



CONCEPTS IN NEWS

December 2024



Environment

Keyword	Official Definition	Easy Explanation
Marine Carbon Dioxide Removal (mCDR)	Techniques aimed at removing CO ₂ from the atmosphere and storing it in marine environments.	Removing carbon dioxide from the air and storing it in the ocean.
Ocean Alkalinity Enhancement (OAE)	A method of increasing the alkalinity of ocean water to enhance its capacity to absorb atmospheric carbon dioxide.	Making ocean water more alkaline to help it absorb more CO ₂ from the air.
Persistent Organic Pollutants (POPs)	Chemical substances that persist in the environment, bioaccumulate through the food web, and pose a risk to human health and the environment.	Dangerous chemicals that don't break down and can accumulate in living things.
Land Degradation Neutrality	A state whereby the amount and quality of land resources necessary to support ecosystem functions and services remain stable or increase within specified temporal and spatial scales and ecosystems.	Keeping the amount and quality of land stable over time.
Plastic Production Cap	Regulatory limits set on the amount of plastic that can be produced to reduce environmental impact.	Limits on how much plastic can be made to protect the environment.



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Lake-Effect Snow	Snow falling on the leeward side of a lake, generated by cold dry air passing over warmer water, especially in the Great Lakes region.	Snow caused by cold air moving over warm lake water.
Carbon Budget	The amount of carbon dioxide emissions permitted over a period of time to keep within a certain temperature threshold.	The limit on CO2 emissions to avoid excessive global warming.
Net-Zero Emissions	Achieving a balance between the greenhouse gases put into the atmosphere and those taken out.	Balancing the amount of greenhouse gases emitted and removed from the atmosphere.
Cyclone Stagnation Effects	The phenomenon where a cyclone remains in one area longer than usual, often leading to increased and prolonged impacts.	When a cyclone doesn't move on quickly, causing extended damage.
Single-Use Plastics	Plastic products designed to be disposed of right after use without being reused or recycled.	Plastics that are thrown away after one use.
Extended Producer Responsibility (EPR)	A policy approach where producers are given a significant responsibility—financial and/or physical—for the treatment or disposal of post-consumer products.	Making producers responsible for their products from creation to disposal.
Marine Carbon Dioxide Removal	Techniques aimed at removing carbon dioxide directly from seawater to mitigate climate change.	Methods to take out CO2 from the ocean to fight climate change.
Lake-Effect Snow	Snowfall caused when cold dry air passes over warmer water bodies, particularly large lakes, gaining moisture and heat.	Snow that forms when cold air moves over warm lake water.
Albedo Effect	The fraction of solar energy reflected from the Earth back into space, influencing the Earth's climate.	How much sunlight Earth's surface reflects back into space.
Ice-Free Arctic Day	A day on which there is no sea ice present in the Arctic Ocean during the summer melt season.	A day when the Arctic Ocean has no ice.
Land Degradation Neutrality	A state whereby the amount and quality of land resources necessary to support ecosystem functions remain stable or increase over time.	Maintaining or improving the quality and quantity of land over time.
Arctic Amplification	The phenomenon that the Arctic region is warming faster than the rest of the world.	The Arctic warming up much faster than other parts of the world.
Climate Tipping Points	Critical points within the climate system that, when exceeded, can lead to significant changes to the climate system.	Points at which small changes can drastically alter the climate.
Agrivoltaics	The co-development of the same area of land for both solar photovoltaic power as well as for agriculture.	Using land for both solar power and agriculture.





La Niña	A climate pattern that describes the cooling of sea surface waters in the Pacific Ocean, which can significantly impact global weather.	Cooling of the Pacific Ocean that affects global weather patterns.
El Niño Southern Oscillation (ENSO)	A climate cycle in the Pacific Ocean with a global impact on weather patterns, involving shifts between El Niño and La Niña.	Climate changes in the Pacific that affect weather around the world.
Planetary Boundary Layer Height (PBLH)	The part of the atmosphere directly influenced by the earth's surface and responds to changes in surface forcings.	The atmosphere layer that reacts directly to changes on Earth's surface.
Cold Weather Chemistry	Chemical processes that occur in the atmosphere at lower temperatures, affecting air quality and climate.	Chemical reactions in the air during cold weather affecting climate.
Secondary Aerosols	Tiny particles formed in the atmosphere from gas molecules, significant for air quality and climate.	Particles formed from gases in the air that impact climate and air quality.
Greenwashing Policies	Corporate or governmental initiatives that claim to prioritize environmental concerns but are actually superficial or misleading.	Policies that pretend to help the environment but are not effective.
Compensatory Afforestation	Planting of trees to compensate for the loss of forest area due to industrial projects.	Planting new trees where others were cut down for development.
Subduction Zones	Areas of the Earth's crust where one tectonic plate moves under another, often causing earthquakes and volcanic activity.	Places where Earth's plates meet and one slides beneath another, causing natural disasters.
Carbon Sequestration	The process of capturing and storing atmospheric carbon dioxide to mitigate global warming.	Storing carbon from the atmosphere to slow down climate change.
Hyperlocal Ecosystems	Small-scale environments uniquely adapted to specific areas, often influenced by human activities.	Very small, area-specific environments influenced by nearby human activities.
Glacial Lake Outburst Floods (GLOFs)	Sudden releases of water from glacial lakes, which can cause catastrophic flooding.	Dangerous floods caused by water suddenly released from glacier lakes.
Tsunamigenic Earthquakes	Earthquakes that occur underwater and are capable of generating tsunamis.	Underwater earthquakes that can cause tsunamis.





Science and Technology

Keyword	Official Definition	Easy Explanation
Extrachromosomal DNA (ecDNA)	DNA that exists outside the chromosomes and can replicate independently, often affecting cancer and tumor growth.	DNA pieces outside normal genes that can influence cancer.
Frontier AI Risks	The potential dangers associated with advanced artificial intelligence, including ethical and safety concerns.	The risks of developing very advanced AI technologies.
Biologized Inheritance	The concept of passing on traits or conditions not only through genes but also through environmental and social factors.	How traits can be inherited through both genes and one's environment.
Genetically Modified Parasites	Parasites that have been genetically engineered to study diseases or for potential use in disease control strategies.	Parasites altered in the lab to help in research or disease control.
Late-Arresting vs. Early-Arresting Parasites	Classification of parasites based on the timing of their impact on their hosts during the host's lifecycle.	Parasites categorized by when they affect their hosts.
Extrachromosomal DNA (ecDNA)	DNA that exists outside of chromosomes and can replicate independently, often playing a role in cancer progression.	DNA outside normal chromosomes that can contribute to cancer.
Quantum Dot Solar Cells	Solar cells that utilize quantum dots to improve light absorption and overall efficiency.	Solar cells enhanced by tiny particles for better sunlight capture.
Gravitational Lensing	The bending of light by gravity from a massive object, used in astronomy to study distant celestial objects.	Using gravity's effect on light to view distant objects in space.
James Webb Space Telescope (JWST)	The largest space telescope designed to provide improved infrared resolution and sensitivity over the Hubble Telescope.	A major space telescope for observing the universe in infrared light.
Hubble Tension	The discrepancy in measurements of the rate at which the universe is expanding.	Conflicting data on how fast the universe is growing.
Ghost Guns	Firearms that are made by individuals using parts that do not have serial numbers and are therefore untraceable.	Guns made at home that can't be tracked because they lack serial numbers.
Biodegradable Satellites	Satellites designed to decompose naturally after their mission ends to reduce space debris.	Satellites that break down after use to avoid cluttering space.
Space Traffic	The management of space vehicles and debris in Earth's orbit to prevent collisions and maintain safe navigation.	Managing satellites and debris to keep space travel safe.





Genetic Bottleneck	A sharp reduction in the size of a population, leading to a decrease in genetic diversity.	When a population drastically decreases, leading to less genetic variety.
Astropolitics	The study of the political and legal implications of human activities in outer space.	Politics concerning space exploration and usage.
Sakharov Conditions	Necessary theoretical conditions for explaining the matter-antimatter asymmetry in the universe.	Conditions needed for the difference in matter and antimatter in the universe.
Microglia Overactivation	The excessive activation of microglia, brain immune cells, which can lead to neuroinflammation and neurological diseases.	When brain immune cells become overactive and cause brain issues.
Electrification Paradox	The observed phenomenon where increases in energy efficiency lead to higher overall energy consumption, instead of reducing it.	Using more energy because of more efficient technology.
Cross-Species Transmission	The transfer of diseases or pathogens from one species to another, often highlighting zoonotic diseases.	Diseases that move between different animal species or to humans.
Lentivirus Vector	A type of virus used in gene therapy to deliver genetic material into the DNA of cells.	A virus used to carry new genes into cells in gene therapy.
Furin Cleavage Site	A specific sequence in a protein that allows for the protein to be cut and activated by the enzyme furin.	A spot on a protein where it gets cut to be turned on.
Technosignatures	Observable properties or effects that provide evidence of advanced technology used by extraterrestrial civilizations.	Signs that could show technology from aliens.
Bioequivalence	A measure used in pharmacology to assess if two drugs have similar bioavailability and activity in the body.	Comparing two drugs to see if they work the same in the body.
Gene Therapy	A medical field focused on the modification of genetic material within a patient's cells to treat or prevent disease.	Changing genes in cells to treat or prevent diseases.
Quantum Key Distribution (QKD)	A secure communication method that uses quantum mechanics to distribute cryptographic keys.	Sending secure messages using the principles of quantum physics.
Post-Quantum Cryptography	Cryptography designed to be secure against the computational power of future quantum computers.	Encryption methods safe from future quantum computers.
Blood-Brain Barrier	The barrier in the central nervous system that prevents certain substances in the blood from entering the brain.	A natural barrier preventing harmful substances in the blood from reaching the brain.





Polyamines	Organic compounds that regulate cell growth and function.	Natural substances in cells that help regulate growth and health.
Slow-Slip Tectonic Faults	Faults that release accumulated stress slowly over time without causing significant earthquakes.	Faults that move slowly without causing large earthquakes.
Decoherence	The process by which quantum systems lose their quantum properties through interaction with their environments.	When quantum systems interact with the environment and lose unique properties.
Air-Independent Propulsion (AIP)	A submarine propulsion technology that allows submarines to operate without the need for atmospheric oxygen.	Submarine technology that works without surface air.
Bioequivalence	A pharmacological term indicating that two drugs release their active ingredient into the bloodstream at the same rate and extent.	Two drugs that work the same way and are equally effective.
Critical Minerals Dependency	Reliance on essential but often scarce minerals critical for modern technologies.	Dependence on rare minerals crucial for modern technology.
Genetic Profiling	Analyzing DNA to identify genetic differences that may determine disease risk or personal traits.	Using DNA to find genetic information that can predict health and personal characteristics.
Technosignatures	Evidence of advanced technology or its use by extraterrestrial sources.	Signs that suggest the presence of advanced alien technologies.
Neurotropism	The affinity of pathogens or treatments to target nerve cells.	The tendency of certain diseases or treatments to affect nerve cells.
Synthetic Biology	The redesign of biological components and systems that do not already exist in the natural world.	Engineering new biological parts, devices, or organisms.
Genetic Circuitry	Engineered networks of genes that mimic electronic circuits and are used to program cell behaviors.	Designed gene networks that control how cells behave.
Digital Twin Technology	Virtual replicas of physical devices used to run simulations before actual devices are built and deployed.	Creating digital versions of real-world devices for testing and analysis.



Economy

Keyword	Official Definition	Easy Explanation
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Cash Reserve Ratio (CRR)	The percentage of total deposits banks are required to keep as reserves either in cash or as deposits with the central bank.	The amount of money banks must keep on hand or with the central bank.
Gross Value Added (GVA)	A measure of the value of goods and services produced in an area, industry or sector of an economy.	How much value is created from producing goods and services in a specific area.
Imported Inflation	Inflation caused by the increase in prices of imported goods and services that contribute to rising domestic prices.	Price rises in a country caused by more expensive imports.
Sunrise Sectors	Industries that are new or innovative and are expected to grow rapidly in the coming years.	New and rapidly growing industries.
Windfall Gains Tax	A tax imposed on companies or individuals that have benefited unexpectedly from something that leads to sudden profits.	A tax on sudden, unexpected profits.
Global Carbon Markets	Mechanisms established under the Paris Agreement allowing countries to trade emissions reductions to meet their climate targets.	Trading system for countries to buy and sell reductions in carbon emissions.
Windfall Gains Tax	A tax imposed on companies that benefit from sudden, unexpected financial gains due to external circumstances.	A tax on sudden, large profits made because of favorable events.
Current Account Deficit (CAD)	The measurement of a country's trade where the value of the goods and services it imports exceeds the value of those it exports.	When a country spends more on foreign trade than it earns.
De-Dollarisation	The process by which countries and businesses globally reduce their reliance on the U.S. Dollar as a currency for trade and reserves.	Reducing the use of the U.S. dollar in global trade.
Biofuel Trade-Offs	The advantages and disadvantages associated with producing and using biofuels, considering their environmental and economic impacts.	The benefits and downsides of using fuels made from organic materials.
Ultra-Processed Foods (UPFs)	Foods that have been significantly modified from their original form and contain various artificial ingredients to increase shelf life or enhance flavor.	Highly processed foods that are often high in additives and low in nutrients.
Wealth Tax vs. Paper Wealth	A wealth tax is levied on the total value of personal assets, while paper wealth refers to wealth represented in financial instruments or investments, not physically tangible.	A tax on all personal assets vs. value in investments like stocks.
Economic Cost of Inequality	Refers to the economic losses associated with income disparities, impacting overall economic growth and stability.	The financial loss society faces due to unequal income distribution.
Production-Linked Incentives (PLI)	Incentives offered by governments to companies to boost manufacturing in certain sectors, linked to their levels of production.	Rewards for companies that increase their manufacturing output.





Sovereign Wealth Fund	State-owned investment funds or entities that manage national savings for the purposes of investment.	Government-managed funds invested to generate returns for the country.
Regulatory Arbitrage	Exploiting differences between similar regulatory rules or lack of rules in different jurisdictions to gain a business advantage.	Using regulatory loopholes to gain advantages in business.
Producer Support Estimate (PSE)	A measure of the annual monetary value of gross transfers from consumers and taxpayers to support agricultural producers.	Financial support given to farmers from taxes and consumer prices.
Employment Elasticity of Growth	A measure of how employment varies with economic output or growth.	How job opportunities change with economic growth.
Circular Economy	An economic system aimed at minimizing waste and making the most of resources through reuse, repair, and recycling.	An economy designed to reuse and recycle materials, reducing waste.
Nano-Urea	A nanoparticle form of urea that allows for more efficient use and absorption by plants, reducing the need for traditional urea.	A very small, efficient form of fertilizer that plants can use more effectively.



International Relations

Keyword	Official Definition	Easy Explanation
Global Digital Compact	A proposed agreement under the United Nations to address digital cooperation and ensure safe and inclusive digital future.	A plan to work together globally on digital issues for a safer future.
Strategic Autonomy	The ability of a state to pursue its national interests and adopt global positions without external coercion.	A country's capability to make decisions based on its own interests without foreign pressure.
Global Digital Compact	A proposed initiative by the United Nations to address challenges and opportunities presented by digital transformation worldwide.	A UN plan to manage and improve digital cooperation globally.
Reactive Diplomacy	Diplomatic actions taken in response to events rather than shaping them proactively.	Reacting to global events with diplomacy instead of planning ahead.
Geopolitical Disengagement	The reduction or withdrawal of a country's influence or involvement in international affairs.	A country pulling back from international politics.





Multilateral Moderation (BRICS, SCO)	Diplomatic strategy involving multiple countries to moderate global issues through organizations like BRICS and SCO.	Countries working together in groups like BRICS to handle global issues.
Hybrid Warfare	A military strategy that combines conventional warfare, irregular tactics, and cyber warfare to exploit the enemy's vulnerabilities.	Warfare that uses a mix of traditional, irregular, and cyber tactics.



Polity

Keyword	Official Definition	Easy Explanation
Section 197(1) of CrPC	A provision in the Indian Criminal Procedure Code that requires government sanction to prosecute public servants.	A rule that says you can't sue government workers without permission.
Judicial Precedent	A legal principle or rule that is created by a court decision and which future courts must follow.	A past court decision that sets a rule for future cases.
Special Leave Petitions (SLPs)	A petition that can be made to the Supreme Court of India to appeal against judgments of any lower court.	Asking the Supreme Court to review a lower court's decision.
Master of the Roster	The Chief Justice's power to allocate cases to different judges in the Supreme Court.	The top judge's role in deciding which judge hears which case.
Proportional Representation	An electoral system in which parties gain seats in proportion to the number of votes cast for them.	A voting system where parties get seats based on their share of the vote.
Articles 72 and 161 (Pardoning Power)	Powers granted to the President of India and governors of states to pardon or reduce the sentence of convicted persons.	The power of top officials to forgive or reduce prisoners' sentences.
Socio-Economic and Caste Census (SECC)	A census conducted in India to gather information on the socio-economic status and caste details of households.	A survey to understand the economic and caste status of families.
Judicial Review	The power of courts to declare the actions of other branches of government unconstitutional.	The court's ability to say if something the government does is illegal.
Uniform Civil Code	A proposed legal code in India that would replace personal laws of different religions with a common set governing every citizen.	A law to standardize personal laws for all citizens in India, regardless of their religion.
Anuradha Bhasin vs. Union of India	A landmark legal case in India concerning freedom of speech and internet shutdowns in the state of Jammu and Kashmir.	A court case about the right to internet access and free speech in Kashmir.





Rome Statute	The treaty that established the International Criminal Court (ICC) to prosecute individuals for international crimes.	The law that created an international court for major crimes.
Harmonised System of Nomenclature	An internationally standardized system of names and numbers for classifying traded products.	A global system for naming and numbering traded products.
Never Events	Serious, preventable patient safety incidents that should not occur if healthcare providers follow proper procedures.	Major mistakes in healthcare that should never happen.
Fixed-term Parliaments Act	A UK law that sets fixed dates for general elections and limits the powers of the Prime Minister to call snap elections.	UK law that schedules elections regularly and limits unexpected ones.
Constructive Vote of No Confidence	A vote where the government must have a prospective replacement before it can be ousted.	A rule that a new government must be ready before the old one can be removed.
Constitution 129th Amendment	An amendment in the legal framework of a country that modifies its constitution. Specific context needed for which country and what changes.	Changes made to a country's constitution. Specific details depend on the country.
Ranganath Misra Commission	A commission in India that investigated possible solutions to communal and social conflicts.	A group formed to look into social issues in India.
Electoral Bonds	Bonds that allow donors to pay political parties anonymously, intended to increase transparency in political funding.	Ways to donate money to political parties without revealing the donor's identity.

