The central ask on both sides: deeper defence industrial collaboration – specifically co-development and co-production rather than simple buyer-seller transactions. Belgium is not a typical partner in India's defence narrative but punches above its weight: it is home to FN Herstal (world-renowned small arms manufacturer), Safran Belgium (aerospace engines and components), and John Cockerill Defence (armoured vehicles). Belgium is also an



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EU member and NATO ally – meaning defence cooperation with Belgium gives India access to European defence industrial networks and standards. The joint statement called for 'stronger militaries through co-development and co-production' – language that mirrors the RAKSHA document unveiled the same day. India's interest: European sourcing diversification (beyond France and Israel), access to NATO-standard defence technology, potential for Belgian companies to set up in India's defence corridors.

Key Terms

Term	Definition
Belgium's defence industry	FN Herstal (SCAR rifles, Minimi, MAG machine guns – used globally including Indian Special Forces); Safran Belgium (aerospace components); John Cockerill Defence (armoured vehicles, turrets); niche but high-quality
NATO membership significance	Belgium = NATO founding member; NATO-standard interoperability; co-production with Belgian firms = implicit alignment with NATO defence industrial standards – relevant as India deepens ties with Quad, Western partners
EU defence industrial base	EU's European Defence Fund (EDF); European Defence Agency (EDA); Belgium active in both; India-Belgium co-production could open pathways to EU defence industrial ecosystem
India's European defence diversification	Primary European partners: France (Rafale, submarines), Israel (missiles, drones), Russia (historical); Belgium adds a new node; India actively avoids single-source dependence
Co-production framework	DPP 2020 enables foreign OEMs to partner with Indian companies; RAKSHA formalises this model; Belgium-India co-production would fall under this framework – technology transfer + local manufacturing
Defence corridors	India has two dedicated defence industrial corridors: UP (Lucknow-Agra-Aligarh) and Tamil Nadu (Chennai-Coimbatore); Belgium OEMs could set up manufacturing here under co-production agreements

UPSC Relevance



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- GS2 IR: India-Belgium bilateral = India's effort to build defence industrial partnerships across geopolitical blocs; Belgium as NATO/EU anchor; multi-alignment in practice
- GS3 Defence: Co-development vs ToT vs simple purchase – understand the hierarchy; co-development = deepest technology integration; RAKSHA makes co-development India's stated preference

16th Aero India 2027 Announced – Bengaluru, February 8-12

Ministry: Ministry of Defence

PIB Date: 1 September 2026

Easy Explanation

The 16th edition of Aero India – Asia's largest air show and aerospace exhibition – will be held at Yelahanka Air Force Station, Bengaluru, from February 8-12, 2027. Aero India is not just an air show. It is India's primary platform for: defence exports promotion (Indian defence companies showcase capabilities to foreign buyers and governments); defence industrial partnerships (MoUs between Indian and foreign aerospace firms); diplomatic signalling (which countries send their senior-most delegations signals bilateral defence warmth); and Make in India showcasing (HAL, DRDO, private sector display indigenous systems). Aero India 2025 (15th edition) saw participation from 100+ countries, 800+ exhibitors, and generated MoUs worth ₹1 lakh crore. The 2027 announcement comes in the same week as the RAKSHA document – Aero India will be the first major showcase of India's new defence diplomacy framework in practice.

Key Terms

Term	Definition
Aero India	Biennial aerospace and defence exhibition; Yelahanka Air Force Station, Bengaluru; DRDO, HAL, private sector, foreign OEMs; defence exports platform; MoUs and agreements; Asia's largest air show
Yelahanka Air Force Station	IAF base, Bengaluru; permanent venue for Aero India since 1996; adjacent to HAL headquarters – symbolic co-location of India's aerospace manufacturing hub
Aero India 2025 outcomes	15th edition; 100+ countries, 800+ exhibitors; MoUs worth ₹1 lakh crore; iDEX challenges; defence export deals; first major showcase post-DPEPP 2020



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DPEPP 2020	Defence Production and Export Promotion Policy 2020; \$5 billion export target by 2028-29; Aero India = primary implementation platform for DPEPP's export promotion chapter
iDEX – Innovations for Defence Excellence	Startup challenges at Aero India; MoD supports defence tech startups; iDEX winners get funding + potential procurement; Aero India platform for startup-MoD interface

UPSC Relevance

- Prelims: Aero India = biennial; Yelahanka, Bengaluru; 16th edition = Feb 2027; Asia's largest aerospace exhibition; organised by Ministry of Defence
- GS3: Aero India as implementation vehicle for DPEPP 2020, iDEX, Make in India in defence – connects policy to practice

LOKAYAN 2026 — INS Sudarshini Arrives in Barcelona

Ministry: Ministry of Defence / Indian Navy

PIB Date: 1 September 2026

Easy Explanation

INS Sudarshini – the Indian Navy's sail training ship – arrived in Barcelona, Spain as part of LOKAYAN 2026, the Indian Navy's overseas deployment for goodwill and training. Sudarshini is a three-masted barquentine (a type of sailing vessel) commissioned in 2012, used to train officer cadets at sea. LOKAYAN (from Sanskrit 'loka' = world, 'yana' = journey) is the Indian Navy's annual/periodic long-range sail training deployment to multiple international ports. The deployment serves multiple purposes: naval diplomacy (port calls = diplomatic engagement), officer training at sea (real navigation, seamanship, ocean passage-making), and maritime heritage projection (sail ships carry a different kind of soft power than warships). Barcelona = Spain's largest port and Mediterranean hub – a port call here signals India's growing maritime engagement with Southern Europe and the Western Mediterranean.

Key Terms

Term	Definition
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INS Sudarshini	Indian Navy's sail training ship; three-masted barquentine; commissioned 2012; Kochi-based; trains officer cadets; part of Indian Naval Academy's sea training programme
LOKAYAN 2026	Indian Navy goodwill and training deployment; multi-port overseas voyage; 'loka' (world) + 'yana' (journey); naval diplomacy through sail ship port calls
Barquentine	Sailing vessel with 3 or more masts; foremast fully square-rigged, remaining masts fore-and-aft rigged; hybrid rig for ocean passage; INS Sudarshini = India's only barquentine
Naval diplomacy	Soft power projection through naval presence; port calls = diplomatic engagement without combat signalling; sail ships = particularly effective – heritage, tradition, youth training resonates
Barcelona / Mediterranean significance	Spain = EU, NATO member; Barcelona = Mediterranean shipping hub; India's presence = expanding maritime engagement beyond traditional Indian Ocean Region focus

UPSC Relevance

- Prelims: INS Sudarshini = sail training ship, barquentine, commissioned 2012; LOKAYAN = Indian Navy's sail training/goodwill deployment
- GS2/GS3: Naval diplomacy as soft power; India's maritime engagement expanding into Mediterranean; LOKAYAN as part of India's blue-water naval presence building

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PM Modi's State Visit to Uzbekistan – Joint Statement, Outcomes + UPI in Uzbekistan

Ministry: Prime Minister's Office / Ministry of External Affairs

PIB Date: 30 August 2026

Easy Explanation

Prime Minister Modi's state visit to Uzbekistan produced substantial outcomes across multiple domains. The headline honour: PM was conferred Uzbekistan's highest honour for foreign leaders – 'Oliy Darajali Do'stlik' Order (Order of Friendship of the Highest Degree). India-Uzbekistan relations have been deepening since



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the 2011 Strategic Partnership, upgraded to a Comprehensive Strategic Partnership in 2022. Key outcomes from the visit: Joint Statement covering defence, connectivity, trade, education, culture; agreements in pharmaceuticals (India exports \$300+ million in generics to Uzbekistan annually), IT, textiles, agriculture; connectivity focus (International North-South Transport Corridor – INSTC – and India's Chabahar port as key nodes for India-Central Asia trade); and a landmark fintech development – NPCI International and Uzbekistan's NIPC partnered to enable UPI payments across Uzbekistan via UZQR (Uzbek QR payment standard). This makes Uzbekistan the latest country to integrate UPI with its domestic payment architecture.

Key Terms

Term	Definition
'Oliy Darajali Do'stlik' Order	Uzbekistan's highest state honour for foreign leaders; 'Do'stlik' = friendship in Uzbek; conferred on PM Modi during state visit August 2026; diplomatic recognition of India-Uzbekistan ties
India-Uzbekistan relationship	Strategic Partnership (2011) → Comprehensive Strategic Partnership (2022); largest Indian diaspora in Central Asia (~15,000); Indian pharma, IT, textiles exports; Tashkent = significant India connection (Tashkent Declaration 1966, Lal Bahadur Shastri died there)
INSTC – International North-South Transport Corridor	Multimodal route: India → Iran (Chabahar) → Azerbaijan → Russia → Central Asia / Europe; 7,200 km; India-Uzbekistan connectivity via INSTC critical; Chabahar port = India's access point to Central Asia bypassing Pakistan
Chabahar port	Iran's deep-water port; India developed Shahid Beheshti terminal; India-Iran-Afghanistan connectivity; Central Asia access; US sanctions waiver for India; key node in INSTC
UPI in Uzbekistan – UZQR integration	NPCI International + Uzbekistan's NIPC partnership; UPI payments via UZQR (Uzbek QR standard); Uzbekistan joins 17+ countries with UPI integration; Indian tourists and diaspora can transact digitally



SCO context	Uzbekistan = SCO member since 2001; India = full SCO member since 2017; PM Modi attended SCO Summit Bishkek (Kyrgyz Republic) same trip; Uzbekistan previously hosted SCO Summit Samarkand 2022
Tashkent Declaration 1966	Historic agreement between India and Pakistan after 1965 war; mediated by Soviet Union in Tashkent; PM Lal Bahadur Shastri died in Tashkent the night after signing; historical context for India-Uzbekistan connection

UPSC Relevance

- GS2 IR: India-Uzbekistan Comprehensive Strategic Partnership; INSTC; Chabahar port; India's Central Asia Connect policy; SCO membership
- GS3 Economy: UPI in Uzbekistan = India's digital payment export; NPCI International's global expansion; fintech diplomacy as soft power
- Prelims: 'Oliy Darajali Do'stlik' Order = Uzbekistan's highest honour for foreign leaders; UZQR = Uzbek QR payment standard; Tashkent Declaration 1966
- Mains: India's Central Asia engagement – why Central Asia matters (energy, connectivity, trade, counter-terrorism, SCO), India's constraints (no land border), India's workarounds (Chabahar, air corridors, INSTC)

PM at 26th SCO Summit, Bishkek – Bilaterals with Russia, Kyrgyz Republic, Armenia, Iran

Ministry: Prime Minister's Office / Ministry of External Affairs

PIB Date: 1-2 September 2026

Easy Explanation

PM Modi participated in the 26th Shanghai Cooperation Organisation (SCO) Summit in Bishkek, Kyrgyz Republic, and held bilateral meetings on the sidelines with President Putin (Russia), President of Kyrgyz Republic, PM of Armenia, and President of Iran. The SCO Summit itself focused on regional security, connectivity, and counter-terrorism. India's participation is always watched closely: India joined SCO as full member in 2017; it uses SCO to engage Russia and Central Asia without the QUAD-bloc framing; and it navigates the China-Pakistan dynamic within SCO with studied composure. Key bilaterals: Russia – PM Putin meeting = defence supply (S-400, Su-30MKI spares, oil purchases), Kudankulam expansion; Iran – on the sidelines (significant given US sanctions context) = Chabahar port progress, India-Iran trade in



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rupees; Armenia – emerging defence partner (India sold Pinaka MBRL to Armenia, strengthening ties as Armenia pivots from Russia-dependence).

Key Terms

Term	Definition
SCO – Shanghai Cooperation Organisation	Eurasian political, economic, security organisation; founded 2001; members: China, Russia, India, Pakistan, Kazakhstan, Kyrgyz Republic, Tajikistan, Uzbekistan, Iran, Belarus; observer states; India full member since 2017
Bishkek significance	Capital of Kyrgyz Republic; SCO headquarters not here (secretariat in Beijing); previous SCO summits: Samarkand 2022 (India hosted SCO foreign ministers), New Delhi 2023 (India SCO Chair), Astana 2024, Bishkek 2026
India-Russia bilateral	Longstanding Special and Privileged Strategic Partnership; S-400 Triumf delivered (US CAATSA sanctions concern); Kudankulam NPP expansion (Units 5-6); rupee-rouble trade; India buying Russian crude at discount post-Ukraine sanctions
India-Iran bilateral (sidelines)	Chabahar port progress; India-Iran trade in rupees (SWIFT bypass); US sanctions context – India has carve-out for Chabahar; Iran SCO full member since 2023
India-Armenia bilateral	Armenia = emerging Indian defence partner; India sold Pinaka MBRL systems; Armenia pivoting from Russia-dependence post-2020 Nagorno-Karabakh; India = alternative supplier; GS2 angle: small state hedging, India's defence export strategy
SCO's China-Pakistan dynamic	Pakistan = full SCO member since 2017 (same as India); China = SCO's dominant power; India navigates this by focusing on economic/connectivity agenda, avoiding CPEC endorsement, blocking Pakistan-sponsored terrorism language reforms



RATS – SCO anti-terror body	Regional Anti-Terrorist Structure; Tashkent; India participates; SCO's primary counter-terrorism mechanism; India pushes cross-border terrorism agenda here
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UPSC Relevance

- GS2 IR: SCO's significance for India – multi-alignment, Russia engagement, Central Asia connectivity, counter-terrorism; India's SCO challenges (China-Pakistan axis)
- Prelims: SCO members (8 full + observers + dialogue partners); India joined 2017; secretariat in Beijing; RATS in Tashkent; 26th Summit = Bishkek 2026
- Mains: India's approach to SCO – balancing Quad membership with SCO engagement; India's bilateral relationship with Russia in post-Ukraine context; Chabahar as India's strategic infrastructure
- Armenia link: India sold Pinaka MBRL to Armenia – UPSC asked about this; Armenia = NATO aspirant, India's emerging European defence export market

India–Chile CEPA Negotiations Advance

Ministry: Ministry of Commerce and Industry

PIB Date: 30 August 2026

Easy Explanation

India and Chile moved forward in negotiations for a Comprehensive Economic Partnership Agreement (CEPA) – Commerce Secretary Rajesh Agrawal met Chilean Vice-Minister Paula Estévez Weinstein. Chile is India's second-largest trade partner in Latin America (after Brazil) with bilateral trade of approximately \$3 billion. Why Chile matters for India: Copper – Chile has the world's largest copper reserves (~27% of global reserves) and is the world's largest copper producer; India imports copper for electronics, electrical equipment, and EV manufacturing; China is Chile's largest trade partner (copper + lithium), and India is trying to develop an alternative trade relationship. Lithium – Chile has the world's largest lithium reserves (Atacama Desert salt flats); critical for EV batteries; India's Critical Minerals Mission explicitly targets Latin America for lithium sourcing. Pacific access – Chile's ports (Valparaíso, San Antonio) are Pacific gateways; CEPA with Chile = India's first meaningful economic foothold in the Pacific coast of South America.

Key Terms

Term	Definition
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CEPA – Comprehensive Economic Partnership Agreement	Trade agreement covering goods, services, investment, intellectual property – broader than FTA; India has CEPAs with UAE, Australia, Mauritius, Japan, South Korea; Chile CEPA = first in South America
Chile's mineral wealth	World's largest copper reserves (~27% global); world's largest lithium reserves (Atacama; ~42% global); also cobalt, silver, molybdenum; all critical minerals for India's EV and electronics sectors
Lithium Triangle	Chile + Argentina + Bolivia = Lithium Triangle; ~65% world's lithium reserves; Chile's Atacama = highest concentration; India's Critical Minerals Mission targets this region for supply diversification
India-Chile bilateral trade	~\$3 billion; India exports: pharmaceuticals, machinery, organic chemicals; Chile exports: copper, molybdenum, iodine, fishmeal; CEPA could double this; Chile gives preferential access to Pacific Latin America
India's Latin America strategy	India's trade with Latin America = ~\$50 billion; historically neglected region; China has \$480 billion trade with Latin America; India-CELAC Forum; India's 3Cs for LAC: Commerce, Culture, Connectivity
Pacific Alliance	Chile, Peru, Colombia, Mexico = Pacific Alliance; free trade among them; CEPA with Chile could give India preferential access pathway to Pacific Alliance economies

UPSC Relevance

- GS2 IR: India's Latin America engagement; India's critical minerals diplomacy; CEPA as trade architecture tool
- GS3 Economy: Copper and lithium = critical minerals for India's EV transition; Chile CEPA = supply chain security; India's first CEPA in South America
- Prelims: Lithium Triangle = Chile + Argentina + Bolivia; Chile = world's largest copper AND lithium producer; India-Chile bilateral = ~\$3 billion

India-Belgium Joint Statement — Strategic Partnership Outcomes

Ministry: Ministry of External Affairs



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PIB Date: 3 September 2026

Easy Explanation

India and Belgium issued a Joint Statement during the visit of the Belgian Prime Minister, covering a broad range of cooperation areas. Belgium is a small but strategically significant country: it hosts NATO headquarters (Brussels), is home to EU institutions (European Commission, European Parliament, European Council), and has a substantial Indian diaspora (estimated 60,000+). The Joint Statement's key areas: defence industrial collaboration (co-development, co-production – linked to RAKSHA document); digital economy (Belgium as EU's digital hub, India's Digital Public Infrastructure as model); trade and investment (India-EU BTIA negotiations ongoing, Belgium = major EU trading economy); and education and research (KU Leuven, Ghent University = Belgium's research universities, India-Belgium academic ties). The bilateral comes on the heels of significant India-EU momentum – India-EU Trade and Technology Council (TTC) established 2023, India-EU FTA negotiations resumed.

Key Terms

Term	Definition
Belgium's strategic significance	NATO HQ in Brussels; EU institutional hub (European Commission, European Parliament, European Council); diamond trade (Antwerp = world's diamond capital, ~85% of rough diamonds traded here – India-Belgium diamond trade = significant); defence industry
India-EU BTIA	Broad-based Trade and Investment Agreement; negotiations resumed 2022 after decade-long pause; Belgium = EU member = BTIA progress reflected in India-Belgium bilateral
India-EU TTC	Trade and Technology Council; established June 2023; focuses on semiconductors, AI, clean tech, digital standards; India-Belgium = node for TTC implementation
Antwerp diamond trade	Antwerp = world's diamond trading capital; ~85% rough diamonds pass through; India cuts and polishes ~90% of world's diamonds (Surat); India-Belgium diamond trade = major bilateral economic link



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KU Leuven	Catholic University of Leuven; Belgium's top research university; ranked consistently in top 50 globally; strong in life sciences, engineering, AI; India-Belgium academic research link
NATO headquarters	Brussels; Belgium = NATO founding member (1949); India's growing defence ties with NATO members (US, UK, France, Belgium) – context for RAKSHA document's vision

UPSC Relevance

- GS2 IR: India-Belgium Joint Statement; Belgium as NATO/EU hub; India-EU BTIA; India-EU TTC; Belgium's role in India's European engagement
- Prelims: NATO HQ = Brussels; Antwerp = world diamond capital; KU Leuven = Belgium's top university; Belgium = EU founding member

India Q1 FY2026-27 GDP – 7.8% Growth

Ministry: Ministry of Statistics and Programme Implementation (MoSPI)

PIB Date: 31 August 2026

Easy Explanation

India's GDP grew 7.8% in Q1 FY2026-27 (April-June 2026) – the fastest quarterly growth in six quarters, and above the full-year FY2025-26 growth of 6.4%. PM Modi lauded it as evidence of 'surging economic confidence.' What drove the 7.8%? Manufacturing (accounting for ~16% of GDP) grew strongly, consistent with the IIP data (7.2% manufacturing growth in July 2026); services sector continued robust growth particularly in financial services and IT-enabled services; government capex remained elevated (Union Budget FY2026-27 maintained capex at ₹11.11 lakh crore); and private consumption showed meaningful recovery, especially in urban consumption. Concerns that persist: rural consumption remains below pre-COVID trend; private investment (gross fixed capital formation by private sector) still needs to fully catch up; and global uncertainty (US rate environment, China slowdown) creates export headwinds. India remains the world's fastest-growing major economy – China grew 4.7% in Q1 2026.

Key Terms

Term	Definition
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GDP calculation methodology	GDP = C + I + G + (X-M); also calculated by output method (GVA + taxes - subsidies = GDP); MoSPI releases advance estimates, first revised estimates, second revised estimates; base year 2011-12
Q1 FY2026-27	April-June 2026; 7.8% real GDP growth; fastest in six quarters; above FY2025-26 full year (6.4%); China grew 4.7% same period; India = fastest-growing major economy
GVA – Gross Value Added	GVA = GDP - product taxes + product subsidies; sectoral breakdown: agriculture, industry (manufacturing, construction, mining), services; GVA growth by sector reveals structural story behind GDP headline
Capex push	Union Budget FY2026-27 capex = ₹11.11 lakh crore (3.4% of GDP); government capex crowds in private investment; multiplier effect on GDP growth; infrastructure (roads, railways, ports) primary recipient
IIP connection	Index of Industrial Production (July 2026) = 6.7% growth; manufacturing 7.2%; capital goods 12.3% – corroborates Q1 GDP industrial strength; IIP is monthly, GDP quarterly – IIP = leading indicator
Private consumption revival	Urban consumption recovering (consumer durables +9.8% in IIP); rural consumption recovering slower; PMJDY + DBT ensuring welfare transfer floor; FMCG companies report rural recovery 'gradual'
India vs China growth	India 7.8% vs China 4.7% in Q1 2026; India consistently faster since FY2022; 'China+1' strategy = manufacturing FDI to India; India targeting \$1 trillion manufacturing by 2030

UPSC Relevance



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- GS3 Economy: GDP composition, drivers, methodology; India's growth story – structural vs cyclical; capex multiplier; private investment recovery
- Prelims: Q1 FY2026-27 GDP = 7.8%; base year = 2011-12; MoSPI releases GDP data; GVA + net taxes = GDP; India fastest-growing major economy
- Mains: Analyse India's economic growth – what's sustaining it (capex, services, manufacturing PLI), what are the risks (private investment gap, rural consumption, global headwinds), what reforms are needed

India Sovereign Credit Rating Upgraded to 'A-' – Japan Credit Rating Agency

Ministry: Ministry of Finance

PIB Date: 2 September 2026

Easy Explanation

Japan Credit Rating Agency (JCR) upgraded India's sovereign credit rating from 'BBB+' to 'A-' with Stable Outlook – India's first 'A' category rating from any major credit rating agency. This is significant: the 'A' category indicates 'strong capacity to meet financial commitments' as opposed to 'BBB' which is the lowest investment grade. India has been stuck in 'BBB' territory with Moody's, S&P, and Fitch despite being the world's fastest-growing major economy – a longstanding complaint of Indian policymakers who argue that Western CRAs underrate India. JCR's upgrade, while not from the 'Big Three' (Moody's, Fitch, S&P), is a meaningful signal: it validates India's fiscal consolidation (fiscal deficit path from 6.4% in FY2020-21 to 4.9% in FY2025-26), strong GDP growth, and improving debt dynamics. It also matters for Japanese institutional investors (including GPIF, the world's largest pension fund – India sought investment from this week's Tokyo visit) who use JCR ratings.

Key Terms

Term	Definition
Sovereign credit rating	Assessment of a country's ability and willingness to repay its debt; assigned by credit rating agencies (CRAs); determines borrowing cost for government bonds; affects FDI and FPI flows
JCR – Japan Credit Rating Agency	Japan's leading CRA; significant for Japanese institutional investors (GPIF, Japanese banks, insurance companies); not in Big Three (Moody's, Fitch, S&P) but influential in Asian markets



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Rating scale	AAA (highest) → AA → A → BBB (lowest investment grade) → BB and below (speculative/junk); India upgraded from BBB+ to A- by JCR; still BBB- to BBB by Moody's/Fitch/S&P
Big Three CRA criticism	Moody's, Fitch, S&P seen as underrating India relative to fundamentals; India's GDP growth, demographic dividend, fiscal consolidation not fully reflected; India GDP = \$3.7 trillion (5th largest), fastest-growing major economy
Fiscal consolidation path	India's fiscal deficit: 6.4% FY2020-21 (COVID peak) → 5.8% FY2022-23 → 5.1% FY2023-24 → 4.9% FY2025-26 → 4.5% target FY2026-27; steady consolidation without growth sacrifice
Implications of upgrade	Lower borrowing costs for sovereign bonds; signal to Japanese institutional capital (GPIF investment discussions – Goyal Tokyo visit same week); FPI inflows into Indian debt; India's case to Big Three CRAs strengthened
Debt-to-GDP	India's general government debt ~83% of GDP; high by emerging market standards; but largely domestic currency debt (lower default risk); JCR factored this with growth trajectory – hence upgrade

UPSC Relevance

- GS3 Economy: Sovereign credit rating mechanics; India's fiscal consolidation; why India's rating matters; Big Three CRA criticism from Indian policymakers
- Prelims: JCR upgraded India to A- (first 'A' category from any major CRA); Big Three = Moody's, Fitch, S&P; BBB = lowest investment grade; Stable Outlook
- Mains: Credit rating agencies and India – assess whether Big Three ratings fairly reflect India's fundamentals; what fiscal and structural reforms would support further upgrades

GIFT IFSC — \$52.8 Billion FCNR(B) Mobilised; International Banking Hub

Ministry: Ministry of Finance / IFSCA



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PIB Date: 2 September 2026

Easy Explanation

GIFT IFSC (Gujarat International Finance Tec-City International Financial Services Centre) has mobilised over \$52.8 billion under RBI's FCNR(B) Swap Facility, \$11.62 billion in External Commercial Borrowings (ECBs), and \$11.12 billion in bond listings by banks. This data cements GIFT IFSC's emergence as a genuine international banking hub – not just a regulatory experiment. GIFT IFSC is India's first and only IFSC, a special economic zone for financial services where Indian and foreign financial institutions can transact in foreign currencies with a streamlined regulatory framework. The scale of FCNR(B) mobilisation is striking: FCNR(B) deposits are Foreign Currency Non-Resident (Bank) deposits – foreign currency fixed deposits by NRIs that earn competitive interest rates. RBI's swap facility converts these into rupees for the banking system, providing dollar liquidity. GIFT IFSC also hosts: global banking units (GBUs) of Indian and foreign banks; aircraft leasing (India trying to capture a share of the \$70 billion global aircraft leasing market – 85% currently from Ireland and Singapore); bullion trading; and alternative investment funds (AIFs).

Key Terms

Term	Definition
GIFT IFSC	Gujarat International Finance Tec-City IFSC; Gandhinagar, Gujarat; India's first IFSC; IFSCA (International Financial Services Centres Authority) regulates; special economic zone for financial services in foreign currency
IFSCA	International Financial Services Centres Authority; statutory regulator for GIFT IFSC; established 2020; unified regulator (replaces RBI, SEBI, IRDAI, PFRDA for IFSC activities); headquarters Gandhinagar
FCNR(B) deposits	Foreign Currency Non-Resident (Bank) deposits; foreign currency fixed deposits by NRIs; earn competitive interest; RBI's swap facility converts to rupees for domestic banking system – dollar liquidity tool



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ECBs – External Commercial Borrowings	Borrowing by Indian entities from foreign sources; regulated by RBI; GIFT IFSC = preferred routing for ECBs; \$11.62 billion through GIFT IFSC = significant
Aircraft leasing	Global aircraft leasing market = ~\$70 billion; 85% from Ireland (Shannon) and Singapore; India wants share – GIFT IFSC set up aircraft leasing regime; Air India, IndiGo leasing via GIFT; tax breaks for lessors
Alternative Investment Funds (AIFs)	Pooled investment vehicles; Category I (infrastructure, SME, social venture funds), II (PE, VC, debt funds), III (hedge funds); GIFT IFSC AIF regime attracts international capital into India
Singapore/Dubai competition	GIFT IFSC competes with Singapore (MAS), Dubai (DIFC), London; advantages: access to India's \$3.7T economy, NRI-focused products, tax treaties; disadvantage: new, still building liquidity and talent pool

UPSC Relevance

- GS3 Economy: GIFT IFSC – structure, IFSCA, products offered; FCNR(B) mechanics; aircraft leasing; India's fintech/financial services ambition
- Prelims: GIFT IFSC = Gandhinagar, Gujarat; IFSCA = regulator; FCNR(B) = foreign currency deposits by NRIs; India's first IFSC
- Mains: GIFT IFSC as India's strategy to capture international financial services; challenges vs Singapore/Dubai; what makes a successful IFC

LESS NOISE. MORE RETENTION.

NLMC E-Auction of 459 RINL Land Parcels – Visakhapatnam

Ministry: Ministry of Finance / NLMC

PIB Date: 1 September 2026

Easy Explanation

National Land Monetisation Corporation (NLMC) will facilitate an e-auction of 459 land parcels belonging to Rashtriya Ispat Nigam Limited (RINL) – the steel PSU that runs Vizag Steel Plant (VSP) in Visakhapatnam. RINL has been in severe financial distress: accumulated losses of over ₹16,000 crore,



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debt of ₹25,000+ crore, and multiple failed attempts at privatisation (the Cabinet approved RINL's strategic disinvestment in 2021 but buyers have not materialised). The land monetisation – RINL has significant land holdings around Visakhapatnam – is an attempt to generate cash without completing outright privatisation. NLMC (set up in 2022) is the central agency for monetising surplus land of Central Public Sector Enterprises (CPSEs) and government departments. RINL's land auction is one of its largest assignments. The amounts involved are significant: Visakhapatnam real estate values are rising given the city's status as Andhra Pradesh's capital and a growing port city.

Key Terms

Term	Definition
NLMC	National Land Monetisation Corporation; set up August 2022; subsidiary of DIPAM (Dept of Investment and Public Asset Management); monetises surplus land of CPSEs and government departments; provides expertise, transaction support
RINL – Rashtriya Ispat Nigam Limited	Visakhapatnam Steel Plant (Vizag Steel); only coastal integrated steel plant in India; commissioned 1992; capacity 7.3 MTPA; major employer in Andhra Pradesh; accumulated losses ₹16,000+ crore; strategic disinvestment approved 2021 but not completed
DIPAM	Department of Investment and Public Asset Management; Ministry of Finance; manages disinvestment, PSE asset monetisation; National Monetisation Pipeline (NMP) = ₹6 lakh crore pipeline 2021-25; NLMC under DIPAM
National Monetisation Pipeline (NMP)	₹6 lakh crore asset monetisation pipeline (FY2022-25); roads, railways, power transmission, gas pipelines, airports, telecom; land = separate NLMC track; monetisation ≠ privatisation (assets return to government after concession)



Vizag as AP capital	Andhra Pradesh shifted capital functions to Visakhapatnam after Amaravati controversy; IT sector growing; port expansion; land values rising – RINL's land holdings therefore more valuable
Land monetisation vs privatisation	Land monetisation: sell/lease land, retain plant; privatisation: sell the whole entity; RINL land auction = monetisation, not disinvestment of steel plant itself; different politically

UPSC Relevance

- GS3 Economy: NLMC, DIPAM, National Monetisation Pipeline; RINL's financial distress; land monetisation as fiscal tool; PSU restructuring
- Prelims: NLMC = National Land Monetisation Corporation; RINL = Rashtriya Ispat Nigam Limited = Vizag Steel; DIPAM manages disinvestment; NMP = ₹6 lakh crore pipeline
- Mains: PSU asset monetisation – rationale, critique, implementation challenges; RINL case study – why privatisation stalled, what land monetisation achieves

GSLV-F17 Successfully Launches EOS-05

Ministry: Department of Space / ISRO

PIB Date: 4 September 2026

Easy Explanation

ISRO's Geosynchronous Satellite Launch Vehicle (GSLV-F17) successfully placed the Earth Observation Satellite EOS-05 into Geosynchronous Transfer Orbit (GTO). PM Modi lauded ISRO for the achievement. EOS-05 is an earth observation satellite – part of ISRO's renamed EOS series (previously known as RISAT, Cartosat, ResourceSat, OceanSat series under new unified naming). Earth observation satellites serve multiple purposes: agriculture (crop area estimation, drought monitoring), disaster management (flood mapping, cyclone tracking), urban planning (land use change detection), defence surveillance, and environmental monitoring. GSLV-F17 uses the indigenous Cryogenic Upper Stage (CE-20 engine) – a technology that India developed indigenously after Russia refused to transfer it in the 1990s (the ISRO-Glavkosmos scandal). The GSLV has had a mixed history (GSLV-F10 failed in 2021) but has improved significantly. GSLV Mark III (now LVM3) is a separate, heavier vehicle.

Key Terms



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Term	Definition
GSLV – Geosynchronous Satellite Launch Vehicle	India's medium-lift launch vehicle; 3 stages (solid + liquid + cryogenic); payload to GTO: ~2.5 tonnes; uses indigenous Cryogenic Upper Stage (CE-20 engine); distinct from GSLV Mk III (now LVM3)
EOS series	ISRO's unified Earth Observation Satellite series; covers previous RISAT (SAR imaging), Cartosat (optical imaging), ResourceSat, OceanSat; EOS-04 = SAR, EOS-06 = OceanSat-3, EOS-05 = latest
Cryogenic Upper Stage	Cryogenic propellant = liquid hydrogen + liquid oxygen; highest efficiency (Isp ~450s); India developed CE-7.5 (earlier GSLV) and CE-20 (GSLV Mk II) indigenously; Russia technology denial in 1990s led to 15-year delay but eventual indigenous development
ISRO-Glavkosmos case	1992-93: USA pressured Russia (Glavkosmos) to cancel cryogenic technology transfer to India; ISRO had to develop independently; Kalpana Chawla, APJ Abdul Kalam era – eventually CE-7.5 engine developed by 2014
GTO – Geosynchronous Transfer Orbit	Elliptical orbit used to transfer satellite from low Earth orbit to geostationary orbit; perigee ~200 km, apogee ~35,786 km; satellite then uses own propulsion to circularise to GEO
Earth observation applications	Agriculture: crop area, NDVI; Disaster: flood mapping, cyclone tracking; Defence: border surveillance; Environment: deforestation, glacier retreat; Urban: built-up area change; ISRO data used by NDMA, MoA, defence

UPSC Relevance

- Prelims: GSLV = Geosynchronous Satellite Launch Vehicle; cryogenic stage = CE-20 (liquid H₂ + liquid O₂); GTO = Geosynchronous Transfer Orbit; GSLV vs LVM3 – distinct vehicles



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- GS3 Science: India's space programme milestones; cryogenic technology development history; EOS satellite applications for governance
- Mains: India's space programme – from dependence to indigenisation; ISRO's dual civilian-military use; New Space India Ltd (NSIL) and commercialisation

C-DOT Unveils 14 Indigenous Quantum Products for Communication Security

Ministry: Ministry of Communications / DoT

PIB Date: 31 August 2026

Easy Explanation

Centre for Development of Telematics (C-DOT) – India's telecom R&D centre – unveiled 14 indigenous quantum technology products aimed at strengthening the security of India's communication networks. These include Quantum Key Distribution (QKD) systems, Quantum Random Number Generators (QRNGs), and quantum-secured communication devices. Why does this matter? Classical encryption (RSA, AES) is theoretically vulnerable to quantum computers – a sufficiently powerful quantum computer could break RSA encryption in hours. Quantum cryptography, specifically QKD, uses quantum mechanics (specifically, the quantum property that observing a quantum state disturbs it) to distribute encryption keys with mathematically provable security – any interception is detectable. India's indigenisation of QKD is critical: telecom infrastructure security, government communication security, defence communication encryption. C-DOT's quantum products will be deployed in India's existing telecom networks – a step toward post-quantum cryptographic resilience.

Key Terms

Term	Definition
QKD – Quantum Key Distribution	Uses quantum properties (photon polarisation) to distribute encryption keys; any eavesdropping disturbs quantum states – detectable; theoretically unbreakable; deployed on optical fibre or free-space (satellite QKD)
C-DOT	Centre for Development of Telematics; established 1984; India's premier telecom R&D centre; developed indigenously rural



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	telephone exchanges in 1980s-90s; now 5G, quantum, AI telecom R&D
QRNG – Quantum Random Number Generator	Uses quantum phenomena (radioactive decay, photon detection) to generate true random numbers; critical for cryptographic key generation; classical pseudo-RNGs are predictable in theory
Post-quantum cryptography	Cryptographic algorithms resistant to quantum computer attacks; NIST finalised post-quantum standards (CRYSTALS-Kyber for key encapsulation, CRYSTALS-Dilithium for signatures) in 2024; India needs to migrate government systems
Quantum threat timeline	Large-scale quantum computers ('cryptographically relevant') may arrive 2030-2035; 'harvest now, decrypt later' threat = adversaries collecting encrypted data today to decrypt once quantum computers are ready; urgency real
National Quantum Mission	India's NQM (2023, ₹6,003 crore, 2023-31); 4 themes: quantum computing, quantum communication, quantum sensing, quantum materials; C-DOT's QKD products = quantum communication track deliverable
India's quantum ecosystem	C-DOT (QKD), IISc (quantum computing), IIT Bombay (quantum sensing), TIFR (quantum materials); NQM coordinates; targets: 50-1000 qubit quantum computer by 2031, satellite QKD by 2028

UPSC Relevance

- GS3 Science/Technology: Quantum cryptography; QKD mechanics; National Quantum Mission; post-quantum cryptography urgency
- Prelims: C-DOT = Centre for Development of Telematics; NQM = National Quantum Mission (₹6,003 crore, 2023-31); QKD = Quantum Key Distribution; QRNG = Quantum Random Number Generator
- Mains: India's quantum technology strategy – NQM goals, India's position vs USA/China, applications in defence and communication security



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Century-Old Thermodynamic Limit on Heat-to-Electricity Conversion Surpassed

Ministry: Ministry of Science and Technology

PIB Date: 31 August 2026

Easy Explanation

Indian scientists surpassed a century-old theoretical limit on converting heat into electricity – enabling ultrasensitive temperature sensing. The breakthrough involves thermoelectric materials that convert temperature gradients into electrical voltage. The traditional limit – derived from classical thermodynamics (specifically, the Thomson/Kelvin relations governing the Seebeck effect) – capped the efficiency of thermoelectric energy conversion. The new approach exploits quantum effects in specially engineered materials to exceed this classical limit. Practical implications: ultrasensitive temperature sensors (medical diagnostics, industrial process control, environmental monitoring), waste heat recovery (converting industrial waste heat to electricity – improving energy efficiency), and wearable electronics (body heat → electricity for powering IoT devices). The breakthrough was achieved at a national science institution and published in a top international journal. India's science journals have increasingly featured in Nature family publications in recent years.

Key Terms

Term	Definition
Seebeck effect	Thermoelectric effect: temperature difference between two dissimilar conductors/semiconductors generates a voltage; basis of thermoelectric generators (TEGs) and thermocouples; discovered 1821 by Thomas Seebeck
Thermoelectric materials	Materials with high Seebeck coefficient, low electrical resistance, low thermal conductivity = high ZT (figure of merit); bismuth telluride (Bi_2Te_3) = current best; quantum materials = new frontier
ZT – Figure of Merit	Dimensionless measure of thermoelectric efficiency: $ZT = S^2\sigma T/\kappa$ where S = Seebeck coefficient, σ = electrical conductivity, T =



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	temperature, κ = thermal conductivity; $ZT > 1$ = practical; quantum approaches may exceed classical ZT limits
Waste heat recovery	~60% of energy generated globally lost as heat; thermoelectric generators on industrial exhausts, vehicle exhausts, power plants could recover significant energy; exceeding classical limit = higher efficiency recovery
Quantum effects in materials	At nanoscale, quantum confinement, tunnelling, interference affect electron transport; quantum-engineered materials can decouple thermal and electrical conductivity – bypassing classical thermoelectric limits
National Quantum Mission link	C-DOT quantum products (same week) + thermoelectric breakthrough = India's quantum science output accelerating; quantum sensing (NQM's third theme) encompasses ultrasensitive temperature sensing

UPSC Relevance

- GS3 Science: Thermoelectric effect (Seebeck effect); thermoelectric materials; applications in waste heat recovery, medical sensing; quantum materials
- Prelims: Seebeck effect = heat to electricity; thermoelectric materials = high ZT; ZT = figure of merit for thermoelectric efficiency
- Mains: India's scientific research capacity – connect to National Quantum Mission, PM Research Fellowship, ANRF (Anusandhan National Research Foundation) established 2023

LESS NOISE. MORE RETENTION.

Legal Metrology (Indian Standard Time) Rules, 2026 – 'One Nation, One Time'

Ministry: Ministry of Consumer Affairs / Ministry of Science and Technology

PIB Date: 30 August - 2 September 2026

Easy Explanation

The Department of Consumer Affairs notified the Legal Metrology (Indian Standard Time) Rules, 2026 – a significant step toward 'One Nation, One Time.' India currently operates on a single time zone (IST = UTC+5:30) but there has been a longstanding debate about whether India – spanning ~30 degrees of



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longitude (roughly equivalent to the time difference between Mumbai and Kolkata) – should have two time zones. The 'One Nation, One Time' push is in the opposite direction: standardising IST as the legal metrology standard, ensuring all official clocks, devices, and instruments across India display IST uniformly. The Legal Metrology framework covers weights, measures, and now time – ensuring that clocks on electronic devices, railway stations, government offices, and commercial establishments all display legally standardised IST. The rules also address NTP (Network Time Protocol) synchronisation – ensuring India's digital clocks are synchronized with the National Physical Laboratory (NPL), New Delhi, which maintains India's primary time standard.

Key Terms

Term	Definition
IST – Indian Standard Time	UTC+5:30; no daylight saving time; single time zone for entire India; NPL (National Physical Laboratory), New Delhi = India's primary time standard keeper; based on 82.5°E longitude (Mirzapur, UP)
Legal Metrology Act 2009	Regulates weights, measures, and related devices; enforced by Dept of Consumer Affairs; state legal metrology officers enforce locally; now extended to time standardisation
NPL – National Physical Laboratory	CSIR institute, New Delhi; India's national measurement institute; maintains primary standards for length, mass, time, temperature; India's caesium atomic clock = IST primary standard
NTP – Network Time Protocol	Internet protocol for synchronising clocks over a network; IST NTP servers at NPL provide authoritative time source; devices sync to NPL NTP → IST uniformity across digital infrastructure
Two time zones debate	Argued for northeast India (sunrise/sunset 2 hours earlier than IST in Arunachal Pradesh); CSIR-NPL studied in 2016, didn't recommend two zones; productivity gains vs coordination costs; government has consistently rejected two-zone proposal



One Nation policy family	One Nation One Ration Card (food security portability), One Nation One Grid (power transmission), One Nation One Mobility Card (transport), One Nation One Time (IST standardisation) – unified national infrastructure theme
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UPSC Relevance

- Prelims: IST = UTC+5:30; 82.5° E longitude (Mirzapur) = basis; NPL = India's primary time standard; NTP = Network Time Protocol; Legal Metrology Act 2009
- GS2/GS3: One Nation One Time – connect to One Nation policy family; federalism dimensions; northeast time zone debate; NPL's role in India's measurement infrastructure

CSIR-CRRI 60% RAP Technology on NH-716 – Recycled Asphalt Pavement Landmark

Ministry: Ministry of Science and Technology / MoRTH

PIB Date: 2 September 2026

Easy Explanation

CSIR-Central Road Research Institute (CRRI), OSEPL, and Ooms India demonstrated 60% Recycled Asphalt Pavement (RAP) technology on National Highway 716 – a landmark in sustainable road construction. RAP involves reusing milled material from old roads in new road construction. 60% RAP means 60% of the material in the new road surface is recycled from the old road – dramatically reducing the need for fresh bitumen (a petroleum product, hence costly and carbon-intensive) and virgin aggregates (quarried stone). Currently, India uses 10-20% RAP in road construction – the global best practice is 30-40% in developed countries. 60% RAP is at the frontier of what is technically achievable. Benefits: lower road construction cost (fresh bitumen costs ₹40,000-50,000 per tonne), lower carbon emissions, reduced quarrying pressure, and extended use of India's existing road surface materials. India has 1.46 lakh km of National Highways – the RAP resource available from periodic resurfacing is enormous.

Key Terms

Term	Definition
RAP – Recycled Asphalt Pavement	Milling old road surface, processing, and reusing in new road construction; reduces fresh bitumen and aggregate needs; 60%



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	RAP = 60% of new pavement is recycled material; India currently uses 10-20%
CSIR-CRRI	Central Road Research Institute; New Delhi; CSIR institute; India's premier road research institution; standards for road construction, pavement design, road safety; RAP technology development
Bitumen	Viscous black petroleum-derived material binding aggregate in asphalt roads; India imports ~45% of its bitumen needs; highly carbon-intensive; ₹40,000-50,000/tonne; reducing bitumen use = cost and carbon savings
NH-716	National Highway 716; demonstration site for 60% RAP; NHAI maintains National Highways; India has 1.46 lakh km of NHs; periodic resurfacing generates large RAP resource
Green highways	MoRTH's Green Highways Policy 2015; NHAI's Green Highway Excellence Awards (same week); RAP + recycled plastic roads + fly-ash use + wayside plantation; sustainable road construction agenda
OSEPL + Ooms India	Private sector partners in RAP demonstration; Ooms India = Dutch company with RAP expertise; technology demonstration involved public (CRRI) + private (OSEPL, Ooms) partnership – model for technology scaling

UPSC Relevance

- GS3 Environment/Infrastructure: RAP technology; sustainable road construction; Green Highways Policy; India's bitumen import dependency; circular economy in construction
- Prelims: CSIR-CRRI = Central Road Research Institute; RAP = Recycled Asphalt Pavement; India's NH network = 1.46 lakh km; bitumen = petroleum-derived road binding material
- Mains: Sustainable infrastructure – how India can reduce construction costs and emissions simultaneously; circular economy principles in public works



BIO-NIVESH Launched – Catalysing Biotech Investment and Scale-Up

Ministry: Ministry of Science and Technology

PIB Date: 3 September 2026

Easy Explanation

Union Minister Dr. Jitendra Singh launched BIO-NIVESH – a platform to catalyse investment into India's biotechnology sector. BIO-NIVESH (NIVESH = investment in Hindi) is a structured interface between biotech startups, investors (VCs, PE, family offices, strategic investors), and government support systems (Biotechnology Industry Research Assistance Council – BIRAC, Department of Biotechnology – DBT). India's biotech sector is significant: ~\$130 billion industry (2024), target \$300 billion by 2030; vaccines (Serum Institute, Bharat Biotech), biosimilars (India = world's largest biosimilar producer), agricultural biotech, and industrial biotech. The sector needs more risk capital in early stages – BIO-NIVESH creates a structured matchmaking platform. Announced same week as 'Tiny molecular switch – biomaterials for self-powered healthcare' breakthrough – signalling India's push to convert biotech research into investment and commercial products.

Key Terms

Term	Definition
BIO-NIVESH	Platform to catalyse investment into Indian biotech; connects startups + investors + BIRAC/DBT; launch September 2026; structured matchmaking for biotech scale-up
BIRAC	Biotechnology Industry Research Assistance Council; DBT's interface with industry; funding (BIPP, SBIRI schemes), incubation, regulatory support; ~₹5,000 crore deployed since inception
India's biotech sector	~\$130 billion industry (2024); target \$300 billion by 2030; vaccines (SII, Bharat Biotech), biosimilars, agricultural biotech, industrial biotech; 3rd largest biotech hub in Asia-Pacific, 12th globally



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Biosimilars	Biologic medicines similar (not identical) to already-approved biologics; complex molecules (proteins, antibodies) unlike chemical generics; India = world's largest biosimilar producer; major export to USA, EU, regulated markets
DBT – Department of Biotechnology	Ministry of Science and Technology; India's primary biotech governance body; BIRAC, Biotech clusters (Hyderabad, Bangalore, Pune), BioE3 Policy (2024), National Biopharma Mission
BioE3 Policy 2024	Biotechnology for Economy, Environment, Employment; India's comprehensive biotech industrial policy; targets biomanufacturing, biofuels, bio-based chemicals, agri-biotech; connects to BIO-NIVESH as investment platform
Risk capital gap	Indian biotech startups face 'valley of death' between research and commercialisation; BIRAC grant-based funding → BIO-NIVESH equity investment bridge; models: USA's SBIR/STTR, UK's BBB (British Business Bank)

UPSC Relevance

- GS3 Science/Economy: India's biotech sector; BIRAC; BioE3 Policy 2024; biosimilars; risk capital in deep tech; startup ecosystem for biotech
- Prelims: BIRAC = Biotechnology Industry Research Assistance Council; India biotech = ~\$130 billion; target \$300 billion 2030; India = world's largest biosimilar producer; BioE3 Policy 2024

LESS NOISE. MORE RETENTION.

Tiny Molecular Switch — Nature-Inspired Biomaterials for Self-Powered Healthcare

Ministry: Ministry of Science and Technology

PIB Date: 3 September 2026

Easy Explanation

Indian researchers demonstrated a tiny molecular switch that enables nature-inspired biomaterials capable of powering healthcare devices using ambient energy sources – a breakthrough at the intersection of



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materials science, nanotechnology, and biomedical engineering. The molecular switch responds to environmental stimuli (pH, temperature, light, mechanical stress) – mimicking biological systems like proteins that change shape to perform functions. The resulting 'smart biomaterials' can: harvest mechanical energy from body motion (piezoelectric effect) or thermal energy from body heat (thermoelectric effect – related to the week's other breakthrough) to power implantable or wearable sensors; and respond autonomously to physiological changes (pH changes in tumour microenvironment, for targeted drug delivery). The application: self-powered wearable health monitors, implantable biosensors that don't need battery replacement, and responsive drug delivery systems. This connects directly to India's Digital Health Mission and the push for affordable, battery-free healthcare devices for rural and remote settings.

Key Terms

Term	Definition
Molecular switch	Molecule that changes structure/properties in response to stimulus (light, pH, temperature, mechanical force); mimics biological switches (allosteric proteins, DNA G-quadruplexes); enables 'smart' material behaviour
Biomaterials	Materials engineered to interact with biological systems; implants (titanium, PEEK), biosensors, drug delivery systems, tissue scaffolds; 'smart biomaterials' respond to physiological cues
Piezoelectric effect	Mechanical stress → electrical voltage generation; quartz is classic piezoelectric; biological motion (walking, heartbeat) → electricity via piezoelectric biomaterials → powers wearable/implantable devices; no battery needed
Self-powered devices	Devices powered by ambient energy (body motion, heat, light) via nanogenerators; eliminates battery – critical for implantables (no surgery for battery replacement) and remote area wearables
Ayushman Bharat Digital Mission	India's national digital health ecosystem; health IDs, healthcare registries, telemedicine; self-powered wearable sensors feeding



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	into ABDM = rural health monitoring without infrastructure dependency
Anusandhan National Research Foundation (ANRF)	Established 2023; funds, coordinates, promotes scientific research; ₹50,000 crore over 5 years; replaces SERB; India's primary competitive research funding body; this biomaterials research = type ANRF funds

UPSC Relevance

- GS3 Science: Smart biomaterials; piezoelectric effect; self-powered wearables; applications in rural healthcare and digital health mission
- Prelims: Piezoelectric effect = mechanical stress → electricity; ANRF = Anusandhan National Research Foundation (₹50,000 crore, 5 years); ABDM = Ayushman Bharat Digital Mission

Zero-Emission Shipping Corridors — Ports Ministry Pushes Green Fuel Readiness

Ministry: Ministry of Ports, Shipping and Waterways

PIB Date: 3 September 2026

Easy Explanation

Union Minister Sarbananda Sonowal charted a course for zero-emission shipping corridors and directed ports to fast-track green fuel readiness. India's maritime sector — handling ~95% of trade by volume and ~70% by value — is under increasing pressure to decarbonise. The International Maritime Organisation (IMO) revised its GHG strategy (2023) targets: 20-30% reduction in GHG by 2030, 70-80% by 2040, and net-zero by 2050. Green shipping fuels under consideration: ammonia (zero carbon combustion, but toxic, requires new infrastructure), methanol (easier to handle, Maersk already deploying methanol ships), LNG (lower-emission transition fuel), and green hydrogen (highest promise, highest infrastructure challenge). India's major ports — Jawaharlal Nehru Port (JNPT), Mundra, Chennai, Visakhapatnam — will need to develop bunkering (ship fuelling) infrastructure for green fuels. India also has the opportunity to become a green ammonia and green methanol exporter — with its renewable energy capacity, India could produce these cost-competitively.

Key Terms



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Term	Definition
Zero-emission shipping corridors	Designated shipping routes where ships use only zero/near-zero emission fuels; pioneered by Green Shipping Challenge (COP27, 2022); Clydebank Declaration (6 green corridors by 2025); India not yet on announced corridors but pushing domestically
IMO GHG Strategy 2023	International Maritime Organisation's revised greenhouse gas strategy; 20-30% reduction by 2030, 70-80% by 2040, net-zero by/around 2050; replaces 2018 strategy (50% by 2050); more ambitious timeline
Green shipping fuels	Ammonia (zero carbon, toxic, new infrastructure), methanol (easier handling, Maersk deploying), LNG (transition fuel, still fossil), green hydrogen (highest promise); each requires different ship engines and port bunkering infrastructure
Bunkering infrastructure	Ship fuelling facilities at ports; conventional = petroleum bunker; green bunkering = ammonia, methanol, LNG storage + transfer; massive infrastructure investment required; safety challenges (ammonia toxicity, LNG cryogenics)
India's green fuel opportunity	India's renewable capacity (solar, wind) → green hydrogen → green ammonia or methanol; low-cost green energy = competitive green shipping fuel production; exports to Japan, South Korea, EU (large shipping fuel consumers)
Sagarmala programme	Ministry of Ports' flagship port-led development programme; port modernisation, connectivity, coastal economic zones; green shipping = newest Sagarmala sustainability dimension
JNPT	Jawaharlal Nehru Port Trust (Navi Mumbai); India's largest container port; handles ~55% of India's containerised cargo; first port to target green fuel bunkering readiness



UPSC Relevance

- GS3 Environment/Economy: IMO GHG Strategy 2023; green shipping fuels; bunkering infrastructure; India's green ammonia opportunity; Sagarmala + green shipping
- Prelims: IMO = International Maritime Organisation; green shipping fuels = ammonia, methanol, LNG, green hydrogen; JNPT = India's largest container port; Sagarmala = port-led development
- Mains: India's maritime decarbonisation challenge – IMO targets, infrastructure investment needed, India's dual opportunity (port readiness + green fuel export)

Agentic AI Skilling – NIELIT and Intel India Launch National Programme

Ministry: Ministry of Electronics and IT

PIB Date: 3 September 2026

Easy Explanation

NIELIT (National Institute of Electronics and Information Technology) and Intel India organised a National Leadership Dialogue and launched Agentic AI Skilling Programs to prepare India's workforce for the Agentic AI era. 'Agentic AI' refers to AI systems that can take sequences of actions, make decisions, and complete complex multi-step tasks autonomously – rather than simply responding to prompts. Examples: AI agents that autonomously browse the web, write code, run tests, and deploy software; AI agents that autonomously manage customer service workflows; or AI copilots in manufacturing that monitor, diagnose, and suggest corrective actions without human prompting at each step. The launch is significant because: India has ~5.8 million IT professionals and is the world's largest technology talent pool; skilling this workforce for Agentic AI (vs earlier generative AI wave) positions India for the next productivity frontier. NIELIT is the primary government ICT skilling institution – its reach into tier-2/3 cities is crucial for democratising AI skilling.

Key Terms

Term	Definition
Agentic AI	AI systems that act autonomously to complete multi-step tasks; use 'tools' (web search, code execution, file management); examples: AutoGPT, Claude Code, Devin (AI software engineer); distinct from chatbot/prompt-response AI



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NIELIT	National Institute of Electronics and Information Technology; autonomous body under MeitY; ICT skilling in India; CCC (Course on Computer Concepts) = India's most widely taken computer literacy course; centres across India including remote areas
Intel's AI skilling	Intel's AI for Youth, AI on PC Initiative; hardware (Intel Core Ultra with NPU) + software (OpenVINO AI toolkit); partners with governments globally for AI workforce development; India partnership = significant scale
India's IT workforce	~5.8 million IT professionals; world's largest tech talent pool; NASSCOM reports; currently 60-70% in traditional software development; Agentic AI = next productivity wave that this workforce must master
IndiaAI Mission connection	IndiaAI Mission (₹10,372 crore); AI skilling pillar = 5 lakh AI skilling target over 3 years; NIELIT as implementation agency; Intel partnership adds private sector resources and hardware
NPU – Neural Processing Unit	Dedicated chip for AI inference; present in Intel Core Ultra, Apple M-series, Qualcomm Snapdragon X; runs AI models locally (on-device) without cloud; critical for agentic AI in edge/offline scenarios

LESS NOISE. MORE RETENTION.

UPSC Relevance

- GS3 Science/Economy: Agentic AI; India's IT workforce skilling; NIELIT; IndiaAI Mission; AI skilling pillar; India as AI talent hub
- Prelims: NIELIT = National Institute of Electronics and Information Technology; Agentic AI = autonomous multi-step AI; IndiaAI Mission = ₹10,372 crore; NPU = Neural Processing Unit

Swachh Sagar, Surakshit Sagar 2026 — 5th Edition, Ocean Conservation Movement

Ministry: Ministry of Earth Sciences



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PIB Date: 1 September 2026

Easy Explanation

Union Minister Dr. Jitendra Singh launched the 5th edition of 'Swachh Sagar, Surakshit Sagar' (Clean Ocean, Safe Ocean) – a nationwide people's movement for ocean conservation. The campaign focuses on coastal and beach cleanup, marine plastic pollution awareness, and ocean health education. India has a 7,517 km coastline and a massive marine economy: blue economy contributes ~4% of GDP (target: 10% of GDP). Marine plastic pollution is a severe problem – India's rivers carry an estimated 0.4 million tonnes of plastic to the ocean annually (among highest globally). The campaign connects with global frameworks: UNEA Resolution 5/14 establishing an intergovernmental committee to develop a Global Plastics Treaty (INC-5 held in Busan, South Korea, November 2024 – complex negotiations ongoing); and UN Sustainable Development Goal 14 (Life Below Water). The Ministry of Earth Sciences oversees NCPOR (National Centre for Polar and Ocean Research) and INCOIS (Indian National Centre for Ocean Information Services) – both connect to the Swachh Sagar campaign's scientific foundation.

Key Terms

Term	Definition
Swachh Sagar, Surakshit Sagar	Nationwide coastal cleanup + ocean conservation campaign; Ministry of Earth Sciences; 5th edition 2026; beach cleanups, marine plastic awareness, citizen engagement; launched on National Marine Day (1 September)
India's blue economy	Ocean-based economic activities: fisheries (₹1.7 lakh crore), shipping, ports, offshore energy, coastal tourism, marine biotechnology; ~4% of GDP; target 10% of GDP; Sagarmala, Deep Ocean Mission, blue economy policy
Deep Ocean Mission	India's ₹4,077 crore, 5-year deep sea programme; 6 themes: deep sea mining, ocean climate change advisory, marine biodiversity, deep ocean survey, energy and freshwater from ocean, advanced marine station; Samudrayaan (manned submersible) under this



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Global Plastics Treaty (INC)	UNEA Resolution 5/14 (2022): Intergovernmental Negotiating Committee (INC) to develop legally binding global plastics treaty; INC-5 Busan November 2024; complex negotiations (production caps vs waste management focus); India's position: waste management focus, not production cap
Marine plastic pollution	India's rivers = ~0.4 million tonnes plastic to ocean annually; Ganga among world's top plastic-polluting rivers; single-use plastic ban (India 2022, 19 items) partial measure; Extended Producer Responsibility (EPR) framework for plastic packaging
SDG 14 – Life Below Water	Conserve and sustainably use oceans, seas, marine resources; targets include reducing marine pollution, protecting marine and coastal ecosystems, ending harmful fisheries subsidies; India's progress monitored by MoES

UPSC Relevance

- GS3 Environment: Blue economy; marine plastic pollution; Global Plastics Treaty negotiations (INC); SDG 14; Deep Ocean Mission; Samudrayaan
- Prelims: Swachh Sagar Surakshit Sagar = Ministry of Earth Sciences; Deep Ocean Mission = ₹4,077 crore; INCOIS = Indian National Centre for Ocean Information Services; SDG 14 = Life Below Water
- Mains: India's blue economy potential; marine plastic pollution – causes, India's contribution, policy responses; India's position on Global Plastics Treaty

LESS NOISE. MORE RETENTION.

Tiger Landscapes Workshop – Conservation, Bioeconomy and Ecotourism

Ministry: Ministry of Environment, Forest and Climate Change

PIB Date: 2 September 2026

Easy Explanation

Union Environment Minister Bhupender Yadav inaugurated an International Workshop themed 'Tiger Landscapes: Conservation, Bioeconomy and Ecotourism for Livelihood and Income Generation.' This workshop is significant in framing: it moves beyond 'tiger conservation as preservation' to 'tiger landscapes as economic assets.' India has ~3,682 tigers (2022 census) – 70% of the world's wild tiger population –



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across 54 tiger reserves covering 75,796 sq km. The bioeconomy angle: tiger landscapes support non-timber forest products (medicinal plants, bamboo, honey), carbon credits (tiger forests = significant carbon sinks), and ecotourism. Ecotourism from tiger reserves generates significant revenue – Ranthambore, Jim Corbett, and Bandhavgarh are among India's top wildlife tourism destinations. The 'income generation' frame is important: it directly addresses the human-wildlife conflict problem by making local communities economic stakeholders in tiger conservation rather than its victims. This connects to the UNCCD COP17 community-based restoration theme from last week.

Key Terms

Term	Definition
Project Tiger	Launched 1973; one of India's most successful conservation programmes; tiger population: 1973 (1,827) → 2006 (1,411, crisis) → 2018 (2,967) → 2022 (3,682); 54 tiger reserves; NTCA (National Tiger Conservation Authority) oversees
NTCA	National Tiger Conservation Authority; statutory body under Wildlife Protection Act 1972 (amended 2006); oversees Project Tiger, tiger reserve management, M-STrIPES monitoring system
Bioeconomy	Economic activity derived from biological resources – food, agriculture, forestry, fisheries, bioenergy, bio-based materials; tiger landscape bioeconomy = NTFPs, carbon credits, medicinal plants, bamboo; estimated ₹50,000+ crore potential
Carbon credits from tiger forests	Tiger reserves = dense forests = significant carbon sinks; voluntary carbon market enables monetisation; REDD+ (Reducing Emissions from Deforestation and Forest Degradation) mechanism; India exploring carbon credit revenue for forest communities
Ecotourism	Wildlife tourism at tiger reserves; India's tiger tourism revenue = significant; community-based ecotourism = local income; Jim



	Corbett (~5 lakh visitors/year), Ranthambore (~3 lakh), Kaziranga, Bandhavgarh
Human-wildlife conflict	Tiger attacks on livestock and occasionally humans in forest fringe areas; retaliatory killings = major tiger mortality cause; making communities economic beneficiaries of tiger conservation reduces conflict – this workshop's core thesis
CITES and tigers	Convention on International Trade in Endangered Species; tigers in Appendix I (highest protection); tiger bone trade banned; India hosts CITES CoP delegates periodically

UPSC Relevance

- GS3 Environment: Project Tiger; NTCA; tiger census 2022 (3,682); bioeconomy from tiger landscapes; carbon credits; human-wildlife conflict solution through ecotourism
- Prelims: India = 70% of world's wild tigers; 54 tiger reserves; NTCA oversees Project Tiger; 2022 census = 3,682 tigers; M-StrIPES = tiger monitoring system
- Mains: Tiger conservation success story and emerging challenges; bioeconomy and ecotourism as sustainable conservation finance; human-wildlife conflict – causes and solutions

Home Secretary Reviews Himalayan States' GLOF and Snow Avalanche Preparedness

Ministry: Ministry of Home Affairs

PIB Date: 3 September 2026

Easy Explanation

Union Home Secretary reviewed the preparedness of Himalayan States and Union Territory for Glacial Lake Outburst Floods (GLOF) and snow avalanches – a timely and recurring UPSC-relevant topic. GLOFs are sudden releases of water when a glacial lake overflows or its dam (moraine or ice) breaks – typically triggered by landslides into the lake, ice avalanches, or glacial lake expansion due to warming. India's Himalayan states (Uttarakhand, Himachal Pradesh, Sikkim, Arunachal Pradesh, J&K, Ladakh) are increasingly GLOF-prone as glaciers retreat due to climate change. Recent major GLOFs: Chamoli disaster (February 2021, Uttarakhand) – debris flow killed ~200+; South Lhonak Lake GLOF (October 2023, Sikkim) – Teesta River flooding, major dam damage. GLOF preparedness involves: early warning systems (NDMA



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+ State agencies), community evacuation protocols, real-time satellite monitoring (ISRO + NRSC), and dam safety review (upstream glacial lake impact on dams).

Key Terms

Term	Definition
GLOF	Glacial Lake Outburst Flood; sudden release from glacial lake when dam (moraine, ice, landslide debris) fails; triggered by: ice/rock avalanche into lake, seismic activity, overtopping, piping; increasing frequency with climate warming
Recent Indian GLOFs	Chamoli (Feb 2021, Uttarakhand): debris flow from rock/ice avalanche, ~200+ killed, Rishiganga and Dhauliganga dams damaged; South Lhonak Lake GLOF (Oct 2023, Sikkim): Teesta flooding, 4,800+ MW Teesta-III dam damaged, ~100 deaths
NDMA – National Disaster Management Authority	Apex body for disaster management; chaired by PM; guidelines on GLOF, avalanche, earthquake preparedness; State DMAs implement; NDRF (National Disaster Response Force) deployed for rescue
NRSC – National Remote Sensing Centre	ISRO's earth observation data centre; Hyderabad; satellite imagery for glacier monitoring, GLOF risk mapping, disaster assessment; CARTOSAT, RISAT data for Himalayan monitoring
High Mountain Asia glaciers	Himalayas, Karakoram, Hindu Kush, Tibetan Plateau = largest glacier mass outside polar regions; 'Third Pole'; feeding 10 major Asian rivers; climate change accelerating glacial retreat; IPCC reports document
Avalanche preparedness	Snow avalanche = mass of snow, ice, rock sliding downslope; Himalayan passes (Rohtang, Zoji La, Nathu La) and border roads frequently blocked; BRO (Border Roads Organisation) clears; snow avalanche warnings by DRDO's Snow and Avalanche Study Establishment (SASE)



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GLOF early warning	Real-time lake monitoring (water level, outflow sensors); satellite-based lake area tracking; community alert systems; India-Swiss GLOF early warning project in Himachal Pradesh; NDMA guidelines
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UPSC Relevance

- GS3 Environment/Disaster Management: GLOF; Chamoli 2021; South Lhonak 2023; NDMA; NDRF; Himalayan glacier retreat; avalanche preparedness; SASE
- Prelims: GLOF = Glacial Lake Outburst Flood; NDMA = chaired by PM; NRSC = ISRO's earth observation centre, Hyderabad; SASE = Snow and Avalanche Study Establishment (DRDO); BRO = Border Roads Organisation
- Mains: GLOF risk in India – climate change linkage, past disasters, preparedness gaps; disaster management framework (NDMA, SDMA, NDRF structure); Himalayan glacier retreat as existential risk

Indo-German Environment Forum – Knowledge, Solutions, Institutional Capacity

Ministry: Ministry of Environment, Forest and Climate Change

PIB Date: 1 September 2026

Easy Explanation

Bhupender Yadav (Union Environment Minister) called on the 4th Indo-German Environment Forum to strengthen knowledge exchange, scale solutions, and build institutional capacity in environmental conservation. India-Germany environmental cooperation is substantive: Germany is India's largest trading partner in the EU (bilateral trade ~€30 billion); it is also India's largest development cooperation partner through KfW (German development bank) and GIZ (Deutsche Gesellschaft für Internationale Zusammenarbeit). Indo-German environmental cooperation areas: renewable energy (Germany's Energiewende = energy transition experience relevant to India's 500 GW non-fossil target), industrial decarbonisation (Germany's expertise in green hydrogen, hydrogen steelmaking relevant to India), biodiversity conservation, urban water management, waste management. The 4th edition signals sustained bilateral engagement – previous editions focused on air quality, water, and forests. Same week: India-Germany cooperation in power/sustainable development also noted.

Key Terms



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Term	Definition
Indo-German Environment Forum	Bilateral platform for environment cooperation; 4th edition September 2026; knowledge exchange, technology transfer, institutional capacity building; held in New Delhi
KfW	Kreditanstalt für Wiederaufbau (Reconstruction Credit Institute); Germany's state-owned development bank; India = one of KfW's largest borrower countries; finances renewable energy, water, urban development; committed €10+ billion to India
GIZ	Deutsche Gesellschaft für Internationale Zusammenarbeit; Germany's international development agency; implements bilateral development cooperation; Indo-German partnerships in solar energy (ISA + TERI), urban water, forestry
Energiewende	Germany's 'energy transition' – phasing out nuclear and coal, scaling renewables; Germany faced challenges (energy crisis post-Ukraine sanctions); lessons for India = what to replicate, what to avoid in energy transition
Green hydrogen cooperation	Germany = major green hydrogen importer (domestic renewable capacity limited); India = potential exporter (NGHM – National Green Hydrogen Mission, ₹17,490 crore); Germany-India green hydrogen partnership = logical; NTPC-RWE discussions
India-EU environmental connection	EU's Green Deal; Carbon Border Adjustment Mechanism (CBAM) = carbon tariff on imports from countries without carbon pricing; India-EU BTIA negotiations include sustainability chapter; Germany as EU's environment standard-setter = important bilateral partner

UPSC Relevance

- GS2 IR: India-Germany bilateral; KfW and GIZ as development cooperation instruments; Indo-German Environment Forum



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- GS3 Environment: Green hydrogen (NGHM); India-Germany energy cooperation; Energiewende lessons; CBAM and India
- Prelims: KfW = Germany's development bank; GIZ = Germany's development agency; Energiewende = Germany's energy transition; NGHM = National Green Hydrogen Mission (₹17,490 crore)

Allied and Healthcare Education — UGC Notifies 33 New Degrees Under NCAHP

Ministry: Ministry of Health and Family Welfare

PIB Date: 2 September 2026

Easy Explanation

The Union Health Ministry strengthened allied and healthcare education by having UGC notify 33 new undergraduate and postgraduate degree programmes under the National Commission for Allied and Healthcare Professions (NCAHP) Regulatory Framework. Allied health professionals (AHPs) are the often-invisible backbone of healthcare: physiotherapists, radiographers, medical laboratory technicians, optometrists, audiologists, nutritionists, operation theatre technicians – they outnumber doctors in most advanced healthcare systems (ratio of ~6 AHPs per doctor in USA vs ~1.2 per doctor in India). India has a severe AHP shortage – estimated gap of 2+ million allied health workers. The NCAHP Act 2021 was the first legislation specifically for allied and healthcare professions in India, creating a regulatory framework analogous to what the Medical Council of India (now NMC) does for doctors. UGC notifying 33 new degree programmes under this framework = formal academic integration, standardised curriculum, and recognised qualifications for AHPs.

Key Terms

Term	Definition
NCAHP	National Commission for Allied and Healthcare Professions; established under NCAHP Act 2021; regulates 56 allied and healthcare professions (physiotherapy, radiology, lab tech, optometry, etc.); analogous to NMC for doctors
Allied Health Professionals (AHPs)	Non-physician, non-nursing healthcare workers; physiotherapists, radiographers, medical laboratory technicians, optometrists,



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	audiologists, dietitians, OT technicians; backbone of healthcare delivery; India has ~1.2 AHP per doctor vs USA's ~6
NCAHP Act 2021	First comprehensive legislation for allied health professions in India; creates national registry, educational standards, professional conduct regulations; addresses India's massive AHP shortage
UGC	University Grants Commission; apex body for higher education regulation; notifies degree names and frameworks; 33 new degrees under NCAHP = formal integration into India's degree education system
India's healthcare workforce gap	India needs: doctors (current ~13.5 lakh, WHO norm = ~18.5 lakh), nurses (~35.5 lakh, shortage ~28 lakh), AHPs (shortage estimated 2+ million); AHP shortage most severe and least addressed
SUMAN Roadmap 2030 (same week)	National Workshop on SUMAN Roadmap 2030 = Accelerating Continuum of Care; maternal and newborn health; AHP (midwives, ANMs, labour room technicians) critical for maternal health outcomes; both pieces connect

UPSC Relevance

- GS2 Health/Governance: NCAHP Act 2021; India's healthcare workforce gaps; allied health professionals; UGC's role in healthcare education regulation
- Prelims: NCAHP = National Commission for Allied and Healthcare Professions; NCAHP Act = 2021; UGC = University Grants Commission; 33 new degrees notified under NCAHP framework
- Mains: India's healthcare workforce challenge – doctor-population ratio, AHP gap, nurse shortage; NCAHP Act as reform; connecting to Ayushman Bharat and universal health coverage

Mission Rangeen Machhli 2031 – Strategic Action Plan for Ornamental Fisheries

Ministry: Ministry of Fisheries, Animal Husbandry and Dairying



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PIB Date: 30 August 2026

Easy Explanation

The Vice President of India released 'Mission Rangeen Machhli 2031' (rangeen = colourful in Hindi) – India's Strategic Action Plan for Ornamental Fisheries Development up to 2031. Ornamental fisheries = trade in live fish, corals, and other aquatic organisms for aquariums and decorative purposes. The global ornamental fish trade is worth ~\$15-20 billion annually; India's share is a negligible ~\$20-25 million despite being home to extraordinary freshwater biodiversity (Himalayan streams, Western Ghats rivers, northeast India's rivers) and extensive marine coastline. India currently imports large volumes of ornamental fish (primarily from Southeast Asia) despite having endemic species of high commercial value. Mission Rangeen Machhli 2031 targets: increasing India's ornamental fish export to \$500 million by 2031; developing aquaculture of ornamental species (currently most are wild-caught); and creating livelihoods for coastal and riverine communities. This connects to PM Matsya Sampada Yojana (PMMSY) – India's flagship fisheries scheme.

Key Terms

Term	Definition
Ornamental fisheries	Trade in live fish, invertebrates, corals, aquatic plants for aquariums; global trade ~\$15-20 billion; India's current export ~\$20-25 million (massive underperformance given biodiversity); primary exporters: Singapore, Malaysia, Thailand, Sri Lanka
Mission Rangeen Machhli 2031	Strategic Action Plan for India's ornamental fisheries; target: \$500 million export by 2031; freshwater + marine ornamental fish; aquaculture of ornamental species; community livelihoods; released August 2026
India's ornamental fish biodiversity	Western Ghats rivers = endemic cyprinids (danios, rasboras, loaches); Northeast India = stunning coldwater species; Andaman seas = marine ornamentals; Himalayan streams = snow trout; most species unknown internationally



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PM Matsya Sampada Yojana (PMMSY)	₹20,050 crore, 2020-25; India's flagship fisheries scheme; fisheries infrastructure, aquaculture, export promotion, fishermen welfare; ornamental fisheries = one component; PMMSY successor in 12th Five Year Plan
MPEDA	Marine Products Export Development Authority; export promotion for marine products including ornamentals; Kochi-based; India's marine product exports ~\$7.38 billion (FY2024); ornamentals = very small share to grow
Aquaculture of ornamentals	Wild-caught ornamentals = sustainability concern, CITES restrictions; aquaculture (tank breeding) = sustainable, disease-free, year-round supply; India needs ornamental fish aquaculture infrastructure development

UPSC Relevance

- GS3 Economy/Environment: India's fisheries sector; PMMSY; ornamental fisheries potential; biodiversity conservation + economic use; MPEDA
- Prelims: Mission Rangeen Machhli 2031 = ornamental fisheries strategic plan; target \$500 million by 2031; MPEDA = Marine Products Export Development Authority; PMMSY = ₹20,050 crore fisheries scheme

PM-JANMAN Review + DA-JGUA — Tribal Development Initiatives

Ministry: Ministry of Tribal Affairs

PIB Date: 3 September 2026

Easy Explanation

The Ministry of Tribal Affairs reviewed progress of PM-JANMAN (PM Janjati Adivasi Nyaya Maha Abhiyan) and DA-JGUA, announcing key initiatives for strengthening tribal development. PM-JANMAN was launched in November 2023, specifically targeting Particularly Vulnerable Tribal Groups (PVTGs) – the most marginalised of India's tribal population. PVTGs are 75 communities across 18 states that are identified as having declining or stagnant population, pre-agricultural technology, extremely low literacy, and subsistence economy. PM-JANMAN allocates ₹24,104 crore over 3 years for PVTGs – covering housing (PMAY), roads



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(PMGSY), education, health, clean drinking water, and mobile medical units. DA-JGUA (Dharti Aaba Janjatiya Gram Utkarsh Abhiyan) is a complementary initiative for broader tribal development – covering all Scheduled Tribe communities (not just PVTGs). The review focuses on coverage, convergence, and implementation gaps.

Key Terms

Term	Definition
PM-JANMAN	PM Janjati Adivasi Nyaya Maha Abhiyan; launched November 2023; targets 75 PVTGs (Particularly Vulnerable Tribal Groups); ₹24,104 crore over 3 years; 9 ministries converge; housing, roads, clean water, education, health, telecom, livelihood for PVTGs
PVTGs	Particularly Vulnerable Tribal Groups; 75 communities in 18 states; pre-agricultural technology, declining population, very low literacy, subsistence economy; Sentinelese (Andaman), Shompens, Baigas, Bondas, Birhor, Chenchus among PVTGs
DA-JGUA	Dharti Aaba Janjatiya Gram Utkarsh Abhiyan; 'Dharti Aaba' = Birsa Munda's title ('Father of the Earth'); broader tribal development (not just PVTGs); 63,000+ tribal villages; convergence of 25 schemes; ₹79,156 crore outlay
Birsa Munda	Tribal freedom fighter (1875-1900); Ulgulan (rebellion) against British and zamindars in Jharkhand; Dharti Aaba = his honorary title; Nov 15 (birth anniversary) = Janjatiya Gaurav Divas (Tribal Pride Day); PM-JANMAN launched on this date 2023
Tribal population	India's ST population = 10.45 crore (Census 2011), ~8.6% of total; scheduled tribes in all states/UTs except Punjab, Haryana, Delhi, Chandigarh; concentrated in Jharkhand, Odisha, MP, Chhattisgarh, northeast states



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PESA Act 1996	Panchayats (Extension to Scheduled Areas) Act; extends panchayati raj to Fifth Schedule areas; tribal self-governance; gram sabha powers over land, resources, minor forest produce; DA-JGUA implementation should align with PESA
FRA 2006	Forest Rights Act; tribal rights over forest land, community resources; Individual Forest Rights (IFR), Community Forest Rights (CFR); connection to PM-JANMAN – forest-dwelling PVTGs need FRA before other development

UPSC Relevance

- GS1/GS2 Society/Polity: Tribal communities; PVTGs; PM-JANMAN; DA-JGUA; PESA 1996; FRA 2006; Birsa Munda; Fifth Schedule
- Prelims: PM-JANMAN launched November 2023; PVTGs = 75 communities, 18 states; ₹24,104 crore; DA-JGUA = Dharti Aaba Janjatiya Gram Utkarsh Abhiyan; Dharti Aaba = Birsa Munda's title
- Mains: Tribal development challenges in India – PVTGs, land rights, forest rights, education gaps; PM-JANMAN as policy response; critique of welfare vs rights-based approach; FRA implementation status

SUMAN Roadmap 2030 — Accelerating Maternal and Newborn Care

Ministry: Ministry of Health and Family Welfare

PIB Date: 3 September 2026

Easy Explanation

The Union Health Ministry convened a National Workshop on 'SUMAN Roadmap 2030 – Accelerating the Continuum of Care.' SUMAN = Surakshit Matritva Aashwasan (Assured Safe Motherhood). SUMAN is a government initiative guaranteeing free, respectful, and quality healthcare to every pregnant woman and newborn at all public health facilities. The SUMAN Roadmap 2030 accelerates the continuum of care – ensuring a woman receives connected, uninterrupted healthcare from pregnancy through antenatal care → institutional delivery → postnatal care → newborn care → infant/child care. India's maternal and newborn health has improved dramatically but gaps remain: Maternal Mortality Ratio (MMR) reduced from 254 (2004-06) to 97 (2018-20) – below the Sustainable Development Goal target of 70 per 1 lakh live births by 2030 is within reach but requires acceleration. Neonatal Mortality Rate (NMR) = 20 per 1,000 live births



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(2020); infant mortality rate (IMR) = 28 per 1,000. The workshop brings together states with high MMR

(Assam, MP, UP, Rajasthan, Odisha) to accelerate.

Key Terms

Term	Definition
SUMAN	Surakshit Matritva Aashwasan; free, respectful, dignified, quality healthcare guaranteed to every pregnant woman and sick newborn; zero tolerance for denial of services; implemented at all public health facilities
Continuum of care	Unbroken healthcare journey: preconception → antenatal → delivery → postnatal → newborn → infant → child; gaps in handoff between stages = preventable deaths; SUMAN Roadmap 2030 addresses these gaps
MMR – Maternal Mortality Ratio	Maternal deaths per 1,00,000 live births; India MMR: 254 (2004-06) → 167 (2011-13) → 130 (2014-16) → 113 (2016-18) → 97 (2018-20); SDG target = 70 by 2030; high MMR states: Assam (195), MP (173), UP (167)
NMR – Neonatal Mortality Rate	Deaths in first 28 days per 1,000 live births; India NMR = 20 (2020); causes: preterm birth complications, birth asphyxia, sepsis; Navjaat Shishu Suraksha Karyakram (NSSK) = newborn care training for healthcare workers
LaQshya programme	Labour Room Quality Improvement Initiative; quality improvement in labour rooms and maternity operation theatres; reduces preventable maternal and newborn mortality during delivery – directly under SUMAN framework
Janani Suraksha Yojana (JSY)	Cash transfer for institutional delivery; promotes hospital birth over home delivery; ~1.13 crore beneficiaries annually; demand-side financing that created supply-side pressure → more institutional deliveries → lower MMR



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PMSMA	Pradhan Mantri Surakshit Matritva Abhiyan; free antenatal care on 9th of every month; specialist doctor examination; targets women in second and third trimester; part of SUMAN's antenatal component
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UPSC Relevance

- GS2 Health: SUMAN; MMR trends in India; SDG 3 targets (MMR < 70 by 2030); JSY; LaQshya; PMSMA; high MMR states (Assam, MP, UP)
- Prelims: SUMAN = Surakshit Matritva Aashwasan; India MMR = 97 (2018-20); SDG target MMR = 70 by 2030; NMR = 20 (2020); LaQshya = Labour Room Quality Improvement Initiative
- Mains: India's maternal health progress – quantify, identify remaining challenges, policy measures; SDG 3 targets; high-burden states; social determinants of maternal mortality

Civil Aviation — Hub and Spoke International Flights from Ahmedabad

Ministry: Ministry of Civil Aviation

PIB Date: 1 September 2026

Easy Explanation

The Ministry of Civil Aviation launched Hub and Spoke International Flight Operations from Ahmedabad (Sardar Vallabhbhai Patel International Airport). This is a structural change in India's aviation architecture: instead of only operating point-to-point international flights from Tier-1 airports (Delhi, Mumbai, Bengaluru, Chennai, Hyderabad, Kolkata), airlines can now connect passengers from smaller Tier-2/3 cities through Ahmedabad as a hub to international destinations. The Hub and Spoke model works like this: a passenger from Rajkot or Surat flies to Ahmedabad (spoke), then connects internationally (hub). This improves connectivity for Gujarat's large business community (GIFT City, Surat's diamond/textile industry, pharma clusters in Anand/Vadodara) and its large NRI population in the UK, USA, and East Africa who would otherwise connect through Mumbai. Ahmedabad's elevation as an international hub also reflects India's plan to develop multiple tier-2 international hubs – reducing congestion at Mumbai and Delhi.

Key Terms

Term	Definition
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Hub and Spoke model	Aviation network model: hub airport with many direct routes + spoke airports feeding traffic to hub for connections; efficient for airlines (higher load factors) and passengers (connectivity to more destinations)
Sardar Vallabhbhai Patel International Airport	Ahmedabad; operates terminal T1 (domestic) and T2 (international); operated by Adani Airports; one of India's fastest growing airports; new greenfield terminal under development
UDAN scheme	Ude Desh ka Aam Nagrik; regional connectivity scheme; subsidised routes to unserved/underserved airports; 500+ routes awarded; complements Hub and Spoke by feeding spoke traffic; hub connectivity = outcome of UDAN's regional feed
Gujarat's aviation demand	GIFT IFSC (Gandhinagar) = international finance centre; Surat = diamond, textile, chemical industry; Vadodara/Anand = pharma (Amul HQ, IIMA); Rajkot = SME manufacturing; large Gujarati NRI community globally = significant international travel demand
Adani Airports	Operates 7 major Indian airports (Mumbai, Ahmedabad, Lucknow, Mangaluru, Jaipur, Thiruvananthapuram, Guwahati) under 50-year concession; significant private sector role in India's airport infrastructure
India's aviation sector	India = 3rd largest domestic aviation market; 155+ million passengers (FY2024); target 300 million by 2030; airport infrastructure investment ₹1 lakh crore next 5 years; National Civil Aviation Policy 2016

UPSC Relevance

- GS3 Economy/Infrastructure: Hub and spoke aviation model; India's airport infrastructure; UDAN scheme; Adani Airports; Ahmedabad's strategic role
- Prelims: SVPIA = Sardar Vallabhbhai Patel International Airport, Ahmedabad; UDAN = regional connectivity scheme; Hub and Spoke = aviation network model; Adani Airports operates 7 major airports



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Backgrounder: Pradhan Mantri Fasal Bima Yojana + Per Drop More Crop

Ministry: Ministry of Agriculture and Farmers Welfare

PIB Date: 29 August 2026

Easy Explanation

PMFBY (Pradhan Mantri Fasal Bima Yojana): India's flagship crop insurance scheme launched 2016. Farmers pay: 2% premium for Kharif crops, 1.5% for Rabi crops, 5% for commercial/horticultural crops; government (Centre + State equally) pays the rest. Coverage: yield losses due to natural calamities, pest/disease; prevented sowing; post-harvest losses. In FY2023-24: 5.56 crore farmer applications, ₹15,027 crore claims paid. Reforms: PMFBY now voluntary (made compulsory for loanee farmers till 2020, now optional); YES-TECH (Yield Estimation System using Technology) – using satellite imagery and crop cutting experiments to settle claims faster; Wind-Up methodology for quick assessment. Challenge: claims ratio high in some states (adverse selection), low penetration in non-loanee farmers. PMFBY + RWBCIS (Restructured Weather Based Crop Insurance Scheme) together cover India's crop insurance ecosystem. Per Drop More Crop (Micro Irrigation): component of Pradhan Mantri Krishi Sinchayee Yojana (PMKSY); drip and sprinkler irrigation; 90% subsidy (SC/ST/small/marginal farmers), 80% others; target: expand micro-irrigated area; India has 220 lakh hectares under micro-irrigation (target: 260 lakh ha).

Key Terms

Term	Definition
PMFBY	Pradhan Mantri Fasal Bima Yojana; launched 2016; crop insurance; 2% kharif/1.5% rabi farmer premium; Centre+State pay balance; 5.56 crore applicants FY2023-24; ₹15,027 crore claims; YES-TECH for remote sensing-based claims
RWBCIS	Restructured Weather Based Crop Insurance Scheme; weather index (temperature, rainfall, humidity) based – no crop cutting; faster claim settlement; complements PMFBY; weather station data driven



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YES-TECH	Yield Estimation System using Technology; satellite + drone + smartphone based crop yield assessment; reduces dependence on traditional crop cutting experiments (CCEs); faster, more accurate claim settlement
Per Drop More Crop / PMKSY	Pradhan Mantri Krishi Sinchayee Yojana; 4 components: AIBP (Accelerated Irrigation Benefits Programme), HKKP (Har Khet Ko Pani), Per Drop More Crop (micro-irrigation), Watershed Development; ₹93,068 crore (2015-26)
Micro-irrigation benefits	Drip: 40-50% water saving; 25-35% yield improvement; fertiliser efficiency (fertigation); reduces weed growth; Sprinkler: 25-30% water saving; suitable for uneven terrain; India: 220 lakh ha micro-irrigated, global 2nd after China
Har Khet Ko Pani	'Every field gets water' component of PMKSY; groundwater development, surface water bodies, Atal Bhujal Yojana (groundwater management); complements Per Drop More Crop's efficiency push

UPSC Relevance

- GS3 Agriculture: PMFBY mechanics; crop insurance challenges; YES-TECH innovation; Per Drop More Crop; PMKSY components; micro-irrigation benefits
- Prelims: PMFBY premium = 2% kharif, 1.5% rabi, 5% commercial; YES-TECH = satellite-based yield estimation; PMKSY = 4 components; Per Drop More Crop = micro-irrigation; India = 220 lakh ha micro-irrigated

Background: India's Higher Education Sector

Ministry: Ministry of Education

PIB Date: 30 August 2026

Easy Explanation

India's higher education sector: 1,113 universities, 43,796 colleges, 4.3 crore enrolled students (GER = 28.4%, 2022-23). India is the world's largest higher education system by number of institutions after USA



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and China. NEP 2020 reforms are reshaping the sector: multidisciplinary education (replacing rigid stream separation), 4-year UG degrees with multiple exit points, Academic Bank of Credits (ABC), and autonomy for top-performing institutions. Key bodies: UGC (University Grants Commission – regulatory, funding), AICTE (technical education), NMC (medical education), BCI (legal education). National Ranking: NIRF (National Institutional Ranking Framework) – 2024: IIT Madras (#1 overall for 6th consecutive year), IISc Bengaluru (#1 research), AIIMS Delhi (#1 medical). Challenges: low GER vs global average (~40%), faculty shortage, research output lag, employability gap (only ~47% graduates employable per NASSCOM), India's share of global research publications rising but quality metrics lag. National Mission on Education through ICT (NME-ICT), SWAYAM (online courses), e-PG Pathshala = digital education push.

Key Terms

Term	Definition
GER – Gross Enrolment Ratio	Enrolled students as % of 18-23 age population; India GER = 28.4% (2022-23); NEP 2020 target = 50% by 2035; global average ~40%; low GER = access and equity challenge
NEP 2020	National Education Policy 2020; 5+3+3+4 school structure; multidisciplinary higher education; 4-year UG with multiple exit options; Academic Bank of Credits; 30% online education option; mother tongue medium; research university focus
NIRF	National Institutional Ranking Framework; MoE; annual ranking of HEIs; categories: overall, university, college, engineering, medical, management, law, pharmacy, dental, architecture; IIT Madras = #1 overall (2024, 6th year)
Academic Bank of Credits (ABC)	National credit framework; students can earn credits from multiple institutions; store in DigiLocker-linked account; transfer credits across institutions; enables flexible, multi-institution learning under NEP 2020
SWAYAM	Study Webs of Active Learning for Young Aspiring Minds; India's MOOC (Massive Open Online Courses) platform; 4 quadrants



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	(video, reading, self-assessment, discussion); courses from IITs, IIMs, central universities; ~5 crore enrolments
PM Research Fellowship (PMRF)	Direct PhD admission for top BTech graduates to IITs/IISc; ₹70,000-80,000/month stipend; 3,000 fellowships; aims to attract best undergrad talent into research; addressing India's research talent pipeline gap
HEFA	Higher Education Financing Agency; finances infrastructure at centrally-funded institutions (IITs, NITs, IIMs); soft loans repaid from internal revenues; ₹1 lakh crore target; alternative to grant-based capital funding

UPSC Relevance

- GS2 Education: India's higher education overview; NEP 2020 key features; UGC, AICTE, NMC, BCI; NIRF rankings; GER challenge; SWAYAM
- Prelims: India's universities = 1,113; students enrolled = 4.3 crore; GER = 28.4%; NEP 2020 GER target = 50% by 2035; NIRF = National Institutional Ranking Framework; ABC = Academic Bank of Credits
- Mains: Higher education reforms in India – NEP 2020's promise vs implementation challenges; employability gap; research output; privatisation vs quality

Background: Cyber-Physical Systems

Ministry: Ministry of Science and Technology

PIB Date: 31 August 2026

Easy Explanation

Cyber-Physical Systems (CPS) integrate computational algorithms with physical processes – where computers and software monitor and control physical systems, with feedback loops between the digital and physical worlds. Examples: smart power grids (sensors + algorithms monitor and adjust electricity flow in real-time), autonomous vehicles (cameras + LIDAR + AI algorithms control physical vehicle), industrial automation (Industry 4.0 robots controlled by software), smart hospitals (medical devices connected to hospital management systems), and precision agriculture (drones + sensors + AI controlling irrigation, fertilisation). CPS differs from IoT: IoT = 'things connected to internet'; CPS = 'tight integration between



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computation and physical process with real-time control.' India's National CPS Mission: DST initiative, ₹3,660 crore, creating 25 Technology Innovation Hubs (TiHs) at IITs and other institutions for AI, robotics, quantum, blockchain, cyber security, smart healthcare, smart mobility, autonomous navigation. The National Quantum Mission, IndiaAI Mission, and National Mission on Interdisciplinary Cyber-Physical Systems (NM-ICPS) are India's three flagship technology missions.

Key Terms

Term	Definition
Cyber-Physical Systems (CPS)	Integration of computational algorithms with physical processes; feedback between digital and physical; real-time control; examples: smart grid, autonomous vehicles, Industry 4.0 robotics, precision agriculture
NM-ICPS	National Mission on Interdisciplinary Cyber-Physical Systems; DST; ₹3,660 crore; 25 Technology Innovation Hubs at IITs + other institutions; themes: AI, robotics, IoT, quantum, blockchain, smart manufacturing
Technology Innovation Hubs (TiHs)	Created under NM-ICPS at IITs; each TiH has specific focus (AI-TiH at IIT Kharagpur, CoE for Robotics at IIT Kanpur); industry-academia interface; startup incubation; knowledge translation
Industry 4.0	Fourth industrial revolution; cyber-physical production systems; IoT, AI, cloud computing in manufacturing; digital twins; additive manufacturing (3D printing); India's NM-ICPS + PLI = India's Industry 4.0 push
Digital Twin	Virtual replica of a physical system that receives real-time data from the physical system; used for monitoring, simulation, predictive maintenance; key CPS application in manufacturing, infrastructure management



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SCADA systems	Supervisory Control and Data Acquisition; industrial CPS for power plants, water treatment, oil/gas pipelines; critical infrastructure; cybersecurity vulnerabilities in SCADA = national security concern
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UPSC Relevance

- GS3 Science/Technology: CPS definition; NM-ICPS; TiHs; Industry 4.0; digital twins; SCADA security; India's technology missions landscape
- Prelims: NM-ICPS = National Mission on Interdisciplinary Cyber-Physical Systems; DST; ₹3,660 crore; 25 Technology Innovation Hubs; CPS = cyber-physical systems; SCADA = Supervisory Control and Data Acquisition

Background: Geothermal Energy

Ministry: Ministry of Science and Technology / Ministry of New and Renewable Energy

PIB Date: 4 September 2026

Easy Explanation

Geothermal energy harnesses heat from the Earth's interior – produced by radioactive decay of elements (uranium, thorium, potassium) in the mantle and core. There are three main uses: electricity generation (high-temperature geothermal fields, $>150^{\circ}\text{C}$ – Iceland, USA, Philippines, Kenya lead globally); direct use (medium-temperature, $20\text{--}150^{\circ}\text{C}$ – space heating, greenhouse warming, fish farming, industrial drying); and geothermal heat pumps (low-temperature, $<20^{\circ}\text{C}$ – ground-source heat pumps for building heating/cooling). India's geothermal potential: estimated 10,600 MW but largely untapped. India has 340+ hot spring locations (seven geothermal provinces): Himalayas (Puga Valley, Ladakh – highest potential), Cambay (Gujarat), Godavari Basin, Mahanadi, West Coast, Son-Narmada, Andaman-Nicobar. Puga Valley, Ladakh has temperatures of 84°C at shallow depth – viable for electricity. ONGC has done exploratory work. Why India hasn't tapped: cost, difficult terrain, grid connectivity, lack of enabling policy (unlike solar/wind). NEP 2023 (National Electricity Plan) includes geothermal for the first time. Globally: Iceland gets 25% of electricity from geothermal; Kenya 46%.

Key Terms

Term	Definition
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Geothermal energy	Heat from Earth's interior; radioactive decay of U/Th/K in mantle + primordial heat; three uses: electricity ($>150^{\circ}\text{C}$), direct use ($20-150^{\circ}\text{C}$), heat pumps ($<20^{\circ}\text{C}$); renewable, baseload (unlike solar/wind)
India's geothermal potential	$\sim 10,600$ MW estimated; 340+ hot springs; 7 geothermal provinces: Himalayas (Puga), Cambay, Godavari, Mahanadi, West Coast, Son-Narmada, Andaman-Nicobar; largely untapped
Puga Valley, Ladakh	India's highest geothermal potential zone; temperatures $84-100^{\circ}\text{C}$ at shallow depth; ONGC exploratory work; pilot electricity project proposed; remote location = grid connectivity challenge; strategic import (border region energy security)
Enhanced Geothermal Systems (EGS)	Technology to extract geothermal energy from hot dry rock (no natural water/steam); hydraulic fracturing creates fractures $\rightarrow$ inject water $\rightarrow$ steam extracted; not yet commercial; USA, EU investing; could unlock India's vast hot dry rock resources
Geothermal vs other renewables	Advantages: baseload (24x7), small land footprint, low water use (closed loop), long life; Disadvantages: high upfront cost, location-specific, seismic risk (EGS); complements solar/wind as non-intermittent renewable
Global leaders	Iceland: 25% electricity from geothermal (volcanic island); Kenya: 46% geothermal electricity; USA: largest geothermal producer (3,676 MW); Philippines, Indonesia, New Zealand also significant; India absent from global leaders despite potential
NEP 2023	National Electricity Plan 2023 (CEA); first to include geothermal; 2026-27 target = marginal; long-term potential recognised; geothermal enabling policy framework needed (like Solar RPO for solar)



UPSC Relevance

- GS3 Energy/Environment: Geothermal energy types; India's potential (Puga Valley, 7 provinces); why untapped; EGS; comparison with solar/wind; NEP 2023
- Prelims: Geothermal energy = Earth's interior heat; Puga Valley = highest potential in India; ONGC = exploratory work; Iceland = 25% geothermal electricity; Kenya = 46%; 7 geothermal provinces in India; EGS = Enhanced Geothermal Systems
- Mains: Geothermal's role in India's energy transition – potential, challenges, enabling conditions; compare with global leaders; connect to India's net-zero 2070 target

Background: Decentralised Grain Storage in Cooperative Sector

Ministry: Ministry of Cooperation / Ministry of Consumer Affairs

PIB Date: 3 September 2026

Easy Explanation

The Decentralised Grain Storage Plan in the Cooperative Sector is one of the world's largest food storage infrastructure programmes – India is constructing grain storage capacity at Primary Agricultural Credit Societies (PACS) level across the country. The scale: creating 700 lakh metric tonne (LMT) additional storage capacity at grassroots level over 5 years, through ~2 lakh PACS. Why decentralised storage? Currently ~85% of India's grain storage capacity is concentrated at FCI (Food Corporation of India) warehouses in major mandis and state capital storage depots. Farmers in remote areas must transport grain long distances at harvest time (when prices are low) or sell at distress prices. PACS-level storage means farmers can: store grain immediately after harvest locally; avoid distress sales; access Warehouse Receipt-based credit (grain as collateral); and sell when prices improve. The cooperative-sector angle: PACS → District Cooperative Banks → State Cooperative Banks = India's rural cooperative credit chain; storage at PACS = convergence of credit + storage + marketing at grassroots. Connected to PM Gati Shakti for logistics connectivity.

Key Terms

Term	Definition
PACS	Primary Agricultural Credit Societies; village-level cooperative credit institutions; ~1.02 lakh PACS in India; members = farmers;



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	provide short-term crop loans; PACS computerisation = recent reform; now adding storage function
Decentralised grain storage	Storage at production/village level vs centralised at major mandis; reduces post-harvest losses (~10-15% in India from inadequate storage), distress sales, transportation costs; benefits: price realisation for farmers, MSP protection
FCI	Food Corporation of India; Central government's grain procurement, storage, and distribution agency; ~700 lakh MT storage capacity; central pools (wheat, rice); PDS distribution; concentrated storage = logistical challenge
Warehouse Receipt System	Farmer deposits grain in registered warehouse → gets warehouse receipt → uses receipt as collateral for bank loan; can sell whenever price is favourable; WDRA (Warehousing Development and Regulatory Authority) regulates
Post-harvest losses	India's total post-harvest losses = ₹90,000 crore annually (CIPHET estimate); grain storage losses ~6-7%; fruit/vegetable losses much higher (~40%); inadequate cold chain and storage = major agricultural inefficiency
National Cooperative Database	Ministry of Cooperation (new ministry, 2021); Sahakar Mitra portal; PACS audit; multistate cooperative societies reform; decentralised grain storage = signature programme of new cooperation ministry
NABARD role	National Bank for Agriculture and Rural Development; finances PACS; provides refinance to state cooperative banks; NABARD + FCI + Ministry of Cooperation = implementation triad for decentralised storage scheme

UPSC Relevance



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- GS3 Agriculture/Economy: PACS; decentralised grain storage; post-harvest losses; warehouse receipts; FCI; WDRA; Ministry of Cooperation
- Prelims: PACS = Primary Agricultural Credit Societies; ~1.02 lakh PACS in India; FCI = Food Corporation of India; WDRA = Warehousing Development and Regulatory Authority; NABARD finances PACS
- Mains: Grain storage infrastructure in India – current gaps, decentralised model's potential, cooperative sector's role; connect to farmer income, MSP effectiveness, food security

Backgrounder: Districts as Export Hubs

Ministry: Ministry of Commerce and Industry / DGFT

PIB Date: 2 September 2026

Easy Explanation

Districts as Export Hubs (DEH) initiative – launched 2020 under the Foreign Trade Policy framework – aims to identify export-worthy products and services in each district and build an ecosystem to promote their exports. India's exports are highly concentrated: top 5 ports (JNPT, Mundra, Chennai, Vizag, Kolkata) handle ~85% of export cargo; top 5 states (Maharashtra, Gujarat, Karnataka, Tamil Nadu, Andhra Pradesh) account for ~65% of merchandise exports. DEH seeks to unlock export potential from every district – especially in manufacturing clusters (Moradabad's brassware, Tiruppur's knitwear, Agra's footwear, Firozabad's glassware, Jodhpur's handicrafts, Surat's textiles/diamonds) and GI-tagged products. Mechanism: District Export Action Plan (DEAP) – district-level committee identifies top 3-5 export products/services; maps infrastructure gaps (transport, cold chain, testing labs, certification); and provides targeted support. Export Promotion Councils (EPCs) and DGFT district offices implement. Connection: India's export target = \$2 trillion by 2030 (goods + services); DEH = geographic expansion of export base.

Key Terms

Term	Definition
Districts as Export Hubs (DEH)	FTP 2023 initiative; each district identifies top export products/services; District Export Action Plan (DEAP); district-level implementation committee; DGFT + Export Promotion Councils; unlocking geographic export concentration



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DEAP	District Export Action Plan; top 3-5 export products/services per district; gap analysis (infrastructure, certification, logistics); action plan for support; implemented by DIC (District Industries Centre) + DGFT
Geographic concentration of exports	Top 5 ports handle ~85% of export cargo; top 5 states = ~65% of merchandise exports; DEH aims to bring interior districts into export ecosystem; 'Atmanirbhar Bharat' at district level
GI tags and district exports	Geographical Indications (GI) protect local products; India has 400+ GI tags; Darjeeling tea, Kolhapuri chappals, Kanchipuram silk, Banaras brocade; DEH leverages GI products for premium export markets
Export Promotion Councils (EPCs)	Sector-specific export promotion bodies under DGFT/MoC; APEDA (agriculture), MPEDA (marine), EEPC (engineering), FIEO (umbrella body); 26 EPCs; connect district exporters to global markets
India's \$2 trillion export target	\$1 trillion goods + \$1 trillion services by 2030; FY2024-25 = ~\$820 billion (goods + services); significant gap; DEH = strategy to expand export base geographically; GVC integration
One District One Product (ODOP)	State-level initiative (UP first, then national); each district has one focus product for development and marketing; aligns with DEH; ODOP products often same as district's top export products in DEAP

UPSC Relevance

- GS3 Economy: Districts as Export Hubs; Foreign Trade Policy 2023; DEAP; geographic concentration of exports; GI tags; EPCs; India's \$2 trillion export target
- Prelims: DEH = Districts as Export Hubs; DEAP = District Export Action Plan; DGFT = Directorate General of Foreign Trade; FIEO = Federation of Indian Export Organisations; One District One Product (ODOP) connects



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- Mains: India's export diversification strategy – geographic, sectoral; role of districts in export ecosystem; GI tags as export asset; challenges for SME exporters

Backgrounder: Understanding India's Q1 FY2026-27 GDP Estimates

Ministry: Ministry of Statistics and Programme Implementation (MoSPI)

PIB Date: 2 September 2026

Easy Explanation

India's Q1 FY2026-27 (April-June 2026) GDP grew 7.8% – the fastest in six quarters. This backgrounder contextualises the number. Sectoral breakdown (GVA): Agriculture: ~3.5% (good kharif sowing area, base effect from weak Q1 FY26); Industry: Manufacturing 7.2%, Construction 10.1% (government capex driven), Mining 4.8%; Services: Financial, real estate, and professional services 8.5%, Trade, hotels, transport 7.8%, Public admin, defence, education 6.2%. What 7.8% means in global context: India is the fastest-growing major economy; China grew 4.7%, USA 2.1%, EU 1.3%, Japan 0.8%. Investment angle: Gross Fixed Capital Formation (GFCF) grew 9.5% – sign of strong investment activity; private GFCF growing alongside government capex. Consumption angle: Private Final Consumption Expenditure (PFCE) grew 7.1% – urban consumption strong, rural recovering. Export angle: Net exports (X-M) – negative contribution (imports growing faster than exports, reflecting strong domestic demand). Caveats: India's GDP methodology is GDP at market prices (MP) using 2011-12 as base year; advance/first estimates often revised significantly.

Key Terms

Term	Definition
GDP 7.8% Q1 FY26-27	April-June 2026; fastest in six quarters; above FY25-26 full year (6.4%); MoSPI release; base year 2011-12; GDP at market prices
GVA – Gross Value Added	Sector-wise economic output; Agriculture ~3.5%, Manufacturing 7.2%, Construction 10.1%, Services 7-8%; GDP = GVA + product taxes - product subsidies



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GFCF – Gross Fixed Capital Formation	Investment in fixed assets (machinery, buildings, infrastructure); Q1 FY26-27 GFCF grew 9.5%; includes government capex + private investment; high GFCF = future productive capacity building
PFCE – Private Final Consumption Expenditure	Household spending; Q1 FY26-27 PFCE grew 7.1%; urban consumption stronger; rural consumption recovering; PFCE = largest GDP component (~60%)
India vs global growth	India 7.8% vs China 4.7%, USA 2.1%, EU 1.3%, Japan 0.8%; India fastest-growing major economy; demographic dividend, manufacturing PLI, services exports driving advantage
GDP estimation methodology	Output method (GVA approach): sector-wise output; Expenditure method (C+I+G+NX): consumption + investment + government + net exports; India uses both; base year 2011-12 for National Accounts; advance → first revised → second revised estimates
Q1 drivers analysis	Government capex (₹11.11 lakh crore FY26-27 budget) = construction +10.1%; PLI scheme ramp-up = manufacturing +7.2%; services sector resilience = financial, real estate +8.5%; kharif sowing area growth = agriculture recovery

UPSC Relevance

- GS3 Economy: GDP methodology (GVA, expenditure method); sectoral breakdown; GFCF; PFCE; India's growth story Q1 FY26-27; India vs global comparison
- Prelims: GDP base year = 2011-12; GFCF = Gross Fixed Capital Formation; PFCE = Private Final Consumption Expenditure; GVA + net product taxes = GDP; MoSPI releases GDP data
- Mains: Analyse India's 7.8% GDP growth – what drove it, is it sustainable, what are the structural concerns; connect to capex push, PLI schemes, private investment crowding in



Honorary Mentions

Facts that didn't make the main articles but are directly testable in UPSC Prelims one-liners.

Topic	Key Fact	UPSC Angle
RAKSHA document	India's first formal defence diplomacy document; 10-year vision; covers defence exports, co-development, military partnerships; unveiled September 2026	GS3 Defence; Atmanirbhar Bharat in defence; DPEPP 2020; \$5B export target; shifts India from importer to strategic partner
India-Belgium defence	Bilateral call for co-development and co-production of defence equipment; NATO/EU hub (Brussels); FN Herstal, Safran Belgium	GS2 IR + GS3 Defence; co-production model; RAKSHA framework in practice; Belgium = NATO HQ + EU institutional hub
16th Aero India 2027	Yelahanka, Bengaluru; February 8-12, 2027; Asia's largest aerospace exhibition; biennial; Make in India + defence export showcase	GS3 Defence; DPEPP 2020 implementation vehicle; iDEX; MoUs worth ₹1 lakh crore in Aero India 2025
INS Sudarshini – LOKAYAN 2026	Sail training ship (barquentine); arrived Barcelona, Spain; LOKAYAN = Indian Navy goodwill + training voyage; 'loka' + 'yana'	GS3 Defence; naval diplomacy; soft power through sail ships; INS Sudarshini commissioned 2012, Kochi-based
PM Modi – Uzbekistan visit	'Oliy Darajali Do'stlik' Order (Uzbekistan's highest honour for foreign leaders); INSTC, Chabahar, pharma, IT outcomes	GS2 IR; India-Uzbekistan Comprehensive Strategic Partnership 2022; INSTC; Tashkent Declaration 1966; UPI in Uzbekistan via UZQR
UPI in Uzbekistan	NPCI International + Uzbekistan's NIPC; UPI payments via UZQR	GS3 Economy; UPI global expansion; NPCI International;



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Topic	Key Fact	UPSC Angle
	(Uzbek QR standard); 18th+ country with UPI integration	fintech diplomacy; NPCI = Section 8 company
SCO Summit – Bishkek	26th SCO Summit; India bilateral with Russia, Kyrgyz Republic, Armenia, Iran; SCO = 9 full members; RATS = Tashkent	GS2 IR; SCO full members; India joined 2017; secretariat Beijing; RATS (counter-terrorism); India-Armenia Pinaka deal
India-Chile CEPA	Negotiations advancing; Chile = world's largest copper + lithium producer; Lithium Triangle (Chile+Argentina+Bolivia)	GS2 IR + GS3 Economy; CEPA = first in South America; critical minerals; Chile's Atacama = 42% world lithium
India GDP Q1 FY26-27	7.8% growth; fastest in six quarters; Manufacturing 7.2%, Construction 10.1%; GFCF 9.5%; PFCE 7.1%	GS3 Economy; GDP methodology; base year 2011-12; India fastest-growing major economy; China 4.7% same period
India credit rating – JCR	Japan Credit Rating Agency upgraded India to A- (Stable Outlook); first 'A' category from any major CRA; fiscal deficit path 6.4%→4.9%	GS3 Economy; sovereign credit rating; Big Three (Moody's, Fitch, S&P) still at BBB; JCR important for Japanese institutional investors (GPIF)
GIFT IFSC	\$52.8B FCNR(B) mobilised; \$11.62B ECBs; \$11.12B bond listings; aircraft leasing hub emerging; regulated by IFSCA	GS3 Economy; GIFT IFSC = Gandhinagar; IFSCA = unified regulator (est. 2020); FCNR(B) = foreign currency deposits by NRIs
NLMC – RINL land auction	459 RINL (Vizag Steel) land parcels e-auctioned; NLMC	GS3 Economy; NLMC = National Land Monetisation Corporation (est. 2022); RINL accumulated losses



Topic	Key Fact	UPSC Angle
	monetises surplus CPSE land; DIPAM oversight	₹16,000+ crore; strategic disinvestment stalled
GSLV-F17 / EOS-05	GSLV-F17 placed EOS-05 in GTO; cryogenic upper stage (CE-20); GSLV = medium-lift (2.5T to GTO)	GS3 Science; GSLV vs LVM3 (heavy lift); cryogenic stage development history (Russia denial 1990s); EOS = ISRO's earth observation series
C-DOT quantum products	14 indigenous quantum products; QKD, QRNG, quantum-secured communication; National Quantum Mission (₹6,003 crore, 2023-31)	GS3 Science; QKD = Quantum Key Distribution; post-quantum cryptography; National Quantum Mission 4 themes; 'harvest now decrypt later' threat
Thermoelectric breakthrough	Century-old limit on heat-to- electricity conversion surpassed; Seebeck effect; ZT figure of merit; ultrasensitive temperature sensing	GS3 Science; Seebeck effect; thermoelectric materials (Bi_2Te_3); waste heat recovery; $ZT = S^2\sigma T/\kappa$
IST Rules 2026	Legal Metrology (Indian Standard Time) Rules 2026; One Nation One Time; NTP synchronisation with NPL (CSIR, New Delhi)	GS2/GS3; IST = UTC+5:30; 82.5°E Mirzapur; NPL = India's primary time standard; Legal Metrology Act 2009; NTP
CSIR-CRRI RAP technology	60% Recycled Asphalt Pavement on NH-716; India currently uses 10-20% RAP; reduces bitumen (petroleum) use	GS3 Environment/Infrastructure; CSIR-CRRI = Central Road Research Institute; Green Highways Policy 2015; circular economy in construction



Topic	Key Fact	UPSC Angle
BIO-NIVESH	Platform to catalyse biotech investment; BIRAC + DBT interface with investors; India biotech = \$130B, target \$300B by 2030	GS3 Science/Economy; BIRAC = Biotechnology Industry Research Assistance Council; India = world's largest biosimilar producer; BioE3 Policy 2024
Molecular switch – biomaterials	Tiny molecular switch enables self-powered healthcare biomaterials; piezoelectric (motion→electricity); body heat → power wearable sensors	GS3 Science; piezoelectric effect; smart biomaterials; ANRF (₹50,000 crore); ABDM connection; self-powered implantables
Zero-emission shipping	Ports Ministry: zero-emission shipping corridors; green fuels (ammonia, methanol, LNG, H ₂); IMO GHG Strategy 2023 targets	GS3 Environment; IMO = International Maritime Organisation; IMO 2023 = net-zero by 2050; Sagarmala; JNPT = India's largest container port
Agentic AI skilling	NIELIT + Intel India launch Agentic AI Skilling programmes; agentic AI = autonomous multi-step task completion	GS3 Science; NIELIT = National Institute of Electronics and IT; IndiaAI Mission (₹10,372 crore); NPU = Neural Processing Unit
Swachh Sagar 2026	5th edition; ocean conservation movement; Ministry of Earth Sciences; marine plastic pollution; SDG 14 (Life Below Water)	GS3 Environment; India rivers = 0.4MT plastic/year to ocean; Global Plastics Treaty INC; Deep Ocean Mission ₹4,077 crore; INCOIS
Tiger Landscapes workshop	Conservation, Bioeconomy and Ecotourism; India 3,682 tigers (2022) = 70% of world's; 54 tiger reserves; NTCA oversees	GS3 Environment; Project Tiger (1973); NTCA; M-STrIPES monitoring; carbon credits from tiger



Topic	Key Fact	UPSC Angle
		forests; human-wildlife conflict solution
GLOF preparedness review	Home Secretary reviewed Himalayan States for GLOF and snow avalanche; Chamoli 2021, Lhonak 2023 = recent major GLOFs	GS3 Disaster Management; GLOF = Glacial Lake Outburst Flood; NDMA; NDRF; SASE (DRDO) for avalanches; NRSC for satellite monitoring
Indo-German Environment Forum	4th edition; KfW, GIZ bilateral cooperation; green hydrogen (India NGHM ↔ Germany importer); Energiewende lessons	GS2 IR + GS3; KfW = Germany's development bank; GIZ = Germany's development agency; NGHM = ₹17,490 crore; CBAM concern
NCAHP – 33 new degrees	UGC notifies 33 new degrees under NCAHP framework; allied health professionals; India has ~1.2 AHP per doctor vs USA's ~6	GS2 Health; NCAHP Act 2021; UGC; allied health professions (physiotherapy, radiology, lab tech); India's healthcare workforce gap
Mission Rangeen Machhli 2031	Strategic Action Plan for ornamental fisheries; target \$500M export by 2031; global ornamental fish trade = \$15-20B	GS3 Economy; PMMSY (PM Matsya Sampada Yojana) ₹20,050 crore; MPEDA; India's current ornamental export = \$20-25M only
PM-JANMAN + DA-JGUA	PM-JANMAN = PVTGs (75 communities, 18 states), ₹24,104 crore; DA-JGUA = Dharti Aaba Janjatiya Gram Utkarsh Abhiyan, ₹79,156 crore	GS2 Society/Polity; PVTGs; Birsa Munda (Dharti Aaba); PESA 1996; FRA 2006; PM-JANMAN launched Nov 15, 2023 (Janjatiya Gaurav Divas)



Topic	Key Fact	UPSC Angle
SUMAN Roadmap 2030	Surakshit Matritva Aashwasan; continuum of care for maternal and newborn health; India MMR = 97 (2018-20); SDG target = 70	GS2 Health; MMR trend; LaQshya; JSY; PMSMA; high-burden states: Assam (195), MP (173), UP (167)
Hub & Spoke – Ahmedabad	International hub & spoke flights from SVPIA (Sardar Vallabhbhai Patel International Airport, Ahmedabad); Adani Airports	GS3 Economy; UDAN scheme (regional connectivity); Hub & Spoke model; Adani Airports = 7 major airports; India = 3rd largest domestic aviation market



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Practice Questions

10 Prelims Questions – UPSC Style

Q.1. Consider the following statements regarding India's Sovereign Credit Rating:

1. Japan Credit Rating Agency (JCR) upgraded India's rating to 'A-' with Stable Outlook, making it the first time India received an 'A' category rating from a major CRA.
2. The 'Big Three' credit rating agencies (Moody's, Fitch, S&P) currently rate India in the 'A' category.
3. A 'BBB' rating represents the lowest investment-grade rating on the standard rating scale.

Which of the statements given above is/are correct?

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

Q.2. Assertion (A): India has been consistently rated lower than its economic fundamentals suggest by the 'Big Three' credit rating agencies.

Reason (R): India's general government debt-to-GDP ratio (~83%) is high by emerging market standards, predominantly in domestic currency.

In the context of the above, which of the following is correct?

- (a) Both A and R are true and R is the correct explanation of A
- (b) Both A and R are true but R is not the correct explanation of A
- (c) A is true but R is false
- (d) A is false but R is true

Q.3. Match the following geothermal provinces with their states/regions in India:

List I (Geothermal Province)

List II (State/Region)

1. Puga Valley

P. Gujarat

2. Cambay

Q. Ladakh

3. Son-Narmada

R. Madhya Pradesh / Chhattisgarh



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4. West Coast

S. Karnataka / Goa / Kerala

Select the correct answer using the codes below:

- (a) 1-Q, 2-P, 3-R, 4-S
- (b) 1-P, 2-Q, 3-S, 4-R
- (c) 1-Q, 2-S, 3-P, 4-R
- (d) 1-R, 2-P, 3-Q, 4-S

Q.4. With reference to PM-JANMAN, consider the following statements:

1. It targets 75 Particularly Vulnerable Tribal Groups (PVTGs) across 18 states.
2. It was launched on Janjatiya Gaurav Divas (November 15), which marks the birth anniversary of Birsa Munda.
3. The financial outlay under PM-JANMAN is ₹79,156 crore over three years.
4. DA-JGUA (Dharti Aaba Janjatiya Gram Utkarsh Abhiyan) covers a broader set of tribal communities beyond PVTGs.

How many of the above statements are correct?

- (a) Only one
- (b) Only two
- (c) Only three
- (d) All four

Q.5. Assertion (A): India participates actively in the Shanghai Cooperation Organisation (SCO) despite having significant differences with both China and Pakistan, which are also full members.

Reason (R): India uses SCO primarily to engage Russia and Central Asian nations, maintaining its multi-alignment strategy while focusing on connectivity and counter-terrorism cooperation within the SCO framework.

- (a) Both A and R are true and R is the correct explanation of A
- (b) Both A and R are true but R is not the correct explanation of A
- (c) A is true but R is false
- (d) A is false but R is true

Q.6. Consider the following statements regarding Glacial Lake Outburst Floods (GLOFs) in India:



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1. The Chamoli disaster of February 2021 was caused by a GLOF that damaged the Rishiganga and Dhauliganga hydroelectric projects in Uttarakhand.
2. The South Lhonak Lake GLOF of October 2023 caused flooding in the Teesta River and damaged the Teesta-III hydroelectric dam.
3. DRDO's Snow and Avalanche Study Establishment (SASE) is the nodal agency for GLOF early warning systems in India.
4. GLOFs are increasing in frequency primarily due to glacial retreat caused by climate change.

Which of the statements given above are correct?

- (a) 1, 2 and 4 only
- (b) 2, 3 and 4 only
- (c) 1 and 2 only
- (d) 1, 2, 3 and 4

Q.7. Match the following quantum technology products/concepts with their correct descriptions:

List I

List II

- | | |
|-------------------------------|--|
| 1. QKD | P. Uses quantum phenomena to produce true random numbers for cryptographic keys |
| 2. QRNG | Q. Distributes encryption keys using quantum properties such that any eavesdropping is detectable |
| 3. Post-quantum cryptography | R. Algorithms designed to be secure against attacks by quantum computers |
| 4. Harvest now, decrypt later | S. Strategy where adversaries collect encrypted data today to decrypt using future quantum computers |

- (a) 1-Q, 2-P, 3-R, 4-S
- (b) 1-P, 2-Q, 3-S, 4-R
- (c) 1-R, 2-S, 3-Q, 4-P
- (d) 1-Q, 2-R, 3-P, 4-S

Q.8. With reference to India-Uzbekistan relations, consider the following statements:



| Click to Connect Now.

1. India and Uzbekistan upgraded their bilateral relationship to a Comprehensive Strategic Partnership in 2022.
2. The 'Oliy Darajali Do'stlik' Order is Uzbekistan's highest civilian award.
3. The International North-South Transport Corridor (INSTC) connects India to Central Asia through Iran's Chabahar port.
4. The Tashkent Declaration of 1966 was signed between India and Uzbekistan on bilateral trade.

How many of the above statements are correct?

- (a) Only one
- (b) Only two
- (c) Only three
- (d) All four

Q.9. Assertion (A): CSIR-CRRI's demonstration of 60% Recycled Asphalt Pavement (RAP) technology is significant for India's road construction sector.

Reason (R): India currently uses 10-20% RAP in road construction, while bitumen – the petroleum-derived binding material it replaces – is costly and carbon-intensive, with India importing approximately 45% of its bitumen requirements.

- (a) Both A and R are true and R is the correct explanation of A
- (b) Both A and R are true but R is not the correct explanation of A
- (c) A is true but R is false
- (d) A is false but R is true

Q.10. Consider the following statements regarding GIFT IFSC:

1. GIFT IFSC is India's first International Financial Services Centre, located in Gandhinagar, Gujarat.
2. IFSCA (International Financial Services Centres Authority) serves as a unified regulator for GIFT IFSC, replacing the separate regulatory roles of RBI, SEBI, IRDAI, and PFRDA for IFSC activities.
3. FCNR(B) deposits are rupee-denominated fixed deposits made by Non-Resident Indians.
4. Aircraft leasing is one of the financial activities permitted at GIFT IFSC, with India aiming to capture a share of the global aircraft leasing market currently dominated by Ireland and Singapore.

Which of the statements given above are correct?



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- (a) 1, 2 and 4 only
- (b) 2, 3 and 4 only
- (c) 1 and 3 only
- (d) 1, 2, 3 and 4

2 Mains Questions and Model Answers

Mains Question 1 – 150 words:

India's record of 3,682 tigers – representing 70% of the world's wild tiger population – is a conservation success story. However, the government's framing of tiger landscapes as 'bioeconomy and ecotourism assets' rather than purely conservation areas has both promise and risk. Discuss.

Model Answer – 150 words:

India's tiger recovery – from 1,411 in 2006 to 3,682 in 2022 – is one of conservation's great success stories, powered by Project Tiger (1973), the Wildlife Protection Act, and NTCA's M-STrIPES monitoring. The bioeconomy-ecotourism framing offers genuine promise: it aligns conservation with livelihoods, addressing the core human-wildlife conflict problem. When forest-fringe communities earn income from ecotourism (Jim Corbett: ~5 lakh annual visitors), collect non-timber forest products under FRA 2006 rights, or receive carbon credit revenue from tiger forest carbon sinks, they become conservation stakeholders rather than victims. This is more durable than purely coercive protection. However, risks exist. Commercialisation can compromise habitat integrity – unregulated tourism corridors fragment tiger movement routes. Carbon credit monetisation requires robust accounting to avoid greenwashing. Bioeconomy framing may dilute the primacy of biodiversity as an intrinsic value, instrumentalising nature. The balance lies in community-led, carefully regulated ecotourism with strict core-zone protection – not mass tourism. The government's framing is directionally correct but implementation rigour is critical.

Mains Question 2 – 250 words:



India's GDP grew 7.8% in Q1 FY2026-27 – the fastest in six quarters – driven by manufacturing, construction, and services. Critically examine whether this growth is structurally sustainable or dependent on specific short-term drivers.

Model Answer – 250 words:

India's 7.8% Q1 FY2026-27 GDP growth is impressive by any global standard – China grew 4.7%, USA 2.1%, EU 1.3% the same period. However, a critical examination reveals a mix of structural strengths and short-term dependencies. Structural drivers that are sustainable: First, services sector resilience: financial services, IT-enabled exports, and professional services are structurally strong – driven by India's talent base, digital infrastructure (UPI, ABDM, GeM), and global demand for India's IT services. This is enduring. Second, manufacturing PLI ramp-up: Production Linked Incentive schemes in mobile phones, electronics, pharma, and food processing are generating genuine manufacturing output (IIP manufacturing +7.2%). As PLI capacities scale, this becomes more structural. Third, demographic dividend: India's working-age population is growing; consumption as a share of GDP will rise naturally. Short-term dependencies that require scrutiny: First, government capex overhang: Construction grew 10.1%, primarily government-infrastructure driven (₹11.11 lakh crore capex budget). Private investment (Gross Fixed Capital Formation) is recovering but not fully crowding in yet – if government capex normalises without private investment pickup, growth softens. Second, rural consumption lag: Private Final Consumption Expenditure grew 7.1% but urban-rural divergence persists. Rural demand, tied to agricultural income and MGNREGA wages, has not fully caught up. Third, export headwinds: Net exports contributed negatively – global uncertainty (China slowdown, US rate environment) creates headwinds for merchandise exports. Conclusion: India's growth has a structural foundation but is currently partially propped by government capex. Sustainability requires: private investment crowding in, rural consumption recovery, and export diversification – all works in progress. 7.8% today is encouraging; sustaining 7%+ through a full cycle requires completing these transitions.

Prelims Answers and Explanations

Q.1. Answer: (a) 1 and 3 only



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Statement 1 is correct – JCR upgraded India to A-, making it the first 'A' category rating from any major CRA. Statement 2 is incorrect – the Big Three (Moody's, Fitch, S&P) still rate India in 'BBB' territory. Statement 3 is correct – 'BBB' (BBB-, BBB, BBB+) represents investment-grade minimum; below BBB- = speculative/junk grade.

Q.2. Answer: (b) Both A and R are true but R is not the correct explanation of A

Both A (India consistently under-rated by Big Three) and R (India's debt-to-GDP ~83%, mostly domestic currency) are factually true. However, R does not explain A – India's under-rating by Big Three is also attributable to structural factors like per-capita income levels, institutional quality assessments, and geopolitical risk weighting, not only the debt composition. Domestic currency debt reduces default risk but is one of many factors in CRA assessments.

Q.3. Answer: (a) 1-Q, 2-P, 3-R, 4-S

Puga Valley = Ladakh (Q); Cambay = Gujarat (P); Son-Narmada = MP/Chhattisgarh (R); West Coast province spans Karnataka, Goa, and Kerala (S). Remember: India has 7 geothermal provinces – Himalayas (Puga, Ladakh), Cambay (Gujarat), Godavari (AP/Telangana), Mahanadi (Odisha), West Coast (Karnataka/Goa/Kerala), Son-Narmada (MP/CG), Andaman-Nicobar.

Q.4. Answer: (c) Only three

Statements 1, 2, and 4 are correct. Statement 3 is incorrect – ₹24,104 crore is the PM-JANMAN outlay (for PVTGs); ₹79,156 crore is the DA-JGUA outlay (for broader tribal communities). PM-JANMAN launched 15 November 2023 (Janjatiya Gaurav Divas = Birsa Munda's birth anniversary). DA-JGUA = 'Dharti Aaba' (Birsa Munda's title) covers all tribal villages (63,000+), not just PVTGs.

Q.5. Answer: (a) Both A and R are true and R is the correct explanation of A

India's active SCO participation despite China-Pakistan membership (A) is indeed explained (R) by India's strategic use of SCO for Russia engagement, Central Asia connectivity (INSTC, Chabahar), and counter-terrorism cooperation (RATS) – all serving India's multi-alignment policy. SCO is valuable to India precisely because it provides a non-Western, non-Quad framework for these engagements.



Q.6. Answer: (a) 1, 2 and 4 only

Statements 1 (Chamoli 2021 = rock/ice avalanche-triggered GLOF, Rishiganga and Dhauliganga dams damaged – correct), 2 (South Lhonak Lake GLOF 2023, Teesta flooding, Teesta-III dam – correct), and 4 (GLOFs increasing with climate change-driven glacial retreat – correct) are accurate. Statement 3 is incorrect – SASE (DRDO) handles snow avalanche forecasting, not GLOF early warning; GLOF early warning is handled by NDMA, NRSC (ISRO), and state disaster management authorities.

Q.7. Answer: (a) 1-Q, 2-P, 3-R, 4-S

QKD (Quantum Key Distribution) = uses quantum properties so any eavesdropping is detectable (Q). QRNG (Quantum Random Number Generator) = uses quantum phenomena (photon detection, radioactive decay) for true random numbers (P). Post-quantum cryptography = algorithms secure against quantum computers (R). 'Harvest now, decrypt later' = collect encrypted data today, decrypt with future quantum computers (S).

Q.8. Answer: (b) Only two

Statements 1 (India-Uzbekistan Comprehensive Strategic Partnership 2022 – correct) and 3 (INSTC connects India to Central Asia through Iran's Chabahar – correct) are accurate. Statement 2 is incorrect – 'Oliy Darajali Do'stlik' is Uzbekistan's highest honour for foreign leaders, not highest civilian award; these are distinct. Statement 4 is incorrect – the Tashkent Declaration 1966 was a peace agreement between India and Pakistan (not Uzbekistan) after the 1965 war, mediated by the Soviet Union.

Q.9. Answer: (a) Both A and R are true and R is the correct explanation of A

The assertion (60% RAP demonstration is significant) is true, and the reason directly explains why: India currently uses only 10-20% RAP; bitumen is petroleum-derived, expensive (₹40,000-50,000/tonne), carbon-intensive, and India imports ~45% of its bitumen. These facts together explain exactly why the RAP breakthrough matters – it reduces both cost and carbon footprint of road construction.

Q.10. Answer: (a) 1, 2 and 4 only

Statements 1 (GIFT IFSC = Gandhinagar, India's first IFSC – correct), 2 (IFSCA = unified regulator, established 2020 – correct), and 4 (aircraft leasing permitted, Ireland and Singapore dominate globally –



correct) are accurate. Statement 3 is incorrect – FCNR(B) are foreign currency (not rupee-denominated) fixed deposits by NRIs; that is the defining feature – 'FC' = foreign currency. Rupee deposits by NRIs are covered under NRE (Non-Resident External) accounts.



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WEEK 2

5 – 11 September 2026

34 PIB stories · Honorary mentions & practice questions

Week 2 of 4



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5 – 11 September 2026

01	India-Morocco Inaugural Joint Defence Committee — New Delhi	86
02	Ex Veer Guardian-2026 — IAF Air Defence Exercise with Japan Air Self-Defence Force	87
03	IAF DRONATHON 2026.....	89
04	PM Modi at BRICS Business Forum 2026 + Bilateral with President Putin	91
05	India-Russia Bilateral — Goyal Calls for \$100B Trade by 2030	93
06	9th ASEAN-India Ministerial Meeting on Agriculture and Forestry	95
07	India Endorses Call to Action for 6G Leadership and Security.....	96
08	BRICS Bharat Innovates Exposition — 18th BRICS Summit.....	98
09	IndiaAI Mission — India-Sweden SITAC Cooperation on AI and Digitalisation.....	100
10	Bankers' Books Evidence Act, 2026 — Effective 1 October 2026	102
11	e-FAST India + PACT — Zero-Emission Freight and ZET Marketplace	104
12	Financial Fraud Risk Indicator (FRI) — ₹5,000+ Crore Cyber Fraud Prevented	105
13	First-Ever District-Level NSO Estimates for Unincorporated Non-Agricultural Sector	107
14	India to Become Global Hub for Ship Ownership, Leasing and Maritime Finance.....	109
15	E-Commerce Rules Amended — Stronger Consumer Protection and Transparency	111
16	ORV Sagar Manthan — India's Advanced Ocean Research Vessel Launched	113
17	Self-Assembly of Organic Molecules — New Path to Green Hydrogen Production	114
18	Quantum Entanglement Loss — Scientists Find Way to Outsmart It	116
19	DILRMP 3.0 — ₹565.50 Crore Digital Overhaul of Land Records	118
20	Swachh Vayu Sarvekshan 2026 — Best Cities Awarded, NCAP Compendium Released	120
21	Dryland Congress 2026 — New Delhi, 800+ Global Experts	122
22	Forest Rights Act — First Regional Review Conference, Bengaluru.....	124
23	7th India-Japan Joint Working Group on Forests — Bengaluru	126
24	HPV Vaccine — 80 Lakh Doses Administered, Cervical Cancer Prevention Milestone	127
25	Rashtriya Poshan Maah 2026 — 9th Edition	129
26	National Fluorosis Day — Multi-Stakeholder Workshop	131
27	Backgrounder: ECLGS 5.0	133
28	Backgrounder: Vibrant Villages Programme	135
29	Backgrounder: India's Path to Blue Skies — NCAP	137
30	Backgrounder: Jute — India's Golden Fibre	139
31	Backgrounder: Every School, A Model School.....	140
32	Backgrounder: BRICS and Blue Economy	142
33	Backgrounder: Securing Farmers' Future with Dignity.....	144
34	NHRC Suo Motu — School Children Crossing Unfinished Bridge, Gariyaband, Chhattisgarh	146
Honorary Mentions		149
Practice Questions		157
10 Prelims Questions — UPSC Style		157
2 Mains Questions and Model Answers		161
Prelims Answers and Explanations		163



India-Morocco Inaugural Joint Defence Committee — New Delhi

Ministry: Ministry of Defence

PIB Date: 8 September 2026

Easy Explanation

India and Morocco held the inaugural meeting of their Joint Defence Committee (JDC) in New Delhi — a quiet but meaningful expansion of India's Africa defence footprint. Morocco is North Africa's most strategically placed nation: Atlantic and Mediterranean coastlines, control of the southern approach to the Strait of Gibraltar (a critical maritime chokepoint), and the world's largest phosphate reserves (70%+ of global reserves). India-Morocco defence ties have been warming since a 2012 Defence Cooperation Agreement. The inaugural JDC now provides a structured bilateral mechanism. For India: Morocco is a gateway to both Sub-Saharan Africa and the EU (Morocco has FTAs with both). For Morocco: India's defence export portfolio (patrol vessels, artillery, radars) and its non-aligned credibility make it an attractive partner alongside its traditional Western suppliers. The meeting comes weeks after the 7th India-Morocco Joint Commission (PIB Week 13) covered trade, phosphate, and green hydrogen — defence is the new layer on a deepening relationship.

Key Terms

Term	Definition
India-Morocco JDC	Joint Defence Committee; inaugural meeting, New Delhi, September 2026; structured bilateral defence mechanism; defence cooperation, maritime security, training, exercises; follows 2012 Defence Cooperation Agreement
Morocco's strategic geography	Atlantic + Mediterranean coastlines; southern approach to Strait of Gibraltar; controls key maritime chokepoint; gateway to Sub-Saharan Africa and EU; 70%+ of world phosphate reserves
Strait of Gibraltar	Narrow strait connecting Atlantic Ocean to Mediterranean Sea; 14 km wide at narrowest; Morocco controls southern



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	shore; Spain controls northern; critical maritime choke point for global shipping
India-Africa defence arc	India-Morocco JDC + India-Egypt (defence MoU) + India-Tanzania (naval cooperation) + India-Mozambique (base access, Nacala) + India-Seychelles (Assumption Island) – systematic Africa maritime security engagement
Morocco's defence modernisation	Morocco modernising with F-16s (USA), Mistral frigates (France), Leopard tanks (Germany); diversifying suppliers; India competitive for: patrol vessels, artillery systems (Dhanush), radars, training
Phosphate-defence linkage	India imports 30-40% phosphate from Morocco (critical for DAP fertilisers); deepening defence ties complement the economic dependency – multi-domain relationship building

UPSC Relevance

- GS2 IR: India's Africa defence engagement; India-Morocco bilateral (defence + trade + phosphate + green hydrogen = multi-domain); Strait of Gibraltar as maritime chokepoint
- Prelims: Morocco = world's largest phosphate reserves (70%+); Strait of Gibraltar = Atlantic-Mediterranean link; India-Morocco JDC = inaugural 2026; 2012 Defence Cooperation Agreement

Ex Veer Guardian-2026 — IAF Air Defence Exercise with Japan Air Self-Defence Force

Ministry: Ministry of Defence

PIB Date: 8 September 2026

Easy Explanation

Exercise Veer Guardian-2026 is the air defence exercise between India's IAF and Japan's Air Self-Defence Force (JASDF). This is one of India's most strategically significant bilateral air exercises – Japan is a Quad partner, the exercise reflects the deepening security alignment among Quad



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members. Veer Guardian began in 2023 – making this only its second or third iteration, signalling rapid institutionalisation. The exercise involves air combat manoeuvring, Beyond Visual Range (BVR) combat simulations, and electronic warfare – both air forces fly their frontline fighters (IAF's Su-30MKI and Rafale; JASDF's F-15J and F-35A). The India-Japan defence relationship has been growing fast: 2+2 Ministerial Dialogue (2019), Acquisition and Cross-Servicing Agreement (ACSA, 2020), and transfer of defence equipment (Japan's US-2 amphibious aircraft to India under discussion). In the Quad context, India-Japan air force interoperability directly serves collective deterrence against Chinese air power in the Indo-Pacific.

Key Terms

Term	Definition
Ex Veer Guardian	IAF + Japan ASDF bilateral air exercise; 2023 inaugural; 2026 = 2nd/3rd iteration; air combat manoeuvring, BVR combat, electronic warfare; IAF Su-30MKI/Rafale; JASDF F-15J/F-35A
Japan ASDF (JASDF)	Japan Air Self-Defence Force; one of Asia's most capable air forces; F-15J, F-35A, F-35B (in procurement); Patriot PAC-3 SAM; participating in Quad air interoperability building
India-Japan Quad alignment	Both India and Japan are Quad members (with USA and Australia); Quad military exercises building interoperability; Veer Guardian = bilateral air component; Malabar = naval component
India-Japan ACSA (2020)	Acquisition and Cross-Servicing Agreement; allows reciprocal supply of logistics, fuel, ammunition during exercises; deepens defence cooperation beyond just exercises
BVR – Beyond Visual Range combat	Air-to-air combat beyond visual range using radar-guided missiles (AMRAAM, R-77, Meteor); core competency for



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	modern air forces; both IAF (Astra, MICA, Meteor on Rafale) and JASDF (AAM-4, AIM-120) BVR capable
US-2 amphibious aircraft	Japan's ShinMaywa US-2; advanced amphibious rescue/patrol aircraft; India in talks to acquire; would enhance India's maritime rescue capability in IOR; India-Japan defence equipment transfer

UPSC Relevance

- GS2 IR: Quad military exercises; India-Japan defence relationship; ACSA; 2+2 Ministerial Dialogue; India-Japan defence equipment transfers (US-2)
- GS3 Defence: BVR combat; IAF modernisation (Rafale, Tejas Mk-1A); air force interoperability; Quad's military dimension
- Prelims: Ex Veer Guardian = IAF + JASDF; inaugural 2023; ACSA = Acquisition and Cross-Servicing Agreement (2020); Quad members = India, USA, Japan, Australia

IAF DRONATHON 2026

Ministry: Ministry of Defence / Indian Air Force

PIB Date: 8 September 2026

Easy Explanation

The Indian Air Force launched DRONATHON 2026 – a major drone technology showcase and innovation challenge. India's drone ambitions are among the most ambitious globally: PLI scheme for drones (₹120 crore, 2022), Production Linked Incentive for drone components, iDEX drone challenges, and a target to make India a global drone hub by 2030. DRONATHON 2026 focuses on: military drone applications (surveillance UAVs, loitering munitions, swarm drones for offensive and defensive operations); counter-drone systems (drone detection + jamming + interception – critical given Pakistan and China drone threats on borders); and indigenous development (reducing dependence on Israeli Herons and imported drone technology). India's drone ecosystem has exploded: companies like Ideaforge, Garuda Aerospace, Raphe mPhibr are building indigenous military and commercial drones.



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DRONATHON = IAF's platform to accelerate this ecosystem through open innovation challenges, startup engagement, and technology demonstration.

Key Terms

Term	Definition
DRONATHON 2026	IAF drone innovation challenge and showcase; military + counter-drone + indigenous focus; startup and industry engagement; open innovation for drone ecosystem acceleration
India's drone PLI	₹120 crore Production Linked Incentive for drones and components (2022); 23 companies shortlisted; targets India as global drone manufacturer and exporter by 2030
Loitering munitions	'Kamikaze drones' – hover, wait, attack; Israel's Harop (India operates); USA's Switchblade; India developing indigenous versions (DRDO, private sector); Ukraine-Russia war = proof of concept
Counter-drone systems	Detection (radar, RF sensors, acoustic), jamming (GPS denial, RF jamming), interception (nets, directed energy, kinetic interceptors); India deploying CUAS (Counter-Unmanned Aerial Systems) on LoC and LAC
Swarm drones	Multiple drones operating autonomously in coordinated swarms; offensive: saturate air defences; defensive: area surveillance; AI-enabled coordination; DRDO testing; China has demonstrated large swarms
Indigenous drone companies	Ideaforge (India's largest drone company, listed); Garuda Aerospace (PM Modi flew one); Raphe mPhibr (defence



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drones); Alpha Design (EW payloads); India's drone startup ecosystem = 200+ companies

UPSC Relevance

- GS3 Defence/Science: India's drone ecosystem; PLI for drones; loitering munitions; counter-drone systems; swarm drones; iDEX framework
- Prelims: India drone PLI = ₹120 crore (2022); DRONATHON = IAF innovation platform; loitering munitions = 'kamikaze drones'; Ideaforge = India's largest drone company

PM Modi at BRICS Business Forum 2026 + Bilateral with President Putin

Ministry: Prime Minister's Office / Ministry of External Affairs

PIB Date: 11 September 2026

Easy Explanation

Prime Minister Modi addressed the BRICS Business Forum 2026 on the sidelines of the 18th BRICS Summit and held a bilateral meeting with Russian President Putin. The 18th BRICS Summit is being held in India (Bharat Mandapam, New Delhi) – India is hosting it under the BRICS Presidency for 2026. BRICS has expanded significantly: the original BRIC (Brazil, Russia, India, China, South Africa) was joined by Iran, UAE, Egypt, Ethiopia, and Saudi Arabia in 2024. India's PM address at the Business Forum focused on: BRICS trade diversification away from dollar dependence, BRICS innovation ecosystems (Bharat Innovates Exposition), and India's role as the 'voice of the Global South.' The Putin bilateral – against the backdrop of the ongoing Ukraine conflict, Western sanctions on Russia, and India's continued Russian oil imports – covers: defence supply continuity (S-400 spares, Su-30MKI maintenance), Kudankulam NPP expansion, energy cooperation, and the target to double bilateral trade.

Key Terms

Term	Definition
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18th BRICS Summit 2026	India hosts; Bharat Mandapam, New Delhi; BRICS Presidency 2026 = India; theme = South-South cooperation, trade, innovation; Bharat Innovates Exposition on sidelines
BRICS expanded membership	Original BRIC (2009): Brazil, Russia, India, China + South Africa (2010) = BRICS-5; 2024 expansion: Iran, UAE, Egypt, Ethiopia, Saudi Arabia = BRICS-10; more countries as 'partner states'
India-Russia bilateral (BRICS sidelines)	Modi-Putin meeting; defence (S-400 spares, Su-30MKI), Kudankulam Units 5-6, energy (Russia = India's largest oil supplier post-Ukraine sanctions), bilateral trade (target \$100B by 2030)
BRICS Business Forum	Platform for BRICS business communities; trade and investment facilitation; PM addresses = signals India's economic priorities to BRICS partners; de-dollarisation discussions
India as 'voice of Global South'	India's self-positioning: bridges developed and developing worlds; BRICS = primarily Global South forum; India uses BRICS to advance Global South interests (climate finance, WTO reform, debt restructuring)
BRICS de-dollarisation	Ongoing discussions on trade in local currencies; India-Russia rupee-rouble trade; New Development Bank (NDB) loans in local currencies; US concerned about dollar weaponisation driving BRICS alternatives
New Development Bank (NDB)	BRICS development bank; headquarters Shanghai; India's K.V. Kamath was first president; USD 30+ billion disbursed;



lends in local currencies; India = major borrower
(infrastructure)

UPSC Relevance

- GS2 IR: BRICS structure (original + expanded); 18th Summit = India hosts 2026; NDB; India's Global South positioning; India-Russia relationship post-Ukraine
- Prelims: BRICS-5 + 2024 expansion = BRICS-10; NDB = New Development Bank, HQ Shanghai; India BRICS President 2026; 18th Summit = Bharat Mandapam, New Delhi
- Mains: India's engagement with BRICS – what India gains, the China-Pakistan challenge within BRICS, India's Global South narrative, de-dollarisation implications

India–Russia Bilateral — Goyal Calls for \$100B Trade by 2030

Ministry: Ministry of Commerce and Industry

PIB Date: 10 September 2026

Easy Explanation

Commerce Minister Piyush Goyal met Russian Minister of Industry and Trade Anton Alikhanov at INNOPROM India 2026 (India's first INNOPROM exhibition – the flagship Russian industrial trade fair now coming to India) and called for accelerating India-Russia economic partnership to achieve \$100 billion bilateral trade by 2030. Current India-Russia trade: approximately \$65-70 billion (FY2024-25) – driven mainly by Indian crude oil imports from Russia at steep discounts post-Ukraine sanctions. The \$100B target requires diversification beyond energy: defence equipment, fertilisers, pharma, machinery, diamonds, and new sectors like technology and green energy. INNOPROM India 2026 itself is significant: India hosting Russia's premier industrial exhibition signals the depth of the bilateral and is aimed at attracting Russian manufacturing investment into India. The Goyal-Alikhanov meeting also covers: payment mechanisms (rupee-rouble trade given SWIFT restrictions on Russia), logistics (sea route via Vladivostok, INSTC), and technology cooperation in steel and chemicals.

Key Terms

Term	Definition
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| Click to Connect Now.

INNOPROM India 2026	India's first INNOPROM exhibition; flagship Russian industrial trade fair (held annually in Yekaterinburg) now brought to India; signifies depth of India-Russia industrial ties; commerce, manufacturing, technology focus
India-Russia trade (\$65-70B)	Dominated by crude oil imports post-Ukraine (Russia = India's largest oil supplier); other: defence, fertilisers (DAP), diamonds, pharma; \$100B target by 2030 requires non-energy diversification
Rupee-rouble trade mechanism	India pays for Russian oil/goods in rupees; Russia accumulates rupee surplus (limited investment options); SWIFT restrictions on Russia driving alternative payment systems; India-Russia working on solutions
INSTC for India-Russia trade	International North-South Transport Corridor; Russia → Azerbaijan → Iran → India via Chabahar; faster than Suez route for some cargo; key logistics for \$100B target
Vladivostok maritime route	Russia's Far East port; India-Russia eastern sea route; Chennai-Vladivostok Maritime Corridor; Indian exporters can reach Russian Far East + Central Asia via Vladivostok
CAATSA concern	Countering America's Adversaries Through Sanctions Act; USA threatens sanctions on countries buying Russian defence equipment; India's S-400 purchase = CAATSA risk; India argues strategic autonomy

UPSC Relevance

- GS2 IR: India-Russia bilateral; CAATSA; INSTC; India's strategic autonomy in balancing Russia-West ties; Vladivostok maritime corridor
- GS3 Economy: India-Russia trade structure; rupee-rouble payment mechanism; Russia as India's largest oil supplier; SWIFT restrictions and India



| Click to Connect Now.

- Prelims: India-Russia bilateral trade ~\$65-70B (FY2024-25); \$100B target by 2030; INNOPROM = Russia's industrial trade fair; Vladivostok = Russia's Far East port; CAATSA = Countering America's Adversaries Through Sanctions Act

9th ASEAN-India Ministerial Meeting on Agriculture and Forestry

Ministry: Ministry of Agriculture and Farmers Welfare

PIB Date: 9 September 2026

Easy Explanation

The 9th ASEAN-India Ministerial Meeting on Agriculture and Forestry was held in New Delhi – the highest-level agricultural dialogue between India and ASEAN. India-ASEAN agricultural cooperation covers: food security (India's rice and wheat exports to ASEAN; India's role as 'food supplier of last resort' to the region), sustainable agriculture (agroforestry, organic farming, precision agriculture technology sharing), fisheries cooperation, and forest governance. The meeting's timing is significant: India is hosting BRICS and INNOPROM in the same week, and the ASEAN-India agricultural meeting positions India as a multilateral hub for global economic dialogues. The joint outcome reaffirmed commitment to food security, sustainable agriculture, and resilient value chains. India's key asks: preferential market access for Indian agricultural exports in ASEAN, and collaborative research on climate-resilient crop varieties for tropical/sub-tropical agriculture that both India and ASEAN nations need.

Key Terms LESS NOISE. MORE RETENTION.

Term	Definition
ASEAN-India Ministerial Meeting on Agriculture	9th edition, New Delhi; highest-level agricultural dialogue; food security, sustainable agriculture, fisheries, forestry; joint outcome on resilient value chains
India-ASEAN food trade	India exports rice (India = world's largest rice exporter), wheat, sugar, spices to ASEAN; imports palm oil (Indonesia,



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	Malaysia = 85% of India's palm oil), tropical fruits, seafood; agricultural FTA within ASEAN-India FTA (2010)
Food security in ASEAN context	ASEAN Food Security Reserve (AFSR); India as regional food supplier; climate change threatening rice yields in Mekong delta; India's climate-resilient varieties = export opportunity
Agroforestry cooperation	Trees integrated with crops/livestock; India's National Agroforestry Policy (2014); ASEAN has similar priorities; joint research on agroforestry systems for Southeast Asian conditions
ASEAN-India FTA (2010)	Goods FTA; services and investment FTAs added; India's agricultural trade deficit with ASEAN grew; India wants review; bilateral JWGTI with individual ASEAN nations (Cambodia last week) = complementary track
India-Malaysia bilateral (Agriculture context)	India-Malaysia bilateral meeting held on sidelines; palm oil = key sensitivity (India imports ~90 lakh tonnes/year; Malaysia + Indonesia supply; India diversifying to sunflower, soyabean)

UPSC Relevance

- GS2 IR: ASEAN-India relations; India-ASEAN FTA review; India as regional food security provider; Act East Policy's agricultural dimension
- GS3 Agriculture: Palm oil imports; India as world's largest rice exporter; agroforestry; climate-resilient agriculture; India-ASEAN food trade
- Prelims: India = world's largest rice exporter; India imports ~90 lakh tonnes palm oil/year (Indonesia + Malaysia); ASEAN-India FTA = 2010; AFSR = ASEAN Food Security Reserve

India Endorses Call to Action for 6G Leadership and Security

Ministry: Ministry of Communications / Department of Telecommunications



| Click to Connect Now.

PIB Date: 9 September 2026

Easy Explanation

India's Department of Telecommunications (DoT) endorsed the international 'Call to Action for 6G Leadership and Security' – positioning India as a proactive player in shaping global 6G standards and security frameworks. 6G is the next generation of wireless technology after 5G – expected commercial deployment around 2030-2035. Unlike previous generations where India was a standards follower, India is pushing to be a standards setter for 6G: India has a dedicated 6G R&D programme (Bharat 6G Vision, ₹400 crore allocated), indigenous telecom technology development through C-DOT and telecom PSUs (BSNL's 4G/5G stack is 100% indigenous – first time India built its own telecom stack), and active participation in ITU and 3GPP standards bodies. The 'security' dimension of the Call to Action addresses: supply chain security (reducing dependence on Chinese telecom vendors like Huawei/ZTE – India banned these for 5G), trusted vendor frameworks, and network resilience standards.

Key Terms

Term	Definition
6G technology	6th generation wireless; expected commercial deployment 2030-2035; speeds 100x faster than 5G; sub-millisecond latency; integrated sensing and communication; terahertz frequency bands; AI-native networks
Bharat 6G Vision	India's 6G R&D roadmap; DoT; ₹400 crore allocated; target: India among top countries in 6G patents and standards; C-DOT as nodal agency; collaboration with IITs, industry
BSNL indigenous 4G/5G stack	India built 100% indigenous 4G/5G core network for BSNL; first time any country built own telecom stack from scratch; TCS + C-DOT + TEJAS Networks; strategic significance: zero dependence on foreign vendors



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Trusted vendor framework	Post-Huawei/ZTE ban; India's National Security Directive on Telecom (2021); only 'trusted sources' can supply telecom equipment; aligns with USA, EU, UK, Australia ('Clean Network' countries)
ITU and 3GPP	International Telecommunication Union (UN agency for ICT); 3GPP (3rd Generation Partnership Project) = sets mobile telecom standards; India increasing participation in both; 6G standards battle = geopolitical
6G security dimensions	Supply chain security (trusted vendors); network slicing security; AI security in 6G networks; quantum-safe encryption for 6G; India-USA, India-EU 6G collaboration frameworks

UPSC Relevance

- GS3 Science/Technology: 6G technology; Bharat 6G Vision; BSNL indigenous stack; trusted vendor framework; India's telecom standards ambitions
- GS2 IR: 6G as geopolitical battleground (USA-China tech competition); India's positioning; Clean Network initiative; India-USA tech partnership (iCET covers 6G)
- Prelims: DoT = Department of Telecommunications; Bharat 6G Vision = ₹400 crore; 3GPP = mobile telecom standards body; ITU = International Telecommunication Union (UN agency); BSNL 4G/5G = 100% indigenous

LESS NOISE. MORE RETENTION.

BRICS Bharat Innovates Exposition — 18th BRICS Summit

Ministry: Ministry of Education / Ministry of Science and Technology

PIB Date: 11 September 2026

Easy Explanation

The BRICS Bharat Innovates Exposition was held on 11-12 September 2026 at Bharat Mandapam, New Delhi, as part of India's 18th BRICS Summit Presidency. This exposition showcases India's innovation ecosystem – startups, deep tech, IITs, NITs, CSIR labs – to BRICS partners and signals India's identity as a 'Vishwa Guru' in technology and innovation. Key themes: AI and digital public



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infrastructure (India's DPI stack – UPI, Aadhaar, ABDM, ONDC – as a model for BRICS nations), space technology (ISRO's achievements + commercial space policy 2024), clean energy innovation (green hydrogen, solar technology), and biotech (India's vaccine production capacity, biosimilars). The 'Bharat Innovates' branding has been used at G20 (2023) and now BRICS – it's India's systematic attempt to showcase its innovation story on global multilateral platforms. The exposition also serves as an industry-government interface for BRICS-wide R&D collaboration proposals.

Key Terms

Term	Definition
BRICS Bharat Innovates Exposition	11-12 September 2026; Bharat Mandapam, New Delhi; part of 18th BRICS Summit; India's innovation showcase; DPI, space, clean energy, biotech themes; startups + IITs + CSIR labs
DPI as BRICS export	India's Digital Public Infrastructure (UPI, Aadhaar, ABDM, ONDC, DigiLocker, PM-WANI, e-Shram) presented as model for BRICS nations; India-BRICS DPI collaboration MoU possibilities; G20 DPI framework (India's initiative)
India's space commercial push	Space sector reform 2024 (100% FDI, private launch vehicles); IN-SPACE as facilitator; Agnikul (3D-printed rocket), Skyroot (Vikram rocket), Pixxel (hyperspectral satellites); BRICS space data sharing potential
ONDC – Open Network for Digital Commerce	Government-backed e-commerce protocol; allows any seller/buyer app to transact across platforms; alternative to Amazon/Flipkart dominance; India presenting to BRICS as DPI model for inclusive digital commerce
BRICS R&D cooperation	BRICS Science, Technology and Innovation (STI) ministerial; joint research projects; BRICS STI framework; India contributing in AI, biotech, space; potential for BRICS technology fund



Bharat Innovates branding	Used at G20 New Delhi 2023, now BRICS 2026; India's systematic multilateral tech showcase; connects PM's 'Vishwa Guru' narrative with concrete innovation output; brand building for India's tech ecosystem globally
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UPSC Relevance

- GS3 Science/Economy: DPI ecosystem (UPI, Aadhaar, ABDM, ONDC); India's space commercial sector; BRICS STI cooperation; India's innovation narrative
- GS2 IR: India's BRICS Presidency 2026; Bharat Innovates as soft power; DPI as India's 'export' to developing world; BRICS multilateral framework
- Prelims: ONDC = Open Network for Digital Commerce; IN-SPACe = India's space regulator/facilitator; BRICS Bharat Innovates = 11-12 Sep 2026, Bharat Mandapam; DPI = Digital Public Infrastructure

IndiaAI Mission — India-Sweden SITAC Cooperation on AI and Digitalisation

Ministry: Ministry of Electronics and IT

PIB Date: 7 September 2026

Easy Explanation

India's IndiaAI Mission and Sweden discussed strategic cooperation in Artificial Intelligence and Digitalisation under SITAC (Sweden-India Tech Alliance for Cooperation). Sweden is an outlier in AI and tech: a small country (10 million population) that punches enormously above its weight – Spotify, Klarna, King (Candy Crush), Ericsson, H&M tech systems all built in Sweden. Sweden is also home to Europe's most advanced AI research (KTH Royal Institute of Technology, Chalmers, AI Sweden). For India: Sweden-India AI cooperation covers responsible AI frameworks (Sweden is an EU member – EU's AI Act 2024 is the world's first comprehensive AI regulation; India learning from this), open-source AI models, AI for public services (Sweden's digital government = highly ranked), and telecom AI (Ericsson is a key 5G vendor and AI in networks partner). For Sweden: India's 1.4 billion population, vast data resources, and IndiaAI Mission (₹10,372 crore) make it an enormous AI deployment market and talent pool.



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Key Terms

Term	Definition
SITAC	Sweden-India Tech Alliance for Cooperation; bilateral tech cooperation framework; AI, digitalisation, clean tech, life sciences; IndiaAI Mission + Sweden AI ecosystem interface
IndiaAI Mission	₹10,372 crore; 7 pillars: AI compute, research (AIRAWAT), datasets (AIKosh), AI in governance, skilling, startups, safe AI; compute target: 10,000+ GPU clusters; India's comprehensive AI policy framework
EU AI Act 2024	World's first comprehensive AI regulation; risk-based approach (minimal, limited, high, unacceptable risk); bans real-time biometric surveillance in public; India studying this for its own AI governance framework
Sweden's tech ecosystem	Ericsson (5G/6G, telecom AI), Spotify (music AI), Klarna (fintech AI), King (gaming AI), Saab (defence tech); KTH, Chalmers, AI Sweden (national AI research institute); small nation, massive tech output
Ericsson-India relevance	Ericsson = major 5G vendor for Indian telcos; Jio, Airtel using Ericsson 5G RAN; India-Sweden cooperation = indirect leverage for 5G/6G tech collaboration; trusted vendor (non-Chinese)
AIRAWAT	AI Research, Analytics and Knowledge Assimilation Platform; India's national AI compute infrastructure; MeitY; first phase: 100 petaflop GPU cluster; Swedish HPC expertise relevant

UPSC Relevance



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- GS3 Science/Technology: IndiaAI Mission pillars; EU AI Act 2024; AIRAWAT; AI governance frameworks; India-Sweden tech cooperation
- Prelims: IndiaAI Mission = ₹10,372 crore; AIRAWAT = India's AI compute platform; EU AI Act 2024 = world's first comprehensive AI regulation; SITAC = Sweden-India Tech Alliance for Cooperation; Ericsson = Swedish 5G vendor

Bankers' Books Evidence Act, 2026 — Effective 1 October 2026

Ministry: Ministry of Finance

PIB Date: 11 September 2026

Easy Explanation

The Bankers' Books Evidence Act, 2026 will come into force from 1st October 2026 – replacing the colonial-era Bankers' Books Evidence Act, 1891. The 1891 Act was enacted when bank records were physical ledgers; it governed how banks could submit their records as evidence in court proceedings. The 2026 replacement modernises this for the digital age: electronic records (core banking system data, digital transaction logs) now formally admissible as certified copies; blockchain-based records and AI-generated bank statements given legal standing; and the process for certifying and submitting bank records as evidence is streamlined. Why it matters: banking fraud cases (PMLA, IBC proceedings), loan recovery cases (DRT – Debt Recovery Tribunals), and criminal financial investigations rely heavily on bank records as evidence. Delays and challenges in admitting digital bank records have slowed down financial crime prosecution in India. The new Act directly addresses this and will speed up financial dispute resolution.

Key Terms

Term	Definition
Bankers' Books Evidence Act 2026	Replaces 1891 colonial-era Act; effective 1 October 2026; modernises bank record admissibility in court; digital/electronic records formally admissible; blockchain and AI-generated records given legal standing



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1891 Act – colonial legacy	Bankers' Books Evidence Act 1891; designed for physical ledger era; provisions for certified copies of physical records; didn't contemplate core banking systems, digital transactions; outdated for financial crime prosecution
Electronic records admissibility	Section 65B of Indian Evidence Act 2000 covers electronic evidence; Bankers' Books Evidence Act 2026 specifically addresses banking records; removes technical challenges to admitting CBS (Core Banking System) outputs
DRT – Debt Recovery Tribunals	Specialised tribunals for bank loan recovery (loans above ₹20 lakh); DRAT (Debt Recovery Appellate Tribunal) above; new Act speeds up bank record submission in DRT proceedings = faster loan recovery
PMLA evidence	Prevention of Money Laundering Act; bank records = primary evidence in money laundering cases; Enforcement Directorate relies on bank records; new Act streamlines ED's evidence submission in PMLA proceedings
IBC – Insolvency and Bankruptcy Code	Bank records central to IBC resolution proceedings (CIRP); claims by banks against insolvent companies require documentary evidence; new Act facilitates faster claims verification in IBC process

UPSC Relevance

- GS2 Polity/Governance: Modernisation of colonial-era laws; Bankers' Books Evidence Act 2026 vs 1891; digital evidence in financial crime; DRT system
- GS3 Economy: Financial crime prosecution; IBC; PMLA; DRT; impact on NPAs and loan recovery
- Prelims: Bankers' Books Evidence Act 1891 replaced by 2026 Act; effective 1 October 2026; DRT = Debt Recovery Tribunal; DRAT = Debt Recovery Appellate Tribunal; PMLA = Prevention of Money Laundering Act



e-FAST India + PACT — Zero-Emission Freight and ZET Marketplace

Ministry: NITI Aayog

PIB Date: 7 September 2026

Easy Explanation

NITI Aayog's e-FAST India (Electric Freight Accelerator for Sustainable Transportation) launched PACT (Pathways to Advanced Clean Transportation) to support accelerated zero-emission freight deployment in India, along with a ZET (Zero-Emission Truck) marketplace. Freight transport is India's Achilles heel for decarbonisation: commercial vehicles (trucks, buses) account for ~12% of India's road fleet but contribute ~40% of road transport CO₂ emissions. Unlike passenger EVs (where sales are booming – 3-wheelers nearly fully electric, 2-wheelers growing), freight electrification has lagged because: trucks need large battery packs (weight and range challenges), long charging times disrupt logistics timelines, and TCO (Total Cost of Ownership) parity with diesel hasn't been reached. PACT addresses this through: fleet electrification pilots with large logistics players (Delhivery, Blue Dart, Mahindra Logistics), charging infrastructure along freight corridors (Delhi-Mumbai, Golden Quadrilateral), and ZET marketplace as a platform for fleet operators to procure zero-emission trucks.

Key Terms

Term	Definition
e-FAST India	Electric Freight Accelerator for Sustainable Transportation; NITI Aayog initiative; accelerate zero-emission freight deployment; industry-government interface; pilots with logistics companies
PACT	Pathways to Advanced Clean Transportation; NITI Aayog launch September 2026; connects fleet operators, OEMs, financiers, charging infrastructure providers; zero-emission freight ecosystem building



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ZET marketplace	Zero-Emission Truck marketplace; platform for fleet operators to procure ZETs; connects truck OEMs (Tata Motors EV, Mahindra, Olectra, Switch Mobility) with buyers; aggregates demand to drive down costs
Freight decarbonisation challenge	Commercial vehicles = 12% of fleet, 40% of road transport CO ₂ ; hard to electrify: weight, range, charging time, TCO parity; PACT targets these barriers through pilots and market development
PM e-BUS Sewa (contrast)	₹57,613 crore; 10,000+ e-buses for city transport; bus electrification more advanced than truck; freight = next challenge after buses; e-FAST + PACT = freight equivalent of PM e-BUSES
Golden Quadrilateral freight	Delhi-Mumbai-Chennai-Kolkata highway network; ~2% of India's road network but carries ~40% of road freight; strategic corridor for ZET charging infrastructure deployment

UPSC Relevance

- GS3 Environment/Economy: Freight decarbonisation; EV ecosystem; ZET; charging infrastructure; NITI Aayog's e-FAST India; Golden Quadrilateral
- Prelims: e-FAST India = Electric Freight Accelerator for Sustainable Transportation (NITI Aayog); PACT = Pathways to Advanced Clean Transportation; ZET = Zero-Emission Truck; Golden Quadrilateral = Delhi-Mumbai-Chennai-Kolkata

Financial Fraud Risk Indicator (FRI) — ₹5,000+ Crore Cyber Fraud Prevented

Ministry: Ministry of Communications / DoT

PIB Date: 8 September 2026

Easy Explanation



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The Department of Telecommunications' Financial Fraud Risk Indicator (FRI) has prevented suspected cyber fraud transactions worth over ₹5,000 crore – a landmark milestone for India's financial fraud prevention infrastructure. FRI works like this: DoT's telecom analytics system identifies mobile numbers being used for cyber fraud (through complaint data from I4C – Indian Cyber Crime Coordination Centre, TRAI signals, and bank alerts); these numbers are flagged with a 'risk score'; banks check this risk score before processing transactions from flagged numbers; high-risk transactions are flagged or blocked before the money leaves the victim's account. FRI is part of the Sanchar Saathi ecosystem – DoT's citizen-centric telecom security platform that also includes CEIR (Central Equipment Identity Register – for blocking stolen phones) and TAF COP (Telecom Analytics for Fraud Management and Consumer Protection – for tracking SIM cards issued on one's Aadhaar). The ₹5,000 crore prevented figure represents a major real-world impact.

Key Terms

Term	Definition
Financial Fraud Risk Indicator (FRI)	DoT initiative; assigns risk scores to mobile numbers used in cyber fraud; banks check FRI score before processing transactions; integrates with I4C complaint data + TRAI signals + bank alerts; ₹5,000+ crore prevented
Sanchar Saathi ecosystem	DoT's citizen-centric telecom security platform; components: FRI (fraud risk scoring), CEIR (stolen phone blocking), TAF COP (SIM tracking on Aadhaar), ASTR (AI-based SIM subscriber verification); unified fraud prevention
I4C – Indian Cyber Crime Coordination Centre	MHA; coordinates cybercrime investigation across states; Cyber Crime Reporting Portal (cybercrime.gov.in); National Cybercrime Helpline 1930; feeds complaint data to FRI
CEIR – Central Equipment Identity Register	Blocks stolen/lost mobile phones (by IMEI); DoT; citizens can report stolen phone → CEIR blocks it from all networks; prevents stolen phone reuse for cyber fraud



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TAF COP	Telecom Analytics for Fraud Management and Consumer Protection; DoT; citizens can check how many SIMs issued on their Aadhaar; can report unwanted SIMs; addresses SIM fraud
Cyber fraud scale in India	India = 3rd largest source of cybercrime globally; UPI fraud, OTP scams, phishing, investment fraud, digital arrest scam; I4C data: ₹1.5 lakh crore+ lost to cybercrime annually; FRI = preventive infrastructure

UPSC Relevance

- GS3 Technology/Governance: Cyber fraud prevention ecosystem; Sanchar Saathi; FRI; CEIR; TAF COP; I4C; India's cybercrime scale
- GS2 Polity: MHA's I4C; DoT's regulatory role in fraud prevention; Aadhaar-SIM linkage for fraud control
- Prelims: FRI = Financial Fraud Risk Indicator (DoT); Sanchar Saathi = DoT's telecom security platform; CEIR = Central Equipment Identity Register; TAF COP = Telecom Analytics for Fraud Management; I4C = Indian Cyber Crime Coordination Centre (MHA); National Cybercrime Helpline = 1930

First-Ever District-Level NSO Estimates for Unincorporated Non-Agricultural Sector

Ministry: Ministry of Statistics and Programme Implementation (MoSPI)

PIB Date: 10 September 2026

Easy Explanation

The National Statistical Office (NSO) released first-ever district-level estimates for the unincorporated non-agricultural sector – a landmark in India's statistical architecture. The 'unincorporated non-agricultural sector' = small, informal businesses in trade, manufacturing, and services that are NOT registered as companies or LLPs – the kirana stores, roadside dhabas, small tailors, local plumbers, street vendors. This sector employs an estimated 110 million workers (second only to agriculture) and contributes significantly to GDP but has been nearly invisible to official statistics at the district level.

Why it matters: district-level data enables targeted policy (which districts need MSME support, credit



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access, formalisation incentives); informs state finance commission allocations; and helps identify informal economy hotspots. The data was generated from the Annual Survey of Unincorporated Sector Enterprises (ASUSE) – NSO's periodic survey of informal businesses, replacing the older Economic Census methodology for this purpose.

Key Terms

Term	Definition
Unincorporated non-agricultural sector	Small informal businesses NOT registered as companies; kirana stores, dhabas, tailors, vendors, repair shops; ~110 million workers; significant GDP contribution; previously tracked only at national/state level
NSO – National Statistical Office	MoSPI; India's primary statistical agency; conducts PLFS, NSSO surveys, CPI, GDP estimates; now district-level informal sector data = expansion of statistical coverage
ASUSE	Annual Survey of Unincorporated Sector Enterprises; NSO; periodic survey of informal businesses; tracks employment, output, investment; first time generating district-level estimates
District-level data significance	Enables targeted MSME/formalisation policy; informs State Finance Commission allocations (districts with high informal sector = more support needed); identifies credit gaps; basis for MUDRA loan targeting
Formalisation agenda	PM SVANidhi (street vendors), MUDRA (micro enterprises), Udyam registration (MSMEs); district-level data shows where formalisation is lagging; complements GST registration data for informal economy mapping
Economic Census vs ASUSE	Economic Census (last: 6th in 2013-14, 7th in progress) = comprehensive count of all establishments; ASUSE = sample



survey for output/employment data; district-level ASUSE fills gap between censuses
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UPSC Relevance

- GS3 Economy: India's informal sector size and significance; statistical systems (NSO, MoSPI); ASUSE; formalisation agenda; MUDRA; PM SVANidhi
- GS2 Governance: District-level data for policy targeting; State Finance Commission; MoSPI's statistical capacity
- Prelims: NSO = National Statistical Office (under MoSPI); ASUSE = Annual Survey of Unincorporated Sector Enterprises; unincorporated sector = informal non-agricultural businesses; Economic Census last conducted 2013-14 (6th)

India to Become Global Hub for Ship Ownership, Leasing and Maritime Finance

Ministry: Ministry of Ports, Shipping and Waterways

PIB Date: 10 September 2026

Easy Explanation

Union Minister Sarbananda Sonowal announced India's ambition to become a global hub for ship ownership, ship leasing, and maritime finance. Currently, India is a paradox in shipping: India is one of the world's largest producers of merchant seafarers (~240,000 active, 9% of global supply) and has the world's second largest fleet of offshore vessels, yet India-owned ships carry only ~5-6% of India's trade (compared to Greece's 17% and Japan's 14%). Most Indian shipping is done on foreign-owned vessels – meaning freight payments leave India. The strategy to change this: GIFT IFSC ship leasing (aircraft leasing model applied to ships – same tax/regulatory advantages); flag-of-convenience alternative (International Ship Registry of India being developed); maritime finance from Indian banks (currently Indian banks barely finance ships); and incentivising Indian companies to own/register vessels in India. This complements last week's maritime decarbonisation push – India wants to own green ships, not just port them.

Key Terms



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Term	Definition
India's shipping paradox	240,000+ Indian seafarers (9% of global supply) but only 5-6% of India's trade carried on Indian-owned ships; massive freight outgo; UNCTAD data: India among largest shipping importers despite seafarer strength
GIFT IFSC ship leasing	Applying aircraft leasing model to ships; same tax/regulatory advantages (10% tonnage tax, no capital gains on sale of ships); attracting ship leasing companies to set up in India via GIFT IFSC
International Ship Registry of India	Being developed; alternative to flags of convenience (Panama, Liberia, Marshall Islands); India wants ships registered under Indian flag with competitive tax/regulatory regime
Maritime finance gap	Indian banks (SBI, PNB) rarely finance ships; shipping = long-cycle, high-risk asset; maritime finance = specialised; India targets NDB, Exim Bank, IFSCA to develop ship financing products
Sagarmala + Maritime Vision 2030	Sagarmala Programme (port-led development); Maritime India Vision 2030 (₹1.2 lakh crore investment); ship ownership = key pillar; India wants to capture value in entire maritime value chain, not just port services
Greek and Japanese shipping model	Greece: 17% of world's shipping capacity from country with 10M population; strong maritime clusters (Piraeus); Japan: 14% ownership; Japan Shipping (NYK, MOL, K Line) = conglomerates; India studying both

UPSC Relevance



| Click to Connect Now.

- GS3 Economy/Infrastructure: India's shipping sector; GIFT IFSC ship leasing; Maritime India Vision 2030; Sagarmala; India's seafarer strength vs ship ownership gap
- Prelims: India has ~240,000 active seafarers (9% global supply); GIFT IFSC = ship leasing hub; Sagarmala = port-led development programme; India carries only 5-6% of own trade on Indian ships

E-Commerce Rules Amended — Stronger Consumer Protection and Transparency

Ministry: Ministry of Consumer Affairs, Food and Public Distribution

PIB Date: 10 September 2026

Easy Explanation

The Government amended the Consumer Protection (E-Commerce) Rules – strengthening consumer protection and promoting transparency in India's booming e-commerce sector (currently ~\$130 billion, targeting \$350 billion by 2030). Key amendments: mandatory disclosure of country of origin for all products (particularly targeting Chinese-origin goods sold through marketplace platforms without clear labeling); stricter rules on flash sales (preventing predatory pricing that drives small retailers out); liability of marketplace platforms for goods sold by third-party sellers (previously platforms claimed to be 'merely intermediaries'); mandatory grievance redressal officer (Indian resident) for all e-commerce platforms; and prohibition on giving preferential treatment to related-party sellers (addressing the Flipkart-WS Retail or Amazon-Cloudtail type arrangements). These rules come as India's e-commerce sector grows rapidly but faces complaints about: Chinese dumping through online platforms, unfair trade practices, and poor consumer grievance redressal.

Key Terms

Term	Definition
Consumer Protection (E-Commerce) Rules	Amended 2026; mandatory country of origin disclosure; flash sale regulation; marketplace platform liability; mandatory grievance redressal officer; no preferential treatment to related-party sellers



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Country of origin disclosure	Mandatory labeling of product origin on e-commerce platforms; targets Chinese goods sold without clear country identification; consumer right to know; connects to 'vocal for local' and import substitution
Marketplace liability	E-commerce platforms previously claimed 'safe harbour' as mere intermediaries; amended rules increase platform accountability for goods sold by third-party sellers; similar to EU Digital Markets Act approach
Flash sale regulation	Predatory pricing during flash sales (e.g., products sold at 90% discount) to eliminate competitors; amended rules define and restrict anti-competitive flash sales; protect small offline retailers
Related-party seller preference	Platforms favouring their own subsidiary sellers (Amazon favouring its own brands; Flipkart favouring WS Retail); Competition Commission of India (CCI) investigated; amended rules explicitly prohibit preferential treatment
Consumer Protection Act 2019	Parent legislation; Consumer Protection (E-Commerce) Rules are subsidiary; 2019 Act created CCPA (Central Consumer Protection Authority); CCI handles competition; Consumer Courts for disputes

UPSC Relevance

- GS2 Polity/Governance: Consumer protection framework (CPA 2019, CCPA, Consumer Courts); e-commerce regulation; platform liability; CCI's role
- GS3 Economy: India's e-commerce sector; digital markets regulation; competition law; country of origin rules
- Prelims: Consumer Protection Act = 2019; CCPA = Central Consumer Protection Authority; CCI = Competition Commission of India; e-commerce rules amended 2026; Consumer Helpline = 1915



ORV Sagar Manthan — India's Advanced Ocean Research Vessel Launched

Ministry: Ministry of Earth Sciences

PIB Date: 9 September 2026

Easy Explanation

Union Minister Dr. Jitendra Singh launched 'ORV Sagar Manthan' (Ocean Research Vessel Sagar Manthan) – India's most advanced ocean research vessel. 'Sagar Manthan' evokes the mythological Samudra Manthan (churning of the ocean by gods and demons) – aptly named for a vessel that will explore and extract knowledge from India's vast ocean territories. ORV Sagar Manthan's capabilities: deep-sea research (bathymetric mapping, sediment coring, deep ocean mineral exploration); oceanographic research (temperature, salinity, currents, marine biology); atmospheric-ocean interaction research (critical for monsoon prediction); seismic surveys (India's continental shelf has significant hydrocarbon potential); and climate research (ocean carbon uptake monitoring). The vessel significantly upgrades India's ocean research fleet – previously dominated by older FORV Sagar Sampada and other MoES vessels. ORV Sagar Manthan is directly linked to India's Deep Ocean Mission – it will serve as the primary support vessel for deep-sea expeditions and eventually for the Samudrayaan manned submersible mission.

Key Terms

Term	Definition
ORV Sagar Manthan	Ocean Research Vessel; launched September 2026; Ministry of Earth Sciences; India's most advanced ocean research vessel; deep-sea, oceanographic, atmospheric-ocean interaction, seismic, climate research
Samudra Manthan mythological reference	Churning of ocean by gods (Devas) and demons (Asuras) using Mount Meru + Vasuki serpent; produced amrit, Lakshmi, poison (Halahala), and treasures; vessel named to evoke knowledge extraction from the ocean



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Deep Ocean Mission	₹4,077 crore; Ministry of Earth Sciences; 6 themes: deep-sea mining (polymetallic nodules at 5,500m depth), climate advisory, biodiversity, ocean survey, energy/freshwater from ocean, deep-ocean station; Samudrayaan = manned submersible
Samudrayaan	India's manned deep-ocean mission; MATSYA 6000 = submersible; 3 persons to 6,000m depth; NIOT building; target: explore polymetallic nodule fields in Central Indian Ocean Basin; Indian Ocean floor = 75,000 sq km exploration zone
NIOT – National Institute of Ocean Technology	Chennai; under MoES; builds ocean research vessels, deep-ocean technology; built India's previous research vessels; Samudrayaan submersible being built here
Polymetallic nodules	Potato-sized rocks on ocean floor containing manganese, nickel, cobalt, copper; India's exploration zone in Central Indian Ocean Basin = 75,000 sq km (UN allocated); critical minerals for EV batteries

UPSC Relevance

- GS3 Science/Environment: Deep Ocean Mission; ORV Sagar Manthan; Samudrayaan; MATSYA 6000; NIOT; polymetallic nodules; India's ocean research fleet
- Prelims: Deep Ocean Mission = ₹4,077 crore; Samudrayaan = manned submersible; MATSYA 6000 = India's deep-sea vehicle; NIOT = National Institute of Ocean Technology, Chennai; polymetallic nodules = deep-sea critical minerals

Self-Assembly of Organic Molecules — New Path to Green Hydrogen Production

Ministry: Ministry of Science and Technology



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PIB Date: 9 September 2026

Easy Explanation

Indian scientists demonstrated that the self-assembly of organic molecules can create efficient photocatalysts for green hydrogen production – a potentially transformative breakthrough for India's green hydrogen ambitions. The science: certain organic molecules spontaneously organise themselves into ordered nanostructures (self-assembly) under the right conditions. These nanostructures can act as photocatalysts – materials that use sunlight to split water molecules into hydrogen and oxygen (photocatalytic water splitting). The breakthrough: the self-assembled organic structures showed significantly higher hydrogen evolution rates than conventional photocatalysts (typically titanium dioxide, TiO_2) and, crucially, can be synthesised from abundant, cheap organic molecules rather than rare/expensive materials. Why it matters for India: green hydrogen currently costs \$4-7/kg to produce (electrolysis route); India's National Green Hydrogen Mission (NGHM) targets \$1/kg by 2030; photocatalytic green hydrogen could be a third, potentially cheaper route alongside electrolysis and thermochemical splitting.

Key Terms

Term	Definition
Photocatalytic water splitting	Using sunlight + photocatalyst to split water (H_2O) into hydrogen (H_2) and oxygen; solar energy directly converted to chemical energy (hydrogen fuel); no electricity intermediary step unlike electrolysis
Self-assembly of organic molecules	Molecules spontaneously organise into ordered nanostructures without external direction; driven by non-covalent interactions (hydrogen bonds, π - π stacking); creates uniform, high-surface-area catalytic structures
Green hydrogen production routes	Route 1: Electrolysis (using renewable electricity to split water) – current main route; Route 2: Thermochemical (using concentrated solar heat); Route 3: Photocatalytic (direct



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	sunlight + catalyst); India's NGHM primarily Route 1 but research covers all
NGHM – National Green Hydrogen Mission	₹17,490 crore; target: 5 MMT green hydrogen production by 2030; \$1/kg cost target; electrolyser manufacturing (10 GW capacity); export ambition; SECI as implementing agency
Cost comparison	Current green hydrogen: \$4-7/kg (electrolysis); grey hydrogen (from natural gas): \$1-2/kg; NGHM target: \$1/kg by 2030; photocatalytic route = potentially lower cost if scaled, as no electricity cost
India's organic chemistry strength	India = world's 3rd largest pharma producer; deep organic chemistry expertise in CSIR labs, IITs; self-assembly organic photocatalyst research leverages this strength for clean energy

UPSC Relevance

- GS3 Science/Energy: Green hydrogen production routes; photocatalytic water splitting; NGHM; self-assembly nanotechnology; India's green hydrogen cost targets
- Prelims: NGHM = National Green Hydrogen Mission (₹17,490 crore); green hydrogen target = 5 MMT by 2030; \$1/kg cost target; SECI = Solar Energy Corporation of India; photocatalytic water splitting = direct solar-to-hydrogen

LESS NOISE. MORE RETENTION.

Quantum Entanglement Loss — Scientists Find Way to Outsmart It

Ministry: Ministry of Science and Technology

PIB Date: 7 September 2026

Easy Explanation

Indian scientists published a breakthrough method to overcome quantum entanglement loss — one of the biggest barriers to practical quantum communication and quantum computing. Quantum



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entanglement is a phenomenon where two particles become correlated such that the quantum state of one instantly influences the other, regardless of distance – Einstein called it 'spooky action at a distance.' For quantum communication (QKD), entanglement enables provably secure encryption. The problem: entanglement is extremely fragile. Any interaction with the environment ('decoherence') breaks the entanglement – photons carrying entangled states lose their quantum properties as they travel through optical fibres. This limits quantum communication range to ~100-200 km with current technology. The breakthrough: the scientists devised a method using a single quantum operation that effectively 'refreshes' entanglement without measuring the quantum state (which would destroy it) – called an 'entanglement purification' method. This could significantly extend quantum communication range and improve the reliability of quantum networks.

Key Terms

Term	Definition
Quantum entanglement	Quantum phenomenon where two particles share correlated quantum states; measuring one instantly determines the state of the other regardless of distance; basis for quantum communication and quantum computing
Decoherence	Loss of quantum properties due to interaction with environment; photons lose entanglement when interacting with optical fibre material, air molecules, temperature fluctuations; primary barrier to long-range quantum communication
Entanglement purification	Technique to restore degraded entanglement without destroying quantum state; 'refreshes' entangled particles; key to extending quantum repeater networks; this breakthrough = novel single-operation method
Quantum repeaters	Devices that extend quantum communication range by 'relaying' entanglement; analogous to classical optical



	amplifiers but more complex; entanglement purification is core function of quantum repeaters
Quantum network implications	Quantum internet = network of quantum computers/devices communicating via entanglement; requires quantum repeaters at regular intervals; this breakthrough = significant step toward practical quantum networks
National Quantum Mission link	₹6,003 crore (2023-31); 4 themes: quantum computing, quantum communication, quantum sensing, quantum materials; C-DOT QKD products (last week) + this entanglement breakthrough = quantum communication pillar progress

UPSC Relevance

- GS3 Science: Quantum entanglement; decoherence; entanglement purification; quantum repeaters; quantum internet; National Quantum Mission
- Prelims: Quantum entanglement = 'spooky action at a distance' (Einstein); decoherence = quantum state loss; National Quantum Mission = ₹6,003 crore; quantum repeaters needed for long-range quantum communication

DILRMP 3.0 — ₹565.50 Crore Digital Overhaul of Land Records

Ministry: Ministry of Rural Development

PIB Date: 10 September 2026

Easy Explanation

Union Minister Shivraj Singh Chouhan launched operational guidelines for DILRMP 3.0 (Digital India Land Records Modernisation Programme 3.0) with a ₹565.50 crore outlay – the latest iteration of India's flagship land record digitisation programme. Land records in India are a governance nightmare: disputed land ownership is the single largest source of civil litigation (estimated 66% of all civil suits); unclear land titles deter investment; farmers cannot use land as collateral without clean records; and



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land acquisition for infrastructure is delayed by title disputes. DILRMP 1.0 and 2.0 digitised existing records (converting paper patta/khataunis into digital form). DILRMP 3.0 goes further: Real-Time Updating (linking mutations – change of ownership – to digital records in real time); integration with Aadhaar for landowner authentication; GIS mapping (every land parcel geo-tagged with coordinates); and integration with NGDRS (National Generic Document Registration System) so property registrations automatically update land records.

Key Terms

Term	Definition
DILRMP 3.0	Digital India Land Records Modernisation Programme 3.0; ₹565.50 crore; Ministry of Rural Development; real-time mutation updating, Aadhaar integration, GIS mapping, NGDRS integration; upgrades from digitisation to dynamic land registry
Land record digitisation journey	DILRMP 1.0/2.0: converted paper records to digital; DILRMP 3.0: real-time updates, GIS, authentication; target: unique land parcel identification number (ULPIN) for every plot in India
ULPIN – Unique Land Parcel Identification Number	14-digit number for every land parcel; based on geo-coordinates; analogous to Aadhaar for land; enables nationwide land record database; prevents duplicate registration and fraud
NGDRS – National Generic Document Registration System	Standardised property registration platform; integrates with land records; once registered, land record automatically updated; end goal: no gap between registration and mutation
Land litigation scale	Estimated 66% of all civil cases in India relate to land disputes; Supreme Court + High Courts + District Courts clogged; DILRMP 3.0's clean records = fewer disputes = faster justice



PM-SVAMITVA scheme	Survey of Villages and Mapping with Improvised Technology in Village Areas; drone mapping of rural inhabited land; property rights to rural household owners; complementary to DILRMP 3.0 for rural land records
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UPSC Relevance

- **GS2 Governance:** Land records modernisation; DILRMP; ULPIN; NGDRS; land litigation burden; PM-SVAMITVA
- **GS3 Economy:** Clear land titles and investment; farmer credit access; land as collateral; infrastructure land acquisition
- **Prelims:** DILRMP = Digital India Land Records Modernisation Programme; ULPIN = Unique Land Parcel Identification Number (14-digit); NGDRS = National Generic Document Registration System; PM-SVAMITVA = drone mapping of rural land

Swachh Vayu Sarvekshan 2026 — Best Cities Awarded, NCAP Compendium Released

Ministry: Ministry of Environment, Forest and Climate Change

PIB Date: 7 September 2026

Easy Explanation

The 5th Swachh Vayu Sarvekshan (Clean Air Survey) 2026 awards were conferred on Swachh Vayu Diwas 2026, and a compendium of Best Management Practices under NCAP (National Clean Air Programme) was released. Swachh Vayu Sarvekshan ranks cities on air quality improvement – it is a survey of 131 non-attainment cities (cities that failed to meet National Ambient Air Quality Standards – NAAQS – and are covered under NCAP). NCAP was launched in 2019 with a target of 20-30% reduction in PM10 and PM2.5 concentrations by 2024 (revised to 40% reduction by 2026). The survey is critical because it creates competitive pressure: cities lose Smart City/other funding if they don't improve. Best practices compendium: the cities that showed biggest air quality improvement shared their methods – dust suppression, switch to CNG public transport, construction dust norms,



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industrial stack monitoring, crop stubble management (Punjab/Haryana = major contributor to Delhi pollution).

Key Terms

Term	Definition
Swachh Vayu Sarvekshan	Annual air quality improvement survey; 131 non-attainment cities ranked; Ministry of Environment; Swachh Vayu Diwas (September 7); cities ranked on % improvement in PM _{2.5} and PM ₁₀
NCAP – National Clean Air Programme	Launched 2019; targets 131 non-attainment cities; 40% PM ₁₀ /PM _{2.5} reduction target by 2026 (originally 20-30% by 2024); ₹4,507 crore outlay; cities given NCAP funds for air quality improvement projects
Non-attainment cities	Cities that failed to meet National Ambient Air Quality Standards (NAAQS) for PM ₁₀ and PM _{2.5} ; 131 cities; concentrated in Indo-Gangetic Plain (Delhi NCR, UP, Bihar) and industrial clusters
NAAQS – National Ambient Air Quality Standards	Annual standard: PM _{2.5} = 40 µg/m ³ ; PM ₁₀ = 60 µg/m ³ ; 24-hour standard: PM _{2.5} = 60 µg/m ³ ; PM ₁₀ = 100 µg/m ³ ; WHO standard much stricter (PM _{2.5} = 5 µg/m ³ annual); India's standards = interim targets
CAQM – Commission for Air Quality Management	Statutory body for NCR and adjoining areas; replaces EPCA; addresses seasonal pollution (stubble burning, winter inversion); Graded Response Action Plan (GRAP); this week: serious note on HSPCB non-compliance
Best practices from cities	Dust suppression (water sprinkling on roads, mechanised sweeping), CNG/EV public fleet, green belts, industrial



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monitoring, construction norms, biomass burning ban;
compendium = knowledge sharing across NCAP cities

UPSC Relevance

- GS3 Environment: Air pollution; NCAP; non-attainment cities; NAAQS; PM2.5 vs PM10; CAQM; Swachh Vayu Sarvekshan; stubble burning
- GS2 Governance: CAQM as statutory body; graded response; competitive ranking for city governance improvement; NCAP funding mechanism
- Prelims: NCAP = National Clean Air Programme (2019); 131 non-attainment cities; PM2.5 NAAQS = 40 $\mu\text{g}/\text{m}^3$ annual; CAQM = Commission for Air Quality Management; GRAP = Graded Response Action Plan; Swachh Vayu Sarvekshan = annual air quality survey

Dryland Congress 2026 — New Delhi, 800+ Global Experts

Ministry: Ministry of Agriculture and Farmers Welfare / Ministry of Environment

PIB Date: 9 September 2026

Easy Explanation

The Dryland Congress 2026 was held in New Delhi with 800+ global experts deliberating on six key themes for dryland management. Drylands cover about 41% of Earth's land surface and support ~2.5 billion people – including large portions of India's Rajasthan, Gujarat, Haryana, Maharashtra, Karnataka, and Deccan Plateau. India has approximately 228 million hectares of drylands (including arid, semi-arid, and dry sub-humid zones). The six themes of the congress: land degradation and restoration; water management in drylands; dryland agriculture and food security; pastoral systems and livelihoods; climate change adaptation; and digital and innovation solutions for drylands. India's relevance: India made significant progress in dryland restoration (2.176 crore hectares restored 2011-2020, as highlighted at UNCCD COP17 last week). UNCCD (UN Convention to Combat Desertification) – one of the three Rio Conventions – is the primary international framework for dryland governance. Dryland Congress 2026 feeds into UNCCD's policy discussions.

Key Terms



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Term	Definition
Dryland Congress 2026	New Delhi; 800+ global experts; 6 themes: land degradation/restoration, water management, dryland agriculture, pastoral systems, climate adaptation, digital solutions; feeds into UNCCD policy
Drylands – global context	41% of Earth's land surface; arid, semi-arid, dry sub-humid zones; ~2.5 billion people; highly vulnerable to desertification and climate change; India: ~228 million hectares dryland
UNCCD	UN Convention to Combat Desertification; one of Rio Conventions (with UNFCCC and CBD); 1994; 196 parties; Land Degradation Neutrality (LDN) as key framework; India's Bonn Challenge commitment (2.6 crore ha by 2030)
India's dryland states	Rajasthan (Thar Desert), Gujarat (Kutch), Haryana, Maharashtra (Vidarbha, Marathwada), Karnataka (northern), Deccan Plateau; dryland farming = rainfed agriculture; ~60% of India's cropped area is rainfed
Pastoral systems	Livestock herding in drylands; Rajasthan's Bishnoi, Raika communities; Kutch's Maldhari pastoralists; traditional dryland livelihood; community-based land management; UNCCD COP17 (last week) called for community-based restoration
LDN – Land Degradation Neutrality	UNCCD framework: no net loss of productive land; achieved through reducing degradation + restoring equivalent area; India's NDC includes land restoration commitments; 2.176 crore ha restored by 2020

UPSC Relevance



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- GS3 Environment: Drylands; UNCCD; LDN; Bonn Challenge; India's restoration achievements; pastoral systems; dryland agriculture
- Prelims: UNCCD = UN Convention to Combat Desertification (1994); one of Rio Conventions; LDN = Land Degradation Neutrality; India's dryland area ~228 million ha; Bonn Challenge = 2.6 crore ha by 2030 (India)

Forest Rights Act — First Regional Review Conference, Bengaluru

Ministry: Ministry of Tribal Affairs

PIB Date: 10 September 2026

Easy Explanation

The First Regional Review Conference on the Implementation of the Forest Rights Act (FRA) 2006 was held in Bengaluru – a rare official review of how well India's landmark tribal rights legislation is being implemented. FRA 2006 (Scheduled Tribes and Other Traditional Forest Dwellers Recognition of Rights Act) is one of India's most significant land rights laws – it recognises and vests forest rights in forest-dwelling Scheduled Tribes and Other Traditional Forest Dwellers (OTFDs) who have been occupying forest land for generations. Three types of rights: Individual Forest Rights (IFR) – patta for forest land they cultivate; Community Forest Rights (CFR) – rights over community resources (bamboo, NTFP, grazing); and Community Forest Resource rights – right to manage, conserve, and govern forest areas. Implementation has been deeply problematic: millions of claims rejected (often on procedural grounds); state governments slow to recognise CFR; gram sabha empowerment weak in practice; and conflicts with forest department authority. The Regional Review – covering Karnataka, Kerala, Tamil Nadu, Andhra Pradesh, Telangana – aims to identify implementation gaps.

Key Terms

Term	Definition
FRA 2006	Scheduled Tribes and Other Traditional Forest Dwellers Recognition of Rights Act; vests forest rights in ST + OTFDs;



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	3 types: Individual Forest Rights (IFR), Community Forest Rights (CFR), Community Forest Resource rights
IFR – Individual Forest Rights	Personal cultivation rights on forest land; patta (title deed) issued; limited to land under actual cultivation as of 13 December 2005 (cut-off date); maximum 4 hectares per family
CFR – Community Forest Rights	Rights over community resources: bamboo, NTFP, grazing areas, water bodies; managed by gram sabha; source of livelihood for millions of tribal families; implementation extremely poor nationwide
Community Forest Resource rights	Gram sabha as custodian and manager of entire forest area (beyond individual holdings); right to protect, regenerate, manage forest; most progressive provision; least implemented
Implementation gaps	Ministry of Tribal Affairs data: ~44 lakh claims filed; ~21 lakh titles distributed (IFR); CFR titles = very small fraction; millions of claims rejected; OTFDs (non-tribal but traditional dwellers) poorly covered
FRA vs Forest Conservation Act	Tension between FRA 2006 (tribal rights) and Forest Conservation Act 1980 (forest protection); Supreme Court cases; forest departments resist CFR implementation; Compensatory Afforestation Fund (CAMPA) vs FRA communities

UPSC Relevance

- GS2 Polity/Social Justice: FRA 2006; tribal rights; gram sabha powers; IFR vs CFR vs Community Forest Resource rights; implementation failures; OTFD definition
- GS1 Society: Tribal communities and forest rights; historical dispossession; FRA as corrective legislation; PM-JANMAN and FRA convergence
- Prelims: FRA = Forest Rights Act 2006; cut-off date = 13 December 2005; IFR limit = 4 hectares; gram sabha = implementing body; OTFDs = Other Traditional Forest Dwellers; Ministry of Tribal Affairs oversees



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7th India-Japan Joint Working Group on Forests – Bengaluru

Ministry: Ministry of Environment, Forest and Climate Change

PIB Date: 8 September 2026

Easy Explanation

The 7th India-Japan Joint Working Group (JWG) Meeting on Forests was held in Bengaluru – the bilateral mechanism for forest governance cooperation between India and Japan. India-Japan forest cooperation covers: sustainable forest management, afforestation technology (Japan has advanced techniques for difficult terrain), forest-based disaster risk reduction (Japan's expertise in landslide-prone slope stabilisation relevant to India's Himalayan and Western Ghats regions), timber trade standards, and REDD+ implementation. Japan is globally one of the most forested countries (67% forest cover) and has pioneered sustainable forestry – its Satoyama concept (mosaic of secondary forests, farmlands, and settlements) influenced India's agroforestry thinking. The bilateral also covers bamboo development (India is the world's second largest bamboo producer after China, Japan has advanced bamboo utilisation technology) and joint research on forest carbon sequestration for NDC targets. The Bengaluru setting is appropriate: Karnataka's Western Ghats forests are among India's most biodiverse and also most at risk.

Key Terms

Term	Definition
India-Japan JWG on Forests	7th meeting, Bengaluru; sustainable forest management, afforestation technology, disaster risk reduction, timber standards, REDD+, bamboo, carbon sequestration; bilateral forest governance mechanism
Japan's forest profile	67% forest cover (one of world's most forested developed nations); sustainable forestry = longstanding practice; J-Credit (Japan's domestic carbon credit); Satoyama concept; bamboo utilisation technology



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Satoyama concept	Traditional Japanese mosaic landscape: secondary forests + farmlands + settlements managed together; secondary forests provide timber, fuel, food; influenced India's agroforestry policy; UNESCO recognition
REDD+	Reducing Emissions from Deforestation and Forest Degradation; UN framework; forest conservation = carbon credits; 'plus' includes sustainable management and enhancement of carbon stocks; India's REDD+ National Strategy
Bamboo – India-Japan cooperation	India = world's 2nd largest bamboo producer (10 million hectares); Japan = advanced bamboo technology (structural bamboo, bamboo-based materials); National Bamboo Mission (India); bamboo = 'green steel' for construction
Western Ghats biodiversity	UNESCO World Heritage Site (2012); one of world's 8 hottest biodiversity hotspots; 30% of India's endemic plants; 4 states (Kerala, Karnataka, Tamil Nadu, Goa); under severe pressure from encroachment, mining

UPSC Relevance

- GS3 Environment: REDD+; Satoyama concept; India-Japan forest cooperation; National Bamboo Mission; Western Ghats biodiversity; forest carbon sequestration for NDC
- Prelims: India = world's 2nd largest bamboo producer; Japan forest cover = 67%; REDD+ = Reducing Emissions from Deforestation and Forest Degradation; Satoyama = traditional Japanese landscape concept; Western Ghats = UNESCO World Heritage Site (2012)

HPV Vaccine — 80 Lakh Doses Administered, Cervical Cancer Prevention Milestone

Ministry: Ministry of Health and Family Welfare



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PIB Date: 11 September 2026

Easy Explanation

India achieved a major milestone in cervical cancer prevention: 80 lakh (8 million) HPV vaccine doses administered under the Universal Immunisation Programme (UIP). India introduced the HPV (Human Papillomavirus) vaccine into the UIP in 2023 – a landmark decision given that cervical cancer is the second most common cancer in Indian women (after breast cancer), causing approximately 75,000-80,000 deaths annually. The vaccine: Cervavac is India's indigenous HPV vaccine (developed by Serum Institute of India, approved 2022) – the world's first quadrivalent HPV vaccine developed in a developing country. It covers HPV types 16 and 18 (which cause ~70% of cervical cancer cases). Target group: girls aged 9-14 years (before sexual debut, when vaccine is most effective). Coverage: universal, free, through school-based vaccination campaigns and ASHA/ANM delivery. India's scale (80 lakh doses) makes it one of the largest HPV immunisation drives in the developing world, alongside the WHO's goal of reaching 90% of girls with HPV vaccine by age 15.

Key Terms

Term	Definition
HPV vaccine – UIP inclusion	Human Papillomavirus vaccine included in Universal Immunisation Programme 2023; girls aged 9-14; free; school-based + ASHA/ANM delivery; 80 lakh doses milestone
Cervical cancer in India	2nd most common cancer in Indian women (after breast cancer); ~1.25 lakh new cases/year; ~75,000-80,000 deaths/year; HPV types 16 and 18 = ~70% of cases; largely preventable with vaccine + screening
Cervavac – India's indigenous vaccine	Quadrivalent HPV vaccine; Serum Institute of India; approved by CDSCO 2022; covers HPV types 6, 11, 16, 18; first quadrivalent HPV vaccine from a developing country; significantly cheaper than Gardasil (MSD) or Cervarix (GSK)



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Universal Immunisation Programme (UIP)	World's largest immunisation programme; 27 million infants/year; 12 vaccines; MoHFW; ASHA/ANM delivery; Mission Indradhanush = catching up unimmunised children; HPV = newest addition
WHO 90-70-90 cervical cancer elimination strategy	90% of girls vaccinated with HPV by age 15; 70% of women screened at age 35 and 45; 90% of women with cervical pre-cancer/cancer treated; India committed to this global target
Cervical cancer screening	Pap smear; VIA (Visual Inspection with Acetic Acid) – low-tech, frontline; HPV DNA test; screening + vaccination = complementary; India's NACP (National AIDS Control Programme) + NACO also involved in women's health

UPSC Relevance

- GS2 Health: HPV vaccine; cervical cancer burden in India; UIP; Cervavac (Serum Institute); WHO elimination strategy; Universal Immunisation Programme
- Prelims: HPV = Human Papillomavirus; Cervavac = India's indigenous HPV vaccine (Serum Institute); UIP = Universal Immunisation Programme; cervical cancer = 2nd most common cancer in Indian women; Mission Indradhanush = catch-up immunisation

Rashtriya Poshan Maah 2026 — 9th Edition

Ministry: Ministry of Women and Child Development

PIB Date: 9 September 2026

Easy Explanation

The 9th Rashtriya Poshan Maah (National Nutrition Month) 2026 was launched at Varanasi – India's nationwide month-long nutrition awareness and action campaign held every September. Poshan Maah is part of the POSHAN Abhiyaan (Prime Minister's Overarching Scheme for Holistic Nutrition) – the umbrella programme targeting malnutrition in India. India's malnutrition burden: 35.5% of under-5 children are stunted (chronic malnutrition, NFHS-5); 19.3% are wasted (acute malnutrition); 32.1% are



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underweight; anaemia in 67.1% of children under 5 and 57% of women of reproductive age. The 2026 theme: dietary diversity, adequate protein intake, and fresh hot cooked meals – shifting from calorie-focus to diet quality. Key POSHAN Abhiyaan components: Poshan Tracker (real-time digital monitoring of beneficiary nutrition), Pradhan Mantri Matru Vandana Yojana (PMMVY – cash transfer for pregnant women), and the Anganwadi network (1.4 million Anganwadi centres = delivery frontline for supplementary nutrition and early childhood development).

Key Terms

Term	Definition
Rashtriya Poshan Maah	National Nutrition Month; September every year; 9th edition 2026; Varanasi launch; dietary diversity, protein, fresh hot meals theme; awareness + action across India via Anganwadi network
POSHAN Abhiyaan	PM's Overarching Scheme for Holistic Nutrition; 2018; multi-ministry convergence (WCD, Health, Food, Rural Development); targets: reduce stunting, wasting, underweight, anaemia; Poshan Tracker for monitoring
India's malnutrition data (NFHS-5)	Stunting: 35.5% under-5; wasting: 19.3%; underweight: 32.1%; anaemia in children under 5: 67.1%; women (15-49): 57% anaemic; significant improvement from NFHS-4 but targets far from achieved
Anganwadi network	1.4 million Anganwadi centres; 2.6 crore beneficiaries; supplementary nutrition, pre-school education, health checkups, immunisation; ICDS (Integrated Child Development Services) delivery point; frontline for POSHAN Abhiyaan
Poshan Tracker	Real-time digital platform; tracks beneficiary nutrition status; Anganwadi workers input data on smartphones; enables



	monitoring of stunting, wasting reduction at individual level; replaced paper-based monitoring
PMMVY – Pradhan Mantri Matru Vandana Yojana	₹5,000 cash transfer to pregnant/lactating women for first child; ₹6,000 for second child if girl; for nutrition and health during pregnancy; DBT to bank account; ~2 crore beneficiaries/year

UPSC Relevance

- GS2 Health/Social: POSHAN Abhiyaan; India's malnutrition burden (NFHS-5 data); Anganwadi system; PMMVY; Poshan Tracker; ICDS
- Prelims: Rashtriya Poshan Maah = September every year, 9th edition 2026; POSHAN Abhiyaan = 2018; Anganwadi centres = 1.4 million; PMMVY = ₹5,000 cash transfer; Poshan Tracker = real-time nutrition monitoring; stunting (NFHS-5) = 35.5%

National Fluorosis Day – Multi-Stakeholder Workshop

Ministry: Ministry of Health and Family Welfare

PIB Date: 9 September 2026

Easy Explanation

The Union Health Ministry organised a National Multi-Stakeholder Workshop on National Fluorosis Day. Fluorosis is a debilitating disease caused by excessive fluoride consumption – primarily through contaminated groundwater. India has one of the world's most severe fluorosis burdens: an estimated 62 million people in India are at risk of fluorosis; 20 states have endemic fluorosis problem areas; the worst-affected states are Rajasthan, Gujarat, Andhra Pradesh, Telangana, Karnataka, Uttar Pradesh, Punjab, and parts of Assam. Dental fluorosis (mottled, discoloured teeth) is the earliest manifestation; skeletal fluorosis (crippling bone deformity) is the severe form. The national safe drinking water limit is 1.5 mg/litre of fluoride (WHO also recommends 1.5 mg/L). Solutions: defluoridation plants (Nalgonda technique developed in India at NGRI Hyderabad – a pioneering innovation), alternative



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water sources, and rainwater harvesting. The National Programme for Prevention and Control of Fluorosis (NPPCF) is the MoH programme.

Key Terms

Term	Definition
Fluorosis	Disease from excess fluoride intake; primarily via contaminated groundwater; dental fluorosis (mottled teeth) to skeletal fluorosis (crippling deformity); 62 million at risk in India; 20 states endemic
Affected states	Rajasthan (highest: ~65 mg/L in some areas), Gujarat, Andhra Pradesh, Telangana, Karnataka, UP, Punjab, Assam; Indo-Gangetic Plain + Deccan trap geology = high fluoride groundwater
Safe fluoride limit	1.5 mg/litre (WHO; India's BIS standard); dental fluorosis begins above 1.5 mg/L; skeletal fluorosis at prolonged >4 mg/L; Rajasthan has areas with >10 mg/L
Nalgonda technique	Defluoridation method developed at NGRI (National Geophysical Research Institute), Hyderabad; uses alum and lime; low-cost, community-level; named after Nalgonda district, Telangana (highly affected area)
NPPCF	National Programme for Prevention and Control of Fluorosis; MoHFW; surveillance, defluoridation, alternative water sources, health education; integrated with Jal Jeevan Mission (clean piped water for all)
Jal Jeevan Mission link	JJM target: piped water to every rural household by 2024 (extended); piped water from tested sources = key solution to



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groundwater fluorosis; 14+ crore households covered; water quality testing mandatory under JJM

UPSC Relevance

- GS3 Environment/Health: Fluorosis; groundwater contamination; Nalgonda technique (defluoridation); NGRI; NPPCF; Jal Jeevan Mission and water quality
- GS2 Health: NPPCF; India's fluorosis burden (62 million at risk); affected states; safe fluoride limit (1.5 mg/L WHO/BIS)
- Prelims: Fluorosis = excess fluoride disease; 62 million at risk in India; Nalgonda technique = defluoridation method (NGRI, Hyderabad); safe fluoride limit = 1.5 mg/L; NPPCF = National Programme for Prevention and Control of Fluorosis

Background: ECLGS 5.0

Ministry: Ministry of Finance / SIDBI

PIB Date: 5 September 2026

Easy Explanation

Emergency Credit Line Guarantee Scheme (ECLGS) 5.0 is the latest iteration of India's pandemic-era MSME credit support scheme. ECLGS was launched in May 2020 as part of the Atmanirbhar Bharat economic package – providing fully guaranteed collateral-free additional credit to businesses stressed by COVID-19. History: ECLGS 1.0 (May 2020): ₹3 lakh crore for MSME and business loans; ECLGS 2.0 (November 2020): 26 stressed sectors; ECLGS 3.0 (March 2021): hospitality, travel, leisure; ECLGS 4.0 (April 2021): healthcare sector (oxygen plants, hospitals); ECLGS 5.0 (2026): specific sectors identified for renewed support. ECLGS 5.0 provides: 100% NCGTC (National Credit Guarantee Trustee Company) guarantee; no additional collateral required; maximum loan = 30% of existing outstanding credit; tenor = up to 72 months. Total ECLGS disbursements since 2020: ₹3.67 lakh crore+ across 1.19 crore+ accounts – largest government credit guarantee programme in India's history. ECLGS has prevented many MSME bankruptcies and is credited with cushioning the IBC system from being overwhelmed post-COVID.

Key Terms



| Click to Connect Now.

Term	Definition
ECLGS 5.0	Emergency Credit Line Guarantee Scheme 5.0; 100% NCGTC guarantee; collateral-free; max loan = 30% of outstanding credit; tenor up to 72 months; latest iteration of COVID-era MSME support scheme
ECLGS history	1.0 (May 2020, ₹3L cr, MSMEs); 2.0 (Nov 2020, 26 stressed sectors); 3.0 (Mar 2021, hospitality/travel); 4.0 (Apr 2021, healthcare); 5.0 (2026); total disbursed ₹3.67L cr+ to 1.19 cr+ accounts
NCGTC	National Credit Guarantee Trustee Company; Department of Financial Services; manages ECLGS guarantees; also manages Credit Guarantee Fund for Micro Units (CGFMU) and other guarantee funds
Credit guarantee mechanism	Government bears loan default risk (via guarantee); bank lends without collateral; borrower gets credit; if default: NCGTC pays bank; mechanism = government de-risks lending to high-risk sector
MSME credit gap	India's MSME credit gap estimated ₹25-30 lakh crore; formal credit reaches only ~15-20% of MSMEs; ECLGS = emergency bridge; MUDRA = normal channel; SIDBI = apex MSME finance institution
IBC connection	ECLGS credited with preventing wave of MSME bankruptcies post-COVID that would have overwhelmed NCLT/IBC system; NPAs contained; ECLGS borrowers excluded from IBC action for loan period

UPSC Relevance



| Click to Connect Now.

- GS3 Economy: ECLGS mechanism; NCGTC; credit guarantee; MSME credit gap; MUDRA vs ECLGS; IBC stress and ECLGS
- Prelims: ECLGS = Emergency Credit Line Guarantee Scheme; NCGTC = National Credit Guarantee Trustee Company; ECLGS total disbursed = ₹3.67 lakh crore+ (1.19 crore+ accounts); max loan = 30% of outstanding; SIDBI = Small Industries Development Bank of India

Backgrounder: Vibrant Villages Programme

Ministry: Ministry of Home Affairs / Ministry of Rural Development

PIB Date: 6 September 2026

Easy Explanation

The Vibrant Villages Programme (VVP) is one of India's most strategically significant rural development initiatives – specifically targeting border villages along the northern frontier (China border) that have been losing population due to lack of connectivity, economic opportunity, and basic services. The security logic: empty border villages are a vulnerability – in any conflict, populated, economically active villages serve as informal eyes-and-ears and reduce adversary infiltration opportunities. China has been aggressively building 'model villages' (Xiaokang villages) just across the LAC – VVP is partly India's response. VVP coverage: 19 districts, 46 border blocks in Arunachal Pradesh, Sikkim, Uttarakhand, Himachal Pradesh, and Ladakh; ~2,967 identified villages (663 prioritised first). Key interventions: road connectivity (BRO + PMGSY), digital connectivity (BSNL's SATCOM-based internet), solar power, healthcare, education, and livelihood support (border tourism, herbal cultivation, cooperative entrepreneurship). ₹4,800 crore outlay (Phase 1, 2022-26).

Key Terms

Term	Definition
Vibrant Villages Programme	VVP; MHA + Ministry of Rural Development; 19 districts, 46 blocks; Arunachal Pradesh, Sikkim, Uttarakhand, Himachal Pradesh, Ladakh; 2,967 villages (663 prioritised); ₹4,800 crore Phase 1; border village development + security



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Security rationale	Population loss from border villages = surveillance gap; China's Xiaokang villages across LAC = strategic mirror; populated border villages = early warning system + soft security; Tibetan plateau = China's advantage; India's altitude challenge
China's Xiaokang border villages	Model village programme along LAC; infrastructure, amenities, permanent settlers; some built inside India's claimed territory (Arunachal Pradesh); VVP = India's counter-strategy on its own side
BRO – Border Roads Organisation	DGBR (Director General Border Roads); MoD; builds and maintains roads in border areas; DARBUK-SHYOK-DAULAT BEG OLDIE (DSDBO) Road, ATAL TUNNEL – landmark BRO projects; VVP complements BRO connectivity
BSNL SATCOM	Satellite-based internet connectivity for remote border villages; BSNL's VSAT/SATCOM; VVP provides internet even in areas without fibre; digital connectivity = borderless access to services
Village boundary ambiguity	Some VVP villages near disputed LAC; McMahon Line (Arunachal Pradesh border) = disputed; Aksai Chin (Ladakh) under China control; VVP establishes civilian presence = de facto boundary assertion

UPSC Relevance

- GS2 IR/Internal Security: VVP as border security strategy; China's Xiaokang villages; LAC; McMahon Line; BRO; India's northern border vulnerabilities
- GS3 Rural Development: VVP connectivity, livelihoods, solar; border area development; PMGSY for border villages



- Prelims: VVP = Vibrant Villages Programme; 19 districts, 46 blocks; 5 states/UTs; ₹4,800 crore Phase 1; BRO = Border Roads Organisation; Xiaokang = China's border village programme; McMahon Line = Arunachal Pradesh-China boundary

Backgrounder: India's Path to Blue Skies – NCAP

Ministry: Ministry of Environment, Forest and Climate Change

PIB Date: 7 September 2026

Easy Explanation

India's National Clean Air Programme (NCAP) – launched in 2019 – is the country's comprehensive framework for tackling air pollution in 131 non-attainment cities. This backgrounder contextualises India's air quality challenge, NCAP's architecture, and progress. India's air quality crisis: 14 of the world's 20 most polluted cities are in India (IQAir 2023 ranking); 9 of the top 10 are in India; PM2.5 levels in Indo-Gangetic Plain regularly exceed 10x WHO guidelines during winter. Major sources: vehicular emissions (30-40% in cities), industry (30%), construction dust (15-20%), crop stubble burning (seasonal, severe in Oct-Nov – Punjab/Haryana → Delhi), biomass burning (cooking/heating in rural areas). NCAP structure: ₹4,507 crore; 131 non-attainment cities; 40% PM10/PM2.5 reduction target by 2026; city action plans; Swachh Vayu Sarvekshan ranking; PRANA portal (Portal for Regulated Atmosphere for Clean Air Notification and Action) for monitoring. Progress is mixed: 95 of 131 cities showed improvement; but many cities still far from NAAQS compliance.

Key Terms

Term	Definition
NCAP – National Clean Air Programme	Launched 2019; 131 non-attainment cities; 40% PM10/PM2.5 reduction by 2026; ₹4,507 crore; city action plans; Swachh Vayu Sarvekshan for competitive ranking; PRANA portal for monitoring



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India's pollution ranking	14 of world's 20 most polluted cities = India (IQAir 2023); Byrnihat (Meghalaya, 2023 #1), Ghaziabad, Delhi, Noida, Muzaffarpur; Indo-Gangetic Plain = worst air quality zone
PM2.5 vs PM10	PM2.5 (fine particles, <2.5 microns): penetrates lungs, enters bloodstream, most health-damaging; PM10 (coarse, 2.5-10 microns): causes respiratory issues; India NAAQS: PM2.5 = 40 $\mu\text{g}/\text{m}^3$; PM10 = 60 $\mu\text{g}/\text{m}^3$; WHO = PM2.5 = 5 $\mu\text{g}/\text{m}^3$
Stubble burning problem	Punjab: 15-20 million tonnes/year; Haryana: 10 million tonnes/year; Oct-Nov burning → Delhi air crisis; CAQM directions; Happy Seeder (ex-situ straw management), biogas from stubble; incentives to farmers; still major source
PRANA portal	Portal for Regulated Atmosphere for Clean Air Notification and Action; MoES; tracks city-wise pollution data, NCAP progress; public dashboard; city authorities upload action plans and progress
CAQM – Commission for Air Quality Management	Statutory body (2021); replaces EPCA; NCR + adjoining areas; Graded Response Action Plan (GRAP): Stage 1 (Moderate-Poor), Stage 2 (Very Poor), Stage 3 (Severe), Stage 4 (Severe+); emergency measures at higher stages

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UPSC Relevance

- GS3 Environment: NCAP architecture; India's pollution ranking; PM2.5 vs PM10; stubble burning; CAQM; GRAP; PRANA portal; vehicular vs industrial vs agricultural sources
- Prelims: NCAP = 2019; 131 non-attainment cities; NAAQS PM2.5 = 40 $\mu\text{g}/\text{m}^3$; CAQM = statutory body (2021); PRANA portal; GRAP stages; Swachh Vayu Sarvekshan = annual ranking; Happy Seeder = ex-situ straw management



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Backgrounder: Jute — India's Golden Fibre

Ministry: Ministry of Textiles

PIB Date: 7 September 2026

Easy Explanation

India is the world's largest jute producer (accounting for ~60-65% of global production) and the largest consumer. Jute — called 'Golden Fibre' for its colour and economic importance — is grown predominantly in West Bengal (85% of India's jute), followed by Bihar, Assam, Odisha, and Tripura. India's jute industry: 70+ jute mills (mostly in West Bengal's Hooghly belt), ~3.7 lakh mill workers, and a much larger unorganised sector of farmers and cottage industry workers. Key government interventions: Jute Packaging Material (Compulsory Use in Packing Commodities) Act, 1987 — mandates use of jute bags for packaging food grains (minimum 90% of production to be packed in jute) and sugar; National Jute Board; JMDC (Jute Manufactures Development Council). The global opportunity: rising environmental consciousness has increased demand for biodegradable packaging alternatives to plastic; jute geotextiles for soil conservation and road construction are growing markets; and jute composites (replacing fibreglass in automotive panels) are an emerging application. India's challenge: competition from Bangladesh (25-30% global market), declining mill productivity, and high cost vs synthetic alternatives.

Key Terms

Term	Definition
Jute profile	India = world's largest producer (60-65% global) and consumer; 'Golden Fibre'; West Bengal 85% of India's jute; Hooghly belt = mill concentration; 70+ jute mills; ~3.7 lakh mill workers
Jute Packaging Material Act 1987	Mandates jute bags for packing food grains (90% of production) and sugar; protective mechanism for jute industry; WTO dispute (India argued exemption for environmental reasons); Jute Corporation of India procures



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National Jute Board	Ministry of Textiles; market development, R&D, skill development for jute sector; export promotion; diversified products (jute geotextiles, composites, fashion); JCI = Jute Corporation of India (procurement)
Jute geotextiles	Woven jute fabric for soil stabilisation, road construction, slope protection; biodegradable (decomposes in 2-3 years, enriching soil); NHAI using jute geotextiles on national highways; Rs 150 crore+ market
Bangladesh competition	Bangladesh = 25-30% of global jute production; lower labour costs; duty-free access to EU under GSP (India has graduated out); India-Bangladesh jute trade complex – India imports raw jute, exports manufactured goods
Jute composites	Jute fibre reinforced polymer composites; replacing fibreglass in automotive door panels, dashboards; Maruti Suzuki, Tata Motors using some jute composites; lighter, biodegradable alternative to synthetic composites

UPSC Relevance

- GS3 Economy/Agriculture: Jute industry; Jute Packaging Material Act 1987; National Jute Board; geotextiles; jute composites; India-Bangladesh jute trade
- Prelims: India = world's largest jute producer (60-65% global); 'Golden Fibre'; West Bengal = 85% of India's jute; Jute Packaging Material Act = 1987; National Jute Board under Ministry of Textiles; JCI = Jute Corporation of India

Backgrounder: Every School, A Model School

Ministry: Ministry of Education

PIB Date: 9 September 2026

Easy Explanation



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'Every School, A Model School' is the vision articulated under NEP 2020 and PM SHRI (PM Schools for Rising India) scheme – the ambition that every school in India, by 2030, should embody NEP 2020's principles: holistic, multidisciplinary, activity-based learning; 21st century skills (critical thinking, collaboration, creativity, communication); mother-tongue medium in early grades; digital literacy; sports and arts integration; and Bagless Days. PM SHRI Scheme (2022): ₹27,360 crore over 5 years; 14,500 PM SHRI schools to be developed as model schools and mentors for surrounding schools; selected through Vidya Samiksha Kendra (VSK) performance data; includes infrastructure upgrade, smart classrooms, laboratories, playgrounds. The 'model school' concept has a longer history: Kendriya Vidyalayas (1,251 schools) and Navodaya Vidyalayas (649 JNVs) were India's original model school networks. NEP's vision goes further: every government school, not just selected ones. The challenge: India has 1.48 million schools, of which ~1.1 million are government schools – quality varies enormously.

Key Terms

Term	Definition
PM SHRI Scheme	PM Schools for Rising India; 2022; ₹27,360 crore; 14,500 schools as NEP 2020 model and mentors; infrastructure, smart classrooms, labs, playgrounds; Vidya Samiksha Kendra selects schools
NEP 2020 school vision	5+3+3+4 structure (Foundational 5-8 years, Preparatory 8-11, Middle 11-14, Secondary 14-18); mother tongue medium (Grades 1-5); activity-based learning; 21st century skills; Bagless Days; arts integration
Kendriya Vidyalayas (KV)	1,251 KVs; primarily for central government employees' children; MoE; autonomous; CBSE affiliated; KV Sangathan; one of India's most respected school chains; equity through fee waiver for SC/ST/BPL



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Navodaya Vidyalayas (NV)	649 JNVs; one per district (except select states); residential; for rural meritorious students; free education + boarding; lateral entry at Class 9 + 11; Navodaya Vidyalaya Samiti (NVS)
Vidya Samiksha Kendra	State-level education data analytics hub; real-time tracking of student attendance, learning outcomes, teacher deployment; feeds data to Diksha platform; PM SHRI school selection based on VSK data
Digital literacy – NEP schools	ICT integration; PM e-Vidya (one nation, one digital platform); DIKSHA platform (digital content); National Digital Library; NIPUN Bharat (foundational literacy and numeracy by Class 3 by 2026-27)

UPSC Relevance

- GS2 Education: NEP 2020 school structure; PM SHRI; KV vs JNV; Vidya Samiksha Kendra; DIKSHA; NIPUN Bharat; India's school system scale (1.48 million schools)
- Prelims: PM SHRI = PM Schools for Rising India (₹27,360 crore, 14,500 schools); KV = 1,251 schools; JNV = 649 schools; NEP 2020 school structure = 5+3+3+4; NIPUN Bharat = foundational literacy by Class 3

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Backgrounder: BRICS and Blue Economy

Ministry: Ministry of Earth Sciences / Ministry of External Affairs

PIB Date: 11 September 2026

Easy Explanation

The 18th BRICS Summit's BRICS and Blue Economy backgrounder contextualises the maritime and ocean economy dimensions of BRICS cooperation. BRICS nations collectively have: 5 of the world's 10 largest maritime economies; extensive Exclusive Economic Zones (EEZs) covering enormous ocean territory; significant fishing industries; deep-sea mining ambitions; and major shipping routes. India's



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blue economy contribution: ~4% of GDP (~\$200 billion), targeting 10% by 2030. BRICS Blue Economy cooperation areas: deep-sea mineral exploration (polymetallic nodules, cobalt-rich crusts); sustainable fisheries (combating IUU – Illegal, Unreported, Unregulated fishing); maritime connectivity (port development, shipping corridors); ocean climate research (blue carbon – carbon sequestration by coastal ecosystems: mangroves, seagrasses, salt marshes); and maritime security cooperation in the Indo-Pacific and Atlantic. The New Development Bank (NDB) has a role: financing blue economy infrastructure (ports, coastal protection, aquaculture) in BRICS nations.

Key Terms

Term	Definition
BRICS Blue Economy	5 of 10 largest maritime economies; extensive EEZs; fisheries, deep-sea mining, shipping, ocean climate research; NDB financing blue economy; India's blue economy = ~\$200B, targeting 10% of GDP
Blue carbon	Carbon stored in coastal and marine ecosystems: mangroves, seagrasses, salt marshes, tidal flats; faster carbon sequestration than forests; India: 4,975 sq km mangrove cover (3rd largest globally); UNFCCC blue carbon credits
IUU fishing	Illegal, Unreported, Unregulated fishing; depletes fish stocks; South China Sea, Indian Ocean = major IUU zones; China's distant water fishing fleet = world's largest, accused of IUU; BRICS fisheries cooperation challenge
EEZ – Exclusive Economic Zone	200 nautical miles from baseline; coastal state sovereign rights for resource exploration/exploitation; India's EEZ = 2.37 million sq km; BRICS nations collectively have enormous EEZ territory
Deep-sea mining in BRICS context	India (Central Indian Ocean Basin), Brazil (Atlantic), Russia (Pacific, Arctic) have ISA-allocated exploration zones; BRICS



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	could cooperate on deep-sea mineral technology; environmental concerns (deep-sea ecosystem disruption)
Maritime connectivity – NDB	NDB (BRICS development bank) financing ports and shipping infrastructure; India's Sagarmala projects could receive NDB funding; BRICS maritime connectivity = complementary to INSTC (land + sea)

UPSC Relevance

- GS3 Environment/Economy: Blue economy; blue carbon (mangroves, seagrasses, salt marshes); IUU fishing; EEZ; deep-sea mining; NDB's role
- Prelims: Blue carbon = mangroves + seagrasses + salt marshes; India's mangrove cover = 4,975 sq km (3rd globally); EEZ = 200 nautical miles; IUU = Illegal Unreported Unregulated fishing; India's blue economy = ~\$200B

Backgrounder: Securing Farmers' Future with Dignity

Ministry: Ministry of Agriculture and Farmers Welfare

PIB Date: 11 September 2026

Easy Explanation

This BRICS-week backgrounder on 'Securing Farmers' Future with Dignity' contextualises India's farm income support and social security architecture – the web of schemes designed to ensure farmers have stable incomes and a dignified livelihood. Key pillars: PM-KISAN (₹6,000/year income support to 8.5 crore farmer families – direct benefit transfer); PM Fasal Bima Yojana (crop insurance, 2% premium for kharif, 1.5% for rabi); PM Kisan MaanDhan Yojana (PM-KMDY – pension for small/marginal farmers: ₹3,000/month at age 60, self-contribution matched by government); eNAM (electronic National Agriculture Market – online platform for crop price discovery, 1,000+ mandis connected); Kisan Credit Card (KCC, revolving credit for farming needs at 7% interest – effectively 4% after interest subvention); and PM Kisan Samman Sammelan (annual event where PM transfers PM-KISAN instalments and interacts with farmers). The backgrounder also covers: minimum support



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price (MSP) for 23 crops (announced pre-sowing), CACP (Commission for Agricultural Costs and Prices) advisory role.

Key Terms

Term	Definition
PM-KISAN	PM Kisan Samman Nidhi; ₹6,000/year in 3 instalments of ₹2,000; 8.5 crore+ farmer families; direct benefit transfer to bank account; small and marginal farmers (landholding up to 2 ha initially, now all)
PM Kisan MaanDhan Yojana (PM-KMDY)	Pension scheme for small/marginal farmers; ₹3,000/month at 60; self-contribution ₹55-200/month (age-linked), government matches equally; voluntary; LIC implements; target: 5 crore farmers
eNAM	Electronic National Agriculture Market; online platform; 1,000+ APMC mandis connected; price discovery; reduces intermediaries; farmers can sell to buyers across India; Agricultural Produce Market Committee integration
Kisan Credit Card (KCC)	Short-term revolving credit for farming; 7% interest (4% after subvention for loans up to ₹3 lakh repaid on time); flexible drawdown; covers farming + allied + non-farm activities; 7+ crore KCC holders
MSP mechanism	Minimum Support Price for 23 crops; CACP recommends; Cabinet approves; C2+50% formula recommended by Swaminathan Commission; actual procurement: FCI for wheat/rice, NAFED for oilseeds/pulses
CACP	Commission for Agricultural Costs and Prices; advisory body; recommends MSP; considers cost of production (A2, A2+FL,



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C2), market trends, inter-crop price parity; not statutory – recommendations may or may not be accepted

UPSC Relevance

- GS3 Agriculture: PM-KISAN; PM-KMDY; eNAM; KCC; MSP mechanism; CACP; farmer income support architecture; Swaminathan Commission (C2+50% formula)
- Prelims: PM-KISAN = ₹6,000/year (3 instalments); PM-KMDY = ₹3,000/month pension at 60; eNAM = 1,000+ mandis; KCC interest = 7% (4% after subvention); CACP = Commission for Agricultural Costs and Prices; MSP covers 23 crops

NHRC Suo Motu – School Children Crossing Unfinished Bridge, Gariyaband, Chhattisgarh

Ministry: National Human Rights Commission

PIB Date: 9 September 2026

Easy Explanation

The National Human Rights Commission (NHRC) took suo motu cognizance of reported perils faced by school children forced to cross a river through an unfinished bridge in Mainpur Block, Gariyaband district, Chhattisgarh. Photos and videos showing children wading through waist-deep water or clinging to incomplete bridge structures had gone viral. NHRC issued notices to the Chhattisgarh government and district administration seeking a report within 4 weeks. Suo motu cognizance means the NHRC initiated action on its own, without a formal complaint – a power it exercises when it receives media reports of human rights violations. This case highlights: infrastructure delivery failure (the bridge was apparently sanctioned and partially built but incomplete); right to education and safe passage; and accountability of state governments for basic infrastructure in tribal/remote areas. Gariyaband district has a significant tribal population and is a Left Wing Extremism (LWE) affected district in Chhattisgarh – infrastructure deficits in LWE areas are both a human rights issue and a security concern.

Key Terms

Term	Definition
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NHRC suo motu cognizance	NHRC initiates action on its own without formal complaint; based on media reports; issues notices to state/district authorities; seeks compliance report; quasi-judicial powers; can recommend compensation
NHRC – National Human Rights Commission	Statutory body; Protection of Human Rights Act 1993; chairperson = retired CJI; members = retired SC judges + other experts; investigates human rights violations; recommends remedies; no power to penalise
Gariyaband, Chhattisgarh	LWE (Left Wing Extremism/Naxal) affected district; significant tribal population; infrastructure deficit = both development failure and Naxal recruitment driver; PMGSY (rural road connectivity) target area
Right to safe passage	Implied in Article 21 (right to life and personal liberty); children's right to education (Article 21A); incomplete infrastructure = violation of basic rights; NHRC's intervention = rights-based approach to infrastructure
PMGSY and bridge completion	Pradhan Mantri Gram Sadak Yojana; rural road connectivity; bridges included; LWE-affected districts get priority under PMGSY-III (Rurban, hill areas, islands); incompleteness = implementation failure
LWE districts and infrastructure	76 LWE-affected districts; government's 'Smart Village' initiative; infrastructure = counter-insurgency tool; NHRC highlighting infrastructure failures in LWE areas = convergence of rights and security discourse

UPSC Relevance

- GS2 Polity: NHRC suo motu powers; Protection of Human Rights Act 1993; NHRC composition (retired CJI as chairperson); quasi-judicial nature; Article 21 and basic infrastructure



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- GS3 Internal Security: LWE (Naxalism); infrastructure in LWE districts as counter-insurgency; PMGSY in conflict areas
 - Prelims: NHRC = National Human Rights Commission; established under Protection of Human Rights Act 1993; Chairperson = retired CJI; suo motu = self-initiated; Gariyaband = Chhattisgarh LWE district
-



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Honorary Mentions

Facts that didn't make the main articles but are directly testable in UPSC Prelims one-liners.

Topic	Key Fact	UPSC Angle
India-Morocco JDC	Inaugural Joint Defence Committee, New Delhi; Morocco = world's largest phosphate reserves (70%+); Strait of Gibraltar strategic chokepoint	GS2 IR: India-Africa defence; India-Morocco bilateral (trade + defence + phosphate); Strait of Gibraltar = Atlantic-Mediterranean link
Ex Veer Guardian-2026	IAF + JASDF bilateral air exercise; air combat, BVR, electronic warfare; IAF Su-30MKI/Rafale; JASDF F-15J/F-35A; Quad air interoperability	GS2/GS3: Quad military exercises; India-Japan ACSA (2020); 2+2 Ministerial Dialogue; BVR = Beyond Visual Range combat
IAF DRONATHON 2026	IAF drone innovation platform; loitering munitions, counter-drone, swarm drones, indigenous ecosystem; PLI for drones = ₹120 crore (2022)	GS3: India's drone PLI; DRONATHON; loitering munitions; counter-drone systems; iDEX; Ideaforge = India's largest drone company
BRICS Business Forum + Putin bilateral	PM Modi at 18th BRICS Summit (India hosts); Putin bilateral; defence, Kudankulam, energy, \$100B trade; BRICS-10 (2024 expansion)	GS2: BRICS-10 members; NDB; India's Global South positioning; India-Russia post-Ukraine; de-dollarisation



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Topic	Key Fact	UPSC Angle
India-Russia \$100B trade	Goyal at INNOPROM India 2026; \$100B target by 2030; current ~\$65-70B; rupee-rouble mechanism; INSTC; Vladivostok maritime corridor	GS2: India-Russia bilateral; CAATSA; rupee-rouble trade; INSTC; Vladivostok-Chennai maritime corridor
9th ASEAN-India Agriculture Ministerial	New Delhi; food security, sustainable agriculture, resilient value chains; India = world's largest rice exporter; palm oil imports (90 lakh tonnes/year)	GS2/GS3: ASEAN-India FTA (2010); palm oil from Malaysia + Indonesia; India as regional food provider; agroforestry
6G Call to Action	DoT endorses international 6G leadership and security framework; Bharat 6G Vision (₹400 crore); BSNL's indigenous 4G/5G stack (100% indigenous)	GS3: 6G technology; Bharat 6G Vision; trusted vendor framework (Huawei/ZTE ban); ITU; 3GPP standards body
BRICS Bharat Innovates Exposition	11-12 Sep, Bharat Mandapam; India's innovation showcase (DPI, space, clean energy, biotech); ONDC; IN-SPACE; DPI as BRICS 'export'	GS2/GS3: India's BRICS Presidency 2026; DPI (UPI, Aadhaar, ABDM, ONDC, DigiLocker); IN-SPACE; India's innovation soft power
IndiaAI Mission- Sweden SITAC	Strategic AI and digitalisation cooperation; IndiaAI Mission (₹10,372 crore); AIRAWAT;	GS3: IndiaAI Mission pillars; AIRAWAT; EU AI Act 2024 risk-based



Topic	Key Fact	UPSC Angle
	EU AI Act 2024 (world's first comprehensive AI regulation)	approach; Ericsson-India 5G; AI governance
Bankers' Books Evidence Act 2026	Replaces 1891 colonial Act; effective 1 October 2026; digital bank records admissible; DRT proceedings faster; PMLA and IBC evidence	GS2: Colonial law modernisation; DRT = Debt Recovery Tribunal; PMLA; IBC; digital evidence admissibility
e-FAST India + PACT	NITI Aayog; zero-emission freight; ZET (Zero-Emission Truck) marketplace; commercial vehicles = 12% fleet, 40% road CO ₂ ; Golden Quadrilateral freight	GS3: Freight decarbonisation; EV ecosystem; ZET; PACT; NITI Aayog; Golden Quadrilateral = Delhi-Mumbai-Chennai-Kolkata
Financial Fraud Risk Indicator (FRI)	DoT; risk scores for fraud mobile numbers; ₹5,000+ crore cyber fraud prevented; Sanchar Saathi (FRI + CEIR + TAFCOP)	GS3 Tech/Governance: Sanchar Saathi ecosystem; CEIR = stolen phone blocking; TAFCOP = SIM tracking; I4C (MHA); National Cybercrime Helpline = 1930
NSO district-level informal sector data	First-ever district-level estimates for unincorporated non-agricultural sector; ASUSE; ~110 million informal workers; enables targeted MSME/formalisation policy	GS3: Informal economy; NSO; ASUSE; formalisation; MUDRA; PM SVANidhi; statistical coverage expansion



Topic	Key Fact	UPSC Angle
India – global ship ownership hub	Sonowal; India has 240,000+ seafarers (9% global) but only 5-6% trade on Indian ships; GIFT IFSC ship leasing; International Ship Registry of India	GS3: Maritime India Vision 2030; Sagarmala; GIFT IFSC ship leasing; India's shipping paradox; Greek/Japanese model
E-Commerce Rules amended 2026	Country of origin disclosure mandatory; flash sale regulation; marketplace platform liability; no related-party preference; CCPA; CCI	GS2/GS3: Consumer Protection Act 2019; CCPA; CCI; digital markets regulation; Amazon-Flipkart type arrangements
ORV Sagar Manthan	India's most advanced ocean research vessel; supports Deep Ocean Mission + Samudrayaan (MATSYA 6000); polymetallic nodules; NIOT Chennai	GS3: Deep Ocean Mission (₹4,077 crore); Samudrayaan; MATSYA 6000 (6,000m depth); polymetallic nodules = critical minerals
Organic molecule self-assembly – green H₂	Photocatalytic water splitting; self-assembled organic nanostructures as photocatalysts; potential cheaper green hydrogen route; NGHM (\$1/kg target)	GS3: Green hydrogen production routes; NGHM (₹17,490 crore); photocatalytic vs electrolysis; India's organic chemistry strength
Quantum entanglement breakthrough	Entanglement purification – 'refreshes' entanglement without measuring quantum	GS3: Quantum entanglement; decoherence; quantum repeaters;



Topic	Key Fact	UPSC Angle
	state; extends quantum communication range; quantum repeaters	quantum internet; National Quantum Mission (₹6,003 crore)
DILRMP 3.0	₹565.50 crore; real-time mutation, Aadhaar integration, GIS, NGDRS integration; ULPIN (14-digit unique land ID); 66% civil cases = land disputes	GS2 Governance: DILRMP; ULPIN; NGDRS; land records; PM-SVAMITVA; land litigation burden
Swachh Vayu Sarvekshan 2026	131 non-attainment cities ranked; NCAP best practices compendium; CAQM serious note on HSPCB non-compliance; PRANA portal	GS3: NCAP; non-attainment cities; PM2.5 NAAQS = 40 µg/m³; GRAP; Swachh Vayu Diwas = September 7
Dryland Congress 2026	New Delhi, 800+ global experts; UNCCD; LDN; India's ~228 million ha drylands; Bonn Challenge (2.6 crore ha by 2030); pastoral systems	GS3: UNCCD (1994); LDN; Bonn Challenge; Indian dryland states; pastoral communities; Rio Conventions
Forest Rights Act – Regional Review	First Regional Review Conference, Bengaluru; FRA 2006; IFR (4 ha limit) + CFR + Community Forest Resource rights; gram sabha; ~21 lakh titles distributed	GS2 Polity: FRA 2006; IFR vs CFR; gram sabha powers; OTFDs; cut-off date = 13 December 2005; tribal rights



Topic	Key Fact	UPSC Angle
7th India-Japan JWG on Forests	Bengaluru; REDD+; Satoyama concept; bamboo cooperation (India = 2nd largest producer); Western Ghats; forest carbon sequestration	GS3: REDD+; Satoyama (traditional Japanese landscape); National Bamboo Mission; Western Ghats = UNESCO WH Site (2012)
HPV vaccine – 80 lakh doses	Cervavac (Serum Institute); UIP inclusion 2023; girls 9-14; cervical cancer = 2nd most common cancer in Indian women; ~75,000 deaths/year; WHO 90-70-90	GS2 Health: HPV vaccine; Cervavac; UIP; cervical cancer burden; WHO elimination strategy; Mission Indradhanush
Rashtriya Poshan Maah 2026	9th edition; September; Varanasi; dietary diversity, protein, fresh meals theme; POSHAN Abhiyaan (2018); Anganwadi = 1.4 million centres; NFHS-5 stunting = 35.5%	GS2 Health: POSHAN Abhiyaan; ICDS; Poshan Tracker; PMMVY; Anganwadi network; India's malnutrition data
National Fluorosis Day	62 million at risk in India; 20 endemic states; Nalgonda technique (defluoridation, NGRI Hyderabad); safe limit = 1.5 mg/L; NPPCF; JJM solution	GS3/GS2: Fluorosis; groundwater contamination; Nalgonda technique; NGRI; Jal Jeevan Mission; NPPCF
ECLGS 5.0	Emergency Credit Line Guarantee Scheme; 100%	GS3: NCGTC; credit guarantee; MSME credit gap; IBC cushion;



Topic	Key Fact	UPSC Angle
	NCGTC guarantee; max 30% of outstanding; tenor 72 months; total disbursed ₹3.67L cr to 1.19 cr+ accounts	MUDRA vs ECLGS; Atmanirbhar Bharat package
Vibrant Villages Programme	19 districts, 46 blocks; AP, Sikkim, Uttarakhand, HP, Ladakh; ₹4,800 crore Phase 1; China's Xiaokang villages mirror; BRO + SATCOM + solar	GS2: VVP; border security; China Xiaokang; LAC; McMahon Line; BRO; PMGSY in border areas
NCAP – India's Path to Blue Skies	131 non-attainment cities; 40% PM10/PM2.5 reduction by 2026; CAQM; GRAP stages 1-4; PRANA portal; Happy Seeder; Byrnihat = most polluted city 2023	GS3: NCAP; PM2.5 vs PM10; stubble burning; vehicular/industrial/agricultural sources; CAQM (statutory, 2021)
Jute – Golden Fibre	India = world's largest producer (60-65%); West Bengal 85%; Hooghly belt; Jute Packaging Act 1987; geotextiles; jute composites (automotive); Bangladesh competition	GS3: Jute sector; Jute Packaging Material Act 1987; National Jute Board; geotextiles; JCI; India-Bangladesh jute trade



Topic	Key Fact	UPSC Angle
Every School, A Model School	PM SHRI scheme (₹27,360 crore, 14,500 schools); NEP 2020 vision; KV (1,251) + JNV (649); Vidya Samiksha Kendra; NIPUN Bharat by 2026-27	GS2: NEP 2020 school structure (5+3+3+4); PM SHRI; KV Sangathan; NVS; NIPUN Bharat; DIKSHA platform
BRICS and Blue Economy	BRICS maritime cooperation; blue carbon (mangroves + seagrasses + salt marshes); IUU fishing; India mangrove cover = 4,975 sq km (3rd globally); EEZ = 200 nm	GS3: Blue economy; blue carbon; IUU fishing; EEZ; deep-sea mining; NDB blue economy financing
Securing Farmers' Future	PM-KISAN (₹6,000/year, 8.5 crore families); PM-KMDY (₹3,000 pension at 60); eNAM (1,000+ mandis); KCC (7% interest, 4% after subvention); MSP for 23 crops	GS3: Farm income support; CACP; Swaminathan Commission C2+50%; eNAM; KCC; PM-KISAN; PM-KMDY
NHRC suo motu – Gariyaband	School children crossing unfinished bridge; Mainpur Block, Gariyaband, Chhattisgarh; NHRC notice to state; LWE affected district; Article 21	GS2: NHRC powers; Protection of Human Rights Act 1993; suo motu cognizance; Article 21; LWE districts and infrastructure



Practice Questions

10 Prelims Questions – UPSC Style

Q.1. Consider the following statements regarding the Forest Rights Act, 2006:

1. Individual Forest Rights (IFR) are limited to a maximum of 4 hectares per family.
2. The cut-off date for determining forest land occupation for IFR is 13 December 2005.
3. Community Forest Rights (CFR) vest in the gram sabha as collective rights over community resources.
4. The Act covers only Scheduled Tribes and does not extend to Other Traditional Forest Dwellers (OTFDs).

How many of the above statements are correct?

- (a) Only two
- (b) Only three
- (c) All four
- (d) Only one

Q.2. Assertion (A): India endorsing the Call to Action for 6G Leadership and Security is significant because 6G standard-setting has geopolitical implications.

Reason (R): India's indigenous 4G/5G core network built for BSNL (100% domestic technology) and the Bharat 6G Vision (₹400 crore) position India as a technology standard-setter rather than only a technology adopter.

- (a) Both A and R are true and R is the correct explanation of A
- (b) Both A and R are true but R is not the correct explanation of A
- (c) A is true but R is false
- (d) A is false but R is true

Q.3. Match the following schemes with their correct descriptions:

List I (Scheme)

List II (Description)



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- | | |
|----------------------|--|
| 1. PM-KISAN | P. Pension of ₹3,000/month at age 60 for small/marginal farmers |
| 2. PM-KMDY | Q. Direct income support of ₹6,000/year to farmer families |
| 3. eNAM | R. Online platform connecting 1,000+ agricultural mandis for price discovery |
| 4. Kisan Credit Card | S. Revolving credit for farming at 7% interest (4% after subvention) |
- (a) 1-Q, 2-P, 3-R, 4-S
(b) 1-P, 2-Q, 3-S, 4-R
(c) 1-Q, 2-R, 3-P, 4-S
(d) 1-R, 2-S, 3-Q, 4-P

Q.4. With reference to BRICS, consider the following statements:

1. BRICS was expanded in 2024 to include Iran, UAE, Egypt, Ethiopia, and Saudi Arabia – making it BRICS-10.
2. The New Development Bank (NDB) is headquartered in Beijing, China.
3. India holds the BRICS Presidency for 2026 and hosted the 18th BRICS Summit.
4. The New Development Bank lends exclusively in US dollars to maintain financial stability.

How many of the above statements are correct?

- (a) Only two
(b) Only three
(c) All four
(d) Only one

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Q.5. Assertion (A): The Nalgonda technique is significant for India's water security.

Reason (R): India has an estimated 62 million people at risk of fluorosis, primarily from excess fluoride in groundwater, and the Nalgonda technique – developed at NGRI Hyderabad – provides a low-cost community-level defluoridation method.

- (a) Both A and R are true and R is the correct explanation of A
(b) Both A and R are true but R is not the correct explanation of A
(c) A is true but R is false
(d) A is false but R is true



Q.6. Consider the following statements regarding India's National Clean Air Programme (NCAP):

1. NCAP was launched in 2019 targeting 131 non-attainment cities.
2. The Commission for Air Quality Management (CAQM) is a statutory body established in 2021 for NCR and adjoining areas.
3. India's NAAQS standard for PM_{2.5} (annual mean) is 40 µg/m³, which is the same as the WHO guideline.
4. The Graded Response Action Plan (GRAP) is implemented by CAQM.

Which of the statements given above are correct?

- (a) 1, 2 and 4 only
- (b) 2, 3 and 4 only
- (c) 1 and 3 only
- (d) 1, 2, 3 and 4

Q.7. Match the following ocean-related terms with their correct descriptions:

List I (Term)

List II (Description)

- | | |
|-------------------------|---|
| 1. Blue carbon | P. Illegal, Unreported, Unregulated fishing practices |
| 2. IUU fishing | Q. Carbon stored in coastal ecosystems: mangroves, seagrasses, salt marshes |
| 3. EEZ | R. Deep-sea rocks containing manganese, nickel, cobalt, copper |
| 4. Polymetallic nodules | S. 200 nautical mile zone where coastal state has sovereign resource rights |
- (a) 1-Q, 2-P, 3-S, 4-R
(b) 1-P, 2-Q, 3-R, 4-S
(c) 1-Q, 2-S, 3-P, 4-R
(d) 1-R, 2-P, 3-Q, 4-S

Q.8. Consider the following about the Vibrant Villages Programme (VVP):

1. VVP covers border villages in Arunachal Pradesh, Sikkim, Uttarakhand, Himachal Pradesh, and Ladakh.



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2. China's 'Xiaokang villages' programme along the LAC was one of the strategic considerations behind VVP.
3. The programme has a Phase 1 outlay of ₹4,800 crore and covers 19 districts and 46 border blocks.
4. VVP is implemented exclusively by the Ministry of Home Affairs.

Which of the above statements are correct?

- (a) 1, 2 and 3 only
- (b) 2, 3 and 4 only
- (c) 1 and 2 only
- (d) All four

Q.9. Assertion (A): India's Financial Fraud Risk Indicator (FRI), developed by the Department of Telecommunications, is a significant preventive tool against cybercrime.

Reason (R): FRI assigns risk scores to mobile numbers used in cyber fraud and enables banks to flag or block high-risk transactions before money leaves the victim's account, operating as part of the broader Sanchar Saathi ecosystem.

- (a) Both A and R are true and R is the correct explanation of A
- (b) Both A and R are true but R is not the correct explanation of A
- (c) A is true but R is false
- (d) A is false but R is true

Q.10. With reference to the HPV vaccine programme in India, consider the following statements:

1. India included the HPV vaccine in the Universal Immunisation Programme (UIP) in 2023.
2. Cervavac is India's indigenous HPV vaccine developed by the Serum Institute of India and is the world's first quadrivalent HPV vaccine from a developing country.
3. The target group for HPV vaccination under UIP is girls aged 9-14 years.
4. Cervical cancer is the most common cancer among Indian women.

How many of the above statements are correct?

- (a) Only two
- (b) Only three



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- (c) All four
- (d) Only one

2 Mains Questions and Model Answers

Mains Question 1 – 150 words:

The Forest Rights Act, 2006 has been hailed as transformative but criticised for poor implementation. The First Regional Review Conference on FRA implementation (September 2026) identified persistent gaps. Critically examine the FRA's promise versus its implementation record, and suggest reforms.

Model Answer – 150 words:

The Forest Rights Act 2006 represents a historic correction of what the Supreme Court called 'historical injustice' to forest-dwelling communities. It creates three tiers of rights: Individual Forest Rights (IFR) for cultivated plots (max 4 ha, pre-December 13, 2005 occupation), Community Forest Rights (CFR) for shared resources, and Community Forest Resource rights for self-governance of entire forest areas. The promise has been substantially unfulfilled. Of 44 lakh claims filed, only 21 lakh IFR titles distributed – a rejection rate above 50%, often on procedural grounds. CFR titles remain abysmally low. Community Forest Resource rights – the most empowering provision – are barely implemented. Forest departments, whose authority FRA directly challenges, have resisted implementation. State governments with anti-tribal political economies have been slow. Reforms needed: Clear timeline-bound targets for CFR recognition; gram sabha capacity building; resolution of FRA-Forest Conservation Act tensions through legislative clarity; and independent monitoring with district-level accountability. The Regional Review is a good first step – but needs enforcement teeth, not just deliberation.



Mains Question 2 – 250 words:

India is hosting the 18th BRICS Summit (2026) as BRICS Presidency holder, presenting the 'Bharat Innovates' exposition and pushing the blue economy agenda. Analyse India's strategic interests in BRICS, the challenges India faces within BRICS (particularly the China-Pakistan dynamic), and assess whether BRICS serves India's foreign policy objectives.

Model Answer – 250 words:

India's strategic interests in BRICS are multifaceted and distinct from those of other members: Positive interests: BRICS offers India a non-Western, non-aligned platform to engage Russia (avoiding purely Western frameworks that would demand India 'choose sides'), connect with Central Asia and Africa (via other BRICS members), access NDB financing for infrastructure, and project itself as the 'voice of Global South.' The 2026 Presidency and 'Bharat Innovates' exposition leverage BRICS for India's innovation brand-building – DPI, space, biotech – reaching developing-world audiences more effectively than G7/G20. Challenge 1 – China: China dominates BRICS economically and uses it to advance RMB internationalisation, BRI linkages, and anti-Western positions that India doesn't share. China vetoed India's positions in BRICS communiqués on border incidents. India avoids endorsing BRICS unity when it conflicts with sovereignty interests (refusing to endorse BRI; rejecting Pakistan's admission to BRICS-10 as observer). Challenge 2 – Pakistan: Pakistan's repeated attempts to gain BRICS status (observer, partner state) are opposed by India. India has successfully blocked Pakistan's inclusion so far, but the dynamic creates tension. Challenge 3 – BRICS limitations: No binding commitments; consensus-driven; China's dominance of NDB; de-dollarisation debates create risks for India's own dollar-denominated foreign reserves. Assessment: BRICS serves India's foreign policy objectives as a



complementary, not primary, platform. India uses BRICS selectively – for Russia engagement, Global South positioning, NDB access, and multilateral legitimacy – while maintaining its Quad and bilateral ties with Western nations. The challenge is preventing BRICS from becoming an anti-Western bloc that constrains India's multi-alignment. So far, India has managed this successfully – BRICS Presidency is a capstone, not a pivot.

Prelims Answers and Explanations

Q.1. Answer: (b) Only three

Statements 1 (IFR limit = 4 hectares – correct), 2 (cut-off date = 13 December 2005 – correct), 3 (CFR vests in gram sabha – correct) are accurate. Statement 4 is incorrect – FRA 2006 covers both Scheduled Tribes AND Other Traditional Forest Dwellers (OTFDs) who have lived in forests for at least 3 generations (75 years) but may not be tribal. OTFDs are specifically included; exclusion of OTFDs = incorrect statement.

Q.2. Answer: (a) Both A and R are true and R is the correct explanation of A

6G standard-setting has geopolitical implications (A) because standards determine which country's technology dominates – USA (3GPP), China (Huawei's influence in developing world), or new players. India's BSNL indigenous stack + Bharat 6G Vision (R) directly explains why India's endorsement matters – India is now a credible standards participant, not just adopter.

Q.3. Answer: (a) 1-Q, 2-P, 3-R, 4-S

PM-KISAN = ₹6,000/year income support (Q); PM-KMDY (PM Kisan MaanDhan Yojana) = ₹3,000/month pension at 60 (P); eNAM = online market connecting 1,000+ mandis (R); Kisan Credit Card = revolving credit at 7%/4% after subvention (S).



Q.4. Answer: (a) Only two

Statements 1 (BRICS-10: 2024 expansion with Iran, UAE, Egypt, Ethiopia, Saudi Arabia – correct) and 3 (India BRICS Presidency 2026, 18th Summit – correct) are accurate. Statement 2 is incorrect – NDB is headquartered in Shanghai, China. Statement 4 is incorrect – NDB explicitly lends in local currencies (one of its founding purposes is to reduce dollar dependence in development finance).

Q.5. Answer: (a) Both A and R are true and R is the correct explanation of A

The Nalgonda technique's significance (A) is directly explained by India's massive fluorosis burden and the technique's attributes (R): 62 million at risk + groundwater source + Nalgonda technique = low-cost, community-appropriate defluoridation = highly significant for India's water security. R correctly and completely explains A.

Q.6. Answer: (a) 1, 2 and 4 only

Statements 1 (NCAP = 2019, 131 cities – correct), 2 (CAQM = statutory body, 2021 – correct), 4 (GRAP implemented by CAQM – correct) are accurate. Statement 3 is incorrect – India's NAAQS annual PM_{2.5} standard = 40 µg/m³, which is far weaker than WHO guideline of 5 µg/m³ (2021 update). The WHO guideline is 8x stricter, not the same.

Q.7. Answer: (a) 1-Q, 2-P, 3-S, 4-R

Blue carbon = carbon in coastal ecosystems (mangroves, seagrasses, salt marshes) (Q); IUU fishing = Illegal, Unreported, Unregulated fishing (P); EEZ = 200 nautical mile zone with sovereign resource rights (S); Polymetallic nodules = deep-sea rocks with manganese, nickel, cobalt, copper (R).

Q.8. Answer: (a) 1, 2 and 3 only

Statements 1 (5 states/UTs – correct), 2 (China's Xiaokang villages = strategic context – correct), 3 (₹4,800 crore, 19 districts, 46 blocks – correct) are accurate. Statement 4 is incorrect – VVP is a joint initiative with both Ministry of Home Affairs AND Ministry of Rural Development involved in implementation; it is not exclusively MHA.

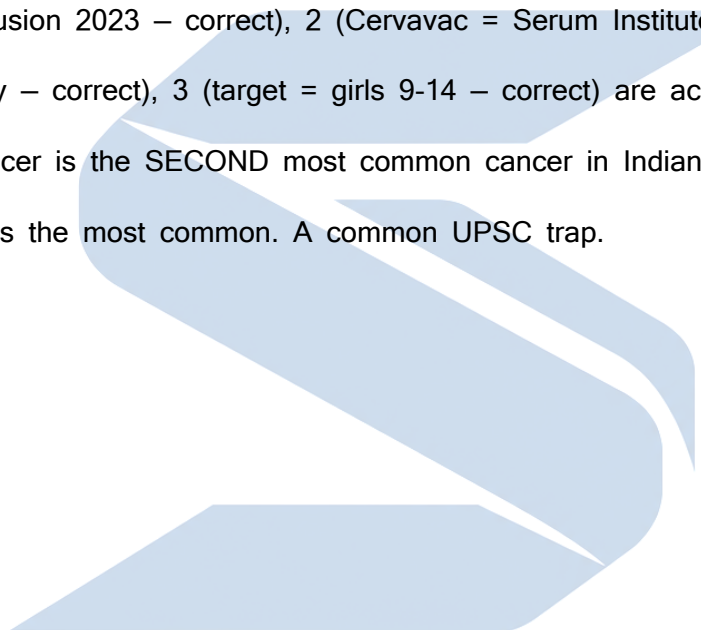


Q.9. Answer: (a) Both A and R are true and R is the correct explanation of A

FRI's significance (A) is precisely explained by R: the risk-scoring mechanism that flags mobile numbers enables banks to act preventively before fraud is completed. This is the mechanism that makes FRI effective – and the Sanchar Saathi ecosystem context is correct. R directly and completely explains why FRI is significant.

Q.10. Answer: (b) Only three

Statements 1 (UIP inclusion 2023 – correct), 2 (Cervavac = Serum Institute, world's first quadrivalent from developing country – correct), 3 (target = girls 9-14 – correct) are accurate. Statement 4 is incorrect – cervical cancer is the SECOND most common cancer in Indian women, after breast cancer. Breast cancer is the most common. A common UPSC trap.



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WEEK 3 · CONTENTS

12 – 18 September 2026

DEFENSE AND SECURITY

01	BRICS New Delhi Declaration: Defence and Security Dimensions	168
02	India-China Bilateral Meeting on the BRICS Sidelines	169
03	Colombo Security Conclave Table-Top Exercise at Eastern Naval Command	171
04	Exercise Yudh Abhyas 2026 at Auli and Mahajan	172

FOREIGN AFFAIRS AND MULTILATERALISM

05	BRICS New Delhi Declaration: Outcomes of India's 2026 Presidency	173
06	Prime Minister's Bilateral Meetings on the BRICS Sidelines	175
07	India-MERCOSUR PTA Expansion and First Additional Protocol	176
08	India-New Zealand FTA Moves Towards Entry into Force	178
09	SCO Ministers on Economic and Foreign Trade Activities	179
10	Third BIMSTEC Conference on Traditional Medicine	180

ECONOMY AND FINANCE

11	India's Exports Rise During April-August 2026-27	182
12	SEMICON India 2026 and the Semicon 2.0 Roadmap	183
13	New UPI Framework Keeps P2P and Most Merchant Payments Free	185
14	World Circular Economy Forum 2026	186
15	Pradhan Mantri Khanij Kshetra Kalyan Yojana	187
16	Electronics Components Manufacturing Scheme	188

SCIENCE AND TECHNOLOGY

17	India's 51st Doppler Weather Radar at Sambalpur	190
18	SPROUT Facility for Climate-Resilient Crop Development	191
19	Steel Slag Road Technology	192
20	CSIR Technology Transfer for Sustainable Leather and Greener Roads	194
21	India's First Soil Carbon Payments to Farmers	195
22	Data Centres in India	196

ENVIRONMENT

23	Great Indian Bustard Conservation in Gujarat	197
24	World Ozone Day and New Climate-Governance Portals	199

GOVERNANCE AND SOCIAL ISSUES

25	National Conference on Building and Other Construction Workers	200
26	PLFS Monthly Bulletin for August 2026	202
27	Care Beyond the Prescription through Janaushadhi Kendras	203
28	Silicon Dreams and India's Semiconductor-Startup Ecosystem	204

Prelims Practice Questions	205
Mains Questions and Model Answers	208
Prelims Answers and Explanations	209



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Defense And Security

1. BRICS New Delhi Declaration: Defence and Security Dimensions

Ministry: Prime Minister's Office / Ministry of External Affairs

PIB Date: 12 September 2026

Easy Explanation

The 18th BRICS Summit adopted the New Delhi Declaration under India's 2026 chairship. Security cooperation remained one of the three principal pillars of BRICS, alongside economic and financial cooperation and cultural and people-to-people exchanges. The Declaration reaffirmed sovereign equality, international law and the central role of the United Nations. It supported reform of global governance so that emerging markets and developing countries receive greater representation. On terrorism, BRICS condemned terrorism in all its forms and stressed that it should not be associated with any religion, nationality or civilisation. It called for zero tolerance, accountability for perpetrators and facilitators, and early adoption of the Comprehensive Convention on International Terrorism. The leaders supported peaceful settlement of disputes, respect for sovereignty and territorial integrity, and stronger cooperation against transnational organised crime, illicit financial flows, narcotics trafficking and misuse of digital technologies. Maritime security, cyber security and disaster resilience were treated as areas requiring practical cooperation.

BRICS began as an economic and political grouping, but its agenda now includes a substantial political and security pillar. This does not create a collective-defence obligation like NATO.

Cooperation is based on consultation, consensus and voluntary follow-up. The expanded membership also means that members have different alliances, threat perceptions and regional interests. Common language therefore matters because it indicates the minimum position that all members—including India, China, Russia and the newer members—were willing to accept.

BRICS is not a military alliance. Its security role is mainly political coordination, information exchange and common positions on threats such as terrorism, cybercrime and organised crime. India uses the forum to press for reform of global institutions and a stronger, non-selective global response to terrorism while retaining strategic autonomy.

For India, the most important security value lies in norm-setting. References to zero tolerance of terrorism, accountability of facilitators and the proposed CCIT support India's long-standing diplomatic position that terrorism cannot be justified by political cause. Support for UN reform and sovereign equality complements India's demand for a more representative Security Council. At the same time, broad declarations do not ensure common action: members may disagree over the naming of organisations, sanctions, regional conflicts or the meaning of cyber sovereignty. The practical test will be information exchange, cooperation against terror financing and cybercrime, and whether security language is applied consistently rather than selectively.

Key Terms

Term	Definition
BRICS	A grouping of major emerging economies that works through consensus.



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Term	Definition
CCIT	Proposed UN Comprehensive Convention on International Terrorism, first advanced by India in 1996.
Strategic autonomy	The ability to take foreign-policy decisions without becoming bound to a single power bloc.
Transnational organised crime	Criminal activity operating across national borders, including trafficking and money laundering.
BRICS security pillar	Political and security cooperation is one of the three main BRICS pillars. It covers consultation on terrorism, cyber security, organised crime, conflict and multilateral reform, but does not create a military alliance or collective-defence guarantee.
Sovereign equality	The UN principle that all states possess equal legal status regardless of size or power. The Declaration uses it to support non-interference, territorial integrity and a more representative international order.
Terror financing	The collection or movement of funds used to support terrorist activity. Effective action requires financial intelligence, international cooperation, sanctions compliance and prosecution of both perpetrators and facilitators.

UPSC Relevance

- GS II: international institutions and groupings
- GS III: internal security, cyber security and terrorism. Prelims: BRICS structure and consensus-based functioning. Mains: India's use of BRICS for Global South representation without turning it into a military or anti-Western bloc.

Source: [Press Information Bureau](#)

2. India-China Bilateral Meeting on the BRICS Sidelines

Ministry: Prime Minister's Office / Ministry of External Affairs

PIB Date: 12 September 2026

Easy Explanation

Prime Minister Narendra Modi met Chinese President Xi Jinping in New Delhi. The leaders welcomed the progress in bilateral relations since their August 2025 meeting in Tianjin and agreed that ties require a strategic and long-term perspective. India reiterated the three mutuals: mutual respect, mutual sensitivity and mutual interest. Both sides stated that differences should not become disputes. Peace and tranquillity in the border areas was described as an essential basis for the continued development of relations. The leaders supported observance of existing border agreements and a fair, reasonable and mutually acceptable settlement of the boundary question. They also discussed people-to-people links, cultural exchanges, business mobility, structural trade imbalance, supply-chain concerns and predictable market access. China's support for India's BRICS chairship was acknowledged.



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India-China relations combine deep economic interdependence with an unresolved boundary dispute and strategic competition. The Line of Actual Control is a de facto alignment, not a jointly demarcated international border. Episodes of military tension have repeatedly shown that ambiguity, infrastructure development and patrol encounters can affect the wider relationship. India therefore links normal bilateral progress with peace and tranquillity in border areas, while China has often favoured treating the boundary as one part of a larger relationship.

The meeting shows cautious stabilisation, not full normalisation. India's position is that economic and political cooperation cannot be separated from peace at the border. Trade imbalance and market access remain concerns even as both countries seek to prevent differences from escalating.

The language of 'differences should not become disputes' and the three mutuals signals an attempt to stabilise ties without pretending that core problems have disappeared. A final boundary settlement would require political agreement beyond tactical disengagement. Economic concerns are equally significant: India depends on Chinese inputs in electronics, machinery, solar equipment and pharmaceuticals, but seeks more balanced trade and predictable access for Indian firms. Cultural exchanges, visas and business travel can reduce friction, yet they cannot substitute for military confidence-building and observance of agreements. The meeting should therefore be read as managed engagement—useful for preventing escalation, but conditional on sustained conduct at the border.

Key Terms

Term	Definition
Line of Actual Control	The de facto boundary between India and China; it is not a mutually agreed international border.
Three mutuals	Mutual respect, mutual sensitivity and mutual interest.
Trade imbalance	A large gap between the value of India's imports from and exports to China.
Boundary question	The unresolved issue of the final alignment and legal settlement of the India-China border.
Border tranquillity	India's position that peace along the LAC is an essential foundation for normal bilateral relations. Tactical disengagement at selected points is different from final demarcation or settlement of the boundary.
Structural trade imbalance	A persistent pattern in which India imports substantially more from China than it exports, especially machinery, electronics, solar equipment and pharmaceutical inputs; market access and domestic capability are therefore major concerns.
Confidence-building measures	Agreements, hotlines, meeting mechanisms and operating rules intended to reduce miscalculation between forces. Their effectiveness depends on consistent observance and timely clarification of incidents.

UPSC Relevance

- GS II: India and its neighbourhood



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- bilateral relations. GS III: border management and supply-chain security. Mains: explain why border tranquillity is treated as the foundation of wider India-China relations.

Source: [Press Information Bureau](#)

3. Colombo Security Conclave Table-Top Exercise at Eastern Naval Command

Ministry: *Ministry of Defence / Indian Navy*

PIB Date: 12 September 2026

Easy Explanation

A three-day Table-Top Exercise under the Colombo Security Conclave concluded at the Eastern Naval Command in Visakhapatnam. It simulated a coordinated response to illicit maritime activity in the Indian Ocean Region. Delegations from member states and observer countries worked through scenarios involving maritime terrorism, narcotics smuggling, human trafficking and illegal, unreported and unregulated fishing. Participants reviewed Standard Operating Procedures and information-sharing arrangements to improve collective Maritime Domain Awareness. The exercise involved planning and decision-making rather than deployment of forces at sea. The activity was linked to MAHASAGAR—Mutual and Holistic Advancement for Security and Growth Across Regions—and the objective of a stable and secure Indian Ocean.

The Indian Ocean carries major energy and trade routes, but many threats fall below the level of conventional naval conflict. Smuggling networks, piracy, trafficking, maritime terrorism, illegal fishing and disasters cross jurisdictional boundaries. No single country can build an adequate operating picture by relying only on its own ships and sensors. Regional cooperation is therefore increasingly centred on shared information, compatible procedures and rapid points of contact.

A table-top exercise is a crisis simulation conducted around maps, plans and communication procedures. It helps countries discover gaps in coordination before a real incident occurs. For India, the CSC is a practical neighbourhood mechanism for non-traditional maritime security.

The exercise tested decision-making rather than combat. Participants had to determine who would detect an incident, how information would be verified, which agency would lead, and how action would be coordinated across territorial seas and exclusive economic zones. Reviewing SOPs is important because a delay caused by incompatible reporting formats or unclear authority can allow a suspect vessel to escape. Maritime Domain Awareness also has a civilian dimension: it supports fisheries management, search and rescue, environmental response and protection of shipping. The CSC complements broader Indian Ocean institutions by remaining small enough for operational cooperation, although trust, data sensitivity and uneven surveillance capacity among members remain constraints.

Key Terms

Term	Definition
Table-Top Exercise	A discussion-based simulation used to test plans and coordination.
Maritime Domain Awareness	An understanding of activities, vessels and threats in the maritime domain.
IUU fishing	Illegal, unreported and unregulated fishing.



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Term	Definition
Eastern Naval Command	The Indian Navy command headquartered at Visakhapatnam and oriented towards the Bay of Bengal.
Colombo Security Conclave	An Indian Ocean regional security mechanism focused on practical cooperation in maritime safety, counter-terrorism, cyber security, trafficking, disaster response and other non-traditional threats.
Standard Operating Procedure	A pre-agreed sequence of actions, responsibilities and communication channels. In a maritime incident, compatible SOPs reduce delay and clarify which national agency should lead.
MAHASAGAR	Mutual and Holistic Advancement for Security and Growth Across Regions; India's wider vision linking maritime security, capacity building, development partnership and regional prosperity.

UPSC Relevance

- GS II: regional groupings
- GS III: maritime security and non-traditional security threats. Prelims: location of Eastern Naval Command and meaning of IUU fishing.

Source: [Press Information Bureau](#)

4. Exercise Yudh Abhyas 2026 at Auli and Mahajan

Ministry: Ministry of Defence / Indian Army

PIB Date: 15 September 2026

Easy Explanation

The 22nd edition of the India-US Army exercise Yudh Abhyas began at the Auli Foreign Training Node in Uttarakhand and the Mahajan Field Firing Range in Rajasthan. Each country fielded about 600 personnel. The exercise focused on employing Integrated Battle Groups in mountainous and semi-mountainous terrain, with emphasis on infantry-dominated operations. Training included joint planning, tactical procedures, drones and autonomous systems for surveillance and reconnaissance, contemporary weapon systems and exchanges on multi-domain warfare. Using two locations allowed the armies to combine high-altitude and semi-desert training conditions, while improving interoperability and exchange of operational practices.

India and the United States conduct a range of bilateral and multilateral exercises across the three services. Exercises do not automatically create a military alliance; they are controlled settings for exchanging tactics, testing communications and learning how equipment and command systems work together. Yudh Abhyas is the principal bilateral army exercise and has gradually moved towards more complex scenarios and technology use.

Yudh Abhyas is an army-to-army exercise, not a treaty commitment. Auli provides mountain conditions while Mahajan provides a large firing and manoeuvre area. The aim is to make the two armies better able to plan and operate together in varied environments.

The two-location design was operationally meaningful. Auli offers high-altitude mountain conditions, while Mahajan provides space for field firing and manoeuvre in a semi-desert environment. Integrated Battle Groups require infantry, artillery, armour, engineers, signals, logistics and air support to operate



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as a coordinated unit. Drones and autonomous systems add surveillance and targeting advantages but also create challenges involving electronic warfare, airspace management and counter-drone defence. For India, such training improves exposure to contemporary methods and strengthens the wider strategic partnership. Its value, however, depends on realistic lessons, adaptation to Indian terrain and doctrine, and avoiding simple imitation of another army's operational model.

Key Terms

Term	Definition
Integrated Battle Group	A flexible, mission-oriented force combining infantry, armour, artillery and support elements.
Interoperability	The ability of forces from different countries to plan, communicate and operate together.
Multi-domain warfare	Coordinated operations across land, air, sea, space and cyber domains.
Autonomous systems	Platforms capable of performing functions with limited direct human control.
Auli Foreign Training Node	A high-altitude Indian Army training location in Uttarakhand. Mountain terrain allows troops to practise mobility, surveillance, logistics and infantry operations under demanding conditions.
Mahajan Field Firing Range	A major training area in Rajasthan used for live firing and large manoeuvres. Its semi-desert environment complements the mountain training conducted at Auli.
Reconnaissance drones	Unmanned systems used to observe terrain and targets without immediately exposing soldiers. Their battlefield value depends on secure communication, electronic-warfare resilience and integration with command decisions.

UPSC Relevance

- GS II: India-US relations
- GS III: defence technology and security. Prelims: participating countries, edition and locations. Mains: defence exercises as instruments of interoperability and strategic partnership.

Source: [Press Information Bureau](#)

Foreign Affairs And Multilateralism

5. BRICS New Delhi Declaration: Outcomes of India's 2026 Presidency

Ministry: Prime Minister's Office / Ministry of External Affairs

PIB Date: 12-13 September 2026



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Easy Explanation

BRICS leaders met in New Delhi for the 18th Summit under the theme Building for Resilience, Innovation, Cooperation and Sustainability. India's chairship organised more than 400 meetings and engagements across 30 cities. The Declaration called for reform of the UN and global governance, greater representation of emerging markets and developing countries, and stronger participation of the Global South in decision-making. Economic priorities included resilient supply chains, greater use of local currencies where feasible, cooperation through the New Development Bank, digital public infrastructure, trade facilitation, sustainable finance and support for MSMEs. India's presidency pushed practical cooperation in health, agriculture, disaster resilience, climate action, critical minerals, artificial intelligence, innovation, skills and people-to-people exchanges. BRICS partner countries were encouraged to participate more deeply in areas of shared interest. The declaration reflected the limits as well as the value of BRICS: it produces negotiated political commitments through consensus rather than legally binding decisions.

A BRICS declaration is a negotiated political document covering the areas on which members can reach consensus. It is not a treaty and does not create directly enforceable obligations. The New Delhi Declaration must therefore be read both for what it includes and for the compromises required by a larger membership. India's presidency sought to keep the grouping development-oriented through the four ideas embedded in its theme: resilience, innovation, cooperation and sustainability.

India presented BRICS as a development-oriented Global South platform rather than an anti-Western alliance. Its benefit lies in agenda-setting, development finance and political coordination. Its weakness is that expanded membership makes consensus more difficult.

The deliverables connect India's domestic strengths with Global South needs. Digital public infrastructure, health cooperation, disaster resilience, agricultural technology, skills and MSME support are areas where practical projects can produce visible benefits. Reform of the UN and multilateral financial architecture advances India's demand for greater developing-country representation. Local-currency settlement can reduce transaction exposure in selected trade, but it is not the same as creating a common BRICS currency or abruptly replacing the dollar. The NDB can widen infrastructure finance, although project quality, governance and China's economic weight remain concerns. India's larger task is to prevent BRICS from becoming rhetorically anti-Western while still using it to widen policy space for developing countries.

Key Terms

Term	Definition
Global South	A broad political term for developing and emerging countries.
New Development Bank	A multilateral development bank established by BRICS; headquartered in Shanghai.
Local-currency financing	Borrowing or settling transactions in national currencies rather than relying only on the US dollar.
Consensus	A decision method requiring members to accept a common position without formal majority voting.



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Term	Definition
BRICS partner country	A form of participation below full membership that allows selected states to join engagements and practical cooperation. It widens BRICS outreach without automatically granting the complete rights of a member.
South-South cooperation	Exchange of finance, technology, skills and policy experience among developing countries. India promotes it as cooperation based on development priorities rather than donor-recipient hierarchy.
BRICS local-currency cooperation	Use of national currencies in selected trade, lending or settlement to reduce transaction risk and dependence on a third currency. It is not the same as an agreed common BRICS currency.

UPSC Relevance

- GS II: global groupings and institutions
- GS III: development finance and digital infrastructure. Essay/Mains: BRICS expansion, Global South leadership and India's multi-alignment.

Source: [Press Information Bureau](#)

6. Prime Minister's Bilateral Meetings on the BRICS Sidelines

Ministry: Prime Minister's Office / Ministry of External Affairs

PIB Date: 12-13 September 2026

Easy Explanation

South Africa: the leaders reviewed their strategic partnership, historical ties and multilateral coordination. India invited South Africa to consider joining the International Big Cat Alliance. Philippines: cooperation was reviewed in defence, trade, space, railways, fintech, education, tourism and technology. The Philippines, then ASEAN chair, decided to join the Coalition for Disaster Resilient Infrastructure. Kazakhstan: discussions covered trade, defence, connectivity, energy, critical minerals, emerging technology and the creative economy, reflecting India's Central Asia engagement. Vietnam: both sides reviewed the Enhanced Comprehensive Strategic Partnership. Vietnam was described as a key pillar of India's Act East Policy and participated as a BRICS partner country. Malaysia: the leaders discussed trade, defence, semiconductors, digital economy, energy and fintech. Malaysia agreed to an Indian Consulate General in Kota Kinabalu, Sabah. Ethiopia: the meeting focused on economic cooperation, defence, capacity building and the collective voice of the Global South. Ethiopia is a full BRICS member. African Union and Burundi: the leaders discussed India-AU cooperation, an early India-Africa Forum Summit, health support through Africa CDC, agriculture, development partnership and capacity building.

Multilateral summits are also platforms for concentrated bilateral diplomacy. Leaders can review several relationships without arranging separate visits, while officials use the summit deadline to advance pending agreements. The value of such meetings lies less in ceremonial photographs and more in the pattern of sectors, regions and institutions that India chooses to emphasise.



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Summit diplomacy allows many bilateral meetings to occur in a short time. The pattern shows India connecting BRICS with Act East, Central Asia, Africa, critical minerals, supply chains and disaster resilience rather than treating the summit as a single-issue event.

The meetings reveal a connected foreign-policy strategy. South Africa and the African Union support India's Global South and conservation diplomacy; Ethiopia and Burundi link BRICS with development partnership and capacity building. The Philippines, Vietnam and Malaysia strengthen India's Act East engagement, defence cooperation and semiconductor links. Kazakhstan connects India to Central Asia, energy and critical minerals. CDRI and the International Big Cat Alliance show India using international initiatives created at home as instruments of external engagement. The challenge is implementation: broad lists of cooperation areas can remain aspirational unless followed by financing, connectivity, institutional meetings and measurable projects. Summit diplomacy creates political direction; ministries and businesses must convert it into outcomes.

Key Terms

Term	Definition
Summit sidelines	Meetings held alongside a larger multilateral event.
Act East Policy	India's policy for deeper strategic and economic engagement with Southeast and East Asia.
CDRI	Coalition for Disaster Resilient Infrastructure, launched by India in 2019.
IBCA	International Big Cat Alliance, an India-led conservation initiative.
Africa CDC	The African Union's public-health agency.
Summit diplomacy	Use of a multilateral summit to hold several bilateral meetings within a short period. It accelerates political review, but implementation still depends on ministries, financing and follow-up mechanisms.
India-Africa Forum Summit	India's principal leaders' platform with African states. It covers development partnership, credit, capacity building, health, agriculture, technology and political coordination.
Critical-mineral diplomacy	External engagement to secure minerals essential for clean energy, electronics and defence. It combines investment, processing, transport corridors, technology and reliable supply agreements.

UPSC Relevance

- GS II: bilateral relations, regional groupings and India's engagement with Africa, ASEAN and Central Asia. Mains: summit diplomacy as a tool of multi-alignment.

Source: [Press Information Bureau](#)

7. India-MERCOSUR PTA Expansion and First Additional Protocol

Ministry: *Ministry of Commerce and Industry*

PIB Date: 14 September 2026



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Easy Explanation

India and MERCOSUR launched negotiations to expand their Preferential Trade Agreement. Uruguay announced the process while holding MERCOSUR's Pro Tempore Presidency. The Terms of Reference will define the scope of the expanded agreement. A First Additional Protocol was also signed to give electronic Certificates of Origin the same legal validity as paper certificates. It amends Article 16 of Annex III on Rules of Origin. The original PTA was signed in 2004 and entered into force in 2009. India offers preferences on 450 tariff lines and MERCOSUR on 452 tariff lines. Electronic certificates are expected to reduce processing time and transaction costs, modernise customs procedures and support paperless trade. The Protocol will enter into force after completion and notification of internal procedures.

India's PTA with MERCOSUR is narrower than a modern free-trade agreement because it grants preferences on a limited number of tariff lines. MERCOSUR gives India access to large South American markets, especially Brazil and Argentina, while India offers a major Asian market. Trade potential has been constrained by distance, logistics, product coverage and complex documentation. A PTA gives tariff concessions on selected products; an FTA normally covers a much wider share of trade. Expansion talks may widen product and policy coverage. Electronic origin certificates help customs verify whether goods qualify for preferential tariffs.

The electronic Certificate of Origin reform is a concrete trade-facilitation step. Origin rules prevent goods from a non-member country from being routed through a partner merely to claim lower tariffs. Digital certificates can reduce delay and fraud if customs systems are interoperable and signatures can be authenticated. Expansion negotiations could widen concessions and address services or non-tariff barriers, but sensitive sectors will require careful sequencing. India must weigh export opportunities in pharmaceuticals, engineering and automobiles against adjustment pressures from competitive agricultural and resource-based exports. Better shipping connections, standards cooperation and business awareness will be as important as tariff schedules.

Key Terms

Term	Definition
MERCOSUR	South American customs union comprising Argentina, Brazil, Paraguay and Uruguay; Bolivia has joined the bloc's integration process.
PTA	An agreement providing lower tariffs on selected products.
Rules of Origin	Criteria used to determine where a product was made.
Pro Tempore Presidency	Rotating temporary chair of a regional organisation.
Electronic Certificate of Origin	A digitally issued and authenticated document identifying where goods were produced. Customs uses it to decide whether a shipment qualifies for the preferential tariff under a trade agreement.
Tariff concession	A lower customs duty offered to qualifying goods from a partner. Under a PTA it normally applies only to listed tariff lines rather than nearly all trade.



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Term	Definition
Joint Administrative Committee	The bilateral institutional mechanism that reviews operation of the PTA, resolves implementation issues and recommends changes such as acceptance of electronic origin documents.

UPSC Relevance

- GS II: regional groupings
- GS III: international trade. Prelims: MERCOSUR members, PTA versus FTA, and Certificates of Origin.

Source: [Press Information Bureau](#)

8. India-New Zealand FTA Moves Towards Entry into Force

Ministry: *Ministry of Commerce and Industry*

PIB Date: 17 September 2026

Easy Explanation

New Zealand's Parliament passed legislation to implement the India-New Zealand FTA signed in New Delhi on 27 April 2026. Both sides must complete domestic procedures before the agreement enters into force. The agreement provides duty-free access for 100 per cent of Indian exports to New Zealand from the date of entry into force. Potential beneficiaries include textiles, leather, engineering goods, pharmaceuticals and processed foods. New Zealand receives improved access to India for products such as wood, wool, sheep meat and leather raw hides. The agreement also addresses services, investment and professional, student and youth mobility. It provides a framework for facilitating USD 20 billion of investment into India and cooperation in agricultural productivity, medical devices, AYUSH, technology and trade facilitation.

Trade agreements pass through negotiation, signature, domestic approval and entry into force. New Zealand's legislation was therefore a necessary legal step rather than the final operational event. The agreement is notable because the two economies differ sharply: India has a large labour force and diversified manufacturing base, while New Zealand is highly competitive in agriculture, forestry and dairy-linked sectors.

Signing an FTA does not automatically make it operational. Each country must complete its legal process. The agreement combines goods, services, mobility and investment, showing that modern trade agreements extend beyond tariffs.

Duty-free access for all Indian exports can benefit labour-intensive sectors, but actual gains depend on rules of origin, standards, freight costs and firms' ability to build distribution networks. India's calibrated access for New Zealand products reflects domestic sensitivity around agriculture. Services, professional mobility and education may generate benefits beyond merchandise trade. The investment-facilitation target should be treated as an enabling ambition, not a guaranteed capital inflow.

Implementation will require customs guidance, mutual recognition where appropriate and support for smaller exporters. India should also monitor import surges and ensure that origin rules prevent third-country trans-shipment.



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Key Terms

Term	Definition
FTA	A treaty that substantially reduces trade barriers between participating economies.
Entry into force	The date on which a treaty becomes legally operative.
Tariff line	A product category in a customs tariff schedule.
Mobility pathway	Rules facilitating temporary movement of students, professionals or workers.
Domestic ratification process	Legal steps each country must complete after signing a treaty. Passage of New Zealand's legislation moved the FTA closer to operation, but entry into force still required completion and notification by both sides.
Rules-of-origin safeguard	Product-specific conditions preventing goods from a third country from being minimally processed or rerouted merely to claim duty-free access under the FTA.
Trade in services	Cross-border supply of professional, digital, educational, financial and other services. Modern FTAs often address services, investment and mobility alongside tariffs on goods.

UPSC Relevance

- GS II: bilateral relations
- GS III: trade agreements and export competitiveness. Mains: gains and adjustment costs from FTAs.

Source: [Press Information Bureau](#)

9. SCO Ministers on Economic and Foreign Trade Activities

Ministry: Ministry of Commerce and Industry

PIB Date: 18 September 2026

Easy Explanation

The 25th ministerial meeting was held in Dushanbe, Tajikistan. India framed regional economic cooperation around three pillars: Security, Connectivity and Opportunity. India called for greater intra-SCO trade, lower trade costs, resilient supply chains, trusted connectivity, simpler customs, paperless trade and electronic exchange of documents. Priority sectors included agriculture, critical minerals, pharmaceuticals, manufacturing, electronics, energy security, renewable energy and green hydrogen. India also supported digital and cross-border payments and accessible trade finance for MSMEs and start-ups. Ministers adopted a statement, agreed on an Action Plan for 2026-2030 for multilateral trade and economic cooperation, and approved rules for a Special Working Group on the Creative Economy. Uzbekistan will host the 2027 meeting.

The SCO emerged from a Eurasian security process but gradually expanded into economic, connectivity and cultural cooperation. Its geography includes major energy producers, large markets



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and important overland routes. Yet political tensions, sanctions, weak intra-regional connectivity and competing infrastructure visions limit the grouping's economic integration.

The SCO began as a security grouping but now also discusses trade and connectivity. India supports connectivity only when it is trusted, transparent and respects sovereignty. This matters because some proposed regional corridors pass through disputed territory.

India's formula of Security, Connectivity and Opportunity links commerce to strategic conditions. Connectivity can lower trade costs only when routes are reliable, transparent and respectful of sovereignty. This explains India's preference for projects such as the International North-South Transport Corridor and Chabahar, and its objection to corridors passing through territory claimed by India. Paperless customs, trade finance and digital payments can provide incremental gains even when a comprehensive regional trade agreement is unrealistic. Cooperation in pharmaceuticals, critical minerals and green hydrogen matches India's supply-chain priorities. However, India must avoid frameworks that expose firms to opaque standards or geopolitical dependence.

Key Terms

Term	Definition
SCO	Shanghai Cooperation Organisation, a Eurasian political, security and economic grouping.
Trusted connectivity	Connectivity built with transparency, financial viability and respect for sovereignty.
Trade facilitation	Simplifying border and customs processes to reduce the time and cost of trade.
Global value chain	A production network in which different stages occur across different countries.
Security Connectivity Opportunity	India's three-part formulation for SCO economic engagement. Security enables commerce, trusted connectivity lowers trade costs, and wider market access creates opportunity for businesses.
Multimodal connectivity	Movement of cargo through linked road, rail, sea and inland-waterway systems. Efficient transfers and common documentation can reduce transit time across landlocked Eurasia.
Creative economy	Economic activity based on culture, design, media, arts, digital content and intellectual property. The SCO approved a special working-group framework for this sector.

UPSC Relevance

- GS II: regional groupings
- GS III: infrastructure, trade and critical minerals. Mains: opportunities and constraints in India's SCO engagement.

Source: [Press Information Bureau](#)

10. Third BIMSTEC Conference on Traditional Medicine

Ministry: *Ministry of Ayush*



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PIB Date: 16-17 September 2026

Easy Explanation

The conference and the second BIMSTEC Nodal Group meeting were held in Goa with participation from all seven member states. The Ministry of Ayush organised the event with AIIA Goa as the nodal institute. Discussions covered documentation of traditional knowledge, intellectual-property rights, genetic resources, access and benefit-sharing, prior informed consent, community rights and the role of WIPO and WHO. The Traditional Knowledge Digital Library was discussed as a model for controlled-access documentation and prevention of wrongful patents through prior-art evidence. The Goa Conclusions identified four cooperation areas: institutional and policy cooperation; standards and trade; documentation and capacity building; and implementation mechanisms. Members supported cooperation on intellectual property, genetic resources and traditional medicine knowledge.

BIMSTEC connects South and Southeast Asia around the Bay of Bengal. Its members possess diverse medical traditions and biological resources, but traditional knowledge is often orally transmitted, unevenly documented and vulnerable to commercial appropriation. International patent rules can create disputes when an applicant presents known community practice as a new invention. Traditional knowledge can support healthcare and research, but communities may lose control if knowledge or biological resources are commercially used without consent. Documentation helps prevent biopiracy, while access-and-benefit-sharing rules ensure that communities receive a fair share of benefits.

The conference brought health, biodiversity and intellectual property into a single framework. Documentation such as TKDL can establish prior art and prevent wrongful patents, but databases must also protect confidential or sacred knowledge. The principles of prior informed consent and mutually agreed terms are essential when researchers or companies use genetic resources and associated knowledge. Regional standards could support research and legitimate trade, while weak or premature standardisation could marginalise local practices. The proposed cooperation should therefore combine scientific validation, pharmacovigilance, community rights, benefit-sharing and respect for national biodiversity laws.

Key Terms

Term	Definition
BIMSTEC	Bay of Bengal Initiative for Multi-Sectoral Technical and Economic Cooperation.
TKDL	India's Traditional Knowledge Digital Library.
Prior art	Existing knowledge used to test whether a patent claim is truly new.
Benefit-sharing	Sharing gains from the use of genetic resources or associated traditional knowledge.
Prior informed consent	Permission obtained from the provider country or knowledge-holding community before accessing a genetic resource or associated traditional knowledge, based on adequate disclosure of the proposed use.



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Term	Definition
Mutually agreed terms	Contractual conditions governing access, research, commercial use and sharing of benefits arising from genetic resources or traditional knowledge.
Biopiracy	Commercial or patent-based appropriation of biological resources or community knowledge without legitimate consent, recognition or fair benefit-sharing.

UPSC Relevance

- GS II: regional cooperation
- GS III: intellectual-property rights and biotechnology. Prelims: BIMSTEC members and TKDL.

Source: [Press Information Bureau](#)

Economy And Finance

11. India's Exports Rise During April-August 2026-27

Ministry: Ministry of Commerce and Industry

PIB Date: 15 September 2026

Easy Explanation

Combined merchandise and services exports during April-August 2026-27 were estimated at USD 399.27 billion, up 15.55 per cent from USD 345.55 billion a year earlier. Merchandise exports rose 17.85 per cent to USD 215.91 billion. Services exports were estimated at USD 183.36 billion. Total imports reached USD 459.65 billion, producing an overall trade deficit of USD 60.38 billion. For August 2026, total exports were estimated at USD 82.68 billion and imports at USD 92.09 billion. The combined deficit was USD 9.41 billion. Major merchandise drivers included electronics, petroleum products, engineering goods, chemicals and cotton/handloom products. Electronics exports in August rose 89.82 per cent year-on-year to USD 5.55 billion. Services data for the latest month included estimates because final RBI data were not yet available.

Monthly trade releases combine customs data for merchandise with RBI-based estimates for services. Merchandise figures are available more quickly, while recent services values may be projected and later revised. The combined headline therefore provides an early picture rather than a final balance-of-payments statement.

Export growth is positive, but imports grew faster over the five-month period, widening the combined deficit. Merchandise trade normally runs a deficit, while India's services surplus partly offsets it. Estimated services figures should be read as provisional rather than final.

The 15.55 per cent export increase indicates strong external demand and supply capacity, especially in electronics and engineering. However, total imports increased faster, widening the five-month deficit. Petroleum exports may rise because of price and refining factors rather than only volume, while electronics growth can still contain imported components. A durable export strategy requires domestic value addition, diversified markets, logistics efficiency, stable trade policy and competitive services. Policymakers should distinguish nominal value growth from volume growth and examine whether the



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export basket is becoming more technologically sophisticated. The services surplus remains a major cushion against India's merchandise deficit.

Key Terms

Term	Definition
Merchandise trade	Trade in physical goods.
Services trade	Cross-border services such as IT, finance, transport and tourism.
Trade balance	Exports minus imports.
Non-petroleum exports	Exports excluding petroleum products, used to judge broader export performance.
Combined trade deficit	The difference between total imports and total exports after combining goods and services. India's services surplus offsets part, but not all, of its merchandise deficit.
Provisional services estimate	A recent-month services figure projected before complete RBI data become available. Such estimates can be revised when final balance-of-payments information is released.
Export value versus volume	Export earnings may rise because more goods were sold, prices increased or the product mix changed. Value growth alone does not show the physical volume of exports.

UPSC Relevance

- GS III: Indian economy, trade and balance of payments. Prelims: trade balance calculations and distinction between merchandise and services.

Source: [Press Information Bureau](#)

12. SEMICON India 2026 and the Semicon 2.0 Roadmap

Ministry: Ministry of Electronics and Information Technology

PIB Date: 17 September 2026

Easy Explanation

SEMICON India 2026 was inaugurated at Yashobhoomi, New Delhi, under the theme Silicon to Systems: Building the Ecosystem. The event included over 600 exhibitors, about 300 international participants, six country pavilions and twelve state pavilions. Semicon 2.0 expands support across six pillars: design; equipment and materials; fabrication; advanced packaging; applied research and development; and talent. The announced mission budget rises from about USD 8 billion under Semicon 1.0 to USD 13.5 billion. India reported 70,000 trained design engineers and deployment of electronic-design-automation tools across more than 500 organisations. Five commercial ATMP units were operational among twelve approved units. Commercial production lines at CDIL Mohali and Suchi Semicon Surat were inaugurated. Micron's DRAM and NAND production at Sanand was reported as live, while Tata's Dholera fabrication plant and Jagiroad OSAT facility remained under construction. Major industry commitments covered equipment, materials, lithography, packaging,



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training and supply chains, emphasising that a viable semiconductor ecosystem needs much more than a fabrication plant.

Semiconductor production is a chain rather than a single factory. It begins with architecture and chip design, moves through masks, materials and wafer fabrication, and ends with assembly, packaging, testing and integration into systems. Each stage has distinct capital, technology and skill requirements. Global concentration in a few countries makes disruptions a strategic risk.

A chip ecosystem includes design software, specialised chemicals and gases, machinery, wafer fabrication, testing, packaging, reliable power and skilled workers. Semicon 2.0 attempts to fill these connected gaps and move India from incentives and approvals towards commercial production. Semicon 2.0 attempts to correct the weakness of an incentive policy focused mainly on attracting headline fabs. Equipment, chemicals, gases, packaging, applied research and talent must develop together for plants to reach commercial yields. India has design strength and domestic demand, but fabrication requires reliable utilities, experienced process engineers and repeated technology upgrades. Public support should be tied to milestones, domestic value creation and environmental safeguards. India can pursue realistic niches—mature nodes, power electronics, sensors, compound semiconductors and advanced packaging—while maintaining international partnerships for equipment and technology that cannot be indigenised quickly.

Key Terms

Term	Definition
Fab	A semiconductor wafer-fabrication facility.
ATMP/OSAT	Assembly, testing, marking and packaging; outsourced semiconductor assembly and test.
EDA tools	Software used to design and verify electronic chips.
Lithography	The process of transferring extremely small circuit patterns onto a wafer.
DRAM and NAND	Major types of semiconductor memory.
Semicon 2.0 six pillars	Design; equipment and materials; fabrication; advanced packaging; applied research and development; and talent. The framework recognises that a fab cannot succeed without the surrounding ecosystem.
Process yield	The proportion of manufactured chips that meet specification. Commercial viability depends on raising yield through stable equipment, materials, process control and experienced engineers.
Compound semiconductors	Chips made from materials such as silicon carbide or gallium nitride. They are important for power electronics, electric vehicles, communications and high-temperature applications.

UPSC Relevance

- GS III: science and technology, industrial policy, supply-chain resilience and strategic sectors. Mains: opportunities and constraints in building a complete semiconductor ecosystem.



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Source: [Press Information Bureau](#)

13. New UPI Framework Keeps P2P and Most Merchant Payments Free

Ministry: *Ministry of Finance*

PIB Date: 15 September 2026

Easy Explanation

All person-to-person UPI transactions remain free irrespective of value. Merchant transactions up to Rs 2,000 and payments received by eligible small merchants also remain under zero MDR, leaving about 96 per cent of merchant transactions unaffected. A 0.4 per cent Merchant Discount Rate applies to specified person-to-merchant transactions above Rs 2,000, capped at Rs 300 for transactions of Rs 75,000 or more. Essential and thin-margin sectors such as railways, telecom, insurance, fuel and agricultural inputs face a flat MDR of Rs 5 on applicable transactions above Rs 2,000. Capital-market transactions attract 0.02 per cent MDR, capped at Rs 300. MDR is distributed among banks, payment service providers and UPI application providers; it is not a government tax and should not be passed to customers. The framework was introduced under the Payment and Settlement Systems Act, 2007.

UPI grew rapidly under a zero-charge framework that encouraged adoption by consumers and merchants. The same model created a policy question: banks, switching infrastructure and payment applications incur operating, security and dispute-resolution costs even when users pay nothing. The new arrangement attempts to finance the ecosystem without burdening ordinary transfers and small payments.

Customers continue to use UPI without a transaction charge. MDR is an ecosystem charge paid on a limited class of merchant transactions. The policy attempts to protect individuals and small merchants while creating revenue to maintain and expand payment infrastructure.

Keeping P2P free protects the basic public utility character of UPI. Exempting payments up to Rs 2,000 and eligible small merchants limits the effect on street vendors and neighborhood businesses.

The risk is indirect pass-through: merchants may raise prices, discourage UPI or impose informal surcharges despite instructions. Transparent settlement, grievance mechanisms and competition among apps will be important. MDR revenue should support uptime, fraud controls and innovation rather than create hidden consumer fees. The distinction between security transaction limits and charging thresholds is also important for Prelims and public understanding.

Key Terms

Term	Definition
UPI	Unified Payments Interface, operated by NPCI for instant bank-to-bank payments.
P2P	Person-to-person payment.
P2M	Person-to-merchant payment.
MDR	Merchant Discount Rate shared among participants that process a merchant payment.
NPCI	National Payments Corporation of India.



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Term	Definition
Zero-MDR framework	Policy under which specified UPI merchant payments do not attract a Merchant Discount Rate. It protects small-value digital payments but leaves the ecosystem's operating-cost question unresolved.
P2PM category	Person-to-person-merchant classification used for eligible small merchants receiving payments through QR codes, with the release protecting receipts up to the prescribed monthly level.
Payment and Settlement Systems Act 2007	The principal statute regulating payment systems in India and empowering the RBI to authorise, supervise and set standards for system providers.

UPSC Relevance

- GS III: digital economy, financial inclusion and payment systems. Prelims: NPCI, MDR and the Payment and Settlement Systems Act.

Source: [Press Information Bureau](#)

14. World Circular Economy Forum 2026

Ministry: Ministry of Environment Forest and Climate Change

PIB Date: 15-16 September 2026

Easy Explanation

India hosted the World Circular Economy Forum in Gandhinagar, the first edition held in South Asia. Its theme was Circular Economy: Transition for People and Prosperity. The forum brought together more than 2,000 stakeholders from over 65 countries and featured more than 125 exhibitors. It was jointly organised by Indian institutions, the Government of Gujarat, Finland and the Finnish Innovation Fund Sitra. Discussions covered circular finance, artificial intelligence, employment, sustainable products, industrial solutions, governance, start-ups and youth participation. India also held a meeting connected with the UN's 10-Year Framework of Programmes on Sustainable Consumption and Production, whose Board India co-chairs. The concluding call sought inclusive and scalable circular solutions, stronger institutions and capacity, and integration of circularity into decision-making. The hosting baton for WCEF 2027 was handed to Columbia University in the United States.

Conventional production extracts resources, manufactures goods and discards them after use. Circularity redesigns this flow by extending product life, recovering materials and reducing virgin-resource demand. It goes beyond recycling: repairability, leasing, remanufacturing, industrial symbiosis and product-as-a-service models can prevent waste before it is created.

A linear economy follows take-make-dispose. A circular economy tries to keep products and materials in use through durability, repair, reuse, remanufacturing and recycling. It can reduce waste and raw-material demand, but only if product design, finance, standards and markets change together.

Hosting WCEF in South Asia brings developing-country concerns into a debate often shaped by advanced economies. India's informal repair and recycling networks already preserve material value, but workers frequently face unsafe conditions and low returns. A just circular transition must combine formal standards with livelihoods and social protection. Finance and reliable markets are needed for secondary materials; poorly designed mandates can lead to downcycling or greenwashing. Digital



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product passports, EPR and public procurement can improve traceability and demand. The forum's real value will depend on whether global discussion produces investible projects, technology access and measurable material-efficiency outcomes.

Key Terms

Term	Definition
Circular economy	An economic model that minimises waste and keeps materials in circulation.
Resource efficiency	Producing value with less material, energy and environmental impact.
Extended Producer Responsibility	A policy making producers responsible for post-consumer management of products.
Sitra	The Finnish Innovation Fund and a founding partner of WCEF.
Industrial symbiosis	An arrangement in which waste, heat, water or by-products from one industry become inputs for another, reducing disposal and virgin-resource demand.
Product life extension	Design, repair, maintenance, refurbishment and remanufacturing that keep a product useful for longer before material recycling becomes necessary.
10YFP	The UN Ten-Year Framework of Programmes on Sustainable Consumption and Production, designed to accelerate resource-efficient and low-impact patterns of production and consumption.

UPSC Relevance

- GS III: environment, resource efficiency and sustainable development. Essay: moving from waste management to circular production systems.

Source: [Press Information Bureau](#)

15. Pradhan Mantri Khanij Kshetra Kalyan Yojana

Ministry: Ministry of Mines / PIB Backgrounder

PIB Date: 17 September 2026

Easy Explanation

PMKKKY, launched in September 2015, directs District Mineral Foundation funds towards welfare and development in mining-affected areas. Revised guidelines were issued in January 2024. District Mineral Foundations are non-profit trusts established under the Mines and Minerals (Development and Regulation) Act, 1957, following its 2015 amendment. DMFs operate under state governments and have been established in 656 districts across 23 states. Mining leases granted on or after 12 January 2015 contribute 10 per cent of royalty to DMFs; older leases contribute 30 per cent of royalty. PMKKKY seeks to complement government programmes, reduce environmental and health impacts of mining, and create sustainable livelihoods. At least 70 per cent of funds are directed towards high-priority sectors. Implementation in Scheduled Areas must respect PESA and the Forest Rights Act.



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Mining benefits the wider economy but concentrates environmental and social costs in host communities. Royalty flows mainly to government, whereas displacement, dust, water stress and livelihood disruption are experienced locally. The 2015 DMF mechanism created a district-level pool linked to mining activity, and PMKKKY guides the use of that pool.

Mining generates public revenue but its local costs—pollution, displacement and loss of livelihoods—are concentrated in host districts. DMF creates the funding pool; PMKKKY provides the framework for spending it on affected people and places.

The scheme can finance health, education, drinking water, nutrition, skill development and livelihood restoration without waiting for ordinary departmental budgets. Yet large collections do not automatically ensure good outcomes. District plans may be dominated by contractors or general infrastructure instead of the most affected settlements. Gram Sabha participation is especially important in Scheduled Areas under PESA and the Forest Rights Act. Public dashboards, social audits, independent impact assessment and convergence with—not substitution for—regular government spending are necessary. Planning must also cover mine closure and long-term livelihoods after extraction declines.

Key Terms

Term	Definition
DMF	District Mineral Foundation, a district-level non-profit trust for mining-affected people.
Royalty	Payment made for the right to extract a mineral resource.
PESA	Panchayats Extension to Scheduled Areas Act, 1996.
MMDR Act	The principal law governing mineral development and regulation in India.
Mining-affected area	A directly or indirectly impacted locality facing consequences such as displacement, pollution, pressure on water and public services, transport damage or livelihood disruption.
High-priority sectors	PMKKKY requires at least 70 per cent of funds for priority needs such as drinking water, health, education, nutrition, welfare, skill development and environmental measures.
Mine-closure planning	Preparation for environmental rehabilitation and livelihoods after extraction declines or stops. DMF planning should address long-term transition rather than only infrastructure during the mining phase.

UPSC Relevance

- GS II: welfare and decentralised governance
- GS III: mining and inclusive development. Prelims: DMF contributions and institutional location.

Source: [Press Information Bureau](#)

16. Electronics Components Manufacturing Scheme

Ministry: Ministry of Electronics and Information Technology / PIB Backgrounder



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PIB Date: 17 September 2026

Easy Explanation

The ECMS aims to deepen domestic electronics manufacturing beyond final assembly by supporting components, sub-assemblies, supply-chain products and related capital goods. India's electronics production increased from Rs 1.9 lakh crore in 2014-15 to Rs 13.11 lakh crore in 2025-26, while exports rose from over Rs 38,000 crore to Rs 4.24 lakh crore. Import dependence remains high for several critical components and materials. The scheme covers products such as printed circuit boards, camera and display modules, connectors, capacitors, lithium-ion cells and rare-earth magnets. ECMS was notified on 8 April 2025 with an initial outlay of Rs 22,919 crore. The Union Budget 2026-27 increased the outlay to Rs 40,000 crore. By August 2026, 106 projects across 15 states had been approved, involving Rs 69,548 crore of approved investment.

Final assembly can produce jobs and exports while leaving much of the product value embedded in imported displays, camera modules, batteries, circuit boards and components. This exposes manufacturers to currency movements, shipping disruption and foreign supply restrictions. ECMS seeks to move India further upstream in the electronics value chain.

India has become a major electronics assembler, especially for mobile phones. ECMS targets the deeper layer of components and production equipment. Higher domestic value addition can reduce import vulnerability and make exports more competitive.

Component manufacturing can create supplier clusters around mobile phones, automobiles, telecom equipment and consumer electronics. Scale, quality certification and dependable demand are crucial because components operate on thin margins and global standards. Incentives should not preserve permanently uncompetitive capacity; they should help firms cross initial scale and technology barriers. Linkages with semiconductors, rare-earth processing, battery supply chains and capital goods can multiply benefits. Policymakers must track actual production, domestic value addition and exports rather than only approved investment. Skills, logistics and R&D support will determine whether local suppliers join global value chains.

Key Terms

Term	Definition
Component ecosystem	The network producing parts, materials, sub-assemblies and manufacturing equipment.
Domestic value addition	The portion of a product's value created within the country.
PCB	Printed circuit board that mechanically supports and electrically connects components.
Capital goods	Machinery and equipment used to produce other goods.
Import dependence	Reliance on foreign sources for critical parts and materials. It can expose Indian assembly operations to currency changes, logistics disruption and export controls.



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Term	Definition
Supply-chain product	A material, part or sub-assembly used by another manufacturer rather than sold directly to the final consumer; examples include PCBs, connectors and display modules.
Approved investment	Investment proposed under sanctioned projects. It should be distinguished from investment actually made, commercial production achieved and domestic value genuinely created.

UPSC Relevance

- GS III: industrial policy, manufacturing, imports and global value chains. Mains: assembly-led growth versus deeper technological capability.

Source: [Press Information Bureau](#)

Science And Technology

17. India's 51st Doppler Weather Radar at Sambalpur

Ministry: Ministry of Earth Sciences

PIB Date: 17 September 2026

Easy Explanation

India commissioned its 51st Doppler Weather Radar at Sambalpur, giving Odisha three radars after Gopalpur and Paradip. The system will strengthen monitoring across western Odisha and adjoining parts of Jharkhand, Chhattisgarh, Andhra Pradesh and West Bengal. The national radar network has grown from 14 in 2014 to 51. Around 40 additional radars are planned under Mission Mausam, taking the network to about 81. The radar will improve detection and nowcasting of thunderstorms, lightning, heavy rainfall and other hazardous weather. It is part of a layered observation network that also includes automatic weather stations, rain gauges, radiosondes and microwave radiometers. India also provides weather, cyclone and flash-flood forecasting support to 13 neighbouring countries, linking domestic capability with regional disaster resilience.

Weather forecasts improve when observations capture conditions at multiple levels and locations. Satellites provide broad coverage, while radar gives high-frequency information about precipitation and storm movement over a region. Ground stations, balloons and radiometers provide complementary variables required by numerical models.

A Doppler radar does more than locate rain. By measuring the frequency shift of reflected waves, it estimates the motion of raindrops and wind within storms. This helps forecasters track storm movement and issue short-range warnings.

The Sambalpur radar fills a coverage gap in a region exposed to severe thunderstorms, lightning and intense rainfall. Better nowcasting can support evacuation, farm decisions, aviation, power utilities and reservoir management. A larger network alone is not sufficient: radars must be calibrated, maintained and integrated with forecasting models and last-mile warning systems. Warnings should reach people in local languages and convert into clear actions. False alarms and missed events affect public trust, so impact-based forecasts—what the weather will do, not merely what it will be—are the next step.



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Key Terms

Term	Definition
Doppler effect	Change in observed frequency caused by relative motion between source and observer.
Nowcasting	Very short-range forecasting, usually for the next few hours.
Radiosonde	A balloon-borne instrument measuring atmospheric conditions with altitude.
Mission Mausam	India's programme to improve weather observation, modelling and forecasting.
Radar reflectivity	A measure derived from returned radar energy indicating the location and relative intensity of precipitation; stronger echoes can signal heavier rain or hail.
Impact-based forecast	A warning that explains likely consequences—such as flooding, crop damage or traffic disruption—rather than communicating only rainfall or wind values.
Observation network	The combined system of radar, satellites, automatic stations, rain gauges, balloons and other sensors supplying data to forecasters and numerical models.

UPSC Relevance

- GS I: climatology
- GS III: disaster management and science. Prelims: Doppler principle and radar applications.

Source: [Press Information Bureau](#)

18. SPROUT Facility for Climate-Resilient Crop Development

Ministry: Ministry of Science and Technology / Department of Biotechnology

PIB Date: 15 September 2026

Easy Explanation

The indigenous SPROUT facility was inaugurated at BRIC-National Institute of Plant Genome Research in New Delhi. SPROUT stands for SpeedSeed Phenotyping and Resource Optimization for Unified Trait Analysis. It is a season-independent controlled environment for high-throughput phenotyping, precision stress screening and evaluation of germplasm, breeding populations, mutants, transgenic plants and genome-edited lines. The major initial focus is chickpea. The facility links gene discovery and genome editing with rapid trait validation. NIPGR's separate SpeedSeed protocol can reduce the chickpea generation cycle to roughly 40 days. The project supports the BioE3 policy's climate-resilient agriculture theme. DBT-backed research between 2014 and 2026 supported more than 300 agricultural-biotechnology projects and produced over 50 improved varieties, including 17 climate-resilient rice varieties cultivated across nearly 15 lakh hectares.

Conventional breeding requires repeated crop generations across seasons and locations. Climate change increases the number of traits breeders must evaluate, including tolerance to heat, drought,



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salinity, flooding, pests and unstable rainfall. Controlled-environment phenotyping can apply the same stress precisely and measure plant responses at scale.

Finding a useful gene is not enough; scientists must test whether it produces the desired trait under heat, drought, salinity or other stress. SPROUT controls environmental conditions and speeds up plant generations, shortening the path from laboratory discovery to improved variety.

SPROUT connects India's genomic research with breeding outcomes. SpeedSeed shortens generation time, while phenotyping tests whether a promising genetic change actually improves performance. The approach can accelerate chickpea improvement, important for nutrition and pulse security. Laboratory success still requires multi-location field trials because controlled conditions cannot reproduce every soil, pest and weather interaction. Biosafety, seed access and farmer suitability must accompany advanced genetics. Public research should focus not only on yield but also water use, nutritional quality and resilience for smallholders in diverse agro-climatic zones.

Key Terms

Term	Definition
Phenotyping	Measuring observable traits of an organism.
Germplasm	Living genetic resources used in breeding and research.
Genome editing	Targeted alteration of DNA.
Speed breeding	Using controlled conditions to shorten plant generation time.
BioE3	Biotechnology for Economy, Environment and Employment policy.
High-throughput phenotyping	Rapid and repeated measurement of large numbers of plants using controlled conditions, sensors and imaging to connect genetic variation with useful traits.
Precision stress screening	Applying defined heat, drought, salinity or other stress so that plant responses can be compared reliably and promising lines selected.
Trait validation	Testing whether a gene, edit or breeding line consistently produces the intended characteristic before it advances to field trials and varietal development.

UPSC Relevance

- GS III: biotechnology, food security and climate-resilient agriculture. Prelims: phenotype versus genotype and roles of NIPGR/DBT.

Source: [Press Information Bureau](#)

19. Steel Slag Road Technology

Ministry: Ministry of Science and Technology / CSIR

PIB Date: 12 September 2026

Easy Explanation

CSIR-CRRI's processed steel-slag road technology can reduce construction costs by around 40 per cent and deliver up to four times the strength of conventional roads in suitable applications. Major



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maintenance may be delayed for about 15 years. A 1.85-km road at Raigarh, Chhattisgarh, received a Guinness World Record as the longest road built with processed steel-slag aggregates. CSIR-CRRI and Jindal Steel also signed a technology-transfer agreement. Steel slag is a by-product of steelmaking. Processing it into road aggregate substitutes part of the natural stone obtained through mining and quarrying, converting industrial waste into infrastructure material. The technology is being scaled to a proposed 40-km road in Odisha and is relevant to high-load, heavy-rainfall and difficult-terrain applications, subject to proper processing and engineering standards.

India's steel industry produces large quantities of slag, while road construction consumes natural aggregates obtained from quarrying. Treating suitable slag can connect these two material flows. The engineering challenge is that slag composition and volume stability vary, so processing and quality control are essential.

Untreated industrial waste cannot simply be spread on roads. Steel slag must be processed and engineered so that it remains stable and safe. When properly used, it reduces waste disposal, conserves natural aggregates and can improve road durability.

Higher strength and longer maintenance cycles can lower lifecycle costs even where initial processing is required. Replacing natural aggregate also reduces quarrying pressure and landfill demand. But headline claims such as 'four times stronger' apply under specified test and design conditions; performance must be validated for different climates, traffic loads and slag sources. Environmental monitoring should check leaching and expansion risks. Standards, certification and technology transfer can enable adoption without allowing untreated waste to enter construction. Public procurement can create scale once safety and lifecycle evidence are established.

Key Terms

Term	Definition
Steel slag	A mineral-rich by-product separated during steelmaking.
Aggregate	Granular material such as crushed stone used in road layers and concrete.
Waste to wealth	Converting waste streams into useful economic inputs.
CSIR-CRRI	Central Road Research Institute under the Council of Scientific and Industrial Research.
Processed steel-slag aggregate	Steelmaking slag treated, stabilised and graded for engineering use. Processing is essential because untreated slag may vary in composition or expand.
Lifecycle cost	Total cost of construction, maintenance, disruption and replacement across a road's useful life; a durable material may be economical even if processing adds an initial cost.
Material leaching	Release of chemical constituents when water passes through a material. Environmental testing is required before industrial by-products are adopted widely in infrastructure.



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UPSC Relevance

- GS III: infrastructure, waste management and indigenous technology. Mains: circular economy applications in heavy industry.

Source: [Press Information Bureau](#)

20. CSIR Technology Transfer for Sustainable Leather and Greener Roads

Ministry: Ministry of Science and Technology / CSIR

PIB Date: 16 September 2026

Easy Explanation

CSIR transferred technologies developed by CSIR-CLRI and CSIR-CRRI to industry, aiming to move laboratory solutions towards commercial use. A CLRI process recovers chromium-free protein hydrolysate from chrome shavings and converts it into syntans used in leather retanning. Commercial-scale validation reached 1,500 kg and could reduce total dissolved solids in post-tanning effluent by up to 50 per cent. Another process recovers iron and chloride from spent steel pickling acid and converts them into pigment-grade iron oxide and ammonium chloride. CRRI transferred ClariVisor, an in-vehicle glare-mitigation device, and a solvent-free two-pack cold pothole-filling mix that requires no hot-mix plant or heating and permits faster reopening of roads.

Public laboratories generate social value only when useful research reaches production and users. Technology transfer may involve licensing, demonstration, engineering support and industry validation. The selected CSIR technologies address waste streams from leather and steel processing as well as practical road-safety and maintenance problems.

Technology transfer is the bridge between public research and industrial production. These examples combine pollution control with resource recovery: leather and steel wastes become inputs, while road-repair technology reduces heating, energy use and repair time.

Recovering protein from chrome shavings reduces a persistent tannery waste problem and creates an input for retanning. Recovering products from spent pickling acid similarly turns hazardous waste into industrial material. Commercial viability depends on consistent waste collection, product quality and compliance costs. The cold pothole mix can enable rapid repair without energy-intensive hot-mix plants, particularly during emergencies or monsoon conditions. ClariVisor addresses glare within the vehicle footprint. Industry uptake should be monitored through environmental performance, cost, licensing reach and actual deployment—not merely the signing of transfer agreements.

Key Terms

Term	Definition
Syntan	A synthetic tanning agent used in leather processing.
Chrome shavings	Chromium-containing leather waste generated after tanning.
Spent pickling acid	Acidic waste from removing oxides and scale from steel.
Technology transfer	Licensing or transferring know-how from a research institution to an industrial user.



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Term	Definition
Protein hydrolysate	Protein broken into smaller chains through chemical or enzymatic treatment. CLRI recovers chromium-free material from leather waste for reuse in syntans.
Cold pothole mix	Repair material applied without a hot-mix plant or heating. It can reduce energy use, permit on-site preparation and reopen a repaired road more quickly.
Commercial licensing	Permission for an industry partner to use protected know-how or patents under agreed conditions, often accompanied by technical support and royalty or fee arrangements.

UPSC Relevance

- GS III: research and development, intellectual property, industry and circular economy.

Source: [Press Information Bureau](#)

21. India's First Soil Carbon Payments to Farmers

Ministry: Ministry of Agriculture and Farmers Welfare

PIB Date: 17 September 2026

Easy Explanation

More than 2,500 small farmers in Punjab and Haryana began receiving digital payments for verified regenerative-farming outcomes. Over Rs 2.9 crore was to be distributed, with individual payments of roughly Rs 3,000-Rs 15,000. The payments came from Aadi, a Grow Indigo programme launched in 2019 with ICAR technical guidance. Practices included direct-seeded rice, reduced tillage and crop-residue management. Emission reductions and increases in soil carbon were measured and independently verified under Verra's VM0042 methodology before credits were issued. The first issuance covered about 30,000 acres and over 50,000 carbon credits. The programme estimated 45 billion litres of water saved, more than two lakh tonnes of crop residue kept from burning and about 1,000 tonnes of PM2.5 emissions avoided for enrolled fields during 2019-2022. The wider programme covers over two million acres and more than 100,000 farmers across seven states. Farmers could choose an assured upfront payment or 75 per cent of net carbon revenue after sale. Agricultural soils can lose carbon through intensive tillage, residue burning and declining organic matter. Practices such as reduced tillage, residue retention and diversified rotations may rebuild soil carbon and lower emissions. Carbon markets attempt to convert verified climate benefits into an additional revenue stream for farmers.

Soils can store carbon when farming practices add organic matter or reduce losses. A carbon credit requires a credible baseline, measurement and independent verification. The main challenge is ensuring additionality, permanence, fair farmer payments and low monitoring costs.

The first payments are significant because they move the idea from project registration to farmer income. Yet agricultural carbon is difficult to measure: soil varies across short distances, results take time and stored carbon can be reversed. Baselines, additionality, leakage and permanence must be handled transparently. Small farmers may otherwise bear practice-change risk while intermediaries capture most revenue. Clear contracts, low-cost MRV, grievance mechanisms and disclosure of credit



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prices are essential. Carbon income should be treated as a supplement to agronomic benefits—water saving, soil health and reduced burning—not as a guaranteed annual payment.

Key Terms

Term	Definition
Soil organic carbon	Carbon stored in soil organic matter.
Additionality	Proof that the claimed climate benefit would not have occurred without the project.
MRV	Measurement, reporting and verification.
Direct Seeded Rice	Rice sown directly rather than transplanted into continuously flooded fields.
Carbon credit	A tradable unit commonly representing one tonne of CO ₂ -equivalent reduced or removed.
Verra VM0042	A methodology used to quantify greenhouse-gas reductions and soil-carbon changes from improved agricultural land-management practices.
Permanence risk	Possibility that stored soil carbon will later be released because farming practice changes, soil is disturbed or climatic conditions reverse the gain.
Farmer revenue share	The portion of carbon-credit income returned to enrolled farmers after measurement, verification and programme costs; contract transparency is essential for fairness.

UPSC Relevance

- GS III: agriculture, climate finance, carbon markets and air pollution. Mains: opportunities and integrity risks in agricultural carbon markets.

Source: [Press Information Bureau](#)

22. Data Centres in India

Ministry: *PIB Backgrounder*

PIB Date: 14 September 2026

Easy Explanation

Data centres house servers, storage and networking systems that process and distribute digital information. They underpin banking, UPI, e-governance, cloud services, artificial intelligence and online platforms. Continuous operation requires reliable electricity, uninterruptible power supplies, backup generation, cooling, physical and cyber security, fibre connectivity, virtualisation and automated management. India's growth drivers include rapid digitalisation, expanding cloud and AI workloads, data-sovereignty concerns, submarine-cable connectivity and a policy ecosystem that grants infrastructure status and supports investment. The sector also creates environmental and planning challenges: high electricity and water demand, cooling requirements, concentration near major cities, electronic waste and the need for renewable power and energy-efficient design.



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Digital services feel intangible, but they depend on energy-intensive physical facilities. Every search, payment, video or AI request travels through networks to servers that compute and store information. Redundant power, cooling and communication links are required because even brief failure can interrupt essential services.

A data centre is the physical infrastructure behind the cloud. Keeping data in India can improve latency and regulatory control, but localisation alone does not guarantee security. Resilience depends on power, networks, redundancy, cybersecurity and disaster planning.

India's large user base, cloud adoption and digital public infrastructure create a strong domestic market. Local capacity can reduce latency and improve resilience, but data localisation does not by itself prevent cyberattack or misuse. Data centres also compete for electricity, land and water, especially in urban clusters. Policy should encourage renewable power, efficient cooling, water recycling, heat reuse where feasible and transparent PUE reporting. Geographic diversification and disaster recovery can reduce concentration risk. Skills in operations and cybersecurity are as important as buildings, while submarine cables and fibre networks determine international connectivity.

Key Terms

Term	Definition
Latency	Delay between sending a digital request and receiving a response.
Cloud computing	On-demand access to remote computing resources.
Virtualisation	Running multiple virtual systems on one physical machine.
PUE	Power Usage Effectiveness, a measure of data-centre energy efficiency.
Data localisation	Requirement that specified data be stored or processed within a jurisdiction.
Redundancy	Duplication of power, network, storage and cooling systems so a component failure does not interrupt digital services.
Liquid cooling	Removal of server heat using a circulating liquid rather than only air; increasingly important for dense artificial-intelligence computing workloads.
Data sovereignty	The principle that data remains subject to the laws and governance of the jurisdiction in which it is stored or processed.

UPSC Relevance

- GS III: digital infrastructure, cybersecurity, energy and environmental impacts of technology.

Source: [Press Information Bureau](#)

Environment

23. Great Indian Bustard Conservation in Gujarat

Ministry: Ministry of Environment Forest and Climate Change



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PIB Date: 13-14 September 2026

Easy Explanation

Gujarat released a science-based Action Plan prepared with the Wildlife Institute of India. It aims to establish a minimum viable population of more than 30 Great Indian Bustards and secure 200-500 sq km of contiguous habitat, beginning with the roughly 200 sq km Lala-Rawa landscape. About 11 sq km of *Prosopis juliflora*-infested grassland near Naliya has been restored, with predator-proof fencing. A jump-start intervention replaced infertile wild eggs with viable eggs from the conservation-breeding programme; a chick from the second attempt survived beyond the critical first three months. A Soft Release Centre near Naliya will acclimatise captive-bred birds from Rajasthan before possible release under suitable protocols and habitat conditions. The Sayara Van Kavach covers 9.46 sq km and uses dense, multi-layered planting with over 10,000 saplings from 47 native species. The wider visit also covered mangroves and MISHTI, illustrating landscape-level conservation.

The Great Indian Bustard depends on open grassland and scrub ecosystems that have often been misclassified as wasteland. Habitat conversion, disturbance, predation and collisions with overhead power lines have contributed to its decline. Small, isolated populations face additional genetic and reproductive risks.

The Great Indian Bustard is a grassland bird, so conservation cannot rely only on breeding birds in captivity. It requires large, connected grasslands, safe movement, predator management and mitigation of threats such as power-line collisions. Soft release allows captive-bred animals to adjust before full release.

The Gujarat plan combines habitat restoration, breeding support and eventual release. A minimum viable population is an ecological goal, not simply a count of captive birds; released animals need connected habitat and low mortality. Removing invasive *Prosopis* can restore open grassland, while predator-proof enclosures help during vulnerable stages. Soft release allows birds to adapt gradually, but release should proceed only with scientific protocols and threat mitigation. Power-line management and land-use planning remain central. The Sayara plantation and mangrove work show landscape ambition, although dense tree planting should not be confused with restoration of the open grassland habitat required by GIB.

Key Terms

Term	Definition
Great Indian Bustard	A Critically Endangered grassland bird found mainly in Rajasthan and Gujarat.
Minimum viable population	The smallest population likely to survive over the long term.
Soft release	Gradual acclimatisation before releasing a captive-bred animal into the wild.
<i>Prosopis juliflora</i>	An invasive woody species that can degrade open grassland habitat.
MISHTI	Mangrove Initiative for Shoreline Habitats and Tangible Incomes.



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Term	Definition
Lala-Rawa landscape	The approximately 200 sq km focal landscape in Kachchh identified for immediate habitat protection and recovery under Gujarat's GIB action plan.
Jump-start intervention	Replacement of an infertile egg in a wild nest with a viable conservation-breeding egg, allowing a wild female to incubate and rear the chick.
Power-line collision	A major mortality threat for large, heavy birds with limited frontal vision. Mitigation can include undergrounding priority lines or scientifically effective diverters.

UPSC Relevance

- GS III: biodiversity, endangered species and habitat restoration. Prelims: GIB habitat and conservation terminology.

Source: [Press Information Bureau](#)

24. World Ozone Day and New Climate-Governance Portals

Ministry: *Ministry of Environment Forest and Climate Change*

PIB Date: 16 September 2026

Easy Explanation

India observed the 32nd World Ozone Day in Mumbai under the theme Global Action for a Cooler Planet. India has been party to the Vienna Convention, Montreal Protocol and all its amendments since 1992. India has phased out CFCs, carbon tetrachloride and halons for controlled uses, and met its 2015, 2020 and 2025 targets for accelerated HCFC phase-out. It ratified the Kigali Amendment in 2021 for phasedown of HFCs. The Net Zero Portal allows entities to voluntarily register targets, report greenhouse-gas emissions and provide annual updates. Scope 1 and Scope 2 reporting is encouraged; Scope 3 remains voluntary. The NAPCC Dashboard consolidates indicators and implementation information across India's national climate missions to support monitoring, inter-ministerial coordination and links with international commitments. A partnership involving 12 refrigeration and air-conditioning manufacturers adopted 248 ITIs to align technician training with low-global-warming-potential technologies and safe refrigerant handling.

Ozone depletion and climate change are related but distinct problems. Stratospheric ozone shields life from harmful ultraviolet radiation. The Montreal Protocol reduced substances that destroy this layer and is widely regarded as a successful environmental treaty. Some substitutes, especially HFCs, protected ozone but contributed strongly to warming, leading to the Kigali Amendment.

The Montreal Protocol protects the ozone layer by controlling ozone-depleting substances. The Kigali Amendment targets HFCs mainly because of their high global-warming potential, even though HFCs generally do not deplete ozone. The new portals address transparency and coordination rather than imposing mandatory net-zero targets.

India's phase-out record shows how finance, technology transition and industry schedules can support treaty compliance. Technician training is essential because leakage and unsafe handling can undermine refrigerant policy. The Net Zero Portal creates visibility for voluntary corporate



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commitments, while the NAPCC Dashboard can reduce fragmented reporting across missions. Their credibility will depend on common definitions, complete data and verification. Voluntary disclosure may encourage action but cannot replace binding regulation or sectoral policy. Scope 3 emissions are often the largest and hardest to measure, so leaving them voluntary limits comparability.

Key Terms

Term	Definition
Montreal Protocol	1987 treaty controlling ozone-depleting substances.
Kigali Amendment	2016 amendment for phasedown of HFCs.
Scope 1 emissions	Direct emissions from sources owned or controlled by an entity.
Scope 2 emissions	Indirect emissions from purchased energy.
Scope 3 emissions	Other indirect value-chain emissions.
NAPCC	National Action Plan on Climate Change.
HCFC phase-out	India's scheduled reduction of hydrochlorofluorocarbons under the Montreal Protocol; these chemicals damage ozone and can also contribute to warming.
HFC phase-down	Gradual reduction—not immediate elimination—of hydrofluorocarbon production and consumption under the Kigali Amendment because many HFCs have high global-warming potential.
Voluntary net-zero disclosure	Non-mandatory reporting of emissions, target year, pathway and progress. Credibility depends on consistent boundaries, transparent data and verification.

UPSC Relevance

- GS III: climate change, environmental treaties and governance. Prelims: Montreal Protocol versus Kigali Amendment and emission scopes.

Source: [Press Information Bureau](#)

Governance And Social Issues

25. National Conference on Building and Other Construction Workers

Ministry: Ministry of Labour and Employment

PIB Date: 12-13 September 2026

Easy Explanation

The Ministry of Labour and Employment and the Maharashtra government held a national conference in Mumbai on welfare, skilling, employment and social protection for construction workers. The conference stressed portability for migrant workers, occupational health and safety, dignity of labour, better links between jobseekers and employers, and sustainable welfare planning supported by actuarial analysis. States shared delivery innovations: Uttar Pradesh on skill development, Rajasthan



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on Digital Labour Chowks, Bihar on Shram Seva Suvidha Kendras and Assam on the Nirman Sakhi Portal. Discussions also examined the responsibilities of BOCW Welfare Boards under the new labour-code framework and the need for stronger Centre-State coordination and cross-learning. Construction is a major source of employment but much of the workforce is informal, project-based and mobile. Workers frequently change contractors and states, making employer-linked benefits difficult to maintain. BOCW laws created welfare boards and a cess-funded system to provide social protection.

Construction workers are often informal and mobile, so a benefit linked only to one state or employer can be difficult to access. Welfare boards collect cess and fund benefits, but registration, portability, awareness and effective use of accumulated funds remain central governance issues.

The conference correctly connected welfare with labour-market access, skills and occupational safety. Digital Labour Chowks can reduce information gaps, while facilitation centres can help with registration and claims. Digitisation must not exclude workers lacking documents or digital literacy. Portability requires interoperable records and coordination across state boards, not merely an online portal. Boards also need actuarial planning so benefits remain sustainable and accumulated funds are used responsibly. Worker representation, simple registration, on-site facilitation and transparent cess utilisation are necessary to convert legal entitlement into actual access.

Key Terms

Term	Definition
BOCW	Building and Other Construction Workers.
Welfare Board	A statutory state-level body delivering benefits to registered construction workers.
Cess	An earmarked levy collected for a specified purpose.
Portability	Ability to retain and access benefits after moving between places or jobs.
Actuarial analysis	Assessment of future financial liabilities and fund sustainability.
Digital Labour Chowk	A digital adaptation of traditional labour gathering points that can connect workers with employers, jobs, registration and welfare information.
Occupational safety	Prevention of workplace injury and disease through standards, training, protective equipment, inspections, reporting and employer accountability.
Interstate portability	Ability of migrant construction workers to access registration and benefits after moving across state borders without losing accumulated entitlement.

UPSC Relevance

- GS II: welfare schemes and vulnerable sections
- GS III: labour and informal economy. Mains: portability and social protection for migrant labour.

Source: [Press Information Bureau](#)



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26. PLFS Monthly Bulletin for August 2026

Ministry: Ministry of Statistics and Programme Implementation

PIB Date: 15 September 2026

Easy Explanation

The Labour Force Participation Rate for persons aged 15 and above rose to 55.6 per cent in August from 55.4 per cent in July. Rural LFPR reached 58.2 per cent while urban LFPR remained 50.4 per cent. Female LFPR increased to 34.8 per cent, driven mainly by rural female LFPR of 39.4 per cent. Overall LFPR was 0.6 percentage point higher than in August 2025. The Worker Population Ratio rose to 52.8 per cent, the highest since March 2026. Rural WPR reached 55.8 per cent, up 1.3 percentage points year-on-year. The overall Unemployment Rate remained 5.0 per cent. Rural unemployment declined to 4.1 per cent, the lowest since January 2026. Monthly PLFS estimates use the Current Weekly Status approach. The methodology was modified from January 2025 to provide monthly and quarterly indicators.

Employment statistics depend on definitions and reference periods. Under Current Weekly Status, a person's activity is assessed over the preceding seven days, making the measure responsive to short-term change. Monthly national estimates improve timeliness but should be interpreted alongside quarterly and annual data, sampling variation and sectoral information.

LFPR measures people working or looking for work; WPR measures those actually working; unemployment rate measures unemployed people as a share of the labour force. A lower unemployment rate does not automatically mean more jobs if people stop searching and leave the labour force, so the indicators must be read together.

The simultaneous rise in LFPR and WPR is encouraging because more people entered the labour force while the share actually working also increased. Female LFPR improved, particularly in rural areas, but participation does not reveal job quality, wages, hours or whether work is unpaid family labour. A stable unemployment rate can coexist with underemployment. Rural and urban changes may reflect seasonality, agriculture and migration. Policymakers should examine long-term trends, youth unemployment, education levels and formalisation rather than judging the labour market from one monthly movement.

Key Terms

Term	Definition
LFPR	Labour force as a percentage of the population.
WPR	Employed persons as a percentage of the population.
Unemployment Rate	Unemployed persons as a percentage of the labour force.
CWS	Current Weekly Status, based on activity during the preceding seven days.
PLFS	Periodic Labour Force Survey conducted by the NSO.
Labour force	All persons who are employed or unemployed but actively seeking or available for work; people outside both categories are not counted in the unemployment-rate denominator.



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Term	Definition
Female labour-force participation	Share of women working or seeking work. It is influenced by education, care responsibilities, safety, social norms, job availability and measurement of unpaid work.
Underemployment	A situation in which a person is employed but receives fewer hours, lower productivity or less suitable work than desired; the headline unemployment rate may not capture it.

UPSC Relevance

- GS III: employment and labour-market data. Prelims: denominators of LFPR, WPR and UR. Mains: interpreting labour indicators and female workforce participation.

Source: [Press Information Bureau](#)

27. Care Beyond the Prescription through Janaushadhi Kendras

Ministry: *Department of Pharmaceuticals / PIB Backgrounder*

PIB Date: 16 September 2026

Easy Explanation

The Pradhan Mantri Bhartiya Janaushadhi Pariyojana has expanded beyond generic medicines to a wider basket of affordable surgical, medical and family-care products through more than 20,000 Janaushadhi Kendras. As of August 2026, the basket included 2,110 medicines and 315 surgical items, consumables and devices across major therapeutic groups. Sales during 2021-22 to 2025-26 totalled Rs 7,873.85 crore and were estimated to have saved citizens around Rs 37,200 crore compared with branded alternatives. Products include baby-care supplies, feeding bottles, manual breast pumps, hot-water bags, abdominal belts, nebulisers, masks, cervical pillows and blood-glucose test strips. The purpose is to reduce out-of-pocket spending across childbirth, recovery, chronic disease and elderly care.

Out-of-pocket health expenditure includes far more than prescribed tablets. Devices, dressings, diagnostics, transport and caregiving products can impose repeated costs, particularly for childbirth, chronic illness, disability and elderly care. PMBJP uses pooled procurement and dedicated outlets to reduce prices for quality-assured products.

Affordable healthcare is broader than the price of medicines. Families also spend on diagnostics, consumables and devices. By using central procurement and a dedicated retail network, PMBJP seeks to improve access to quality-assured generics and selected healthcare products.

Expanding the basket makes the network more useful to families, but affordability must be combined with reliable stock and product quality. Generic substitution works best when doctors and patients trust regulatory testing and receive clear information. Kendras should not encourage self-medication or unnecessary device use; clinical advice remains essential. Location, opening hours and supply-chain continuity determine access for rural and low-income households. Reported consumer savings are important, but independent assessment should also track availability, therapeutic categories, quality complaints and whether lower prices improve adherence to treatment.



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Key Terms

Term	Definition
Generic medicine	A medicine with the same active ingredient and therapeutic effect as the branded reference product.
PMBJP	Pradhan Mantri Bhartiya Janaushadhi Pariyojana.
Janaushadhi Kendra	A dedicated outlet selling PMBJP medicines and healthcare products.
Out-of-pocket expenditure	Health spending paid directly by households.
Quality-assured generic	A non-branded or generic medicine procured against specified standards and testing requirements, intended to provide the same active ingredient and therapeutic effect at lower cost.
Healthcare consumable	A product used and replaced during care, such as a syringe, dressing, diaper, test strip or mask; repeated purchases can significantly increase household expenditure.
Medicine adherence	Taking treatment at the prescribed dose and duration. Lower prices and reliable availability can improve adherence, especially for chronic disease.

UPSC Relevance

- GS II: health policy, welfare and access
- GS III: pharmaceutical sector. Mains: affordability beyond insurance coverage.

Source: [Press Information Bureau](#)

28. Silicon Dreams and India's Semiconductor-Startup Ecosystem

Ministry: *PIB Backgrounder*

PIB Date: 15 September 2026

Easy Explanation

The backgrounder placed SEMICON India 2026 within India's longer electronics-manufacturing transition. The theme Silicon to Systems signals an attempt to build an entire ecosystem rather than only attract isolated fabrication plants. Electronics production rose from about Rs 1.9 lakh crore in 2014-15 to Rs 13.11 lakh crore in 2025-26. Exports rose from roughly Rs 38,000 crore to Rs 4.24 lakh crore. Mobile-phone production increased from Rs 18,000 crore to Rs 6.27 lakh crore and exports from about Rs 1,500 crore to Rs 2.59 lakh crore. India produces about 99.2 per cent of the phones it uses and became a net exporter of mobile phones. The semiconductor ecosystem links large investments with design start-ups, university talent, chip-design tools, packaging, materials and domestic electronics demand. Start-ups can enter design and intellectual-property niches without bearing the full cost of owning a fabrication plant. The strategic case combines economic value, supply-chain resilience and national security because chips are embedded in communications, vehicles, medical equipment, defence systems and critical infrastructure.

Semiconductor start-ups need not own multibillion-dollar fabs. Fabless firms can specialise in chip architecture, verification, embedded systems and reusable intellectual property, then contract



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manufacturing to a foundry. This model fits India's design talent but still requires access to expensive software, prototype runs and patient capital.

India's advantage is not limited to low-cost assembly. It has a large pool of chip-design engineers and a growing electronics market. The challenge is to connect design talent with fabrication, testing, intellectual property, patient capital and reliable commercial customers.

India's electronics growth creates potential anchor customers for domestic designs in automobiles, telecom, industrial equipment, power systems and public procurement. University access to EDA tools and shared prototyping can lower entry barriers. Start-ups also need protection of intellectual property, experienced mentors and a pathway from tape-out to qualified commercial volume. Government support should avoid measuring success only by the number of registered ventures. Tape-outs, patents, tested products, domestic procurement and export revenue are stronger indicators. Close linkage among design firms, packaging units, system manufacturers and research institutions can turn the semiconductor mission into an innovation ecosystem rather than a collection of subsidised factories.

Key Terms

Term	Definition
Fabless company	A company that designs chips but outsources fabrication.
Semiconductor IP	Reusable chip-design building blocks or proprietary circuit designs.
Tape-out	Finalising a chip design for fabrication.
Foundational industry	An industry whose output is essential to many other sectors.
Supply-chain resilience	Ability to withstand disruption and continue obtaining critical inputs.
Prototype shuttle run	A shared wafer-fabrication run in which several designers place small chip designs on one wafer, reducing the cost of early prototypes.
Design verification	Testing whether a chip design performs correctly before fabrication. Errors discovered after tape-out are extremely costly, making verification tools and expertise critical.
Anchor customer	A dependable early buyer—such as an automobile, telecom or public-sector manufacturer—that helps a semiconductor start-up validate demand and scale production.

UPSC Relevance

- GS III: start-ups, innovation, electronics and strategic technology. Essay/Mains: industrial ecosystems rather than isolated subsidies.

Source: [Press Information Bureau](#)

Prelims Practice Questions

Q.1. With reference to the Colombo Security Conclave exercise, consider the following statements:

1. It was conducted at the Eastern Naval Command in Visakhapatnam.



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2. It focused exclusively on conventional naval warfare.
3. It reviewed information-sharing arrangements for Maritime Domain Awareness.

Which of the statements given above are correct?

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

Q.2. Exercise Yudh Abhyas 2026 was conducted between India and which one of the following countries?

- (a) France
- (b) United States
- (c) Australia
- (d) Japan

Q.3. Consider the following statements about the India-MERCOSUR Preferential Trade Agreement:

1. It entered into force in 2009.
2. The First Additional Protocol recognises electronic Certificates of Origin.
3. A Certificate of Origin helps determine eligibility for preferential tariff treatment.

How many of the above statements are correct?

- (a) Only one
- (b) Only two
- (c) All three
- (d) None

Q.4. Which of the following were identified as the six pillars of Semicon 2.0?

1. Design
2. Equipment and materials
3. Fabs
4. Advanced packaging
5. Applied R&D
6. Talent

- (a) 1, 2, 3 and 4 only
- (b) 1, 3, 5 and 6 only
- (c) 2, 4, 5 and 6 only
- (d) 1, 2, 3, 4, 5 and 6

Q.5. With reference to the new UPI framework, consider the following statements:

1. All person-to-person UPI transactions remain free.
2. MDR is a tax collected by the Government.
3. Approximately 96 per cent of merchant transactions remain unaffected.

Which of the statements given above are correct?

- (a) 1 and 3 only
- (b) 2 only



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

Q.6. Regarding District Mineral Foundations, consider the following statements:

1. They are non-profit trusts for mining-affected persons and areas.
2. Mining leases granted on or after 12 January 2015 contribute 10 per cent of royalty.
3. DMFs are operated exclusively by the Union Government.

Which of the statements given above are correct?

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

Q.7. A Doppler Weather Radar is especially useful because it can:

- (a) Measure only atmospheric pressure at the surface
- (b) Estimate motion within precipitation using frequency shift
- (c) Directly measure ocean salinity from land
- (d) Predict earthquakes through ground vibrations

Q.8. Assertion (A): Soil-carbon credits require credible measurement and independent verification.

Reason (R): Every change in farm practice automatically produces a permanent and additional carbon removal.

- (a) Both A and R are true and R is the correct explanation of A
- (b) Both A and R are true but R is not the correct explanation of A
- (c) A is true but R is false
- (d) A is false but R is true

Q.9. With reference to ozone and climate agreements, consider the following statements:

1. The Montreal Protocol controls ozone-depleting substances.
2. The Kigali Amendment provides for phasedown of HFCs.
3. HFCs are controlled mainly because they destroy stratospheric ozone.

Which of the statements given above are correct?

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

Q.10. Which one of the following correctly describes the relationship among PLFS indicators?

- (a) LFPR is employed persons as a share of population
- (b) WPR includes everyone seeking work
- (c) Unemployment Rate is unemployed persons as a share of the labour force
- (d) All three indicators use the total population as denominator



Mains Questions and Model Answers

Mains Question 1

BRICS has become larger and more representative, but also more internally diverse. Examine how India can use BRICS to advance Global South priorities while preserving its strategic autonomy. (150 words)

Model Answer

BRICS gives India a platform to seek reform of global governance, amplify developing-country concerns and expand practical cooperation in development finance, health, technology and resilient supply chains. India's 2026 chairship used the New Delhi Declaration to emphasise representation of emerging economies, UN reform, digital public infrastructure and people-centred development. However, expansion also widens differences over security, de-dollarisation, connectivity and relations with the West. China's economic weight can shape the agenda, while consensus may produce broad declarations rather than enforceable outcomes. India should therefore pursue issue-based coalitions within BRICS, strengthen the New Development Bank's transparent and local-currency lending, and resist language that undermines sovereignty or converts BRICS into an anti-Western bloc. It should link BRICS initiatives with UN rules, maintain its partnerships with the Quad, G20 and Western economies, and prioritise measurable projects for the Global South. BRICS best serves India as a complementary platform of multi-alignment, not an exclusive strategic camp.

Mains Question 2

India's semiconductor strategy is moving from assembly incentives towards a complete 'silicon to systems' ecosystem. Discuss the opportunities, constraints and policy priorities for Semicon 2.0. (250 words)

Model Answer

Semiconductors are foundational to communications, automobiles, healthcare, defence, artificial intelligence and critical infrastructure. India combines a large electronics market, a strong chip-design workforce and rapidly growing mobile and electronics exports. Semicon 2.0 therefore creates opportunities to reduce strategic import dependence, attract global supply chains, build high-skill employment and connect fabless start-ups with domestic manufacturing.

The 2026 roadmap correctly broadens policy across six pillars: design, equipment and materials, fabrication, advanced packaging, applied R&D and talent. Commercial ATMP units, planned fabs and component-manufacturing support can create cluster effects.

Constraints remain substantial. Fabs require reliable power, ultra-pure water, specialised chemicals, precision equipment, patient capital and continuous technology upgrades. India still depends on imported tools and materials, while global subsidies can trigger costly competition. A shortage of experienced process engineers and weak research-industry linkages can delay yield improvement. Concentrating facilities without environmental safeguards may also create water and energy stress. Policy should focus on ecosystem depth rather than the number of announcements. Incentives must be milestone-based and transparent; universities need shared prototyping and EDA access; design start-ups need procurement, IP support and access to foundries; packaging and compound semiconductors can offer nearer-term gains. Renewable energy, water recycling and trusted supply



partnerships should be built into clusters. Finally, India should combine domestic capability with diversified international cooperation, because complete technological self-sufficiency is neither immediate nor efficient. Success will be measured by commercially viable production, domestic value addition and durable innovation—not merely approved investment.

Prelims Answers and Explanations

Q.1. Answer: (a) 1 and 3 only

Statements 1 and 3 are correct. The exercise addressed non-traditional threats such as maritime terrorism, narcotics smuggling, trafficking and IUU fishing; it was not limited to conventional warfare.

Q.2. Answer: (b) United States

Yudh Abhyas is an India-US Army exercise. Its 22nd edition was held simultaneously at Auli and the Mahajan Field Firing Range.

Q.3. Answer: (c) All three

All three are correct. Electronic certificates receive the same legal validity as paper certificates after the Protocol enters into force.

Q.4. Answer: (d) 1, 2, 3, 4, 5 and 6

Semicon 2.0 covers the full ecosystem through all six listed pillars.

Q.5. Answer: (a) 1 and 3 only

Statements 1 and 3 are correct. MDR is an ecosystem charge shared among payment participants; it is not a government tax and is not to be passed on to customers.

Q.6. Answer: (a) 1 and 2 only

DMFs operate under the jurisdiction of state governments. The first two statements are correct.

Q.7. Answer: (b) Estimate motion within precipitation using frequency shift

The Doppler shift in reflected radio waves helps estimate the velocity of raindrops and storm movement, supporting nowcasts and warnings.

Q.8. Answer: (c) A is true but R is false

A is true. R is false because carbon outcomes vary and must demonstrate additionality, quantification and durability; a changed practice does not automatically meet these conditions.

Q.9. Answer: (a) 1 and 2 only

Statements 1 and 2 are correct. HFCs generally do not deplete ozone; they are controlled because many have high global-warming potential.

Q.10. Answer: (c) Unemployment Rate is unemployed persons as a share of the labour force

UR uses the labour force as denominator. LFPR is labour force as a share of population, while WPR is employed persons as a share of population.





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19 – 25 September 2026

01	ROZGAR MELA 20	213
02	INDIA-NEW ZEALAND FREE TRADE AGREEMENT	215
03	SLINEX-26 MARITIME EXERCISE	217
04	FSSAI PANEER REGULATION AMENDMENT	219
05	GREATER ONE-HORNED RHINO AND WORLD RHINO DAY	221
06	IMEI TAMPERING AWARENESS CAMPAIGN	223
07	SATELLITE ANTI-AIRFIELD WEAPONS (AATMANIRBHAR BHARAT)	225
08	DRDO DEEP TECH START-UP PROJECT (QUANTUM TECHNOLOGY)	227
09	DDU-GKY 2.0 LAUNCH (RURAL SKILL DEVELOPMENT)	229
10	TELECOM MANUFACTURING ZONE INITIATIVES	231
11	RAILWAY KAVACH 4.0 COMMISSIONING	233
12	NHAI GUIDELINES FOR HIGH-SPEED NATIONAL HIGHWAYS	235
13	DRI SEIZURES AND LAW ENFORCEMENT	237
14	NLMC LAND MONETISATION PROGRAMME	238
15	NGT MOBILE APPLICATION LAUNCH	240
16	OPEC-INDIA ENERGY DIALOGUE	242
17	CSIR-CRRI SCIENTIFIC COLLABORATION (VISAKHAPATNAM ROADS)	244
18	SWACH SAGAR SURAKSHIT SAGAR 5.0 (COASTAL CONSERVATION)	246
19	INDIA-MONGOLIA MILITARY EXERCISE NOMADIC ELEPHANT	248
20	SECO INDIA 2026 (SEMICONDUCTOR ECOSYSTEM)	250
21	3RD NATIONAL ANTF CONFERENCE	252
22	JUDICIAL APPOINTMENTS TO HIGH COURTS	254
23	BHARAT TAXI SERVICE LAUNCH (UP)	256
24	KANDA EXPRESS AND FOOD SECURITY	258
25	WORLD SKILLS SHANGHAI 2026 (INDIA'S CONTINGENT)	259
26	AROGYA MANTHAN 2026 (HEALTH SCHEMES REVIEW)	261
27	INDIA-NETHERLANDS WATER PARTNERSHIP (IIWW 2026)	263
28	SPECIAL CAMPAIGN 6.0 (ADMINISTRATIVE EFFICIENCY)	265
29	NEW TRAIN SERVICES EXPANSION	267
30	AGNIKUL COSMOS RDI SUPPORT (REUSABLE LAUNCH VEHICLE)	269
31	BRICS HEADS OF TAX AUTHORITIES MEETING	271
32	UPASI TEA RESEARCH CENTENARY CONFERENCE	273
33	CCI COMPETITION LAW APPROVALS	274
34	PIB BACKGROUNDER AND SPECIAL TOPICS	276
	PRACTICE QUESTIONS	279
	QUICK REVISION TABLE	294



ROZGAR MELA 20

Ministry: Prime Minister's Office / Ministry of Labour | PIB Date: 20 September 2026

Easy Explanation

To understand Rozgar Mela, first understand the problem it is trying to solve. India's central government carries thousands of sanctioned posts – jobs that exist on paper, with budget already allocated – sitting vacant for years because recruitment (advertising, exams, interviews, verification, final selection) is slow and fragmented across dozens of separate departments and recruiting bodies like the SSC, Railway Recruitment Boards, and IBPS for banking. Rozgar Mela is the government's way of clearing this backlog in one visible push: candidates who have already cleared these selection processes are called together in a single coordinated event, and their appointment letters are handed out on the same day, usually via video conferencing so the Prime Minister can address every recruit nationwide at once from Delhi. This is not a fresh recruitment exam; it is the finishing step of processes already completed. In the 20th such event, held on September 20, 2026, over 51,000 candidates received appointment letters, joining as Group C (diploma or degree-level, technical and clerical) and Group D (school-pass level, support staff) employees across the Ministries of Railways, Posts, Health, Home Affairs, and Defence. Since the first Rozgar Mela in October 2022, the cumulative figure across all 20 editions now runs into several lakhs of appointments. The value for India lies in two things: putting genuinely vacant capacity to work faster than routine processing allows, and repeatedly signalling – 20 times now – that public hiring remains active despite persistent public criticism of recruitment delays.

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Key Terms:

Term	Definition
Rozgar Mela	Direct government recruitment event distributing appointment letters to already-selected candidates; 20th edition Sept 20, 2026, 51,000+ letters, Group C and D posts.



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Group C and D Posts	Group C: diploma/degree-level technical and clerical posts. Group D: school-pass level support staff posts.
SSC / RRB / IBPS	Staff Selection Commission, Railway Recruitment Boards, Institute of Banking Personnel Selection – the bodies that conduct the underlying exams before Rozgar Mela appointment.
Demographic Dividend	Economic growth potential from a young, working-age-dominant population; realised only if this population is productively employed, else becomes a liability.
Sanctioned Post	A government job that officially exists on paper with budget allocated, whether or not a person currently occupies it; distinct from an actually filled position.
Labour Force Participation Rate (LFPR)	Share of working-age population that is either employed or actively seeking work; a key indicator of employment-scheme effectiveness.
Periodic Labour Force Survey (PLFS)	India's main official survey (NSO) measuring employment, unemployment, and LFPR, used to assess schemes like Rozgar Mela against ground-level data.
Jobless Growth	Economic growth that does not translate into proportionate employment generation; a criticism sometimes levelled despite headline GDP growth figures.

Important Points for UPSC:

- **GS2 Governance:** Employment generation as policy priority; direct recruitment strategy; federalism angle with state participation.
- **GS3 Economy:** Youth unemployment crisis; labour force participation; demographic dividend utilization.



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- Prelims: 20th Rozgar Mela, Sept 20, 2026; 51,000+ appointments; first edition Oct 2022; Group C and D posts; PMO with Ministry of Labour coordinates; video conferencing format.

INDIA-NEW ZEALAND FREE TRADE AGREEMENT

Ministry: *Ministry of Commerce and Industry* | PIB Date: *20 October 2026*

Easy Explanation

When two countries trade, their governments usually charge a tariff – an import tax – on goods coming from the other side, which protects local producers but raises prices for consumers and limits how much businesses on either side can sell abroad. A Free Trade Agreement (FTA) is a negotiated deal where both sides agree to lower or eliminate these tariffs on an agreed list of goods and services, typically phased in over 5 to 10 years rather than overnight. The India-New Zealand FTA became legally operational on October 1, 2026, opening New Zealand's market wider to Indian exports such as IT services, pharmaceuticals, and textiles, while granting India greater access to New Zealand's dairy, wool, kiwifruit, and other horticultural exports – sectors where New Zealand, a country of just 5 million people producing enough dairy to be among the world's top 3 exporters, is extremely cost-competitive. This second part is politically sensitive domestically: India's dairy sector supports over 80 million rural households, so the agreement includes negotiated safeguards – slower tariff phase-down, tariff-rate quotas, and exclusions for the most sensitive dairy lines. Strategically, this is India's third major bilateral FTA since 2021 (after UAE in 2022 and Australia in 2022), continuing India's post-2019 approach, adopted after walking out of the 15-nation RCEP, of signing smaller, carefully negotiated bilateral deals with trusted Indo-Pacific economies rather than joining large multilateral pacts with less room to protect sensitive sectors.

Key Terms:

Term	Definition
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Free Trade Agreement (FTA)	Bilateral treaty reducing or eliminating tariffs on goods, services, and investment; India-NZ FTA in force Oct 1, 2026, India's 3rd major bilateral FTA since 2021.
Tariff-Rate Quota	A safeguard mechanism allowing a fixed low-tariff import quantity, with higher tariffs applying beyond that quota; used to protect India's dairy sector under the FTA.
RCEP	Regional Comprehensive Economic Partnership; 15-nation Asia-Pacific trade bloc India exited in 2019 over trade deficit and dairy/agriculture concerns.
CEPA / CECA	Comprehensive Economic Partnership/Cooperation Agreement; broader FTA variants India has signed (e.g. with UAE, 2022) covering goods, services and investment together.
Most Favoured Nation (MFN)	WTO principle requiring equal trade treatment to all member countries; FTAs are a legal exception allowing preferential treatment to specific partners.
Rules of Origin	Criteria determining a product's 'nationality' under an FTA, preventing third countries from routing goods through a member to claim preferential tariffs.
Trade Deficit	When a country's imports exceed its exports with a partner; a key concern that shaped India's decision to exit RCEP given its deficit with China.
Non-Tariff Barriers (NTBs)	Trade restrictions other than tariffs – quality standards, licensing, quotas – that FTAs often also address alongside tariff reduction.

Important Points for UPSC:



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- GS2 IR: India's trade diplomacy; bilateral relationships; positioning in Indo-Pacific strategy.
- GS3 Economy: Impact on Indian exporters (IT, pharma); 80 million dairy households; agricultural trade sensitivities.
- Prelims: India-NZ FTA in force Oct 1, 2026; 3rd major bilateral FTA after UAE (2022) and Australia (2022); India exited RCEP (15 nations) in 2019.

SLINEX-26 MARITIME EXERCISE

Ministry: Ministry of Defence | **PIB Date:** 23 September 2026

Easy Explanation

Navies from different countries do not automatically know how to operate together during a real crisis – a search-and-rescue mission, a piracy incident, or cyclone relief – because each navy uses its own communication protocols and command procedures. SLINEX (Sri Lanka-India Naval Exercise), first held in 2005 and now in its 26th edition, exists to close exactly this gap between the Indian Navy and the Sri Lanka Navy through practiced joint drills involving warships, maritime patrol aircraft, and Special Forces detachments from both sides, simulating scenarios such as intercepting a suspicious vessel, anti-piracy boarding operations, and joint search-and-rescue. This year's harbour and sea phase concluded at Visakhapatnam, headquarters of India's Eastern Naval Command. Beyond tactical training, SLINEX carries real strategic weight: Sri Lanka sits directly astride some of the world's busiest east-west shipping lanes, through which a substantial share of global container traffic passes, and India has watched with concern as Chinese-funded infrastructure – most notably the Hambantota port, leased to a Chinese state firm for 99 years in 2017 after Sri Lanka defaulted on the loan that built it – expanded Beijing's footprint there. By returning every year with a genuinely useful, no-strings naval exercise, India positions itself as Sri Lanka's dependable security partner of choice, reinforcing its Neighbourhood First policy and its SAGAR (Security and Growth for All in the Region) vision of being the Indian Ocean's preferred security provider.

Key Terms:



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Term	Definition
SLINEX	Annual bilateral naval exercise between India and Sri Lanka, first held 2005; SLINEX-26 concluded at Visakhapatnam; covers anti-piracy, disaster relief, interoperability.
Hambantota Port	Sri Lankan port leased to a Chinese state firm for 99 years in 2017 after a loan default; cited as a debt-trap diplomacy example.
SAGAR	Security and Growth for All in the Region – India's doctrine framing itself as the Indian Ocean's preferred security provider.
Neighbourhood First Policy	India's foreign policy priority of strengthening ties with immediate neighbours (Sri Lanka, Nepal, Bangladesh, Bhutan, Maldives) before extended regions.
String of Pearls	Term describing China's network of port and infrastructure investments across the Indian Ocean Rim, seen as encircling India strategically.
Debt-Trap Diplomacy	Criticism of infrastructure lending (often linked to China's Belt and Road Initiative) that leaves recipient nations unable to repay, ceding strategic assets.
Quad (QUAD)	India, US, Japan, Australia grouping focused on a free and open Indo-Pacific; SLINEX-style bilateral exercises complement this wider security architecture.
Eastern Naval Command	One of the Indian Navy's three operational commands, headquartered at Visakhapatnam, where SLINEX-26 concluded.



Important Points for UPSC:

- GS2 IR: India-Sri Lanka bilateral relations; Indian Ocean maritime security; countering Chinese port-lease influence.
- GS3 Defence: Naval interoperability; anti-piracy and disaster-relief capability building.
- Prelims: SLINEX first held 2005; SLINEX-26 concluded Visakhapatnam (Eastern Naval Command HQ); Hambantota leased 99 years, 2017.

FSSAI PANEER REGULATION AMENDMENT

Ministry: Ministry of Health and Family Welfare | **PIB Date:** 24 September 2026

Easy Explanation

Paneer is a fresh cheese made by heating milk and curdling it with an acid such as lemon juice or vinegar, then straining and pressing the curds – a simple, centuries-old process. Precisely because it is so simple and consumed daily across India, paneer has also become a frequent adulteration target: some manufacturers replace part or all of the milk with cheaper vegetable fats, starch, or synthetic analogue mixtures while still selling the product under the trusted name 'paneer'. FSSAI, the statutory food regulator functioning under the Food Safety and Standards Act, 2006, has now amended the Food Safety and Standards (Food Products Standards and Food Additives) Regulations to close this loophole: only products made genuinely from cow's or buffalo's milk, with a minimum specified milk-fat content, can legally be labelled 'paneer'; anything using vegetable fat must instead be labelled as an 'analogue' or 'imitation' product, in a font size no smaller than the product's own brand name, so it is visible at the point of purchase. This matters on three fronts at once: nutritionally, since paneer is a primary protein source for a large vegetarian population; economically, since India's roughly 8 crore dairy farming households and small paneer producers were losing business to cheaper adulterated competitors trading on the same name; and from a pure enforcement standpoint, since FSSAI inspectors and courts now have one clear, testable legal standard rather than a vague general prohibition on 'adulteration' that was difficult to prosecute.

Key Terms:



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Term	Definition
Paneer	Fresh dairy cheese from curdled milk; FSSAI 2026 amendment restricts the label to genuine cow/buffalo milk products with minimum fat content.
FSSAI	Food Safety and Standards Authority of India; statutory body under the Food Safety and Standards Act, 2006, Ministry of Health.
Analogue/Imitation Labelling	Mandatory labelling requirement for vegetable-fat-based cheese substitutes, in font size not smaller than the brand name, to prevent consumer confusion.
Food Safety and Standards Act, 2006	The parent legislation consolidating India's food regulation, under which FSSAI operates and issues product-specific standards like the paneer amendment.
Adulteration	Mixing substandard, cheaper, or harmful substances into food while marketing it as genuine, undermining both nutrition and consumer trust.
Codex Alimentarius	International food standards body (FAO/WHO) whose norms often inform domestic standards like FSSAI's; relevant for India's food export compliance.
Operation Milk Trust / White Revolution	Broader Indian dairy-sector context: Operation Flood (White Revolution) made India the world's largest milk producer, the backdrop against which paneer fraud undermines consumer trust.
One Nation One Ration Card and PDS	Broader food-security architecture; paneer regulation sits within FSSAI's wider consumer-protection role alongside distribution-side schemes like PDS.



Important Points for UPSC:

- GS2 Consumer Rights: Food safety regulations; mandatory labelling as an enforcement tool.
- GS3 Agriculture: Impact on India's roughly 8 crore dairy farming households; small paneer producers.
- Prelims: FSSAI amendment under Food Safety and Standards Act, 2006; restricts 'paneer' label to milk-derived products; mandates 'analogue' labelling for substitutes.

GREATER ONE-HORNED RHINO AND WORLD RHINO DAY

Ministry: *Ministry of Environment, Forest and Climate Change* | PIB Date: *22 September 2026*

Easy Explanation

At the start of the 20th century, the Greater One-Horned Rhinoceros had been hunted so relentlessly for its horn – falsely prized in some traditional medicine systems and as a hunting trophy – that fewer than 200 individuals survived anywhere on Earth, concentrated in a handful of pockets in Assam and neighbouring regions. What followed is now cited as one of India's clearest conservation successes: sustained protection of Kaziranga National Park (a UNESCO World Heritage Site since 1985, spanning about 1,090 sq km along the Brahmaputra floodplain), specially trained and often armed forest guard units, and – crucially – eco-tourism revenue-sharing arrangements that gave surrounding communities a direct economic stake in the rhino's survival rather than in poaching it. The population has since recovered to over 3,700 individuals across Assam as of the 2022 census, with Kaziranga alone holding more than 2,600 of them, roughly two-thirds of the world's total wild population. World Rhino Day, observed every September 22 since 2010, marks this progress globally while renewing attention on remaining threats: the species is still listed as Vulnerable under the IUCN Red List (one step above Endangered), poaching persists because a single rhino horn can fetch tens of thousands of dollars in illegal markets in Vietnam and China, and India's domestic protection works alongside CITES, the international treaty since 1975 that criminalises cross-border trade in endangered species products, since the demand fuelling poaching is almost entirely international rather than domestic.



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Key Terms:

Term	Definition
Greater One-Horned Rhino	IUCN Vulnerable species; population recovered from under 200 (c.1900) to over 3,700 (2022 census), ~2,600 in Kaziranga alone.
Kaziranga National Park	UNESCO World Heritage Site since 1985, ~1,090 sq km on the Brahmaputra floodplain, Assam; also home to tigers and wild water buffalo.
CITES	Convention on International Trade in Endangered Species, in force since 1975; criminalises cross-border trade in rhino horn and similar products.
IUCN Red List	Global inventory of species' conservation status (Least Concern to Extinct); Greater One-Horned Rhino is currently classified Vulnerable.
Project Rhino / Indian Rhino Vision 2020	Assam government initiative (with WWF) aiming to raise the state's rhino population to 3,000 across 7 protected areas through translocation and anti-poaching.
Wildlife Protection Act, 1972	India's primary domestic wildlife law; rhinos are listed under Schedule I, giving them the highest level of legal protection.
UNESCO World Heritage Site	International designation for sites of outstanding universal value; Kaziranga has held this status since 1985.
Poaching for Traditional Medicine	Illegal killing driven by unfounded beliefs (chiefly in parts of East/Southeast Asia) in rhino horn's medicinal value, despite it being made of keratin, the same protein as human hair and nails.



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Important Points for UPSC:

- GS2 International: CITES (1975); India's biodiversity treaty commitments.
- GS3 Environment: Kaziranga (UNESCO 1985); population recovery from <200 to 3,700+ (2022 census).
- Prelims: World Rhino Day, Sept 22, observed since 2010; IUCN status Vulnerable; Kaziranga holds ~2,600 of India's rhinos.

IMEI TAMPERING AWARENESS CAMPAIGN

Ministry: *Ministry of Communications* | PIB Date: *21 September 2026*

Easy Explanation

Every mobile phone is stamped at the factory with a unique 15-digit IMEI (International Mobile Equipment Identity) number, functionally similar to a vehicle's chassis number, identifying one specific physical device. The Department of Telecommunications (DoT) runs this identity system through the Central Equipment Identity Register (CEIR), launched nationally in 2019, which lets any citizen report a lost or stolen phone online; once reported, that phone's IMEI is blacklisted, and every telecom operator's network – Jio, Airtel, Vi, BSNL – will refuse it a connection, making the stolen device useless to resell. The specific problem DoT's new awareness campaign targets is IMEI tampering: using specialised flashing software or hardware tools, widely and illegally available, to erase a stolen phone's genuine IMEI and burn in a fake one, which lets the device bypass the CEIR blacklist entirely and be resold as if never stolen. This single act defeats the whole deterrence system CEIR was built to create. DoT's campaign asks citizens to dial the universal code *#06# to check a phone's genuine IMEI before buying any second-hand device and to verify it against the seller's invoice, and it clarifies that IMEI tampering is a specific offence under Section 66 read with Section 43 of the Information Technology Act, 2000, giving police a clear legal basis to prosecute the technicians and shops offering this service.

Key Terms:



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Term	Definition
IMEI	15-digit unique mobile device identifier; verified via *#06#; tracked through DoT's Central Equipment Identity Register (CEIR), launched 2019.
CEIR	Central Equipment Identity Register; DoT's national database blacklisting stolen/lost phone IMEIs so no network will connect them.
IT Act Sections 43 and 66	Provisions of the Information Technology Act, 2000 under which IMEI tampering is prosecuted as a cybercrime.
Sanchar Saathi Portal	DoT's citizen-facing platform (which hosts CEIR services) allowing users to block stolen phones, trace mobile connections in their name, and check device genuineness.
Type Approval / ICTC	Indian Council of Telecom-Chip Testing; equipment must pass certification before sale, part of India's broader telecom equipment security regime.
Cybercrime Coordination Centre (I4C)	Ministry of Home Affairs body coordinating national cybercrime response, complementing DoT's device-security measures like CEIR.
Digital Personal Data Protection Act, 2023	India's data protection law; relevant backdrop to telecom/device security measures aimed at preventing identity and data-linked fraud.

Important Points for UPSC:

- GS2 Cybersecurity: CEIR (2019) as a telecom security framework; IT Act enforcement.
- GS3 Technology: IMEI tracking; device-level cybercrime trends.
- Prelims: IMEI = 15 digits, checked via *#06#; CEIR launched 2019; tampering prosecuted under IT Act Sections 43/66.



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SATELLITE ANTI-AIRFIELD WEAPONS (AATMANIRBHAR BHARAT)

Ministry: *Ministry of Defence* | PIB Date: *23 September 2026*

Easy Explanation

One of the most effective ways to disable an enemy air force is to destroy the runways and ground infrastructure it flies from rather than fight its aircraft in the sky – an anti-airfield weapon does exactly this. A 'Satellite Smart' version uses satellite-based navigation, similar in principle to GPS but built to India's own NavIC standard for guaranteed availability during a conflict, to strike such targets precisely from stand-off range, meaning the launching aircraft need not fly over heavily defended airspace. The Ministry of Defence signed a contract worth ₹811 crore on September 23, 2026, for 160 units of this weapon, to be manufactured domestically by Bharat Dynamics Limited (BDL), a Hyderabad-headquartered defence public sector undertaking. India has historically depended on imports for precision-guided munitions of this class, a dependency carrying real risk since a supplier nation could delay deliveries or withhold spares during a political dispute or an actual conflict, exactly when such weapons would be needed most. This contract sits within the Aatmanirbhar Bharat push in defence, which since 2020 has published four successive 'Positive Indigenisation Lists' banning the import of over 500 specified defence items altogether, forcing domestic development. Building this capability domestically also builds engineering talent and supplier networks reusable for future weapons – though a fair assessment notes many 'indigenous' Indian defence products still import sub-components like advanced seeker heads, meaning full self-reliance remains a work in progress.

Key Terms:

Term	Definition
Satellite Smart Anti-Airfield Weapon	Precision-guided, satellite-navigated munition to destroy airfield infrastructure; ₹811 crore contract for 160 units, Sept 23, 2026, made by BDL.



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Positive Indigenisation List	Four successive MoD lists since 2020 banning import of 500+ defence items, forcing domestic manufacture under Aatmanirbhar Bharat.
NavIC	India's own regional satellite navigation system, providing guaranteed availability for defence applications independent of foreign GPS.
Bharat Dynamics Limited (BDL)	Hyderabad-headquartered Defence PSU under Ministry of Defence, manufacturer of missiles and precision munitions including the new SSAW contract.
Defence Acquisition Procedure (DAP) 2020	India's framework governing defence procurement, prioritising indigenous design, development, and manufacture (IDDM) categories.
Make in India (Defence)	Sector-specific application of Make in India promoting domestic defence manufacturing to reduce India's historically high import dependence.
Strategic Partnership Model	MoD policy enabling select private Indian firms to partner with foreign OEMs for technology transfer in critical defence platforms.
Precision-Guided Munition (PGM)	Weapon using guidance systems (satellite, laser, or inertial) for high-accuracy strikes, minimising collateral damage compared to unguided munitions.

Important Points for UPSC:

- GS2 Strategic Autonomy: Positive Indigenisation Lists (2020 onward, 500+ items); NavIC.
- GS3 Defence: ₹811 crore, 160 units, BDL (Hyderabad); Aatmanirbhar Bharat.
- Prelims: SSAW contract ₹811 crore, Sept 23, 2026; 160 units; manufacturer BDL; part of 4 Positive Indigenisation Lists since 2020.



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DRDO DEEP TECH START-UP PROJECT (QUANTUM TECHNOLOGY)

Ministry: *Ministry of Defence* | PIB Date: *24 September 2026*

Easy Explanation

Ordinary computers store information as bits that are either 0 or 1. Quantum computers use qubits, which – through the physics principle of superposition – can represent a mixture of both simultaneously, allowing certain calculations, such as breaking today's RSA encryption or simulating complex molecules, to run exponentially faster than any classical computer. The catch is that qubits are extraordinarily fragile: their quantum state collapses from even tiny amounts of heat, so functioning quantum computers must be cooled to around 20 millikelvin – about -273.13°C , within a fraction of a degree of absolute zero. A dilution refrigerator is the specialised apparatus that achieves and sustains this temperature; without one, there is no functioning quantum computer at all. DRDO has signed its first major contract under the Technology Development Fund (TDF) scheme, launched in 2016 with roughly ₹50 crore annual outlay to fund private start-ups rather than only DRDO's own in-house labs, specifically to build this dilution-refrigerator capability domestically rather than continuing to import the equipment. The stakes are dual-purpose: under the National Quantum Mission, approved by the Cabinet in 2023 with an outlay of ₹6,003 crore over eight years, a sufficiently powerful quantum computer could eventually break the encryption protecting military and banking data worldwide, so nations lacking this capability risk falling behind in both offensive code-breaking and next-generation defensive encryption, while quantum technology equally has major civilian applications in secure communications.

Key Terms:

Term	Definition
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Dilution Refrigerator	Cooling apparatus reaching ~ 20 millikelvin (-273.13°C), essential for quantum computers; DRDO's first TDF-funded contract targets domestic manufacture.
Technology Development Fund (TDF)	DRDO scheme launched 2016, $\sim ₹50$ crore annual outlay, funding private start-ups (not just DRDO labs) for defence deep-tech.
National Quantum Mission	Cabinet-approved 2023, ₹6,003 crore over 8 years, covering quantum computing, communication, and sensing technologies.
Qubit / Superposition	Quantum bit that can represent 0 and 1 simultaneously via the physics principle of superposition, enabling exponential computational speed-up for specific problems.
Post-Quantum Cryptography	Next-generation encryption designed to remain secure even against future quantum computers capable of breaking today's RSA-based encryption.
iDEX (Innovations for Defence Excellence)	Separate DRDO/MoD initiative funding start-ups and MSMEs for defence innovation, running alongside TDF as part of India's deep-tech ecosystem.
Absolute Zero	Theoretical coldest possible temperature (-273.15°C or 0 Kelvin), at which molecular motion stops; dilution refrigerators approach this to stabilise qubits.

Important Points for UPSC:

- GS3 Science: National Quantum Mission (2023, ₹6,003 crore/8 years); TDF scheme (2016).
- GS2 Strategic Autonomy: Indigenous quantum infrastructure reducing import dependence.
- Prelims: Dilution refrigerator ~ 20 mK (-273.13°C); TDF launched 2016; National Quantum Mission ₹6,003 crore, 8 years, approved 2023.



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DDU-GKY 2.0 LAUNCH (RURAL SKILL DEVELOPMENT)

Ministry: *Ministry of Skill Development* | PIB Date: *19 September 2026*

Easy Explanation

A persistent pattern in India's labour market is a skill mismatch: industries need workers for hospitality, retail, manufacturing, and construction, while millions of rural youth remain unemployed simply because they were never trained in the specific practical skills employers need. DDU-GKY (Deen Dayal Upadhyaya Grameen Kaushalya Yojana), launched in 2014 as part of the National Rural Livelihood Mission, closes this gap with free, placement-linked training for rural youth aged 15 to 35 from poor households, running 576 to 984 hours depending on the trade, with the training partner contractually obligated to place at least 70% of trainees in jobs and retain them for a minimum of three months. Version 2.0, launching from October 2026 with a target of 70,000 rural youth, sharpens this model based on over a decade of implementation experience, with a mandated minimum 33% enrolment for women and specific quotas for Scheduled Caste and Scheduled Tribe candidates reflecting their share of the rural poor population. The underlying economic logic connects to India's demographic dividend: with a median age of around 28 and over 65% of the population of working age, this young population is only an economic asset if productively employed; without adequate skilling, it becomes a source of social pressure rather than growth, making DDU-GKY 2.0 a structural necessity rather than discretionary welfare.

LESS NOISE. MORE RETENTION.

Key Terms:

Term	Definition
DDU-GKY	Launched 2014 under National Rural Livelihood Mission; free 576-984 hour placement-linked training for rural youth aged 15-35; 2.0 targets 70,000 from Oct 2026.



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Placement Mandate	Training partners contractually required to place at least 70% of trainees in jobs and ensure 3-month minimum retention.
Reservation in DDU-GKY	Minimum 33% enrolment mandated for women, with specific SC/ST quotas reflecting their share of the rural poor.
National Rural Livelihood Mission (NRLM)/Ajeevika	Umbrella rural poverty-alleviation mission under which DDU-GKY (skilling) and self-help-group-based livelihoods programmes both operate.
Skill India Mission	Overarching national skilling framework launched 2015, of which DDU-GKY (rural) and PMKVY (broader) are component schemes.
PMKVY	Pradhan Mantri Kaushal Vikas Yojana; India's flagship short-term skill certification scheme, distinct from but complementary to DDU-GKY's rural, placement-linked focus.
Skill-Job Mismatch	Structural gap between the skills job-seekers possess and those employers require, the core problem DDU-GKY-style targeted training aims to close.
Rural Self-Employment Training Institutes (RSETI)	Bank-sponsored institutes offering self-employment-oriented training, complementing DDU-GKY's wage-employment focus.

Important Points for UPSC:

- GS2 Social Welfare: DDU-GKY launched 2014; 33% women reservation; SC/ST quotas.
- GS3 Economy: India's median age ~28; 65%+ working-age population; skill-job mismatch.
- Prelims: DDU-GKY 2.0 targets 70,000 rural youth from Oct 2026; 70% placement mandate; 3-month retention rule; 576-984 training hours.



TELECOM MANUFACTURING ZONE INITIATIVES

Ministry: Ministry of Communications | PIB Date: 21 September 2026

Easy Explanation

Despite having over 1.16 billion mobile connections, among the largest telecom markets on Earth, India has historically imported the majority of its network equipment – routers, base stations, and switching hardware – because domestic manufacturing capacity for this specialised, capital-intensive hardware never developed at the scale of countries like China or Vietnam. A Telecom Manufacturing Zone (TMZ) concentrates manufacturers in dedicated industrial clusters, currently being promoted through investor meetings led by Union Minister Jyotiraditya Scindia in cities including Gwalior (Madhya Pradesh) and Bengaluru (Karnataka), offering tax incentives, single-window regulatory clearance, and shared infrastructure. This builds on India's existing Production Linked Incentive (PLI) scheme for telecom and networking products, approved by the Cabinet in 2021 with a financial outlay of ₹12,195 crore over five years, which already pays manufacturers a percentage-based incentive on incremental sales of domestically made equipment. The economic logic, called agglomeration, is that manufacturing clusters succeed because related businesses – component suppliers, logistics providers, and skilled labour pools – develop together in one location, lowering costs for every manufacturer in that cluster. For India, closing this manufacturing gap serves two goals simultaneously: reducing the foreign exchange spent annually importing telecom hardware, and reducing strategic dependency on foreign network equipment, a live global security concern given fears of built-in vulnerabilities in hardware sourced from geopolitical rivals.

LESS NOISE. MORE RETENTION.

Key Terms:

Term	Definition
Telecom Manufacturing Zone	Industrial clusters with tax incentives for telecom equipment manufacturers, promoted in Gwalior and Bengaluru by Minister Scindia.



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PLI Scheme for Telecom	Cabinet-approved 2021, ₹12,195 crore over 5 years, incentivising domestic manufacture of telecom and networking products.
India's Mobile Connections	Over 1.16 billion mobile connections, among the largest telecom markets globally, yet historically import-dependent for network hardware.
Agglomeration Economies	Cost and efficiency benefits firms gain by locating near each other, sharing suppliers, logistics, and skilled labour pools – the logic behind manufacturing zones.
Make in India	Government initiative launched Sept 25, 2014 promoting domestic manufacturing to reduce imports and build a self-reliant industrial base.
Special Economic Zone (SEZ)	Designated area with distinct economic laws (tax, customs) to promote exports and manufacturing; TMZs borrow from this model conceptually.
5G / 6G Telecom Equipment	Next-generation network hardware India seeks to manufacture domestically, reducing reliance on foreign vendors amid security concerns over embedded vulnerabilities.
Bharat 6G Vision	India's roadmap document for 6G technology leadership, positioning domestic telecom manufacturing (including via TMZs) as integral to that ambition.

Important Points for UPSC:

- GS3 Economy: PLI for telecom (2021, ₹12,195 crore/5 years); manufacturing agglomeration strategy.
- GS2 Governance: TMZs as SEZ-style policy tool; Gwalior and Bengaluru as pilot locations.
- Prelims: TMZ investor meets led by Min. Scindia; PLI telecom scheme ₹12,195 crore (2021, 5 years); India 1.16 billion+ mobile connections.



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RAILWAY KAVACH 4.0 COMMISSIONING

Ministry: *Ministry of Railways* | PIB Date: *23 September 2026*

Easy Explanation

The most dangerous moment on any railway network is when two trains risk colliding, whether from a missed signal or misjudged speed, and relying purely on human alertness across a network as vast as India's, which runs roughly 68,000 route kilometres, is not sufficient alone. Kavach, developed indigenously by RDSO (Research Design and Standards Organisation) along with three Indian vendors, is India's Automatic Train Protection system, first developed around 2012-16 under the earlier name TCAS and rebranded Kavach in 2020: it continuously tracks a train's speed and position via onboard and trackside radio-frequency equipment, cross-checks this against safe limits and nearby trains, and automatically applies brakes if a driver fails to act, removing human error as the single point of failure. Version 4.0's first deployment, covering 607.7 route kilometres on South Central Railway's Lucknow Division at a cost of ₹252 crore, marks a move from pilot testing toward wider rollout. Following the June 2023 Balasore triple-train collision in Odisha, which killed around 296 people and exposed how little of the network had Kavach coverage at the time, the government significantly accelerated its rollout target, aiming to cover roughly 44,000 route kilometres of high-density routes progressively. That Kavach is indigenous rather than imported matters because retrofitting India's full network with a foreign system would cost substantially more and create long-term vendor dependency for maintenance and upgrades.

Key Terms:

Term	Definition
Kavach	Indigenous Automatic Train Protection system by RDSO, originally TCAS (2012-16), renamed Kavach 2020; automatically brakes trains to prevent collisions.



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Balasore Train Accident	June 2023 triple-train collision in Odisha killing ~296 people; accelerated Kavach's national rollout target.
Route Kilometre Target	Government aims to cover ~44,000 route kilometres of high-density routes with Kavach progressively; Kavach 4.0 covers 607.7 km on Lucknow Division at ₹252 crore.
RDSO	Research Design and Standards Organisation, Lucknow; Indian Railways' R&D wing that developed Kavach and sets technical standards for rolling stock and signalling.
Automatic Train Protection (ATP)	Global category of railway safety systems (of which Kavach is India's variant) that enforce speed limits and prevent signal-passed-at-danger collisions.
Mission Raftaar	Indian Railways' broader initiative to double average freight and passenger train speeds, for which Kavach-enabled safety is a prerequisite.
Vande Bharat / Amrit Bharat	India's modern train categories whose higher speeds make Automatic Train Protection systems like Kavach especially critical for safe operation.
Signal Passed at Danger (SPAD)	A train passing a stop signal without authorisation, the single largest cause of collision risk that Kavach is designed to eliminate.

Important Points for UPSC:

- GS3 Transport: Balasore accident (2023, ~296 deaths) as policy trigger; indigenous ATP development.
- GS2 Strategic Autonomy: Kavach vs. imported ATP systems; RDSO's role.
- Prelims: Kavach 4.0, 607.7 RKM, Lucknow Division, ₹252 crore; originally TCAS (2012-16), renamed 2020; target ~44,000 RKM.



NHAI GUIDELINES FOR HIGH-SPEED NATIONAL HIGHWAYS

Ministry: Ministry of Road Transport | PIB Date: 22 September 2026

Easy Explanation

An access-controlled highway allows vehicles to enter or exit only at engineered points, with no signals or roadside interruptions, permitting sustained speeds of 100-120 km/h, the design standard now used on India's expanding expressway network, which crossed roughly 5,000 km of access-controlled corridors by 2026 under projects like the Delhi-Mumbai Expressway. NHAI has issued updated design guidelines for such corridors emphasising UHPFRC (Ultra-High Performance Fibre-Reinforced Concrete), a material with compressive strength several times that of ordinary M25-grade concrete, achieved by mixing in steel micro-fibres, making it far more resistant to cracking and heavy-axle-load truck traffic. This matters financially as much as structurally: UHPFRC construction can cost 20-30% more upfront but extends structure life well beyond the 30-40 years typical of conventional concrete flyovers, lowering total lifecycle cost even though this is harder to see in short-term budget figures. The real-world impact is illustrated by the Indora-Dighori flyover in Nagpur, where advanced construction cut travel time on that stretch from around 60 minutes to just 10-15 minutes, a roughly 75-80% reduction that cuts fuel consumption and emissions from idling traffic, an outcome NHAI is now trying to replicate systematically across future high-speed corridor projects nationwide.

Key Terms:

Term	Definition
NHAI	National Highways Authority of India; issued 2026 guidelines mandating UHPFRC for high-speed, access-controlled corridors.
UHPFRC	Ultra-High Performance Fibre-Reinforced Concrete; several times the strength of standard M25 concrete; costs 20-30% more but lasts far longer.



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Indora-Dighori Flyover	Nagpur flyover example cutting travel time from ~60 minutes to 10-15 minutes (~75-80% reduction) via advanced construction.
Bharatmala Pariyojana	India's umbrella national highway development programme (launched 2017) under which most new access-controlled expressways, including Delhi-Mumbai, are built.
Hybrid Annuity Model (HAM)	PPP financing structure for highways where government and private developer share capital cost, commonly used for NHAI expressway projects.
Delhi-Mumbai Expressway	India's longest expressway (~1,350 km), a flagship access-controlled corridor exemplifying the design standards NHAI's 2026 guidelines formalise.
FASTag	RFID-based electronic toll collection system mandatory on Indian highways, complementing access-controlled design by removing toll-booth congestion.
Logistics Performance Index / Cost of Logistics	India's logistics costs as a share of GDP (historically 13-14%, among the highest globally) is the macro problem better highway design aims to reduce.

Important Points for UPSC:

- GS3 Infrastructure: UHPFRC vs. conventional concrete; India's ~5,000 km access-controlled expressway network by 2026.
- GS2 Public Policy: Design standards as regulatory tool; lifecycle-cost thinking in infrastructure.
- Prelims: NHAI 2026 UHPFRC guidelines; Indora-Dighori flyover (Nagpur) 60 min to 10-15 min; access-controlled speeds 100-120 km/h.



DRI SEIZURES AND LAW ENFORCEMENT

Ministry: Ministry of Finance | **PIB Date:** 23-24 September 2026

Easy Explanation

DRI, headquartered in New Delhi and functioning under the Central Board of Indirect Taxes and Customs (CBIC), Ministry of Finance, is India's apex anti-smuggling intelligence agency. A single set of operations across September 23-24, 2026 illustrates how varied this threat is: 845 kg of narcotics including heroin, whose trafficking finances organised crime and, in cases, terrorism; 86 live Tokay Geckos, a reptile species listed under CITES Appendix II, illegally trafficked for the exotic pet and traditional-medicine trade where a single specimen can fetch thousands of dollars abroad; 21 kg of foreign-origin gold worth roughly ₹32 crore, smuggled largely via routes through Bangladesh and the Gulf to avoid India's import duty on gold, which has ranged between 6% and 15% in recent years; and 10,000 kg of firecrackers, smuggled to bypass both duty and the safety standards administered by the Petroleum and Explosives Safety Organisation (PESO) that legitimate manufacturers must follow. Each category causes distinct harm, yet all four required the same institutional response: DRI's Bharat Kavach information-sharing platform and coordination with the Directorate General of GST Intelligence, state police, and international customs counterparts, since smuggling networks routinely operate across state and national borders, and any single agency acting alone can only ever catch a fraction of the actual volume moving through them.

Key Terms:

Term	Definition
DRI	Directorate of Revenue Intelligence, HQ New Delhi, under CBIC, Ministry of Finance; India's apex anti-smuggling agency.
Gold Import Duty	India's customs duty on gold, ranging 6-15% in recent years, the key incentive driving persistent gold smuggling via Bangladesh/Gulf routes.



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PESO	Petroleum and Explosives Safety Organisation; sets safety standards for legitimate firecracker manufacture, bypassed by smugglers.
CBIC	Central Board of Indirect Taxes and Customs; the apex Finance Ministry body overseeing customs, GST, and DRI's anti-smuggling operations.
NDPS Act, 1985	Narcotic Drugs and Psychotropic Substances Act; the primary law under which DRI's narcotics seizures are prosecuted.
Golden Crescent / Golden Triangle	Afghanistan-Pakistan-Iran and Myanmar-Thailand-Laos, the two major drug-producing regions from which narcotics are trafficked into and through India.
Customs Act, 1962	India's principal customs legislation empowering DRI and customs officers to search, seize, and prosecute smuggling of goods including gold and firecrackers.
DGGI	Directorate General of GST Intelligence, DRI's sister agency under CBIC handling GST evasion, often coordinating on overlapping smuggling/tax-fraud cases.

Important Points for UPSC:

- GS2 Law: DRI under CBIC; anti-smuggling coordination with DGGI and state police.
- GS3 Environment: CITES Appendix II (Tokay Gecko); wildlife trafficking.
- Prelims: DRI Sept 23-24, 2026: 845 kg drugs, 86 Tokay Geckos, 21 kg gold (~₹32 cr), 10,000 kg firecrackers; gold duty 6-15%.

NLMC LAND MONETISATION PROGRAMME

Ministry: Ministry of Finance | PIB Date: 23 September 2026



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Easy Explanation

Over decades, central departments and public sector undertakings acquired land for operational needs – factories, offices, railway yards – but much of it became surplus as operations changed, remaining government-owned, generating no income, while still costing money in security, maintenance, and encroachment litigation. NLMC, incorporated in 2022 as a wholly government-owned company under the Ministry of Finance with an initial paid-up capital of ₹150 crore, was set up specifically to identify such non-core surplus land across government bodies and sell it systematically, targeting roughly ₹1 lakh crore in monetisation value over four years as part of the broader National Monetisation Pipeline first announced in the 2021-22 Budget. The method matters as much as the goal: NLMC promotes e-auctions, open online competitive bidding, over private negotiation, historically vulnerable to underpricing or favouritism. The recent RINL (Rashtriya Ispat Nigam Limited, the Visakhapatnam Steel Plant operator) land sale conducted through this model is a concrete example in action. The fiscal logic is clean: since this land generated zero revenue while incurring costs, converting it to one-time cash is close to a pure gain, redirectable toward infrastructure without new taxes or borrowing – though such one-time asset sales cannot substitute for deeper structural fiscal reform if the government's underlying financial position needs a lasting rather than temporary improvement.

Key Terms:

Term	Definition
NLMC	National Land Monetisation Corporation, incorporated 2022, ₹150 crore initial paid-up capital; targets ₹1 lakh crore over 4 years.
National Monetisation Pipeline	Broader asset monetisation framework first announced in the 2021-22 Union Budget, of which NLMC's land programme is one component.



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e-Auction	Transparent online competitive bidding NLMC mandates over private negotiation, as used in the RINL (Visakhapatnam Steel Plant) land sale.
RINL (Rashtriya Ispat Nigam Limited)	State-owned steel company operating the Visakhapatnam Steel Plant, whose surplus land sale exemplifies NLMC's e-auction model.
Fiscal Deficit	Gap between government expenditure and revenue; asset monetisation like NLMC's land sales provides one-time, non-tax revenue to help manage this gap.
Disinvestment vs Monetisation	Disinvestment sells ownership stakes in PSUs; monetisation (like NLMC) leases or sells specific underused assets while retaining core operations, a narrower concept.
NITI Aayog	Government think tank that conceptualised the National Monetisation Pipeline framework, which NLMC's land programme implements for real-estate assets specifically.

Important Points for UPSC:

- GS2 Governance: NLMC (2022, ₹150 crore capital); National Monetisation Pipeline (2021-22 Budget).
- GS3 Economy: One-time asset sales vs. structural fiscal reform.
- Prelims: NLMC incorporated 2022; target ₹1 lakh crore/4 years; RINL e-auction Sept 2026; part of National Monetisation Pipeline.

NGT MOBILE APPLICATION LAUNCH

Ministry: Ministry of Environment | PIB Date: 22 September 2026

Easy Explanation



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The National Green Tribunal, established under the NGT Act, 2010, is a specialised judicial body created to hear environmental cases – industrial pollution, illegal mining, unauthorised deforestation – faster and with more technical expertise than ordinary civil courts. In principle this makes environmental justice more accessible; in practice, the NGT operates from only 5 benches nationwide (principal bench in Delhi, plus Bhopal, Pune, Kolkata, and Chennai), meaning a community affected by pollution hundreds of kilometres from the nearest bench faced a genuine practical barrier to filing a case at all. The newly launched NGT mobile application directly targets this by allowing digital case filing, real-time status tracking, and access to hearing schedules and orders from a phone. This is a meaningful step, but its limits are worth noting clearly: digital filing removes geographic and procedural friction, but does not by itself supply the scientific or technical expertise many environmental cases genuinely require, nor does it guarantee effective enforcement of favourable orders by state pollution control boards, which India's own parliamentary standing committees have repeatedly flagged as inconsistent. The app widens the entry point to environmental justice; actual outcomes still depend on strengthened enforcement and technical support running alongside this accessibility gain.

Key Terms:

Term	Definition
NGT	National Green Tribunal, established under the NGT Act, 2010; operates from 5 benches – Delhi (principal), Bhopal, Pune, Kolkata, Chennai.
NGT Mobile App	2026 launch enabling digital case filing, real-time tracking, and access to hearing schedules/orders without travel to a bench.
State Pollution Control Boards	State-level bodies responsible for enforcing NGT orders; enforcement consistency flagged as a gap by parliamentary standing committees.



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Polluter Pays Principle	Legal doctrine, frequently applied by NGT, holding polluters financially liable for environmental damage and remediation costs.
Precautionary Principle	Environmental law doctrine (also applied by NGT) requiring preventive action against environmental harm even without full scientific certainty.
Central Pollution Control Board (CPCB)	National-level body setting pollution standards, working alongside NGT and state boards in India's environmental governance architecture.
Environment (Protection) Act, 1986	India's umbrella environmental legislation, enacted post-Bhopal gas tragedy, under which many cases before NGT are ultimately adjudicated.
Locus Standi (Environmental)	Legal standing to bring a case; NGT has relaxed traditional locus standi rules, allowing any concerned citizen (not just directly affected parties) to file cases.

Important Points for UPSC:

- GS3 Environment: NGT Act (2010); enforcement gap at state pollution board level.
- GS2 Governance: Access to justice via digital tools; NGT's 5-bench structure.
- Prelims: NGT Act 2010; 5 benches (Delhi principal + Bhopal, Pune, Kolkata, Chennai); mobile app launched Sept 2026.

OPEC-INDIA ENERGY DIALOGUE

Ministry: *Ministry of Petroleum* | PIB Date: *22 September 2026*

Easy Explanation



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India imports roughly 85-88% of the crude oil it consumes as of 2026, so global oil prices feed directly into inflation, the fiscal position, and the current account deficit. OPEC, founded in 1960 and now comprising 12 member nations after some recent membership changes – including Saudi Arabia, Iran, Iraq, and the UAE – together with its OPEC+ partners led by Russia, controls close to 40% of global crude output and coordinates production quotas specifically to influence global prices. Given how much India's economy depends on prices this group effectively sets, the OPEC-India Energy Dialogue, now in its 7th high-level round since the mechanism's institution, functions as a structured channel for India – the world's third-largest oil importer – to communicate demand forecasts and pricing concerns directly to the group most influencing what it pays. Sustained dialogue also supports long-term supply agreements offering more predictable pricing than pure spot-market purchases, and reinforces diplomatic ties with Gulf nations hosting over 8 million Indian expatriate workers. Dialogue alone cannot fully insulate India from shocks caused by wars or sanctions, which is why India separately maintains a Strategic Petroleum Reserve of about 5.33 million tonnes across three underground sites and is expanding renewable capacity to gradually reduce oil dependency itself.

Key Terms:

Term	Definition
OPEC / OPEC+	OPEC (founded 1960, 12 members) plus Russia-led OPEC+ partners; together control ~40% of global crude output via coordinated quotas.
India's Oil Import Dependence	India imports ~85-88% of crude consumed (2026); world's 3rd-largest oil importer; over 8 million Indian expatriates in Gulf states.
Strategic Petroleum Reserve	India's emergency oil buffer, ~5.33 million tonnes across 3 underground storage sites (Vizag, Mangalore, Padur).



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Basket Price (Indian Crude Basket)	Weighted average price of crude oil grades India imports, tracked by the Petroleum Planning and Analysis Cell to assess import cost impact.
Current Account Deficit (CAD)	Gap when a country's imports of goods/services/transfers exceed exports; oil imports are the single largest driver of India's CAD.
International Energy Agency (IEA)	OECD-linked body coordinating member countries' emergency oil stocks and energy policy, a counterpart institution to OPEC on the consumer side.
Petroleum Planning and Analysis Cell (PPAC)	Ministry of Petroleum body under which India tracks crude basket prices, subsidy outgo, and import statistics referenced in OPEC dialogues.
National Green Hydrogen Mission	India's parallel long-term strategy (approved 2023) to reduce fossil fuel/oil dependency through green hydrogen, complementing diplomatic oil engagement.

Important Points for UPSC:

- GS2 IR: India as 3rd-largest oil importer; Gulf diplomacy (8 million+ expatriates).
- GS3 Economy: OPEC/OPEC+ (~40% global output); Strategic Petroleum Reserve (5.33 MT, 3 sites).
- Prelims: 7th OPEC-India Dialogue; OPEC founded 1960, 12 members; India imports 85-88% crude; SPR 5.33 MT across 3 sites.

CSIR-CRRI SCIENTIFIC COLLABORATION (VISAKHAPATNAM ROADS)

Ministry: *Ministry of Science* | PIB Date: *24 September 2026*

Easy Explanation



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Cities typically apply generic engineering specifications to road-building regardless of local conditions, yet durability depends heavily on soil type, rainfall drainage, and actual traffic load, all of which vary enormously by location. CSIR-CRRI, established in 1952 and headquartered in New Delhi as one of CSIR's 37 national laboratories, exists to bring rigorous, location-specific engineering science to road planning, and its collaboration with the Visakhapatnam Metropolitan Region Development Authority (VMRDA) does exactly this: CRRI scientists conduct direct soil-bearing-capacity testing, analyse actual axle-load traffic patterns, and use GIS mapping to pinpoint precisely which stretches are failing and why, before recommending evidence-based, context-specific solutions rather than a generic national template. India's substantial scientific research capacity, built over more than seven decades through CSIR's network, has not always connected systematically to the day-to-day decisions of city and state infrastructure agencies, which often lack in-house engineering research capability. When such a connection is made, as in Visakhapatnam, the result is more durable infrastructure; the open, fair question is whether this intensive, hands-on model can scale to India's roughly 4,000-plus urban local bodies without either significant CRRI capacity expansion or simpler, self-applicable guidelines that smaller municipalities can use without direct expert involvement.

Key Terms:

Term	Definition
CSIR-CRRI	Central Road Research Institute, established 1952, New Delhi; one of CSIR's 37 national laboratories, specialising in road engineering research.
VMRDA	Visakhapatnam Metropolitan Region Development Authority; the city body partnering with CRRI for evidence-based road design.
GIS-Based Road Diagnostics	Geographic Information System mapping used by CRRI to pinpoint failing road stretches and their specific causes before recommending fixes.



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CSIR (Council of Scientific and Industrial Research)	India's largest chain of publicly funded R&D institutions (37 labs), under the Ministry of Science and Technology, of which CRRI is one.
Geotechnical Engineering	Study of soil, rock, and subsurface conditions for construction; the core scientific discipline CRRI applies to location-specific road design.
Pavement Design Life	Engineering estimate of how many years a road surface will function before major repair; varies with soil, traffic load, and material quality.
Smart Cities Mission	Broader urban infrastructure modernisation programme (launched 2015) within which city-science collaborations like CRRI-VMRDA fit conceptually.

Important Points for UPSC:

- GS3 Science: CSIR (37 labs network); CRRI established 1952; applied research-to-implementation gap.
- GS2 Governance: Science-policy interface; scaling challenge across 4,000+ urban local bodies.
- Prelims: CRRI established 1952, New Delhi; CSIR has 37 national labs; CRRI-VMRDA collaboration Sept 2026.

SITOK IAS

LESS NOISE. MORE RETENTION.

SWACH SAGAR SURAKSHIT SAGAR 5.0 (COASTAL CONSERVATION)

Ministry: *Ministry of Science* | PIB Date: *21 September 2026*

Easy Explanation

India's coastline runs roughly 7,500 km and supports millions through fishing, tourism, and shipping, yet absorbs a large share of the estimated 9.3 million tonnes of plastic waste India generates annually, much of which is inadequately managed and reaches rivers and the sea. Swach Sagar



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Surakshit Sagar, first launched in 2022 to mark National Coastal Cleanup Day, held its 5th edition on September 21, 2026, mobilising roughly 15 lakh volunteers across 231 locations spanning 13 coastal states and union territories in a single-day coordinated cleanup, run jointly by the Ministry of Earth Sciences and NCCR (National Centre for Coastal Research). It is worth being clear-eyed about scale: the waste removed in a single day, however large the volunteer turnout, is a small fraction of the roughly 9.3 million tonnes generated annually, so the campaign's most valuable long-term contribution is arguably the public awareness it builds rather than the tonnage collected. When 1.5 million citizens personally remove plastic from beaches, many develop a concrete understanding of the pollution problem, a shift from passive bystander to active participant that can build broader public support for the tougher, less visible policy changes actually required – stricter industrial effluent standards and expanded municipal sewage treatment capacity – which cleanup drives cannot substitute for but which benefit from the public attention such visible participation generates.

Key Terms:

Term	Definition
Swachh Sagar Surakshit Sagar	Annual coastal cleanup since 2022; 5th edition Sept 21, 2026; 15 lakh volunteers, 231 locations, 13 states/UTs; run with NCCR.
NCCR	National Centre for Coastal Research, under Ministry of Earth Sciences; co-runs the coastal cleanup campaign.
India's Annual Plastic Waste	Estimated 9.3 million tonnes generated annually, much of it inadequately managed, contributing to coastal and marine pollution.
Blue Economy	Sustainable use of ocean and coastal resources (fisheries, tourism, shipping) for economic growth while preserving marine ecosystem health.



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Extended Producer Responsibility (EPR)	Regulatory principle making plastic producers responsible for collection/recycling of their packaging waste, a structural complement to cleanup campaigns.
Coastal Regulation Zone (CRZ)	India's regulatory framework restricting construction and industrial activity near coastlines to protect fragile marine and coastal ecosystems.
Namami Gange	River-cleaning mission for the Ganga; conceptually linked to coastal cleanup since river pollution is a major source of ocean plastic and waste.
Marine Protected Areas (MPAs)	Designated ocean zones with restricted human activity to conserve marine biodiversity, complementing cleanup and pollution-control efforts.

Important Points for UPSC:

- GS3 Environment: India's plastic waste (9.3 million tonnes/year); coastline ~7,500 km.
- GS2 Governance: Mass mobilisation (2022 onward); NCCR's coordinating role.
- Prelims: Swach Sagar 5.0, Sept 21, 2026; 15 lakh participants, 231 locations, 13 states/UTs; India plastic waste ~9.3 MT/year.

INDIA-MONGOLIA MILITARY EXERCISE NOMADIC ELEPHANT

Ministry: Ministry of Defence | **PIB Date:** 21 September 2026

Easy Explanation

Exercise Nomadic Elephant, first held in 2004 and now in a recent edition conducted at Pithoragarh, Uttarakhand, is a recurring bilateral exercise between the Indian Army and the Mongolian Armed Forces, focused on shared counter-terrorism capability through joint tactical drills, urban warfare training, and coordinated response exercises. This might look like a modest, routine exercise, but its



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significance becomes clearer through Mongolia's geography: a landlocked country of roughly 3.3 million people wedged directly between Russia and China, historically dependent on both for trade and energy, which has led Mongolia to deliberately pursue what it explicitly calls a 'third neighbour' policy, seeking partnerships with countries like India, Japan, and the United States beyond its two dominant neighbours to avoid over-dependence on either. India, having elevated ties with Mongolia to a Strategic Partnership in 2015, fits naturally into this role as a democratic power with no history of territorial ambition toward it. For India, this exercise is one deliberate piece of a broader strategy of building relationships across Asia beyond South Asia, without directly and confrontationally challenging Chinese interests. Its practical military weight is modest given the geographic distance limiting sustained joint operational capability, but its diplomatic value is genuine, reinforcing India's self-positioning as a cooperative Asian power offering partnership options beyond simply choosing sides.

Key Terms:

Term	Definition
Exercise Nomadic Elephant	India-Mongolia bilateral military exercise, first held 2004; recent edition at Pithoragarh, Uttarakhand; focused on counter-terrorism.
Mongolia's Third Neighbour Policy	Mongolia's deliberate strategy of seeking partnerships (India, Japan, US) beyond Russia and China to avoid over-dependence on either.
India-Mongolia Strategic Partnership	Bilateral relationship elevated to Strategic Partnership status in 2015 during PM Modi's visit to Mongolia.
Act East Policy	India's foreign policy framework (successor to Look East) deepening engagement with East and Southeast Asia, within which Mongolia ties are sometimes framed.



Landlocked Developing Country (LLDC)	UN classification for countries like Mongolia without coastal access, facing distinct trade and connectivity challenges shaping their foreign policy choices.
Defence Diplomacy	Use of military cooperation (exercises, training, arms sales) as a tool of foreign policy to build relationships short of formal alliance.
Buddhist Circuit Diplomacy	India's cultural diplomacy leveraging shared Buddhist heritage with Mongolia (a majority-Buddhist nation) to deepen bilateral ties beyond military cooperation.

Important Points for UPSC:

- GS2 IR: Mongolia's Third Neighbour policy; India-Mongolia Strategic Partnership (2015).
- GS3 Defence: Counter-terrorism joint training; India's Central Asia outreach.
- Prelims: Ex Nomadic Elephant first held 2004; recent edition Pithoragarh; India-Mongolia Strategic Partnership since 2015.

SECO INDIA 2026 (SEMICONDUCTOR ECOSYSTEM)

Ministry: *Ministry of Electronics* | PIB Date: *22 September 2026*

Easy Explanation

Semiconductors power every piece of modern electronics, from smartphones to defence hardware, making the global chip supply chain a matter of serious strategic importance. Despite being a massive electronics consumer, India manufactures almost no chips domestically, importing the vast majority, a dependency carrying real risk since over 90% of the world's most advanced chip fabrication capacity is concentrated in Taiwan and South Korea. SECO India 2026 showcases India's early efforts at building indigenous semiconductor capability under the India Semiconductor Mission, approved by the Cabinet in December 2021 with an outlay of ₹76,000 crore, which offers up to 50%



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capital subsidy for chip fabrication and display manufacturing units. The first fabrication plant approved under this mission, the Tata Electronics-PSMC facility at Dholera, Gujarat, with an investment of roughly ₹91,000 crore, broke ground in 2024 and is targeted to begin production around 2026-27. It is important to have realistic expectations: a single modern fabrication plant of this kind can cost several billion dollars and take years to reach full production, and the specialised expertise required has taken Taiwan and South Korea decades to accumulate, so SECO India represents an early, foundational step in a multi-decade effort rather than evidence of imminent self-sufficiency.

Key Terms:

Term	Definition
India Semiconductor Mission	Cabinet-approved Dec 2021, ₹76,000 crore outlay; offers up to 50% capital subsidy for chip fabrication and display units.
Tata Electronics-PSMC Dholera Plant	India's first approved chip fab, Dholera, Gujarat; ~₹91,000 crore investment; groundbreaking 2024, production targeted 2026-27.
Global Chip Fabrication Concentration	Over 90% of the world's most advanced chip fabrication capacity concentrated in Taiwan and South Korea.
Fabless vs Foundry Model	Fabless companies design chips without owning fabrication plants (foundries); India's early semiconductor strategy focuses more on design before attempting fabs.
Chip War / Export Controls	US-led restrictions limiting China's access to advanced chip-making equipment, reshaping global semiconductor supply chains and creating opportunity for alternative hubs like India.
OSAT (Outsourced Semiconductor Assembly and Testing)	Chip packaging and testing stage, less capital-intensive than fabrication, where India is building initial semiconductor capability alongside fabs.



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Digital India Mission	Broader umbrella programme (2015) promoting digital infrastructure and electronics manufacturing, within which the Semiconductor Mission sits as a strategic pillar.
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Important Points for UPSC:

- GS3 Technology: India Semiconductor Mission (₹76,000 crore, 2021); Dholera fab (~₹91,000 crore).
- GS2 Strategic Autonomy: Reducing >90% Taiwan/South Korea chip concentration risk.
- Prelims: SECO India 2026; Semiconductor Mission ₹76,000 crore (2021); Dholera plant ~₹91,000 crore, production ~2026-27.

3RD NATIONAL ANTF CONFERENCE

Ministry: Ministry of Home Affairs | **PIB Date:** 22 September 2026

Easy Explanation

Drug trafficking networks rarely confine themselves to one state, deliberately exploiting the fact that police, customs, and revenue agencies across jurisdictions often do not routinely share intelligence in real time. The Anti-Narcotics Task Force (ANTF) framework, coordinated centrally through the Narcotics Control Bureau (NCB) under a mandate strengthened after the 2020 formation of NCORD (Narco-Coordination Centre) at four tiers from national to district level, closes this gap by bringing together senior officials from every state and union territory. The 3rd National ANTF Conference, held in New Delhi on September 22, 2026, provided this coordination platform. This matters given India's geography: proximity to the Golden Crescent (Afghanistan-Pakistan-Iran) to the west and the Golden Triangle (Myanmar-Thailand-Laos) to the east makes India both a transit route and a growing consumer market, with NCB data showing synthetic drug seizures like methamphetamine rising sharply over the past five years alongside traditional heroin trafficking. Better-coordinated enforcement, however necessary, addresses only the supply side; trafficking persists as a profitable enterprise because sustained demand keeps trafficker incentives high, meaning coordination alone, without



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complementary de-addiction infrastructure under schemes like the Nasha Mukh Bharat Abhiyan launched in 2020, is unlikely to durably reduce trafficking even as individual seizures increase.

Key Terms:

Term	Definition
ANTF / NCORD	Anti-Narcotics Task Force coordinated via NCORD (Narco-Coordination Centre), a 4-tier mechanism (national to district) formed 2020.
Golden Crescent / Golden Triangle	Afghanistan-Pakistan-Iran and Myanmar-Thailand-Laos, the two major drug-producing regions flanking India.
Nasha Mukh Bharat Abhiyan	India's national de-addiction campaign launched 2020, complementing supply-side enforcement with demand reduction.
Narcotics Control Bureau (NCB)	Central nodal agency under Ministry of Home Affairs for drug law enforcement, coordinating ANTF and NCORD structures.
NDPS Act, 1985	Narcotic Drugs and Psychotropic Substances Act, India's principal anti-drug law, under which ANTF-coordinated seizures are prosecuted.
Drug Trafficking and National Security	Narcotics revenue is frequently linked to funding organised crime and, in border regions, insurgent or terrorist financing networks.
Synthetic Drugs (ATS)	Amphetamine-Type Stimulants like methamphetamine and MDMA, a rapidly rising trafficking category alongside traditional plant-based narcotics like heroin.

Important Points for UPSC:



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- GS2 Law: NCORD 4-tier structure (2020); NCB's coordinating role.
- GS3 Social: Golden Crescent/Triangle; rising synthetic drug seizures; Nasha Mukh Bharat Abhiyan (2020).
- Prelims: 3rd ANTF Conference, New Delhi, Sept 22, 2026; NCORD formed 2020; Nasha Mukh Bharat Abhiyan since 2020.

JUDICIAL APPOINTMENTS TO HIGH COURTS

Ministry: *Ministry of Law and Justice* | **PIB Date:** *21 September 2026*

Easy Explanation

India's courts carry a backlog exceeding 5 crore pending cases across all levels as of 2026, and a major structural reason is straightforward: many sanctioned judicial positions sit vacant for years, meaning even approved capacity goes underused. India's 25 High Courts have a combined sanctioned strength of 1,114 judges, yet vacancy rates have often run between 30-40% in recent years. The appointment of 14 new judges across the Delhi, Jammu and Kashmir and Ladakh (a joint High Court since 2019), Jharkhand, and Karnataka High Courts, notified on September 21, 2026, fills some of these gaps. High Court judges are appointed through the collegium system, formalised through the Supreme Court's Second and Third Judges Cases (1993 and 1998), where a collegium of senior judges recommends candidates that the government then formally confirms, a process often taking many months from recommendation to confirmation. High Courts exercise writ jurisdiction under Article 226 of the Constitution, broader in some respects than the Supreme Court's own Article 32 jurisdiction, making unfilled positions costly: important constitutional and appellate cases take longer to resolve, disproportionately harming less wealthy litigants who cannot sustain years of costly litigation.

Key Terms:

Term	Definition
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High Court Vacancy Rate	India's 25 High Courts have combined sanctioned strength of 1,114 judges; vacancy rates have run 30-40% in recent years.
Collegium System	Judicial appointment mechanism formalised via the Second (1993) and Third (1998) Judges Cases; senior judges recommend, government confirms.
Article 226 vs Article 32	Article 226 gives High Courts writ jurisdiction broader in scope than the Supreme Court's Article 32 jurisdiction for fundamental rights.
National Judicial Appointments Commission (NJAC)	2014 constitutional amendment to replace the collegium with a broader appointment body; struck down by the Supreme Court in 2015 as unconstitutional.
Memorandum of Procedure (MoP)	The document governing the detailed process of judicial appointments between the collegium and the government, a recurring point of friction.
Case Pendency	India's courts collectively carry a backlog exceeding 5 crore pending cases (2026) across all levels, a central access-to-justice challenge.
Fast Track Courts / Lok Adalats	Alternative mechanisms (special courts, informal dispute resolution forums) used alongside judicial appointments to reduce case backlog.
Doctrine of Basic Structure	Constitutional principle (Kesavananda Bharati, 1973) that certain features, including judicial independence, cannot be amended away by Parliament – relevant background to the NJAC judgment.



Important Points for UPSC:

- GS2 Governance: Collegium system (1993, 1998 Judges Cases); Article 226 vs 32.
- GS3 Social: 5+ crore pending cases nationally; 30-40% High Court vacancy rates.
- Prelims: 14 judges appointed Sept 21, 2026 (Delhi, J&K-Ladakh, Jharkhand, Karnataka); 25 High Courts, sanctioned strength 1,114.

BHARAT TAXI SERVICE LAUNCH (UP)

Ministry: *Ministry of Cooperation* | **PIB Date:** *23 September 2026*

Easy Explanation

Private ride-hailing apps transformed mobility in India's largest cities, but their venture-capital-backed model, expanding aggressively wherever profit potential is greatest, has left smaller cities with limited or inconsistent service, and generated recurring disputes over driver commissions, which platforms like Uber and Ola have historically charged at 20-30% per ride. Bharat Taxi, launched on September 23, 2026 across five Uttar Pradesh cities – Lucknow, Gorakhpur, Varanasi, Kanpur, and Prayagraj – under the Ministry of Cooperation's push for cooperative-sector alternatives (the same ministry, created in 2021, that also promotes cooperative models in dairy through Amul-style federations), addresses both gaps through a fundamentally different ownership structure: a cooperative where driver-members hold a direct stake and reportedly retain a higher share of fare revenue than under commercial aggregator commission structures, keeping more value within the local economy. This is a genuinely interesting institutional experiment, but real challenges remain: building reliable app technology and dispatch systems requires sustained investment that cooperative structures find harder to raise than venture-capital-backed rivals willing to absorb years of losses to achieve scale. Bharat Taxi's success will depend on matching established service reliability while genuinely delivering better driver outcomes, a real test of whether the cooperative model works in practice, not just in concept.

Key Terms:

Term	Definition
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Bharat Taxi	Cooperative ride-hailing service launched Sept 23, 2026 in 5 UP cities (Lucknow, Gorakhpur, Varanasi, Kanpur, Prayagraj) under Ministry of Cooperation.
Ministry of Cooperation	Created in 2021, promotes cooperative-sector models across dairy, credit, and now urban mobility (Bharat Taxi).
Aggregator Commission Structure	Private platforms like Uber/Ola typically charge 20-30% commission per ride; Bharat Taxi's cooperative model aims for a higher driver share.
Sahakar Se Samridhhi	Ministry of Cooperation's slogan/vision ('Prosperity through Cooperation') framing cooperative-model expansion across new sectors including mobility.
Gig Economy Worker Rights	Ongoing policy debate over social security and job security for platform-based workers (drivers, delivery workers), addressed partly by the Code on Social Security, 2020.
Multi-State Cooperative Societies Act	Legal framework under which cooperative ventures spanning multiple states, potentially including Bharat Taxi's future expansion, would be registered.
Amul Model	India's most successful cooperative federation (dairy), often cited as the template the Ministry of Cooperation seeks to replicate in other sectors.

Important Points for UPSC:

- GS3 Economy: Cooperative vs. VC-backed mobility models; driver commission economics.
- GS2 Governance: Ministry of Cooperation (2021) and its sectoral expansion.
- Prelims: Bharat Taxi launched Sept 23, 2026; 5 UP cities; Ministry of Cooperation created 2021.



KANDA EXPRESS AND FOOD SECURITY

Ministry: Ministry of Consumer Affairs | PIB Date: 23 September 2026

Easy Explanation

Onion prices in India swing unusually sharply within a season, since production is concentrated in a few states – Maharashtra alone accounts for over 40% of national output – and a modest shortfall from unseasonal rain, combined with onions' poor storability, can send retail prices spiking from roughly ₹20-30/kg to over ₹80-100/kg within weeks. To manage this, NAFED and NCCF jointly maintain a strategic buffer stock, currently targeted at around 5 lakh tonnes annually, procured during the Rabi harvest glut and released during shortage periods to increase supply and moderate prices. The Kanda Express, a special train deployed on September 23-24, 2026 to carry buffer-stock onions to Kolkata, ensures the reserve reaches deficit markets in West Bengal rather than sitting in storage in producing states like Maharashtra and Madhya Pradesh. A complete picture registers real limitations: onions typically suffer storage losses of 20-30% due to sprouting and rot even under improved storage conditions, meaning a meaningful share of the buffer never reaches consumers, and release timing has at times been criticised as reactive, responding only once prices have already spiked, rather than proactively calibrated using better production forecasting.

Key Terms:

Term	Definition
NAFED / NCCF	National Agricultural Cooperative Marketing Federation and National Cooperative Consumers' Federation; jointly manage India's onion buffer stock (~5 lakh tonnes).
Onion Buffer Stock	~5 lakh tonnes procured during Rabi harvest glut, released during shortages; suffers 20-30% storage losses from sprouting/rot.



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Maharashtra's Onion Share	Maharashtra accounts for over 40% of India's onion production, making national supply vulnerable to state-specific weather shocks.
Minimum Support Price (MSP)	Government-guaranteed price floor for select crops; onion is notably NOT under MSP, making it more price-volatile than MSP-covered staples like wheat and rice.
Essential Commodities Act, 1955	Law empowering government to regulate production, supply, and stocking of essential goods like onions to prevent hoarding-driven price spikes.
Export Ban/Duty on Onions	Periodic trade restriction tool India uses (alongside buffer stock release) to prioritise domestic supply during price spikes, though it hurts farmer export earnings.
Consumer Price Index (CPI) - Food Inflation	Onion price spikes are a recurring, high-visibility component of India's food inflation, often disproportionately affecting headline CPI readings.

Important Points for UPSC:

- GS2 Policy: NAFED/NCCF buffer stock mechanism; price stabilisation vs. price controls.
- GS3 Economy: Maharashtra's 40%+ output share; 20-30% storage losses.
- Prelims: Kanda Express to Kolkata, Sept 23-24, 2026; buffer target ~5 lakh tonnes; Maharashtra >40% of production.

WORLDSKILLS SHANGHAI 2026 (INDIA'S CONTINGENT)

Ministry: *Ministry of Skill Development* | PIB Date: *24 September 2026*

Easy Explanation



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WorldSkills, often called the Olympics of vocational skills, is a biennial competition first held in 1950 and now involving over 85 member countries and regions, where young competitors under 25 (in most trades) compete across more than 60 skill categories, judged against rigorous international benchmarks. India, a WorldSkills member since 2011, sent its largest-ever contingent, over 60 competitors (India's team size, not to be confused with the total global competitor count of several thousand across all countries), to Shanghai 2026. At the previous edition in Lyon 2024, India won a total of 8 medals including 1 gold, its best-ever performance, and Shanghai 2026 was seen as a test of whether that improvement could be sustained. This matters for two reasons: first, it functions as an externally validated quality check on domestic vocational training, run in India through the National Skill Development Corporation (NSDC), established in 2009; second, it addresses a deep cultural bias, since India's education culture has long valued academic degrees over vocational trades, even while facing a shortage of skilled tradespeople alongside significant graduate unemployment, a genuine mismatch that public recognition of competition success can help gradually shift.

Key Terms:

Term	Definition
WorldSkills Competition	Biennial global vocational skills competition, first held 1950; 85+ member countries; India a member since 2011.
India's Lyon 2024 Performance	India's best-ever WorldSkills result: 8 medals including 1 gold at the 2024 Lyon edition, the benchmark for Shanghai 2026.
NSDC	National Skill Development Corporation, established 2009, the nodal body coordinating India's vocational training ecosystem and WorldSkills participation.
Sector Skill Councils (SSCs)	Industry-led bodies setting occupational standards for specific sectors, feeding into the National Skills Qualification Framework used to prepare WorldSkills competitors.



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National Skills Qualification Framework (NSQF)	India's framework grading vocational qualifications by skill level (1-10), enabling equivalence between vocational and academic credentials.
Vocational Education and Training (VET)	Broad global category of skills-based education, of which WorldSkills represents the international competitive benchmark for quality assessment.
Skill India Digital Hub	Government's unified digital platform for skilling, apprenticeship, and job-matching, part of the broader ecosystem supporting India's WorldSkills preparation pipeline.

Important Points for UPSC:

- GS3 Education: NSDC (2009); India's WorldSkills membership since 2011.
- GS2 Governance: Vocational vs. academic prestige gap in India's labour market.
- Prelims: WorldSkills first held 1950; India member since 2011; Lyon 2024 best-ever 8 medals/1 gold; Shanghai 2026 India's largest contingent.

AROGYA MANTHAN 2026 (HEALTH SCHEMES REVIEW)

Ministry: *Ministry of Health* | PIB Date: *25 September 2026*

Easy Explanation

Arogya Manthan 2026, held on September 25, marked two significant anniversaries: eight years of Ayushman Bharat PM-JAY, launched September 23, 2018, and five years of the Ayushman Bharat Digital Mission (ABDM), launched September 27, 2021. PM-JAY addresses the financial dimension of healthcare access, providing hospitalisation coverage of up to ₹5 lakh per family per year to over 12 crore poor and vulnerable families (roughly 55 crore individuals), covering more than 27 crore Ayushman cards issued and over 8 crore hospital admissions authorised since launch, targeting the catastrophic health expenditure that historically pushed families into poverty. ABDM tackles the



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fragmentation of healthcare data through unique Ayushman Bharat Health Account (ABHA) IDs, with over 75 crore ABHA IDs created by 2026, enabling health records to be shared, with consent, across participating hospitals and clinics, reducing repeated diagnostic tests and improving care continuity. Together these represent financial protection and information infrastructure as complementary pillars, though PM-JAY's insurance coverage matters little in districts where adequate hospitals and specialists are simply not physically available, a persistent rural infrastructure gap that insurance alone cannot solve.

Key Terms:

Term	Definition
Ayushman Bharat PM-JAY	Launched Sept 23, 2018; covers 12+ crore families (~55 crore people); ₹5 lakh/family/year; 27+ crore cards issued, 8+ crore admissions authorised.
ABDM / ABHA	Ayushman Bharat Digital Mission launched Sept 27, 2021; Ayushman Bharat Health Account IDs, 75+ crore created by 2026.
Catastrophic Health Expenditure	Out-of-pocket medical costs severe enough to push a household into poverty; PM-JAY's core target problem.
Health and Wellness Centres (Ayushman Arogya Mandir)	Primary healthcare infrastructure component of Ayushman Bharat, complementing PM-JAY's hospitalisation-insurance focus with preventive and primary care.
Out-of-Pocket Expenditure (OOPE)	Share of healthcare costs paid directly by patients rather than insurance or government; India's OOPE, while declining, remains high compared to global peers.



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Universal Health Coverage (UHC)	WHO-defined goal of all people accessing needed health services without financial hardship; PM-JAY and ABDM are India's twin pillars toward this target.
National Health Policy, 2017	India's overarching health policy document that set the vision culminating in Ayushman Bharat's twin PM-JAY and health-infrastructure components.
e-Sanjeevani	India's national telemedicine platform, another ABDM-linked digital health initiative expanding remote consultation access, especially in rural areas.

Important Points for UPSC:

- GS2 Health: PM-JAY (2018, 55 crore beneficiaries); ABDM/ABHA (2021, 75+ crore IDs).
- GS3 Technology: ABHA as health data interoperability infrastructure.
- Prelims: PM-JAY launched Sept 23, 2018; ABDM launched Sept 27, 2021; 27+ crore Ayushman cards; 75+ crore ABHA IDs by 2026.

INDIA-NETHERLANDS WATER PARTNERSHIP (IIWW 2026)

Ministry: *Ministry of Jal Shakti* | PIB Date: *22 September 2026*

Easy Explanation

India's water challenges are severe: the Central Ground Water Board classifies over 1,000 of India's roughly 7,000 groundwater assessment units as 'over-exploited' or 'critical', concentrated heavily in Punjab, Haryana, and parts of Rajasthan and Tamil Nadu, from decades of unsustainable extraction, chiefly for water-intensive paddy cultivation. The Netherlands, despite covering just 41,500 sq km with roughly 26% of its land below sea level, is globally recognised in water management, having developed sophisticated flood control and water-efficiency expertise through its Delta Works programme over the past 70 years. The India-Netherlands partnership, formalised during India



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International Water Week 2026 (September 22-24, held annually since 2015), brings this expertise to India's precision-farming and flood-management needs, building on an existing bilateral Memorandum of Understanding on water management first signed in 2014. A complete picture must recognise an important limitation: much of India's groundwater crisis stems from domestic policy choices, especially the near-free electricity for agricultural pumping in states like Punjab, which removes any disincentive against excessive extraction, a problem no amount of imported Dutch technical expertise can resolve, since it requires India's own difficult domestic subsidy and crop-pricing reform.

Key Terms:

Term	Definition
Over-exploited Groundwater Units	Central Ground Water Board classifies 1,000+ of India's ~7,000 assessment units as over-exploited/critical, concentrated in Punjab, Haryana, Rajasthan, Tamil Nadu.
Delta Works	The Netherlands' flood-control infrastructure programme developed over 70 years, the source of its globally recognised water-management expertise.
India International Water Week	Annual event held since 2015; 2026 edition Sept 22-24 formalised the India-Netherlands water partnership, building on a 2014 bilateral MoU.
Atal Bhujal Yojana	World Bank-supported central scheme (2020) for community-led sustainable groundwater management in over-exploited states like Punjab and Haryana.
Jal Jeevan Mission	Flagship scheme (2019) aiming for functional household tap water connections nationwide, India's largest current water-sector programme.



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Per Drop More Crop	Component of Pradhan Mantri Krishi Sinchayee Yojana promoting micro-irrigation (drip/sprinkler) to improve agricultural water-use efficiency.
Central Ground Water Board (CGWB)	National body under Ministry of Jal Shakti that monitors and classifies groundwater status across India's assessment units.
Interlinking of Rivers	Long-debated national proposal to transfer water from surplus to deficit river basins, a structural (though contested) approach to India's uneven water distribution.

Important Points for UPSC:

- GS3 Water: 1,000+ over-exploited groundwater units (CGWB); Punjab's free agricultural power as a root cause.
- GS2 IR: India-Netherlands water MoU (2014); Delta Works as a global benchmark.
- Prelims: IIWW since 2015; 2026 edition Sept 22-24; CGWB flags 1,000+ over-exploited units of ~7,000 total.

SPECIAL CAMPAIGN 6.0 (ADMINISTRATIVE EFFICIENCY)

Ministry: *Department of Admin Reforms* | PIB Date: *19 September 2026*

Easy Explanation

Government offices tend to accumulate operational inefficiency over time: files and pending cases pile up, obsolete electronics sit unused, and physical spaces become cluttered. Special Campaign, run annually by DARPG (Department of Administrative Reforms and Public Grievances) since its first edition in 2021, reached its 6.0 iteration in 2026, running for a fixed multi-week window (previous editions ran roughly 2-4 weeks) with every ministry and department expected to clear a specified backlog of pending cases and public grievances, dispose of accumulated e-waste through certified recyclers, and free up office space, with the 2023 edition (Special Campaign 3.0) alone reportedly generating revenue of over ₹370 crore from scrap and e-waste disposal and freeing over 900 lakh



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square feet of office space nationally. These figures illustrate real, measurable outcomes: faster case resolution benefits citizens waiting years for decisions, and certified e-waste disposal prevents toxic materials like lead and mercury from contaminating soil and groundwater. The genuine limitation, borne out by the fact that a 6th edition is still needed, is that without addressing underlying causes like inadequate staffing or outdated procedures, backlogs risk re-accumulating once each intensive campaign period ends.

Key Terms:

Term	Definition
Special Campaign (DARPG)	Annual administrative efficiency drive since 2021; 6.0 edition in 2026; each runs 2-4 weeks targeting pendency, e-waste, and office space.
Special Campaign 3.0 Outcomes (2023)	Reportedly generated over ₹370 crore in scrap/e-waste disposal revenue and freed over 900 lakh sq ft of office space nationally.
DARPG	Department of Administrative Reforms and Public Grievances, the nodal body running Special Campaign editions since 2021.
CPGRAMS	Centralised Public Grievance Redress and Monitoring System, the digital platform DARPG uses to track and resolve citizen grievances, central to Special Campaign targets.
e-Waste (Management) Rules, 2022	Regulatory framework governing certified disposal/recycling of electronic waste, which Special Campaign editions require government offices to comply with.



Minimum Government, Maximum Governance	Governing philosophy emphasising administrative efficiency and reduced red tape, the broader conceptual umbrella under which Special Campaign sits.
Sevottam Framework	Quality-management framework for public service delivery in government offices, conceptually linked to administrative-efficiency drives like Special Campaign.

Important Points for UPSC:

- GS2 Governance: DARPG; Special Campaign as a recurring (2021 onward) time-bound reform tool.
- GS3 Environment: Certified e-waste disposal; 2023 edition generated ₹370+ crore, freed 900+ lakh sq ft.
- Prelims: Special Campaign 6.0, 2026; DARPG; first edition 2021; Campaign 3.0 (2023) generated ₹370+ crore.

NEW TRAIN SERVICES EXPANSION

Ministry: Ministry of Railways | PIB Date: 25 September 2026

Easy Explanation

Indian Railways, which runs roughly 68,000 route kilometres and carries over 2.4 crore passengers daily, approved three new services on September 25, 2026, each addressing a distinct gap: a daily Kanpur-Anand Vihar service, a tri-weekly Bhuj-Barauni service spanning roughly 2,000 km from Gujarat to Bihar, and a Jhansi-Mathura extension of the existing Virangana Lakshmibai Express, adding roughly 200 km to serve pilgrim traffic to Mathura, one of India's most-visited religious destinations with several crore annual visitors. Adding services onto existing track and stations is comparatively fast and inexpensive compared to major new infrastructure like the Dedicated Freight Corridors (roughly ₹1.2 lakh crore total investment) or high-speed rail projects, which require years and massive capital, allowing the railway system to respond nimbly to specific identified gaps without waiting for new construction. Railways remain especially important for less affluent Indians given ticket prices a fraction of air travel, meaning such connectivity improvements disproportionately benefit the



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population segment least able to afford alternatives, consistent with Railways' historical role as India's primary mass-transit backbone.

Key Terms:

Term	Definition
Indian Railways Scale	Runs ~68,000 route kilometres, carries over 2.4 crore passengers daily; new services approved Sept 25, 2026.
Bhuj-Barauni Route	Tri-weekly service spanning ~2,000 km connecting Gujarat to Bihar, one of three new services approved.
Mathura Pilgrim Traffic	One of India's most-visited religious destinations, several crore annual visitors; served by the new Jhansi-Mathura rail extension.
Dedicated Freight Corridor (DFC)	India's ~2,800 km network of freight-only rail lines (Eastern and Western DFC), ~₹1.2 lakh crore investment, separating freight from passenger traffic to boost speed and capacity.
Amrit Bharat Station Scheme	Railway station redevelopment programme upgrading over 1,300 stations nationwide with modern passenger amenities, running alongside new-service expansions.
National Rail Plan 2030	Long-term Indian Railways vision document targeting modal-share increase for rail freight and capacity augmentation across the network.
Zonal Railway System	Indian Railways' administrative division into 17+ zones (e.g., South Central Railway, Northern Railway), each responsible for operations within its territory including new service approvals.



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Important Points for UPSC:

- GS3 Infrastructure: Indian Railways scale (68,000 RKM, 2.4 crore daily passengers); Dedicated Freight Corridors (~₹1.2 lakh crore).
- GS2 Regional Development: Pilgrimage-linked connectivity; affordability for lower-income travellers.
- Prelims: 3 services approved Sept 25, 2026: Kanpur-Anand Vihar (daily), Bhuj-Barauni (tri-weekly, ~2,000 km), Jhansi-Mathura extension.

AGNIKUL COSMOS RDI SUPPORT (REUSABLE LAUNCH VEHICLE)

Ministry: *Ministry of Science* | PIB Date: *25 September 2026*

Easy Explanation

Rockets have traditionally been single-use: a rocket costing several hundred crore rupees is built, launched once, and discarded, comparable to scrapping an airplane after one flight. A reusable launch vehicle instead flies, lands, is refurbished, and flies again, spreading its high cost across many missions – the innovation pioneered by SpaceX with its Falcon 9, which has completed over 300 successful booster landings and dramatically cut global satellite-launch costs. Agnikul Cosmos, a Chennai-based private space start-up incubated at IIT Madras and founded in 2017, is developing Agnibaan, a small-satellite launch vehicle notable for its 3D-printed, single-piece semi-cryogenic engine called Agnilet, and has now received a ₹200 crore grant from India's Technology Development Board on September 25, 2026, to advance the reusable variant. This reflects the changing structure of India's space sector: after the 2020 space-sector reforms that ended ISRO's near-monopoly and created IN-SPACe as the private-sector regulator, government funding of this kind signals recognition that private ventures need patient capital to survive the long development period before commercial viability. Achieving reliable reusability remains an extraordinarily difficult engineering challenge even for far more experienced companies, meaning India's private space sector, while making genuine progress, remains at a comparatively early stage.

Key Terms:



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Term	Definition
Agnikul Cosmos	Chennai-based, IIT Madras-incubated space start-up, founded 2017; developing Agnibaan rocket with 3D-printed Agnilet engine.
IN-SPACe	Indian National Space Promotion and Authorisation Centre, created after 2020 space-sector reforms ending ISRO's near-monopoly, regulating private space activity.
SpaceX Falcon 9 Benchmark	International reference for reusability, having completed 300+ successful booster landings, the model Agnikul's reusable Agnibaan aims to emulate.
NewSpace India Limited (NSIL)	ISRO's commercial arm, marketing launch services and technology transfer, working alongside IN-SPACe to support India's private space sector.
Semi-Cryogenic Engine	Rocket engine type (like Agnikul's Agnilet) using a combination of refined kerosene and liquid oxygen, offering a balance of performance and simpler handling versus fully cryogenic engines.
Small Satellite Launch Vehicle (SSLV)	ISRO's own compact rocket for small-satellite launches, the government counterpart to private ventures like Agnikul competing in the same market segment.
Technology Development Board (TDB)	Statutory body under the Department of Science and Technology providing financial support (like the ₹200 crore Agnikul grant) for commercialising indigenous technology.

Important Points for UPSC:

- GS3 Science: 2020 space reforms; IN-SPACe; Agnikul (2017, IIT Madras).



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- GS2 Strategic Autonomy: India's private space sector vs. established players like SpaceX.
- Prelims: Agnikul Cosmos founded 2017; ₹200 crore TDB grant Sept 25, 2026; Agnibaan engine called Agnilet.

BRICS HEADS OF TAX AUTHORITIES MEETING

Ministry: *Ministry of Finance* | PIB Date: *23 September 2026*

Easy Explanation

Large multinational companies operating across many countries can deliberately structure profits so income is booked wherever tax rates are lowest, a practice called base erosion and profit shifting (BEPS), a term and framework developed by the OECD from 2013 onward, which deprives countries of revenue their real economic activity would otherwise generate. The BRICS Heads of Tax Authorities meeting, hosted by India in New Delhi on September 23, 2026 and inaugurated by Finance Minister Nirmala Sitharaman, brought together officials from the now 10-member BRICS bloc (Brazil, Russia, India, China, South Africa, plus Egypt, Ethiopia, Iran, UAE, and Saudi Arabia's observer status following the 2024 expansion) to coordinate enforcement, sharing information on multinational corporate structures and exploring consistent rules for taxing digital-economy transactions. BRICS nations collectively account for over 35% of global GDP in purchasing-power-parity terms and over 45% of the world's population, giving coordination real weight. The important limitation is that avoidance strategies typically exploit differences across the entire global tax system, so coordination limited to BRICS members cannot fully close loopholes routing through non-BRICS low-tax jurisdictions, meaning this functions as a valuable complementary layer to the OECD's global framework rather than a standalone solution.

Key Terms:

Term	Definition
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BEPS	Base Erosion and Profit Shifting; OECD framework developed from 2013 to counter multinational tax avoidance strategies.
BRICS (Expanded)	10-member bloc since 2024 expansion: original Brazil, Russia, India, China, South Africa, plus Egypt, Ethiopia, Iran, UAE, Saudi Arabia (observer).
BRICS Economic Weight	Collectively over 35% of global GDP (PPP terms) and over 45% of world population, the basis for its coordinated bargaining weight.
Global Minimum Corporate Tax	OECD-brokered 2021 agreement (~140 countries) for a 15% minimum corporate tax rate, aimed at curbing profit-shifting to tax havens.
New Development Bank (NDB)	BRICS' own multilateral development bank (est. 2014, HQ Shanghai), the bloc's main existing institutional counterpart to World Bank/IMF, relevant context for its tax coordination ambitions.
Double Taxation Avoidance Agreement (DTAA)	Bilateral treaties preventing the same income from being taxed twice across two countries; a related but distinct tool from multilateral BEPS-style coordination.
Equalisation Levy	India's own digital tax measure (introduced 2016, expanded 2020) targeting foreign digital companies, illustrating unilateral steps predating multilateral BRICS coordination.

Important Points for UPSC:

- GS2 IR: BRICS expansion (2024, 10 members); India's hosting role.
- GS3 Economy: BEPS (OECD, 2013); BRICS >35% global GDP (PPP).
- Prelims: BRICS Tax meeting, New Delhi, Sept 23, 2026; FM Sitharaman inaugurated; BRICS 10 members since 2024.



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UPASI TEA RESEARCH CENTENARY CONFERENCE

Ministry: *Ministry of Agriculture* | PIB Date: *21 September 2026*

Easy Explanation

UPASI, founded in 1893 in Coonoor, Tamil Nadu (marking not exactly a 100-year but a landmark anniversary conference of its Tea Research Foundation, itself established in 1926, making 2026 that Foundation's own centenary), is the primary body representing tea, and to a lesser extent coffee and rubber, planters across Tamil Nadu, Kerala, and Karnataka's Nilgiris, Wayanad, and Coorg growing regions. Its Tea Research Foundation conference, held September 21, 2026, paired this century of institutional research with discussion of serious modern challenges: South Indian tea, primarily CTC (crush-tear-curl) grade, has seen production plateau around 220-230 million kg annually over the past decade even as climate change brings erratic monsoons and rising temperatures that threaten both yield and the flavour quality determining export pricing. Meanwhile, global demand has shifted toward organic, sustainable, traceable products, a real opportunity for premium pricing, but organic transition typically takes 3 years of certification lag during which yields can dip 15-20%, creating income pressure precisely while farmers invest in this shift. This matters beyond plantation owners, since South India's tea sector employs over 2 million people, mostly women plantation workers, making continued research support a matter of real livelihood significance.

Key Terms:

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Term	Definition
UPASI	United Planters' Association of Southern India, founded 1893, Coonoor, Tamil Nadu; represents tea, coffee, rubber growers.
Tea Research Foundation	UPASI's research arm, established 1926, marking its own centenary in 2026, the occasion for the recent conference.



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South India Tea Production	Primarily CTC-grade tea; production plateaued around 220-230 million kg/year over the past decade; organic transition causes 15-20% yield dip over ~3 years.
Tea Board of India	Statutory body under Ministry of Commerce regulating India's tea industry – production, export promotion, and quality standards – alongside private bodies like UPASI.
Geographical Indication (GI) Tag	Legal protection for region-specific products like Darjeeling Tea and Nilgiri Tea, a premium-positioning tool relevant to UPASI's export strategy discussions.
CTC vs Orthodox Tea	CTC (crush-tear-curl) is the bulk, stronger tea common in South India; Orthodox tea (whole-leaf) commands higher export prices, a key sectoral distinction.
Plantation Labour Act, 1951	Law governing welfare conditions for plantation workers, relevant given the tea sector's 2+ million-strong, majority-women workforce in South India.

Important Points for UPSC:

- GS3 Agriculture: UPASI (1893); Tea Research Foundation centenary (1926-2026); organic transition yield trade-offs.
- GS2 Regional: 2+ million tea sector jobs, mostly women plantation workers, in South India.
- Prelims: UPASI founded 1893, Coonoor; Tea Research Foundation established 1926 (centenary 2026); South India output ~220-230 million kg/year.

CCI COMPETITION LAW APPROVALS

Ministry: *Ministry of Corporate Affairs* | PIB Date: *23 September 2026*

Easy Explanation



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When one company buys another, consolidation can be healthy, enabling scale efficiencies, but can also create dominance so extreme that a firm faces little real competition. CCI, established under the Competition Act, 2002 and operational since 2009, reviews mergers exceeding specified asset or turnover thresholds – currently a combined asset value above ₹2,000 crore or turnover above ₹6,000 crore in India, thresholds revised in 2024 to also capture large 'deal value' transactions above ₹2,000 crore even without meeting the older asset test, a change specifically aimed at catching digital-economy acquisitions that might otherwise evade scrutiny under traditional metrics. The recent approvals of L'Oreal's acquisition of Onesto Labs (cosmetics) and an IIFL Capital Services transaction (financial services), both cleared within CCI's standard Phase I review period of 30 working days, show this system functioning as intended: rapid clearance for transactions posing no significant concentration risk. This regulatory efficiency matters for India's investment climate, since businesses need confidence that approval processes are fast and predictable; CCI's Phase I clearance rate for the vast majority of notified combinations, with only a small fraction requiring the more detailed Phase II investigation, reflects a system genuinely calibrated to distinguish routine consolidation from the rarer cases warranting deeper scrutiny.

Key Terms:

Term	Definition
CCI	Competition Commission of India, established under Competition Act 2002, operational since 2009.
Merger Notification Thresholds	Combined assets above ₹2,000 crore or turnover above ₹6,000 crore in India; 2024 revision added a 'deal value' threshold of ₹2,000 crore for digital deals.
Phase I / Phase II Review	CCI's standard 30-working-day Phase I review clears most mergers; only a small fraction require deeper Phase II investigation.



Abuse of Dominant Position	A separate CCI enforcement category (distinct from merger review) targeting anti-competitive conduct by already-dominant firms, such as predatory pricing.
Cartelisation	Illegal coordination between competing firms to fix prices or limit output; another core area of CCI enforcement beyond merger scrutiny.
Competition Act, 2002	Replaced the older MRTP Act, 1969; India's modern competition law framework establishing CCI and its merger-review, cartel, and dominance provisions.
Digital Markets and Competition	Emerging global regulatory focus (mirrored in CCI's 2024 threshold reform) on ensuring traditional merger tests adequately capture tech/platform acquisitions.

Important Points for UPSC:

- GS2 Governance: CCI (2002 Act, operational 2009); 2024 deal-value threshold reform.
- GS3 Economy: Phase I (30 days) vs Phase II review; digital-economy merger scrutiny.
- Prelims: CCI established 2009 under 2002 Act; thresholds ₹2,000 cr assets/₹6,000 cr turnover; 2024 deal-value test added.

PIB BACKGROUNDEERS AND SPECIAL TOPICS

Ministry: *Press Information Bureau* | PIB Date: *19-25 September 2026*

Easy Explanation

Alongside routine press releases, PIB periodically publishes longer backgrounders providing depth a brief announcement cannot capture. This week's eleven backgrounders covered a twelve-year progress review of Make in India (launched September 25, 2014, meaning this review coincided almost exactly with its 12th anniversary), noting the manufacturing sector's contribution to GVA has actually stayed



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roughly flat around 17% over this period despite the initiative's original 25%-of-GDP target for 2022, alongside an explanation of the National Single Window System (launched 2021, now integrating over 30 central departments and 26 states for investment approvals), further detail on DDU-GKY 2.0 implementation, and coverage of newer platforms like Waves OTT and India Cine Hub. The genuine value of these documents lies in bridging the gap between a policy's headline announcement and the fuller reality of its implementation and measurable progress, useful for understanding not just that a scheme exists but what it has actually achieved. A complete and critical understanding, however, requires recognising that since these documents are written by the government implementing the schemes they describe, they naturally emphasise achievements, such as the Single Window System's integration numbers, over shortfalls like Make in India's missed manufacturing-GDP target, meaning backgrounders are best read alongside independent analysis for a fully balanced picture.

Key Terms:

Term	Definition
Make in India	Launched Sept 25, 2014; original target of manufacturing reaching 25% of GDP by 2022; actual manufacturing GVA share has stayed roughly flat near 17%.
National Single Window System	Launched 2021; by 2026 integrates 30+ central departments and 26 states/UTs for investment approval clearances.
PIB Backgrounder	Longer-form explainer document providing context beyond routine press releases; 11 such documents released covering Week 39's major schemes.
Ease of Doing Business (EoDB)	World Bank ranking (discontinued 2021 but still referenced) that reforms like the Single Window System were designed to improve for India.



Gross Value Added (GVA)	Measure of a sector's economic contribution (output minus input costs); manufacturing GVA share is the key metric for assessing Make in India's success.
PLI Schemes (Cross-Sectoral)	Production Linked Incentive schemes now span 14 sectors (electronics, pharma, textiles, etc.), the main policy tool complementing Make in India's manufacturing push.
Invest India	National investment promotion agency, working alongside the Single Window System to facilitate both domestic and foreign investment into India.

Important Points for UPSC:

- GS2 Governance: Make in India (2014) target vs. actual outcome gap; Single Window System (2021).
- GS3 Economy: Manufacturing GVA share (~17%, target was 25% by 2022).
- Prelims: Make in India launched Sept 25, 2014; Single Window System (2021) covers 30+ departments, 26 states.

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PRACTICE QUESTIONS

20 PRELIMS QUESTIONS (Solve without looking at answers below)

Q1. Consider the following statements regarding recent employment and skilling initiatives:

1. The 20th edition of Rozgar Mela distributed over 51,000 appointment letters for Group C and D government posts.
2. DDU-GKY 2.0 targets training 70,000 rural youth beginning October 2026.
3. Both initiatives are implemented exclusively by the Ministry of Skill Development and Entrepreneurship.

How many of the above statements are correct?

- (a) Only one
- (b) Only two
- (c) All three
- (d) None

Q2. With reference to the FSSAI amendment on Paneer, consider the following statements:

1. It mandates that only products derived from cow or buffalo milk may be labelled as Paneer.
2. FSSAI functions under the Ministry of Consumer Affairs, Food and Public Distribution.
3. The amendment is primarily aimed at preventing misbranding and food adulteration.

Which of the above statements is/are correct?

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

Q3. Consider the following pairs:



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Species/Topic

Associated Fact

- | | |
|-----------------------------|--|
| 1. Greater One-Horned Rhino | – Native habitat includes Kaziranga National Park, Assam |
| 2. World Rhino Day | – Observed on September 22 |
| 3. CITES | – Regional treaty limited to South Asian nations |

How many of the above pairs are correctly matched?

- (a) Only one
- (b) Only two
- (c) All three
- (d) None

Q4. Which of the following statements about SLINEX-26 is correct?

- (a) It is a bilateral naval exercise between India and Bangladesh concluded at Kochi
- (b) It is a bilateral naval exercise between India and Sri Lanka that concluded at Visakhapatnam
- (c) It is a multilateral Quad naval exercise held in the Bay of Bengal
- (d) It is an air defence exercise between the Indian Air Force and Sri Lanka Air Force

Q5. With reference to Kavach, the indigenous train protection system, consider the following statements:

- 1. Kavach 4.0 was first commissioned on the South Central Railway's Lucknow Division.
- 2. Kavach automatically applies brakes to prevent train collisions without driver intervention.
- 3. Kavach was developed entirely by a foreign technology partner and later licensed to Indian Railways.

Which of the above statements is/are correct?

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

Q6. Consider the following statements regarding the OPEC-India Energy Dialogue:



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1. It was the 7th high-level dialogue held between India and OPEC.
2. OPEC collectively controls approximately 30% of global oil supply.
3. India imports approximately 80% of its crude oil requirements.

How many of the above statements are correct?

- (a) Only one
- (b) Only two
- (c) All three
- (d) None

Q7. With reference to the recent High Court judicial appointments, which of the following is/are correct?

1. The President appointed 14 new judges across High Courts including Delhi, Jammu & Kashmir, Ladakh, Jharkhand, and Karnataka.
2. High Court judges are appointed by the President on the recommendation of the Chief Justice of India-led collegium.
3. High Courts have no jurisdiction over constitutional matters, which are reserved exclusively for the Supreme Court.

Select the correct answer:

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

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Q8. Consider the following statements about Agnikul Cosmos' Agnibaan launch vehicle project:

1. It received a grant of ₹200 crore from the Technology Development Board.
2. Agnibaan is designed to be a fully reusable launch vehicle.
3. Agnikul Cosmos is a wholly government-owned enterprise functioning under ISRO.

How many of the above statements are correct?



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- (a) Only one
- (b) Only two
- (c) All three
- (d) None

Q9. With reference to Arogya Manthan 2026, which of the following statements is/are correct?

1. It marked 8 years of Ayushman Bharat PM-JAY and 5 years of the Ayushman Bharat Digital Mission.
2. AB PM-JAY provides hospitalisation coverage of up to ₹5 lakh per family per year.
3. ABDM creates unique digital health IDs enabling interoperable medical records across providers.

Select the correct answer:

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

Q10. The BRICS Heads of Tax Authorities meeting held in September 2026 primarily addressed which of the following?

- (a) Coordinated military exercises among BRICS naval forces
- (b) Coordination on tax enforcement and prevention of cross-border tax avoidance
- (c) A unified BRICS currency to replace the US dollar in trade settlement
- (d) Agricultural subsidy harmonisation across BRICS member states

Q11. With reference to the India-New Zealand Free Trade Agreement, consider the following statements:

1. It entered into force from October 1, 2026.
2. It covers trade in goods and services but excludes investment provisions.
3. New Zealand is among the world's leading dairy exporters, making dairy a sensitive negotiating area for India.



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Which of the above statements is/are correct?

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

Q12. Which of the following statements regarding IMEI is/are correct?

1. IMEI is a 15-digit unique identifier for mobile devices.
2. A phone's IMEI can be checked using the code *#06#.
3. Tampering with a device's IMEI is a punishable offence under the Information Technology Act.

Select the correct answer:

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

Q13. The Directorate of Revenue Intelligence (DRI) functions under which of the following?

- (a) Ministry of Home Affairs
- (b) Ministry of Finance
- (c) Ministry of Commerce and Industry
- (d) Ministry of External Affairs

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Q14. With reference to the National Land Monetisation Corporation (NLMC), consider the following statements:

1. It aims to monetise non-core government and public sector land assets.
2. It has set a target of raising approximately ₹1 lakh crore over 4 years.
3. RINL's land sale under NLMC's framework was conducted through closed-door negotiation rather than e-auction.

How many of the above statements are correct?



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- (a) Only one
- (b) Only two
- (c) All three
- (d) None

Q15. Consider the following statements about the National Green Tribunal (NGT):

1. It was established in 2010 as a specialised body for expeditious disposal of environmental cases.
2. It recently launched a mobile application enabling digital filing of environmental complaints.
3. NGT orders can only be challenged before the concerned State High Court.

Which of the above statements is/are correct?

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

Q16. 'SECO India 2026' is associated with which of the following sectors?

- (a) Semiconductor and electronics manufacturing
- (b) Space launch vehicle technology
- (c) Textile production-linked incentives
- (d) Coastal conservation and marine biodiversity

Q17. Exercise 'Nomadic Elephant', recently conducted, is a bilateral military exercise between India and:

- (a) Kazakhstan
- (b) Mongolia
- (c) Uzbekistan
- (d) Kyrgyzstan

Q18. Consider the following statements about 'Swachh Sagar Surakshit Sagar 5.0':

1. It is a coastal cleanup and ocean conservation campaign.



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2. Its recent edition mobilised about 15 lakh participants across 231 locations in 13 states/UTs.
3. It is implemented solely by the Ministry of Environment, Forest and Climate Change.

How many of the above statements are correct?

- (a) Only one
- (b) Only two
- (c) All three
- (d) None

Q19. The United Planters' Association of Southern India (UPASI), which recently celebrated its centenary, primarily represents which sector?

- (a) Coffee plantations in Karnataka only
- (b) Tea plantations in South India
- (c) Rubber cultivation in Kerala only
- (d) Spice exports from Tamil Nadu

Q20. With reference to the Competition Commission of India (CCI), which of the following statements is/are correct?

1. It reviews mergers and acquisitions to prevent harmful market concentration.
2. It functions under the Ministry of Corporate Affairs.
3. CCI approval is required for every corporate transaction irrespective of its size or market impact.

Select the correct answer:

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

4 MAINS QUESTIONS (Solve without looking at answers below)



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MAINS QUESTION 1: 150 WORDS

'India's recent policy announcements – from Rozgar Mela and DDU-GKY 2.0 to indigenous defence and space technology initiatives – reflect a dual strategy of employment generation and self-reliance. Critically examine this assertion with reference to the developments of this week.'

MAINS QUESTION 2: 250 WORDS

'From FSSAI's Paneer regulation and NGT's digital access reforms to judicial appointments and administrative Special Campaign 6.0, this week's governance announcements reveal a common thread: strengthening institutional trust through regulatory clarity, access, and accountability. Analyse this trend with suitable examples.'

MAINS QUESTION 3: 150 WORDS

'India's engagement this week – spanning the India-New Zealand FTA, the OPEC-India Energy Dialogue, and the SLINEX and Nomadic Elephant military exercises – illustrates a calibrated, multi-track approach to external engagement. Discuss.'

MAINS QUESTION 4: 250 WORDS

'Conservation initiatives such as Greater One-Horned Rhino protection and Swachh Sagar Surakshit Sagar 5.0 demonstrate India's shift toward participatory, community-anchored environmental governance. Critically evaluate this shift, highlighting both its strengths and its limitations.'

PRELIMS ANSWERS & EXPLANATIONS

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Q1. Answer: (b) Only two

Explanation: Statements 1 (51,000+ letters, Group C & D posts) and 2 (DDU-GKY 2.0, 70,000 youth from October 2026) are correct. Statement 3 is WRONG – Rozgar Mela is coordinated by the PMO with Ministry of Labour, not exclusively by MSDE, which only implements DDU-GKY.

Q2. Answer: (a) 1 and 3 only

Explanation: Statements 1 and 3 are correct – the amendment restricts the Paneer label to milk-derived products and targets misbranding/adulteration. Statement 2 is WRONG – FSSAI functions under the Ministry of Health and Family Welfare, not Consumer Affairs.

Q3. Answer: (b) Only two

Explanation: Pairs 1 (Kaziranga habitat) and 2 (World Rhino Day, September 22) are correctly matched. Pair 3 is WRONG – CITES is a global, not regional, convention regulating international wildlife trade with signatories worldwide, not limited to South Asia.

Q4. Answer: (b)

Explanation: SLINEX-26 is the bilateral naval exercise between India and Sri Lanka; the 2026 edition concluded at Visakhapatnam, not Kochi. It is bilateral, not a Quad multilateral exercise, and is a naval (not air defence) exercise.

Q5. Answer: (a) 1 and 2 only

Explanation: Statements 1 and 2 are correct – Kavach 4.0's first commissioning was on South Central Railway's Lucknow Division, and it automatically enforces braking. Statement 3 is WRONG – Kavach is an indigenously developed Automatic Train Protection system, not licensed from a foreign partner.



Q6. Answer: (c) All three

Explanation: All three statements are correct. The dialogue was the 7th such high-level engagement; OPEC controls roughly 30% of global oil supply; and India imports approximately 80% of its crude oil needs, making this dialogue significant for India's energy security.

Q7. Answer: (a) 1 and 2 only

Explanation: Statements 1 and 2 are correct – 14 judges were appointed across the named High Courts, following the collegium-recommendation process. Statement 3 is WRONG – High Courts do exercise constitutional jurisdiction, including writ powers under Article 226, concurrently with the Supreme Court.

Q8. Answer: (b) Only two

Explanation: Statements 1 (₹200 crore TDB grant) and 2 (fully reusable Agnibaan) are correct. Statement 3 is WRONG – Agnikul Cosmos is a private space start-up, not a government-owned ISRO entity; it received government funding support but operates independently.

Q9. Answer: (d) 1, 2 and 3

Explanation: All three statements are correct. Arogya Manthan 2026 reviewed 8 years of PM-JAY and 5 years of ABDM; PM-JAY provides ₹5 lakh annual hospitalisation cover per family; and ABDM's digital health IDs enable record interoperability across healthcare providers.

Q10. Answer: (b)

Explanation: The BRICS Heads of Tax Authorities meeting, inaugurated by the Union Finance Minister, focused on coordinating tax enforcement and countering cross-border tax avoidance by multinational entities – not military, currency, or agricultural matters.

Q11. Answer: (a) 1 and 3 only

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Explanation: Statements 1 and 3 are correct – the FTA entered into force October 1, 2026, and New Zealand's efficient dairy sector makes dairy a sensitive area for India. Statement 2 is WRONG – the FTA is comprehensive, covering goods, services, AND investment, not excluding investment.

Q12. Answer: (d) 1, 2 and 3

Explanation: All three statements are correct. IMEI is indeed a 15-digit identifier, checkable via *#06#, and tampering with it is a punishable cyber offence under the IT Act, as highlighted in DoT's awareness campaign.

Q13. Answer: (b)

Explanation: The Directorate of Revenue Intelligence (DRI) is the apex anti-smuggling intelligence agency functioning under the Ministry of Finance (Department of Revenue), not Home Affairs, Commerce, or External Affairs.

Q14. Answer: (b) Only two

Explanation: Statements 1 and 2 are correct – NLMC targets non-core land monetisation worth roughly ₹1 lakh crore over 4 years. Statement 3 is WRONG – RINL's land sale was conducted through a transparent e-auction process, not closed-door negotiation, which is precisely NLMC's governance safeguard.

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Q15. Answer: (a) 1 and 2 only

Explanation: Statements 1 and 2 are correct – NGT was established in 2010 and recently launched its mobile app for digital case filing. Statement 3 is WRONG – NGT orders can be appealed before the Supreme Court of India, not merely the State High Court.

Q16. Answer: (a)



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Explanation: SECO India 2026 (Semiconductor Electronics Conclave) is associated with India's semiconductor and electronics manufacturing ecosystem, showcasing indigenous chip design and PLI-driven manufacturing progress.

Q17. Answer: (b)

Explanation: Exercise Nomadic Elephant is the bilateral military exercise between India and Mongolia, reflecting India's expanding strategic engagement in Central Asia beyond its immediate neighbourhood.

Q18. Answer: (b) Only two

Explanation: Statements 1 and 2 are correct – it is indeed a coastal cleanup campaign that mobilised roughly 15 lakh participants across 231 locations in 13 states/UTs. Statement 3 is WRONG – such campaigns typically involve multiple ministries and agencies, not the Environment Ministry alone.

Q19. Answer: (b)

Explanation: UPASI (United Planters' Association of Southern India) primarily represents the tea plantation sector across Tamil Nadu, Kerala, and Karnataka, though it also has some association with coffee and rubber; tea remains its principal historical focus, evidenced by its Tea Research Foundation.

Q20. Answer: (a) 1 and 2 only

Explanation: Statements 1 and 2 are correct – CCI reviews mergers for competitive impact and functions under the Ministry of Corporate Affairs. Statement 3 is WRONG – CCI approval (mandatory notification) is required only for transactions crossing specified asset/turnover thresholds, not every transaction.

MAINS MODEL ANSWERS



MAINS Q1 – Model Answer (150 words):

This week's announcements reveal a coordinated employment-cum-self-reliance strategy. Rozgar Mela's 51,000+ direct government appointments and DDU-GKY 2.0's targeting of 70,000 rural youth address unemployment through both immediate public-sector absorption and market-oriented skilling – a dual approach spanning formal and informal workforce segments.

Simultaneously, indigenous defence manufacturing (Satellite Smart Anti-Airfield Weapons, quantum computing infrastructure via DRDO) and space technology (Agnikul Cosmos' reusable launch vehicle) reduce import dependency while creating high-skill domestic employment in emerging technology sectors.

However, this dual strategy shows uneven scale: employment schemes address numbers in tens of thousands, while technology initiatives remain limited to specialised, small-scale ecosystems. The two tracks are complementary but not yet integrated – skilling programmes do not currently feed directly into indigenous high-technology manufacturing workforce needs, representing a gap between mass employment generation and strategic self-reliance objectives that requires closer policy convergence.

MAINS Q2 – Model Answer (250 words):

India's governance announcements this week converge on a consistent theme: strengthening institutional trust through regulatory clarity, accessibility, and accountability, rather than merely expanding government functions.

Regulatory Clarity: FSSAI's Paneer amendment exemplifies this – by legally restricting the term to milk-derived products, it closes a labelling loophole exploited by adulterators, protecting both consumer health and legitimate producers. This is not new regulation but clarification of existing food safety intent, strengthening enforceability without additional bureaucratic burden.

Accessibility: The National Green Tribunal's mobile application extends environmental justice access to citizens who previously faced geographic and procedural barriers to filing complaints. This digital access initiative reduces the transaction cost of seeking legal redress, particularly benefiting citizens outside metropolitan areas where tribunal benches are concentrated.



Accountability: The appointment of 14 High Court judges directly addresses India's persistent case pendency crisis, strengthening the judiciary's capacity to deliver timely justice – a foundational accountability mechanism. Similarly, Special Campaign 6.0's focus on reducing administrative case pendency and improving workplace efficiency targets bureaucratic accountability from within government itself.

Common Thread: Each initiative addresses a specific trust deficit – consumers doubting food authenticity, citizens facing barriers to environmental redress, litigants awaiting delayed justice, and citizens experiencing administrative delays. Rather than expanding state capacity through new schemes, these measures fix specific friction points in existing systems.

Limitation: Such measures depend heavily on implementation quality – regulatory clarity without enforcement capacity, or digital access without addressing underlying case backlogs, yields limited actual improvement. Institutional trust-building requires sustained follow-through beyond the announcement stage, particularly given India's historical gap between policy intent and ground-level execution.

MAINS Q3 – Model Answer (150 words):

This week's external engagements reveal India pursuing distinct instruments for distinct objectives – a calibrated, multi-track foreign policy. The India-New Zealand FTA represents economic diversification within the Indo-Pacific, securing market access while protecting sensitive sectors like dairy through negotiated safeguards.

The OPEC-India Energy Dialogue addresses energy security through diplomatic engagement rather than military or economic coercion, reflecting India's dependence on stable oil pricing given its 80% import reliance.

Military exercises – SLINEX with Sri Lanka and Nomadic Elephant with Mongolia – serve confidence-building and capacity-building functions, reinforcing India's neighbourhood-first policy and extended strategic outreach into Central Asia respectively, without provoking direct confrontation with larger powers.



Together, these tracks – trade, energy diplomacy, and defence cooperation – operate independently but cumulatively project India as a reliable, non-coercive partner across economic and security domains, calibrating engagement intensity to each partner's strategic significance and sensitivity.

MAINS Q4 – Model Answer (250 words):

India's conservation approach has visibly shifted from purely enforcement-driven models toward participatory, community-anchored governance, as evidenced by the Greater One-Horned Rhino's recovery and the Swach Sagar Surakshit Sagar campaign.

Strengths: The rhino's recovery from near-extinction to over 3,500 individuals stemmed significantly from transforming local communities near Kaziranga from potential poachers into conservation stakeholders through eco-tourism revenue sharing – aligning economic incentive with conservation outcome. Similarly, Swach Sagar's mobilisation of 15 lakh citizens across 231 coastal locations demonstrates how mass participation can generate both immediate cleanup impact and broader public awareness, transforming citizens from passive beneficiaries into active environmental stakeholders. This participatory model also generates political legitimacy for stronger environmental regulation by building broad public constituency for conservation.

Limitations: Participatory approaches have inherent constraints. Community-based rhino conservation succeeded partly due to geographically concentrated habitat (Kaziranga), a model difficult to replicate for species with dispersed, fragmented ranges like tigers. Mass cleanup campaigns address symptoms (existing pollution) rather than root causes – without complementary regulatory action on plastic production and industrial effluent discharge, coastal pollution will recur regardless of citizen participation. Additionally, participatory models depend on sustained economic incentive alignment; if eco-tourism revenue declines or community benefit-sharing arrangements weaken, conservation cooperation could reverse.

Conclusion: Participatory conservation represents a valuable complement to, not substitute for, enforcement and regulatory approaches. Sustainable environmental governance requires combining community ownership with continued regulatory action addressing structural pollution and habitat threat sources, ensuring participatory success is not mistaken for complete problem resolution.



QUICK REVISION TABLE

One-line recall facts for all 34 articles – use for rapid revision before Prelims.

Term	Definition
Rozgar Mela 20	20th Rozgar Mela, Sept 20, 2026; 51,000+ appointments; first edition Oct 2022; Group C and D posts; PMO with Ministry of Labour coordinates; video conferencing format.
India-New Zealand Free Trade Agreement	India-NZ FTA in force Oct 1, 2026; 3rd major bilateral FTA after UAE (2022) and Australia (2022); India exited RCEP (15 nations) in 2019.
SLINEX-26 Maritime Exercise	SLINEX first held 2005; SLINEX-26 concluded Visakhapatnam (Eastern Naval Command HQ); Hambantota leased 99 years, 2017.
FSSAI Paneer Regulation Amendment	FSSAI amendment under Food Safety and Standards Act, 2006; restricts 'paneer' label to milk-derived products; mandates 'analogue' labelling for substitutes.
Greater One-Horned Rhino and World Rhino Day	World Rhino Day, Sept 22, observed since 2010; IUCN status Vulnerable; Kaziranga holds ~2,600 of India's rhinos.
IMEI Tampering Awareness Campaign	IMEI = 15 digits, checked via *#06#; CEIR launched 2019; tampering prosecuted under IT Act Sections 43/66.
Satellite Anti-Airfield Weapons (Aatmanirbhar Bharat)	SSAW contract ₹811 crore, Sept 23, 2026; 160 units; manufacturer BDL; part of 4 Positive Indigenisation Lists since 2020.
DRDO Deep Tech Start-up Project (Quantum Technology)	Dilution refrigerator ~20 mK (-273.13°C); TDF launched 2016; National Quantum Mission ₹6,003 crore, 8 years, approved 2023.



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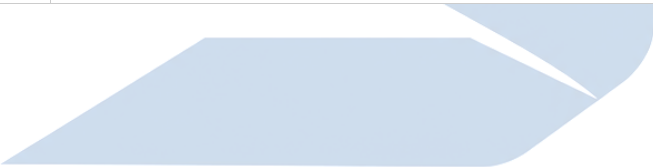
DDU-GKY 2.0 Launch (Rural Skill Development)	DDU-GKY 2.0 targets 70,000 rural youth from Oct 2026; 70% placement mandate; 3-month retention rule; 576-984 training hours.
Telecom Manufacturing Zone Initiatives	TMZ investor meets led by Min. Scindia; PLI telecom scheme ₹12,195 crore (2021, 5 years); India 1.16 billion+ mobile connections.
Railway Kavach 4.0 Commissioning	Kavach 4.0, 607.7 RKM, Lucknow Division, ₹252 crore; originally TCAS (2012-16), renamed 2020; target ~44,000 RKM.
NHAI Guidelines for High-Speed National Highways	NHAI 2026 UHPFRC guidelines; Indora-Dighori flyover (Nagpur) 60 min to 10-15 min; access-controlled speeds 100-120 km/h.
DRI Seizures and Law Enforcement	DRI Sept 23-24, 2026: 845 kg drugs, 86 Tokay Geckos, 21 kg gold (~₹32 cr), 10,000 kg firecrackers; gold duty 6-15%.
NLMC Land Monetisation Programme	NLMC incorporated 2022; target ₹1 lakh crore/4 years; RINL e-auction Sept 2026; part of National Monetisation Pipeline.
NGT Mobile Application Launch	NGT Act 2010; 5 benches (Delhi principal + Bhopal, Pune, Kolkata, Chennai); mobile app launched Sept 2026.
OPEC-India Energy Dialogue	7th OPEC-India Dialogue; OPEC founded 1960, 12 members; India imports 85-88% crude; SPR 5.33 MT across 3 sites.
CSIR-CRRI Scientific Collaboration (Visakhapatnam Roads)	CRRI established 1952, New Delhi; CSIR has 37 national labs; CRRI-VMRDA collaboration Sept 2026.
Swach Sagar Surakshit Sagar 5.0 (Coastal Conservation)	Swach Sagar 5.0, Sept 21, 2026; 15 lakh participants, 231 locations, 13 states/UTs; India plastic waste ~9.3 MT/year.



India-Mongolia Military Exercise Nomadic Elephant	Ex Nomadic Elephant first held 2004; recent edition Pithoragarh; India-Mongolia Strategic Partnership since 2015.
SECO India 2026 (Semiconductor Ecosystem)	SECO India 2026; Semiconductor Mission ₹76,000 crore (2021); Dholera plant ~₹91,000 crore, production ~2026-27.
3rd National ANTF Conference	3rd ANTF Conference, New Delhi, Sept 22, 2026; NCORD formed 2020; Nasha Mukh Bharat Abhiyan since 2020.
Judicial Appointments to High Courts	14 judges appointed Sept 21, 2026 (Delhi, J&K-Ladakh, Jharkhand, Karnataka); 25 High Courts, sanctioned strength 1,114.
Bharat Taxi Service Launch (UP)	Bharat Taxi launched Sept 23, 2026; 5 UP cities; Ministry of Cooperation created 2021.
Kanda Express and Food Security	Kanda Express to Kolkata, Sept 23-24, 2026; buffer target ~5 lakh tonnes; Maharashtra >40% of production.
WorldSkills Shanghai 2026 (India's Contingent)	WorldSkills first held 1950; India member since 2011; Lyon 2024 best-ever 8 medals/1 gold; Shanghai 2026 India's largest contingent.
Arogya Manthan 2026 (Health Schemes Review)	PM-JAY launched Sept 23, 2018; ABDM launched Sept 27, 2021; 27+ crore Ayushman cards; 75+ crore ABHA IDs by 2026.
India-Netherlands Water Partnership (IIWW 2026)	IIWW since 2015; 2026 edition Sept 22-24; CGWB flags 1,000+ over-exploited units of ~7,000 total.
Special Campaign 6.0 (Administrative Efficiency)	Special Campaign 6.0, 2026; DARPG; first edition 2021; Campaign 3.0 (2023) generated ₹370+ crore.



New Train Services Expansion	3 services approved Sept 25, 2026: Kanpur-Anand Vihar (daily), Bhuj-Barauni (tri-weekly, ~2,000 km), Jhansi-Mathura extension.
Agnikul Cosmos RDI Support (Reusable Launch Vehicle)	Agnikul Cosmos founded 2017; ₹200 crore TDB grant Sept 25, 2026; Agnibaan engine called Agnilet.
BRICS Heads of Tax Authorities Meeting	BRICS Tax meeting, New Delhi, Sept 23, 2026; FM Sitharaman inaugurated; BRICS 10 members since 2024.
UPASI Tea Research Centenary Conference	UPASI founded 1893, Coonoor; Tea Research Foundation established 1926 (centenary 2026); South India output ~220-230 million kg/year.
CCI Competition Law Approvals	CCI established 2009 under 2002 Act; thresholds ₹2,000 cr assets/₹6,000 cr turnover; 2024 deal-value test added.
PIB Backgrounders and Special Topics	Make in India launched Sept 25, 2014; Single Window System (2021) covers 30+ departments, 26 states.



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