



## **CONCEPTS IN NEWS**

May 2025;



Keyword	Official Definition	Easy Explanation
Urban Heat Island (UHI)	Urban areas that are significantly warmer than their rural surroundings due to human activities.	Cities feel hotter than nearby villages because of buildings, roads, and fewer trees.
Albedo	The proportion of the incident light or radiation that is reflected by a surface.	How much sunlight a surface reflects. White reflects more, black less.
Ecosystem Service Payments (PES)	Payments made to individuals or communities for undertaking actions that increase environmental services.	Money paid to farmers or communities to protect nature.
Agrivoltaics	Combining solar energy generation with agricultural production on the same land.	Growing crops and producing solar power on the same land.



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Extended Producer Responsibility (EPR)	A policy approach under which producers are given responsibility for the treatment or disposal of post-consumer products.	Manufacturers must take care of their product waste (like plastic).
Material Recovery Facility (MRF)	A specialized plant that receives, separates and prepares recyclable materials.	A place where trash is sorted and useful materials are picked out.
PIBOs	Producers, Importers, and Brand Owners responsible for managing post-consumer plastic waste under EPR.	Companies that make or sell products must manage the waste they create.
Emissions Intensity	Emissions per unit of GDP or per unit of production.	How much pollution is made for every unit of money the economy earns.
Carbon Credit Trading Scheme	A market-based mechanism to reduce greenhouse gas emissions by allowing the trading of carbon credits.	Companies can buy or sell rights to pollute, helping to control emissions.
PAT Scheme	A market-based mechanism to improve energy efficiency in energy-intensive industries.	Industries are rewarded for saving energy; those who don't save have to buy credits.
Blue Economy	Sustainable use of ocean resources for economic growth and improved livelihoods.	Using oceans for fishing, tourism, energy without harming the marine environment.
BBNJ Agreement	An international legal framework to conserve and sustainably use biodiversity in areas beyond national jurisdiction.	UN treaty to protect sea life in international waters.





Pseudo-environmentalism	Deceptive or superficial efforts to appear environmentally friendly.	Pretending to care for the environment without real action.
Greenwashing	Disinformation to present an environmentally responsible public image.	When companies pretend to be eco-friendly to look good.
Net Zero	A state where greenhouse gases emitted are balanced by those removed from the atmosphere.	Pollution going out equals pollution removed — zero net pollution.
Carbon Offset Markets	Allow companies to invest in environmental projects to balance out their own emissions.	Paying to reduce or absorb carbon somewhere else when you pollute.
Nature-Based Solutions	Actions to protect, sustainably manage, and restore ecosystems to address societal challenges.	Using forests, wetlands, etc. to fight climate change and protect biodiversity.
REDD+	A framework to reduce emissions from deforestation and forest degradation.	Paying countries to save forests and reduce carbon emissions.
Biodiversity Credits	Tradable certificates representing conservation actions to protect species or habitats.	Companies buy these to show they are protecting nature.
Environmental Due Diligence	A process to identify environmental risks before investment or transactions.	Checking if a project harms the environment before approval.
Circular Economy	An economic system aimed at eliminating waste and the continual use of resources.	Reuse, recycle, repair — instead of throwing things away.
ESG Standards	Environmental, Social, and Governance criteria used to assess sustainability and ethical impact.	A way to judge if a company cares for nature, people, and ethics.





Carbon Border Adjustment Mechanism (CBAM)	EU policy imposing carbon price on imports to avoid carbon leakage.	Extra tax on imported goods if they come from polluting countries.
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### Science and Technology

Keyword	Official Definition	Easy Explanation
dsRNA (double-stranded RNA)	A type of RNA with two complementary strands involved in gene silencing mechanisms.	A form of RNA that helps in turning off certain genes.
RNA Silencing	A process where RNA molecules inhibit gene expression or translation.	RNA blocks certain genes from working.
HIGS	Host-Induced Gene Silencing: Plants produce RNA to silence genes in pests/pathogens.	Plants use RNA to protect themselves from pests.
SIGS	Spray-Induced Gene Silencing: RNA sprayed on plants to control pests or diseases.	Protecting crops by spraying RNA that blocks harmful genes.
siRNA	Small interfering RNA: short RNA molecules that silence specific genes.	Tiny RNAs that switch off unwanted genes.
GenomeIndia Project	National project to sequence Indian genomes to study population diversity.	India's plan to map genes of its people for better health insights.
Phenotype Data	Observable traits from gene and environment interaction.	Physical features like height, eye color, etc.
Satellite Internet	Internet access delivered through communication satellites.	Internet from space instead of cables or towers.
Starlink	SpaceX's satellite internet constellation providing global coverage.	Elon Musk's project to give fast internet from satellites.





VSAT Licence	Authorization to operate Very Small Aperture Terminal communication systems.	Government's permission for private satellite communications.
Ku/Ka Band	Frequency bands used in satellite communications.	Radio signals used for satellite TV and internet.
IN-SPACe	Indian National Space Promotion and Authorization Center for private space missions.	Government agency helping private space launches in India.
Dynamic Coupled Forecasting	Climate prediction using interaction between ocean and atmosphere.	Weather forecast using ocean-air models for better accuracy.
Monsoon Mission	Indian initiative to improve prediction of monsoon patterns.	A government program to forecast monsoon more accurately.
Multi-Model Ensemble Forecast	Forecast combining multiple weather models for better results.	Using many forecasts together to get a reliable weather prediction.
Convolutional Neural Network (CNN)	Deep learning model mainly used in image and speech recognition.	A smart algorithm that helps machines recognize pictures and sounds.
Audiomoth Ultrasonic Microphone	Device for recording ultrasonic wildlife sounds.	A tool to capture animal sounds we can't normally hear.
Safe Harbour (in tech regulation)	Legal protection to tech platforms from liability for user content.	Platforms not punished for what users post (if they follow rules).
Platform Accountability	Holding digital platforms responsible for harmful content or data misuse.	Making apps/websites answerable for what they allow online.
Algorithmic Governance	Use of automated systems and algorithms in decision-making.	Rules made or enforced using software and algorithms.
Generative AI	AI systems that create new content like text, images, music, etc.	AI that can write, draw, or make music like a human.





Large Language Models (LLMs)	AI trained on massive text data to generate human-like language.	Smart AI that talks and writes like people.
Hallucination (AI term)	When AI generates false or misleading information.	AI gives wrong or made-up answers confidently.
Explainability (AI)	The extent to which an AI's decision can be understood by humans.	How easily humans can understand why AI made a decision.
Model Interpretability	Ability to explain how an AI model arrives at its outputs.	Understanding how AI thinks or makes predictions.
Transformer Architecture	A neural network model used in language processing tasks.	Tech structure behind ChatGPT and similar tools.
Deepfake	AI-generated fake images, videos, or audio that mimic real people.	Fake videos or voices created using AI that look real.
RegTech	Use of technology to manage regulatory compliance.	Tools to help companies follow government rules using software.
AI Watermarking	Technique to mark AI-generated content for traceability.	Hidden tags that show something was made by AI.
Open-source vs Closed-source Models	Debate between public vs private access to AI model code.	Should AI code be shared openly or kept secret?
AI Risk Classification (EU model)	EU's method to rate AI systems by risk level.	European system ranks AI tools by how dangerous or safe they are.
Surveillance Capitalism	Economic model where user data is extracted for profit.	Earning money by watching and using people's online behavior.
Platform Neutrality	Concept that platforms should treat all users/content equally.	Platforms shouldn't favor any user, content, or company.





## Economy

Keyword	Official Definition	Easy Explanation
Merchant Discount Rate (MDR)	Fee charged to merchants by banks for processing digital transactions.	Shopkeepers pay this small fee to banks on card payments.
UPI Lite	Offline small-value payment system using UPI without real-time bank communication.	A quick UPI version that works without internet for small payments.
NPCI	Organization managing digital payment systems like UPI, RuPay in India.	NPCI runs India's digital payments — like UPI, RuPay, IMPS.
Carbon Credit	Permit allowing the emission of one ton of CO <sub>2</sub> , tradable between countries/companies.	A license to pollute a little — can be bought or sold.
Greenhouse Gas Emissions Intensity (GEI)	GHG emissions per unit of GDP.	How much a country pollutes for every rupee it earns.
Input Deregulation	Lifting of government control on agricultural or industrial inputs.	Letting industries or farmers buy inputs freely without government fix.
Renewable Energy Premium	Extra cost of generating electricity from renewable sources.	Clean energy costs a little more than coal-based power.
Fiscal Space	Government's ability to spend without risking debt sustainability.	How much extra money the govt has to spend safely.





Index of Industrial Production (IIP)	A measure of growth in various industrial sectors in India.	A report card on how well factories in India are working.
De-dollarization	Reducing dependence on the US dollar in global trade and reserves.	Countries trading without using the dollar.
Petro-yuan	China's proposal to buy/sell oil in Yuan instead of US dollars.	Buying oil using Chinese currency instead of dollars.
Global South	A term for developing nations of Africa, Latin America, and Asia.	Poorer, developing countries, mostly in the southern hemisphere.
Sovereign Gold Bond	Govt-issued bond linked to the price of gold with fixed interest.	A safe way to invest in gold without buying physical gold.
Net Interest Margin	Difference between income earned on loans and interest paid on deposits.	How much profit banks earn on the money they lend.
Capital Expenditure	Money spent on acquiring or maintaining assets like buildings, roads, etc.	Big investments by government or companies on physical projects.
Current Account Deficit	When a country's imports exceed its exports in goods, services, and transfers.	India spends more on foreign stuff than it earns.
Global Value Chains	Different stages of a product's production located across multiple countries.	A product is made part-by-part in many countries.
Tariff Escalation	Imposing higher duties on finished goods than raw materials.	Finished products are taxed more than their raw inputs.
Sunset Clause	A law or agreement that ends automatically after a set period.	A rule that stops applying after a specific time.
Free Trade Agreements (FTAs)	Agreements between countries to reduce tariffs and trade barriers.	Countries agree to trade goods with fewer taxes or limits.
Inflation Targeting	Central bank policy of maintaining inflation within a specified range.	RBI tries to keep prices from rising too much or falling too low.







Fiscal Consolidation	Steps to reduce fiscal deficit and improve financial health.	Government cuts spending or increases revenue to reduce borrowing.
Credit Cycle	Repeated phases of easier and tighter lending by financial institutions.	Sometimes banks give loans easily, sometimes they don't.
Carbon Budgeting	Limit set on total greenhouse gases that can be emitted to stay under climate goals.	The world's pollution limit to prevent dangerous warming.
Stubble-Based Market Solutions	Commercial solutions for using crop residue instead of burning it.	Turning leftover farm waste into useful products like fuel.



Keyword	Official Definition	Easy Explanation
Simla Agreement	1972 agreement between India and Pakistan to resolve issues peacefully.	India and Pakistan agreed to sort problems through talks, not war.
Indus Waters Treaty (IWT)	1960 water-sharing treaty between India and Pakistan brokered by the World Bank.	India and Pakistan share rivers under this water agreement.
Line of Control (LoC)	Military control line dividing Indian and Pakistani administered Jammu & Kashmir.	The unofficial border in Kashmir between India and Pakistan.





BBNJ Agreement	UN treaty for conservation of marine biodiversity beyond national jurisdictions.	Global rules to protect ocean life in areas outside country borders.
UNOC3	United Nations Ocean Conference 3 for protecting marine ecosystems.	A UN meeting to save and manage the oceans.
The Resistance Front (TRF)	A Pakistan-based terror group linked to Lashkar-e-Taiba, active in Jammu & Kashmir.	A terror group responsible for violence in Kashmir.
FATF	Financial Action Task Force: inter-governmental body fighting money laundering and terror finance.	A global body that checks if countries fight black money and terror funds.
BlueTalks	Global discussion series about sustainable ocean management before UNOC meetings.	Conversations between countries about ocean protection.
"Nice Ocean Agreements"	Informal reference to legally binding treaties for ocean sustainability.	Agreements to manage oceans responsibly.
High Seas Governance	Regulation of ocean areas beyond any national jurisdiction.	Managing seas that no country owns.
Lapu-Lapu Day	Philippine national day honoring a local warrior who resisted Spanish colonization.	A day in Philippines for a hero who fought foreign rule.
Tahawwur Rana Extradition Case	Legal case about sending a terror suspect from the US to India for 26/11 involvement.	India wants to try a 2008 Mumbai attack suspect living in the US.
Blue Economy Diplomacy	Use of ocean-based trade and cooperation to strengthen diplomatic ties.	Countries using sea resources and trade to improve foreign ties.
Vaccine Diplomacy	Use of vaccines to enhance international relations.	Countries give or sell vaccines to win friends globally.





Strategic Autonomy	A state's ability to make decisions independently in foreign affairs.	India decides for itself, without pressure from powerful countries.
Belt and Road Initiative (BRI)	China's infrastructure and trade corridor initiative across continents.	China building roads, ports, and rails worldwide to grow its reach.
G77 + China	Coalition of 134 developing nations at the UN, joined by China for negotiations.	A group of poorer nations speaking together at the UN.
Indo-Pacific Strategy	Policy for free, open, and secure maritime region involving India and Pacific nations.	Plan to keep Indian and Pacific Oceans peaceful and trade-friendly.
Securitisation of Development	Treating developmental issues like poverty as security threats.	Framing poverty and underdevelopment as national security issues.
Multipolar World Order	International system with multiple centers of power.	A world where no single country dominates — power is balanced.
Rules-Based International Order	Global governance based on agreed laws and norms.	Countries follow rules in international dealings, not just power.
Strategic Decoupling	Reducing economic reliance on a rival country.	Countries slowly stop depending on rivals for trade and tech.
QUAD Tech Standards Initiative	QUAD nations creating shared rules for technology.	India, US, Japan, and Australia making joint tech rules.
Digital Public Infrastructure Diplomacy	India promoting its digital platforms (like UPI, Aadhaar) to other countries.	India shares its digital success with the world.





## Polity

Keyword	Official Definition	Easy Explanation
Section 53(2), RPA Act, 1951	Allows a candidate to be declared elected unopposed.	If no one contests against a candidate, they win automatically.
NOTA (None of the Above)	An electoral option allowing voters to reject all candidates.	You vote, but say you don't like any candidate.
Polluter Pays Principle	The one who pollutes must pay for cleanup and damages.	If you harm nature, you must fix it and pay fines.
Continuing Mandamus	A judicial tool for ongoing monitoring of a court order.	Court keeps watching until its orders are followed fully.
Equality Act 2010 (UK)	A UK law protecting individuals from discrimination.	A law that says everyone must be treated fairly.
Gender Recognition Act 2004 (UK)	Allows transgender people in the UK to legally change their gender.	A UK law to give trans people official rights.
Transgender Persons Act, 2019	Indian law that protects the rights and welfare of transgender persons.	A law giving legal identity and protection to trans people.
Civil Society Audit	Evaluation of government schemes by citizens or civil groups.	People check if government schemes work as promised.
RTI Dilution	Weakening of the Right to Information Act to reduce public access to information.	Making it harder for people to get government records.
Electoral Bond Scheme	A system of anonymous political donations in India.	People can give money to parties without revealing names.
Judicial Overreach	When judiciary encroaches into functions of executive or legislature.	Courts start doing the job of the government or lawmakers.





Article 329	Prevents courts from interfering in election matters while elections are underway.	Courts can't stop or change elections while they're happening.
Model Code of Conduct	A set of guidelines for political parties during elections.	Election rules that parties must follow.
Doctrine of Essentiality	Courts decide what religious practices are essential to a religion.	Judges decide what parts of a religion are legally protected.
Ninth Schedule	A part of the Constitution that protects certain laws from judicial review.	Some laws are shielded from being challenged in court.
Separation of Powers	Constitutional principle dividing roles of legislature, executive, and judiciary.	Each branch of government does its own job without interference.
Compulsory Licensing	Government allows use of a patent without owner's permission in public interest.	Letting companies make drugs without permission during need.
Ordinance Route	Executive makes temporary laws when Parliament or Assembly is not in session.	President or Governor issues a law without waiting for MPs/MLAs.
Delegated Legislation	Laws made by an authority other than legislature under the legislature's powers.	Ministers or departments make rules based on parent laws.

