

NEWS TODAY

INDIA-USA JOINT STATEMENT DURING THE OFFICIAL STATE VISIT OF PM TO USA

• Key highlights of the statement

Areas	About
Critical Minerals supply chains	<ul style="list-style-type: none"> • India to join Mineral Security Partnership (MSP), a US-led collaboration of 14 countries that aims to catalyse public and private investment in critical mineral supply chains globally.
Technology	<ul style="list-style-type: none"> • Interagency-led Strategic Trade Dialogue will be launched in June 2023. • Micron Technology, Inc., to build a new semiconductor assembly and test facility in India. • Launch of taskforces on Open Radio Access Network (ORAN) systems, a disaggregated and interoperable telecom network. • 35 innovative joint research collaborations in emerging technologies.
Clean Energy Transition	<ul style="list-style-type: none"> • Launch of India-U.S New and Emerging Renewable Energy Technologies Action Platform to accelerate cooperation in green hydrogen, offshore and onshore wind etc. • MOU under which U.S. Agency for International Development will support Indian Railways' ambitious target to become a "net-zero" carbon emitter by 2030. • Creation of a payment security mechanism that will help India deploy 10,000 made-in-India electric buses.
Cooperation in the Indo-Pacific	<ul style="list-style-type: none"> • US will join the Indo-Pacific Oceans Initiative (IPOI), a regional initiative to promote a safe, secure, and stable maritime domain. ➢ IPOI was launched in 2019 by India's PM at the East Asia Summit held in Bangkok.
Global Growth	<ul style="list-style-type: none"> • Developing a India-U.S Global Digital Development Partnership to enable development and deployment of Digital Public Infrastructure (DPI) in developing countries.
Others	<ul style="list-style-type: none"> • Indo-US Global Challenge Institutes for research partnerships and people-to-people exchanges between a range of diverse institutions in sustainable agriculture, clean energy, health and pandemic preparedness etc.

For information on other areas of cooperation announced between India-US, Kindly refer News Today dated 23rd June, 2023.

CENTRAL GOVERNMENT AMENDS ELECTRICITY (RIGHTS OF CONSUMERS) RULES, 2020

- Electricity (Rights of Consumers) Rules, 2020 were notified by the government to provide reliable services and quality electricity to consumers.
- Rules seeks to ensure that
 - **New electricity connections**, refunds and other services are given in time-bound manner.
 - **Willful disregard to consumer rights** results in levying of penalties on service providers and payment of compensation to consumers.
- Ministry of power has now has introduced **Electricity (Rights of Consumers) Amendment Rules, 2023** to bring following changes:

Changes	About
Introduction of Time of Day (ToD) Tariff	<ul style="list-style-type: none"> • Rather than being charged for electricity at same rate at all times of the day, price for electricity will vary according to the time of day. ➢ Power Tariff to be 20% less during Solar Hours (duration of eight hours in a day as specified by State Electricity Regulatory Commission), 10%-20% Higher during Peak Hours. • It will enable consumers to reduce electricity bills and will help power system to use resources more efficiently.
Amendment made in smart metering provision	<ul style="list-style-type: none"> • Post installation of a smart meter, no penal charges will be imposed on a consumer based on maximum demand recorded by the smart meter for the period before installation date.

DRUGS TECHNICAL ADVISORY BOARD (DTAB) RECOMMEND BAN ON TWO MORE DRUGS HARMFUL FOR VULTURES

- DTAB agreed to **prohibit manufacture, sale and distribution of drugs Ketoprofen and Aceclofenac** for treatment of livestock animals to **conserve vultures**.
 - > It is part of **Central Drugs Standard Control Organization (CDSCO)** in Ministry of Health and Family Welfare.
 - > **It recommends** to the Ministry on policy decisions related to the **technical aspects of the Drugs and Cosmetics Act and Rules**.
- **Ketoprofen, Aceclofenac, Diclofenac and Nimesulide are Non-steroidal Anti Inflammatory drugs (NSAIDs)** used in veterinary practice **that have been proven toxic to vultures** and other birds of prey.
 - > **Diclofenac is already banned** by India.
- **Some NSAIDs are not fully metabolized** by vultures and **cause damage to the birds' kidneys**.
 - > **Treated cattle metabolize NSAIDs** within 3-4 days of treatment and **therefore do not pose a threat to vultures if they die after such a period** has lapsed.
- **A total of nine species of vultures are found in India**. These are:
 - > Oriental White-backed Vulture, Slender billed Vulture, Long billed Vulture, Egyptian Vulture, Red Headed Vulture, Indian Griffon Vulture, Himalayan Griffon, Cinereous Vulture and Bearded Vulture or Lammergeier.
 - > **Population of White-backed Vulture, Slender billed Vulture and Long billed Vulture** (all three **Critically Endangered**) has **declined drastically** over the past decades.

ONLY 5% OF INDIA'S COAL-BASED THERMAL POWER CAPACITY MEETS SO₂ EMISSIONS NORMS: CENTRE FOR SCIENCE AND ENVIRONMENT (CSE) REPORT

- In 2015, Ministry of Environment, Forest, and Climate Change notified **environmental norms** for particulate matter (PM), sulphur dioxides (SO₂), nitrogen oxides and mercury and water use for **coal based thermal power plants (TPPs)**.
 - > Coal TPPs **contribute to over half SO₂ concentration, 30% oxides of nitrogen, 20% PM** in the ambient air.
- **Deadlines for compliance** with emission norms **have been revised** (refer table for latest deadlines) **several times**.
- Compliance with norms **requires retrofitting existing TPPs with auxiliaries**, to control emissions, such as Flue Gas Desulphurisation (FGD), Selective Catalytic Reduction etc.
 - > **Process of eliminating sulphur compounds from the exhaust emissions of fossil-fuelled (coal-fired) power plants is known as FGD**.
 - > This is accomplished by **including absorbent materials**, which can **eliminate up to 95% of sulphur** from flue gas by scrubbing.
- **National Electricity Plan (NEP) for 2022-32 cited various factors** that may have **delayed the implementation** of norms including:
 - > **Dependency on external market** for some FGD components, **novelty of the technology** for Indian market and **COVID-19 pandemic**.

Category of Coal based TPPs	Criteria	Deadline for parameters other than SO ₂ emissions	Deadline for SO ₂ emissions
A	Within 10 km radius of the National Capital Region (NCR) or cities having million-plus population.	End of 2022	End of 2024
B	Within 10 km radius of critically polluted areas or non-attainment cities (not meeting National Ambient Air Quality Standards).	End of 2023	End of 2025
C	Remaining plants	End of 2024	End of 2026

INDIA AND U.S. TO END THEIR SIX TRADE DISPUTES AT THE WORLD TRADE ORGANISATION (WTO)

- **Six disputes**, include three initiated by India and as many by US, **represents certain key sectors of the economy** such as **steel, aluminium, renewable energy, solar products etc**.
- Move will help **further boost two-way commerce and strengthen economic ties**.
 - > In 2022-23 **U.S. was the largest trading partner of India**.
- There are **two main ways to settle a dispute** once a **complaint has been filed in WTO**:
 - > **Parties find a mutually agreed solution**, particularly during the phase of bilateral consultations.
 - > **Through adjudication**, including the **subsequent implementation of panel and Appellate Body reports**.
- There are **three main stages to the WTO dispute settlement process**
 - > **Consultations between the parties**;
 - **If both sides are not able to resolve** the matter through consultation, either of them can approach for **establishment of a dispute settlement panel**.
 - > **Adjudication by panels** whose ruling or report **can be challenged by WTO's appellate body**; and
 - At present, **functioning of appellate body is impacted** in the backdrop of **USA blocking appointments** to Appellate Body.
 - > **Implementation of the ruling**.

TITAN SUBMERSIBLE SUBJECT TO A CATASTROPHIC IMPLOSION

● **US Navy stated it detected sounds "consistent with an implosion"** shortly after submersible lost contact **during a descent to Titanic wreck** at 3,800m (12,467ft) below sea level.

- **In explosion pressure builds up in a contained space** until energy is released violently **causing debris to project outwards.**
- **Whereas in implosion, pressure builds up over a structure** (For example from Water) until it crushes inward causing debris to collapse inward.



● **Deep-sea water pressure appears to have crushed submersible.**

- **At sea level, pressure inside our lungs is the same as pressure of air around us**, 1.033 kilograms on each square centimeter, **or one "atmosphere" of pressure.**
- Pressure increase with the depth of the sea. For every 33 feet (10.06 meters) , pressure increases by one atmosphere.

● **Experts are also suggesting potential safety problems with Titan submersible.**

- **Its hull - surrounding hollow part where passengers sit - was mainly made from carbon fibre, largely untested for deep sea vessels.**
- **Hull of a deep-diving sub is usually spherical** for receiving an equal amount of pressure at every point, but **Titan's hull was tube-shaped** therefore pressure was not equally distributed.

ALSO IN NEWS



Mutual Legal Assistance Treaties (MLATs)

- **India and Belgium** have signed MLATs in criminal matters **to help both countries to execute each other's search warrants and summons against fugitives** wanted by individual investigating agencies.
- MLATs is a mechanism whereby **countries cooperate with one another** to provide and obtain formal assistance **to ensure that the criminals do not escape or sabotage the due process of law.**
 - **Ministry of Home Affairs is the nodal ministry** for executing court orders under the MLATs.
 - **Section 105 of Criminal Procedure Code (CrPC)** explains the reciprocal arrangements to be made.



Implied volatility

- According to RBI bulletin, **Indian rupee was turning out to be one of the most stable currencies with implied volatility at its lowest level** since 2008.
- Implied volatility is the **metric that captures the market's view of likelihood of fluctuations in its value.**
 - However, it **doesn't predict the direction in which the price change will proceed.**
 - It can often be thought to be a **proxy of market risk.**



Government liberalised drone and UAV export for civilian use

- **Decision is in line with** emphasis laid in **Foreign Trade Policy 2023** on **facilitating export of high tech items.**
- **Civilian drone** (ranges less than 25 km and payload less than 2 km) **will now be subject to General Authorization for Export of Drones (GAED)**, a one-time general license valid for three years.
 - **Earlier**, All kinds of drones and UAVs **were restricted for export** under Special Chemicals Organisms Material Equipments and Technology (SCOMET) list.
 - **SCOMET list subject to specific regulations** due to their potential dual-use nature.



National Energy Data: Survey and Analysis 2021-22

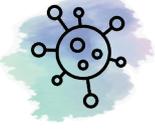
- It is the **maiden report of Energy Data Management Unit**, under Bureau of Energy Efficiency.
- **Key highlights**
 - **Total estimated reserves of coal** (caters to almost half of India's energy requirement) as of 2022 were 361411.46 MT (Million Tonnes).
 - India's **crude oil production has declined** from 36.01 MT 2016-17 to 29.69 MT in 2021-2022.
 - From 2016-17 to 2021-22 India's domestic **production of LPG has grown at a CAGR of 2%.**
 - In 2016-17, **India exported 26% of its domestic production of diesel**, while this share increased to **30% in 2021-22**



Air Independent Propulsion (AIP) System Modules

- **L&T, DRDO sign contract to build AIP modules** for Scorpene class submarines.
- AIP is a **marine propulsion technology** that allows **non-nuclear submarines to operate without access to atmospheric oxygen.**
 - It **allows submarines to stay for longer hours in water.**
 - It **decreases the noise levels made** by submarines.
- **Indigenous AIP propulsion system** by DRDO is a **modular system** that can be **easily configured** for any conventional submarine platform.
 - It **relies on** the innovative **Phosphoric Acid Fuel Cell technology.**



 <p>Joha Rice</p>	<ul style="list-style-type: none"> Scientists explored nutraceutical properties of Joha rice (a GI Tag rice from Assam) and detected two unsaturated fatty acids: linoleic acid (omega-6) and linolenic (omega-3) acid. <ul style="list-style-type: none"> > Joha rice has a more balanced ratio of omega-6 to omega-3 in comparison to widely consumed non-scented variety. Joha is a short-grain winter paddy known for its significant aroma and taste. <ul style="list-style-type: none"> > Joha varieties are mostly short or medium grained and have very low yield potential. It is effective in lowering blood glucose and preventing diabetes onset. <ul style="list-style-type: none"> > It is also rich in several antioxidants, flavonoids, and phenolics.
 <p>Cloud Seeding</p>	<ul style="list-style-type: none"> IIT Kanpur conducts test flight for cloud seeding. Deliberate introduction into clouds of various material/ chemical that act as condensation nuclei in an attempt to induce precipitation is called cloud seeding. Cloud seeding material, including sodium chloride, silver iodide, dry ice (carbon dioxide), potassium iodide, propane etc., bonds to water vapour particles that make up a cloud. Combined particles (Seeding material and water vapour) are a little bigger and in turn attracts more water vapor particles until they form droplets, which eventually become heavy enough to fall as rain.
 <p>Sickle Cell Disease (SCD)</p>	<ul style="list-style-type: none"> Residents of Madhya Pradesh's tribal-dominated Alirajpur and Jabhua districts will get colour-coded cards showing extent of sickle cell anaemia. SCD is a type of haemoglobin disorders, inherited blood diseases that affect how oxygen is carried in the body. SCD is characterized by a modification in the shape of the red blood cell from a smooth, donut-shape into a crescent or half-moon shape. <ul style="list-style-type: none"> > Misshapen cells lack plasticity and can block small blood vessels, impairing blood flow. > This condition leads to shortened red blood cell survival, and subsequent anaemia, often called sickle-cell anaemia.
 <p>Upanishads</p>	<ul style="list-style-type: none"> PM gifted a first edition print of book "The Ten Principal Upanishads" (from 1937) to US President. <ul style="list-style-type: none"> > Book is translated from Sanskrit by Shri Purohit Swami and Irish poet WB Yeats (won Nobel Prize in Literature in 1923). Upanishads, also known as Vedanta, speculate about ontological connection between humanity and cosmos. <ul style="list-style-type: none"> > Two broad categories of texts are: shruti ("revealed") and smriti ("remembered"). > Shruti consists of four Vedas, Brahmanas, Aranyakas and Upanishads. Dated to roughly 800-500 BC, Upanishads discuss concepts such as transmigration. Ten main (or principal) Upanishads: Esha, Kena, Katha, Prashna, Mundaka, Mandukya, Taittiriya, Aitareya, Chandogya, Brihadaranyaka.
 <p>Shikoku island</p>	<ul style="list-style-type: none"> Pilgrimage on Shikoku links 88 Buddhist temples, each of which claims a connection to Buddhist monk Kukai who is credited with founding Shingon Buddhism. Shikoku is the smallest of Japan's four main islands (Hokkaido, Honshu, and Kyushu are other three). <ul style="list-style-type: none"> > Shikoku lies south of the main island of Honshu. > It is bordered to south by Pacific Ocean. Shikoku has no volcanoes, but it does have a huge rift valley. > Highest point: Mt. Ishizuchi. > Rivers: Yoshino, and Shimanto (Japan's only undammed waterway). 
 <p>Personality in News</p>	<p>Shankar Trimbak Dharmadhikari</p> <ul style="list-style-type: none"> Famously known as Dada Dharmadhikari, he was an Indian freedom fighter and Gandhian thinker. Political contributions: <ul style="list-style-type: none"> > Participated in Non-Cooperation Movement and Quit India Movement; > An active member of 'Gandhi Seva Sangh'; > Elected to Madhya Pradesh Legislative Assembly and the Constituent Council. Social contributions: <ul style="list-style-type: none"> > Devoted majority of his time to the advancement of Dalits and women. > Advocated for an ideological revolution. > Had a very close association with Acharya Vinoba Bhave and Participated in the 'Bhoodan Movement'. Ethical Values: Compassionate, Kindness, Integrity, Non-violence etc.