



# CONCEPTS IN NEWS

## April 2025



### Environment

Keyword	Official Definition	Easy Explanation
Pink Bollworm (PBW)	A cotton pest whose larvae damage bolls, significantly reducing crop yield.	A bug that ruins cotton crops.
Urban Biodiversity Hotspot	Urban areas with significant native or adapted biodiversity providing ecological value.	Green zones in cities full of unique plants and animals.
Kancha Gachibowli	A restored eco-sensitive area in Hyderabad promoting urban biodiversity.	A successful urban green revival project in Hyderabad.
Caspian Sea Decline	The shrinking of the Caspian Sea due to climate change and water mismanagement.	Caspian Sea is drying up because of heat and less water flow.
Arctic Boreal Zone (ABZ)	A sub-Arctic forested region crucial for carbon storage and climate regulation.	Northern forests that help trap carbon and cool Earth.
Methane Release from Permafrost	Thawing permafrost emits methane, a potent greenhouse gas, worsening climate change.	Frozen ground melting and releasing dangerous gases.
Climate-Resilient Seeds	Crop varieties designed to withstand climate stresses like drought and floods.	Seeds that survive harsh weather.
Indigenous Landraces	Locally adapted crop varieties developed over centuries by traditional farming.	Ancient, local seed types suited to native soil.
Participatory Breeding	A process where farmers and scientists collaborate to develop crop varieties.	Farmers help create new, better seeds with experts.



| Clear your doubts now.



ICE Sheet Dynamics	The processes governing the movement and melting of large polar ice masses.	How Antarctica's big ice blocks shift and melt.
Soil Decomposition & Emission Loop	Microbial breakdown of organic matter in soil releases greenhouse gases, which accelerate climate change.	Rotting stuff in soil releases gases that heat the Earth.
Forest Biomass	The total mass of living trees and vegetation in a forest, used to estimate carbon stock.	How much wood and green matter is present in a forest.
P-band Radar	Radar system using P-band frequency for biomass and soil moisture mapping.	A special radar that sees through forests and soil.
Normalized Difference Vegetation Index (NDVI)	A satellite-derived index measuring vegetation health by comparing light reflectance.	A satellite tool to check how green and healthy land is.
Caspian Sea Decline	The shrinking of the Caspian Sea due to climate change and human diversion of rivers.	Water in the Caspian Sea is reducing fast.
Evaporation–Inflow Imbalance	When more water evaporates than enters a lake/sea, causing water level drop.	More water is lost than gained, so water bodies shrink.
Green Logistics	Eco-friendly practices in the transportation and supply chain sector.	Making goods transport cleaner and climate-friendly.
Sustainable Warehousing	Warehouses designed with minimal environmental impact and energy efficiency.	Eco-friendly storage spaces that save energy.
Phytomining	The use of plants to extract valuable metals from soil or mine waste.	Growing plants that suck up metals from the ground.
Deep-sea Mining	Extraction of mineral resources from the ocean floor using remotely operated vehicles.	Digging valuable stuff from deep under the ocean.
Cap-and-trade System	A market-based approach where companies buy/sell emission permits under a total emission cap.	Trading carbon rights to control pollution.
Riverine Pollution	Pollution of river ecosystems due to industrial, agricultural, or domestic discharge.	Rivers getting dirty from factories or waste.
Climate-resilient Seeds	Crop varieties genetically developed to withstand extreme weather events.	Seeds that survive floods, droughts, and changing weather.
Urban Biodiversity Hotspot	City areas rich in native flora and fauna, contributing to local ecosystem health.	Parts of cities with lots of plant and animal life.
Climate Diplomacy	International negotiations and policies to address global climate change.	Countries talking to solve climate change.
Svalbard Treaty	A 1920 international treaty recognizing Norway's sovereignty over Svalbard but ensuring open access.	A treaty that makes Svalbard open for all countries.
Arctic Circle India Forum	India's platform to engage in Arctic policy, science, and geopolitics.	India's way to join talks on Arctic issues.





Smart Fences (snow-resistant)	Intelligent border barriers designed to function in extreme snowy terrains using sensors and drones.	High-tech fences that work even in snow.
Urban Heat Island	Urban areas experiencing significantly higher temperatures than surrounding rural zones.	Cities becoming hotter than nearby villages.
Albedo	The measure of how much sunlight a surface reflects without absorbing it.	How shiny or reflective a surface is.
Agrivoltaics	The simultaneous use of land for agriculture and solar energy production.	Growing crops under solar panels.
Ecosystem Service Payments	Financial incentives given to landowners for maintaining ecosystem services like clean air or water.	Paying people to protect nature.
Extended Producer Responsibility (EPR)	Policy approach making producers responsible for post-consumer waste management.	Companies must handle their product's waste too.
Emissions Intensity	Emissions per unit of GDP, measuring environmental efficiency of economic growth.	Pollution compared to how much the economy grows.
Perform, Achieve, and Trade (PAT) Scheme	Market-based energy efficiency program where industries earn tradable credits for exceeding targets.	Industries saving energy and trading their extra savings.
Material Recovery Facility (MRF)	Facility where solid waste is separated and processed for recycling.	A center where garbage is sorted and recycled.
Biodiversity Beyond National Jurisdiction Agreement	A UN treaty to protect marine biodiversity in international waters.	Ocean treaty to save marine life outside countries' borders.



### Science and Technology

Keyword	Official Definition	Easy Explanation
<b>Gene Editing</b>	Technologies enabling changes to an organism's DNA by adding, removing, or altering genetic material at specific locations.	Like using scissors to fix faulty DNA or improve traits.
<b>De-extinction</b>	The process of reviving extinct species via cloning, selective breeding, or genetic engineering.	Bringing back extinct animals like mammoths using genetics.
<b>Cry genes</b>	Genes from <i>Bacillus thuringiensis</i> (Bt) producing proteins toxic to insects, used in GM crops.	Genes used in Bt cotton that kill harmful insects.
<b>Chimeric Constructs</b>	Engineered DNA sequences combining genes from different species.	Mixing genes from different species to get new traits.





<b>P-band SAR</b>	A long-wavelength radar used for biomass and subsurface Earth imaging.	Radar that can "see" through forests and underground layers.
<b>Sun-synchronous Orbit</b>	A satellite orbit where the satellite passes over the same area of Earth at the same local solar time daily.	Satellite gets a consistent sunlight view of Earth — great for weather tracking.
<b>Spectrograms (bat detection)</b>	Visual representations of sound frequencies over time to analyze echolocation calls.	A sound chart used to study bat calls.
<b>CNN Model (AI)</b>	Convolutional Neural Network – a deep learning model used to analyze visual imagery.	AI that helps machines recognize images and patterns, like in face detection.
<b>Audiomoth Ultrasonic Mic</b>	A low-cost, open-source tool that captures high-frequency wildlife sounds.	A small recorder that listens to high-pitched sounds like those from bats.
<b>Solar Neutrino Flux</b>	The flow rate of neutrinos from the Sun's nuclear reactions reaching Earth.	Measures invisible solar particles to understand the Sun.
<b>Breakout Time</b>	Estimated time for a country to make enough weapons-grade material for one nuclear bomb.	How fast a country can make a nuclear weapon if it wants to.
Gene Editing	A method of making precise alterations to DNA in an organism using tools like CRISPR-Cas9.	Changing an organism's genes to fix or add traits.
De-extinction	The process of reviving extinct species using genetic engineering and cloning.	Bringing back extinct animals using science.
Chimeric Constructs	Genetically engineered organisms or molecules that contain components from multiple species.	Mixing DNA from different species to create hybrids.
Cry Genes	Genes from <i>Bacillus thuringiensis</i> that produce proteins toxic to insects, used in GM crops.	Genes used in Bt crops to kill pests.
P-band Synthetic Aperture Radar	A low-frequency radar band used for deep forest penetration and biomass mapping.	Radar that sees through trees to measure forests.
Sun-synchronous Orbit	A near-polar orbit in which a satellite passes over the same Earth region at the same local solar time.	Satellite path that sees Earth with consistent sunlight.
Spectrograms	Visual representations of the spectrum of frequencies in a signal over time.	Charts showing sound patterns over time.
Solar Neutrino Flux	The flow of neutrinos emitted by nuclear reactions in the sun's core.	Tiny particles constantly coming from the Sun.
Phononic Bandgap	A range of frequencies where sound waves cannot propagate in a material.	A material that blocks certain sound waves.
Metamaterial	Artificial materials engineered to have properties not found in nature, like negative refractive index.	Man-made stuff that bends light or sound in weird ways.
Miniature Laser on Silicon Chip	A compact semiconductor laser integrated into a silicon chip for photonic applications.	Tiny laser built on computer chips.





Monolithic Integration	Embedding multiple components (electronic/photonic) into a single chip substrate.	All-in-one chip with everything built inside.
Biosignatures	Chemical or physical indicators that suggest the presence of past or present life.	Clues that life exists or existed somewhere.
RC1 Protein Complex	A reaction center complex in photosynthetic organisms that initiates light-driven energy conversion.	The protein that starts the process of turning sunlight into energy in plants.
Perovskite Solar Cells	Solar cells made from perovskite-structured materials offering high efficiency and low-cost potential.	New, cheap, and powerful solar panels being developed.
Black-box AI Model	An AI system whose internal decision-making logic is not interpretable or transparent to users.	AI that works but we can't see how or why it gives answers.
Hybrid Modelling (AI + Physics-based)	Combining machine learning with physical science models for accurate predictions.	AI plus real-world science used together to predict better.
RTS,S Vaccine	The first approved malaria vaccine, based on a recombinant protein approach targeting <i>Plasmodium falciparum</i> .	First vaccine to prevent malaria in children.
Digital Literacy vs AI Literacy	Digital literacy is basic computer knowledge; AI literacy is understanding how AI works and affects us.	Knowing tech vs knowing how AI affects life.
AI Ambassadors	Individuals trained to promote understanding and responsible use of AI in society.	People who teach others about AI and its safe use.
Inclusive Datasets	Data collections that represent diverse populations to prevent AI bias.	Diverse data to make sure AI is fair to everyone.
Humanics	An interdisciplinary approach combining humanities, tech, and ethics to adapt to AI-driven futures.	Mix of ethics, humanities, and tech to live in an AI world.
RNA Silencing	A regulatory process where RNA molecules inhibit gene expression by destroying mRNA.	Turning off certain genes using RNA to stop protein production.
Host-Induced Gene Silencing	A plant protection technique where plants produce RNAs that silence genes in attacking pests.	Plants make RNA to shut down harmful genes in insects or fungi.
Spray-Induced Gene Silencing	Technique of spraying double-stranded RNA on plants to silence pest or pathogen genes.	Spraying RNA on crops to protect them by disabling pest genes.
Double-stranded RNA (dsRNA)	RNA molecule composed of two complementary strands, used in gene silencing techniques.	Special RNA used to switch off genes in pests.
Small Interfering RNA (siRNA)	Short RNA fragments that guide the silencing complex to degrade specific mRNA.	Tiny RNA pieces that destroy unwanted messages in cells.
Phenotype Data	Observable traits of an organism influenced by genetic and environmental factors.	Physical traits like height, color, behavior of an organism.





Satellite Internet	Internet connectivity provided via communication satellites instead of terrestrial cables.	Internet beamed down from space satellites.
Starlink	SpaceX's global satellite-based internet constellation aiming to provide fast connectivity.	Elon Musk's satellite internet project.
VSAT Licence	Authorization required to operate Very Small Aperture Terminal satellite communication systems in India.	Legal permission to run small satellite antennas.
IN-SPACe	Indian National Space Promotion and Authorization Centre – body to encourage private space activity.	India's space agency that supports private companies in space sector.
Dynamic Coupled Forecasting	Climate prediction technique using real-time interactions between ocean and atmospheric models.	Advanced weather forecasting that links ocean and air systems.
Multi-Model Ensemble System	Climate forecasting method combining outputs from multiple models for better accuracy.	Using many models together for more reliable climate predictions.



Keyword	Official Definition	Easy Explanation
Repo Rate	The rate at which RBI lends money to commercial banks for short-term needs.	Interest rate at which RBI gives loans to banks.
Accommodative Monetary Policy	A policy that lowers interest rates to boost economic growth, especially during slowdown.	Policy to encourage borrowing and growth by making loans cheaper.
Credit Spread	The difference in yield between government bonds and risky corporate bonds.	Extra interest investors demand to lend to riskier borrowers.
Arbitration Ecosystem	A framework of institutions, laws, and practices facilitating private dispute resolution outside courts.	System to settle business fights quickly without going to court.
Fiscal Space	The room a government has to spend or cut taxes without harming fiscal health.	How much the government can spend without going broke.





Reverse Engineering (tariffs)	Studying competitor products or trade practices to replicate or counter them with custom duties.	Analyzing foreign imports to set clever tariffs.
Tariff Escalation / Reciprocal Tariffs	Progressive increase in tariff rates at each stage of production; reciprocal tariffs are retaliatory import taxes.	Higher import duties on finished goods; tit-for-tat tariffs.
Long Gestation Innovation	Innovations that require a long development time before yielding commercial or social value.	Innovations that take years before becoming useful or profitable.
Consumer Tech vs. Deep-Tech	Consumer tech includes gadgets for everyday use; deep-tech involves core scientific breakthroughs.	Phones = consumer tech; quantum computers = deep-tech.
Accommodative Monetary Policy	A policy approach where the central bank increases money supply to stimulate the economy.	RBI lowers rates or injects money to boost growth.
Data-Envelopment Analysis	A performance measurement method used to assess the efficiency of decision-making units.	A tool to see how efficiently an organisation works.
Stubble-Based Market Solutions	Market mechanisms like biomass procurement to reduce stubble burning.	Turning farm waste into products or energy to prevent burning.
Migration Cost Financing Models	Financial schemes designed to help migrant workers afford relocation and placement fees.	Loans or support to help workers move abroad for jobs.
Marginal Standing Facility	RBI facility that lets banks borrow overnight funds at a rate higher than repo.	Emergency loan window for banks at a slightly higher rate.
Liquidity Trap	A situation where interest rate cuts fail to stimulate economic growth.	When people or banks don't spend even if money is cheap.
High-yielding Crop Varieties (HD-3386, PBW-872)	Genetically improved crop varieties developed for better yield and climate resistance.	Special crop seeds that give more output.
Reverse Engineering (Trade Context)	Analyzing imported goods to understand design and replicate them, often to overcome trade restrictions.	Copying imported products to make our own version.
National Critical Mineral Mission (NCMM)	India's initiative to secure supply of minerals essential for clean energy and electronics.	Government mission to find rare minerals we need for tech.
Light vs Heavy REEs	Classification of rare earth elements based on atomic weight and use; heavy REEs are rarer and more valuable.	Two types of rare earth metals—some are harder to find than others.
Most-Favoured-Nation (MFN) Principle	WTO rule that any trade benefit given to one member must be extended to all.	Equal trade treatment for all countries.
Appellate Body (WTO)	The final dispute settlement authority of the World Trade Organization.	WTO's court that resolves trade fights.







Merchant Discount Rate (MDR)	Fee paid by merchants to banks for processing digital payments via credit/debit cards.	Shopkeeper's fee for accepting cards.
UPI Lite	A version of UPI for small-value, offline transactions to reduce payment load.	Mini UPI for small and no-internet payments.
MSME Export Dependence	The extent to which Micro, Small & Medium Enterprises rely on exports for revenue.	How much small businesses earn from selling abroad.
Input Deregulation	Removal of government controls on the pricing and distribution of production inputs.	Letting producers buy stuff freely without government rules.
Renewable Energy Premium	The higher cost paid for clean energy compared to conventional sources.	Paying more for using clean energy.
Fiscal Space	The flexibility a government has in its budget to spend without threatening financial stability.	Room the government has to spend more safely.
Index of Industrial Production (IIP)	A monthly index that tracks the performance of different sectors of industrial economy.	A number showing how well factories and industries are doing.



### International Relations

Keyword	Official Definition	Easy Explanation
JCPOA	The Joint Comprehensive Plan of Action is a 2015 nuclear agreement between Iran and world powers to curb Iran's nuclear program.	Iran's deal to limit nukes in return for sanctions relief.
H-1B Visa / STEM Visa Policy	H-1B allows US firms to hire foreign workers; STEM visas cater to Science, Tech, Engineering, and Math graduates.	Visas to work in the US, especially in science & tech jobs.
Mar-a-Lago Accord	Unofficial US-China trade strategy discussion under Trump, aimed at reducing trade imbalance.	Trump-era talks with China about fixing trade gaps.
Planned Stimulus (China)	Economic recovery plan by China focusing on investment, consumption, and exports to combat slowdown.	China's plan to boost its economy after slowdown.







Tariff Escalation	A trade practice where higher tariffs are imposed on processed goods than raw materials.	Finished products face higher import taxes than raw ones.
WTO National-Security Clause	Allows members to impose trade restrictions citing national security without penalty.	Countries can block trade for security reasons.
Rare Earth Mineral Leverage	Using control over rare earth supply chains as a geopolitical tool.	Controlling key minerals to gain power globally.
Strategic Decoupling	Reducing economic interdependence between major powers for national security.	Big countries trying to do less trade with rivals.
Mutual Assured AI Malfunction	Hypothetical scenario where AI warfare systems pose reciprocal risks like nuclear war.	If both sides have war AIs, failure could destroy everyone.
AI Non-Proliferation Treaty	Proposed global treaty to prevent unchecked spread of lethal autonomous AI systems.	An agreement to stop dangerous war AI from spreading.
Diffusion of Technology	Spread of new tech from advanced to developing nations through trade, FDI, etc.	New tech slowly reaches poorer countries.
India-for-the-World Strategy	India's geopolitical vision to become a trusted, responsible provider of global solutions.	India wants to help the world, not just itself.
Visa Bottlenecks in Bilateral Migration Deals	Administrative or political hurdles delaying mutually agreed migration flows.	Paperwork or politics blocking people from moving easily.
Indus Waters Treaty	A 1960 treaty between India and Pakistan allocating use of Indus River system waters.	River-sharing deal between India and Pakistan.
Simla Agreement	A 1972 treaty post the Bangladesh War to maintain peace and bilateral talks between India and Pakistan.	A peace promise after war between India and Pakistan.
Treaty in Abeyance	A treaty not formally ended but temporarily inactive or suspended.	A deal that's not cancelled, but not active either.
Strategic Autonomy	The ability of a country to pursue independent foreign policy and defence decisions.	Freedom for a country to make its own choices.
Competitive Coexistence	A strategy where rival nations compete but avoid open conflict.	Competing but not fighting.
Vision 2030 (Saudi Arabia)	Saudi Arabia's plan to diversify its economy and reduce oil dependence.	Saudi's plan to grow beyond oil.
Neom Project	A futuristic \$500 billion smart city in Saudi Arabia powered by renewable energy.	Saudi's high-tech, green mega-city.
Polar Silk Road	China's initiative to use Arctic shipping routes as part of its Belt and Road strategy.	China's new Arctic trade path.





Geopolitical Trade Crossfire	A situation where countries are caught in economic tensions due to rival global powers.	Small countries stuck between big powers' trade fights.
US-India TRUST Initiative	A partnership to boost tech cooperation and transparency between India and the US.	US and India teaming up on clean and safe tech.
Proxy War	A war where major powers support opposing sides without direct involvement.	Big powers fighting indirectly through others.
Strategic Depth	A buffer zone or geographical advantage giving a country time/space in military defence.	Extra area for protection during war.
Black Sea Fleet	Russian Navy's strategic fleet based in the Black Sea, key in regional military operations.	Russia's powerful navy in the Black Sea.
Simla Agreement	A 1972 treaty post-Bangladesh War between India and Pakistan to maintain peaceful bilateral relations.	Peace deal after the 1971 war.
Lapu-Lapu Day	A Philippine national day honoring the tribal chief who resisted Spanish colonization.	Philippines holiday for their anti-colonial hero.
UN Ocean Conference 3	Upcoming global summit focused on preserving ocean health and sustainable marine resources.	UN's big meeting to save oceans.
The Resistance Front	A militant group in Jammu & Kashmir affiliated with Pakistani terror networks.	Terrorist outfit operating in Kashmir.
Tahawwur Rana Extradition Case	Legal case involving India's request to extradite 26/11 accused from the US.	India asking the US to send back a terror suspect.
BlueTalks	A global initiative for open discussion on ocean-related challenges and governance.	Public talks around saving the oceans.
"Nice Ocean Agreements"	Informal term for recent UN treaties focused on ocean protection and high seas governance.	Friendly deals to protect global oceans.
High Seas Governance	Legal and institutional frameworks for managing ocean areas beyond national jurisdictions.	Rules for managing international ocean waters.



### Polity

Keyword	Official Definition	Easy Explanation
<b>Article 200</b>	It empowers the Governor to grant assent, withhold assent, return a bill (except money bills), or reserve it for President's consideration.	Governor's power to approve, reject, or send back state bills.
<b>Pocket Veto</b>	An informal power of the President (and Governor) to not act upon a bill, without explicitly vetoing it.	When the President silently blocks a bill by taking no action.





<b>High-Yielding Hybrids</b>	Crop varieties with enhanced genetic traits to produce higher yield, usually developed through hybridization.	Improved seeds that give more output per acre.
<b>Delimitation vs. Readjustment</b>	Delimitation means redrawing electoral boundaries; readjustment refers to minor boundary/seat changes post-census without increasing total seats.	Redrawing voting zones (delimitation) vs. small census-based seat tweaks (readjustment).
<b>Judicial Accountability</b>	Holding the judiciary accountable through mechanisms ensuring transparency and integrity.	Making judges answerable for their conduct.
<b>Cooperative Federalism</b>	A system where Centre and States work together for national development.	Centre and States as partners, not competitors.
<b>Moral Rights (IPR)</b>	Rights of authors over the integrity and attribution of their work even after selling economic rights.	Creator's right to be credited and stop misuse of their work.
<b>Constitutional Rethink</b>	A process or movement seeking fundamental review of constitutional norms, often for reforms or modernization.	Rethinking or updating constitutional ideas and processes.
SC Sub-Categorisation	The classification of Scheduled Castes into subgroups for equitable distribution of quota benefits.	Breaking SC reservations into sub-groups for fairness.
Quota within Quota	Allocation of a portion of a reservation quota for specific sub-groups.	Reserving a piece of the reservation for a smaller group.
UPA/NDA Coalition Dynamics	The power-sharing, policy alignment, and internal negotiations within coalition governments.	How political alliances like UPA or NDA manage power.
Common Minimum Programme	A document outlining shared priorities and policies among coalition partners.	A joint to-do list agreed on by allies in government.
Strategic Hamlet Scheme	A Cold War-era counter-insurgency strategy relocating villagers to controlled settlements.	Moving villages to stop them from helping rebels.
Waqf-by-use Doctrine	A legal principle allowing land to be treated as waqf if used for religious purposes over time.	Land becomes Islamic charity land if used that way long enough.
Safe Harbour Doctrine	A legal shield protecting online intermediaries from user-generated content liability.	Platforms like YouTube aren't blamed for users' posts.
Enabling Legislation	A law that grants authority to the government or institution to perform specific actions.	A law that lets the government do something new.
Affirmative Action	Policies that favor underrepresented groups to promote equality and diversity.	Steps to help backward communities catch up.
<i>Sede Vacante</i> / Interregnum	Period when a position (like Pope or President) is vacant and awaiting succession.	The time when there's no Pope or leader temporarily.





Papal Conclave	The secretive assembly of cardinals to elect a new Pope after <i>sede vacante</i> .	The meeting where the next Pope is chosen.
Judicial Despotism	A situation where judiciary is seen as overreaching or dominating other branches of government.	When courts act like rulers, overriding others.
UIDAI vs ECI Autonomy	A debate on independence between Aadhaar authority (UIDAI) and Election Commission (ECI) over data usage.	Argument over who controls voter data—Aadhaar body or Election Commission.
Performance-driven Governance	A governance model focused on results, metrics, and measurable outcomes.	Running government like a company—based on performance.
RTE Act vs NEP Conflict	Legal tension between Right to Education Act and New Education Policy's implementation framework.	Clash between old education law and new education plan.
Caste Census	Enumeration of population based on caste categories for policy purposes.	Counting castes during the census for welfare plans.
Karnataka Hegde Commission	A state-level panel reviewing quota sub-categorization and caste data accuracy.	A Karnataka committee checking caste quotas and records.
Continuing Mandamus	A court order that remains in effect over time, requiring authorities to show progress.	Court keeps checking till work is done.
Equality Act 2010 (UK)	A UK law that legally protects people from discrimination in the workplace and wider society.	British law against any kind of unfair treatment.
Gender Recognition Act 2004 (UK)	UK law allowing individuals to change their legal gender.	Law that lets people change their gender officially.
Transgender Persons (Protection of Rights) Act, 2019	Indian law ensuring rights and protections for transgender individuals.	Indian law that protects transgender people's rights.

