

NEWS TODAY

SUPREME COURT (SC) TO STATES: GIVE STATUS REPORT ON CASES OF HATE CRIMES SINCE 2018

- **SC directed the governments to file year-wise data** (from 2018) regarding complaints filed, FIRs registered and challans submitted in courts **concerning incidents of hate crimes.**
 - Hate crimes are defined as **offenses motivated by hatred against a victim** based on his or her race, religion, sexual orientation, disability, ethnicity, or national origin.
 - **Hate speech, mob lynching** forms part of hate crimes.
- SC, in its 2018 judgment (**Tehseen S. Poonawala case**), issued several **guidelines to take preventive, remedial and punitive measures to curb increasing incidents of lynching:**
 - States to **designate a senior police officer in every district** to prevent incidents of mob violence.
 - **Set up fast-track courts** in such cases.
 - **Parliament** should create a separate offence of lynching.
 - **State governments shall prepare a lynching/mob violence victim compensation scheme.**
- Also, in 2022, **SC issued a set of interim directions** to several States/UTs **to curb menace of hate speech** including:
 - **Hate speech cases should be suo motu registered** and offenders should be proceeded against in accordance with law.
 - **SC highlighted specific provisions** (153A, 153B, 295A etc) of Indian Penal Code (IPC) **to book hate speech offenders.**

CENTRAL BOARD OF INDIRECT TAXES AND CUSTOMS (CBIC) ISSUES SoP TO CHECK USE OF FREEBIES, LIQUOR TO LURE VOTERS

- SoP aims to **prevent flow of suspicious cash, illicit liquor, drugs/narcotics, freebies and smuggled goods** during assembly and general elections.
 - Earlier, **Election Commission had also expressed concerns** that smuggled goods/contrabands and other illicit articles may be used to lure voters.
- **Key highlights of SoP**
 - **GST and Customs officials to monitor** distribution of **coupon-based or free fuel or cash** for alluring prospective voters.
 - **Setting up flying squads and static surveillance teams** for vehicles check and verification of warehouses.
 - **Movement of items like saris, party flags** etc. associated with candidates or political party **without an e-way bill may be confiscated.**
- **About CBIC**
 - It is part of **Department of Revenue** under Ministry of Finance.
 - It deals with **formulation of policy concerning levy and collection of Customs and Central Excise duties, prevention of smuggling** and matters relating to Customs, Central Excise and Narcotics etc.





SEBI SAYS TIGHTENED FOREIGN PORTFOLIO INVESTMENT (FPI) REGULATIONS, BUT TAX HAVENS POSE A GLOBAL CHALLENGE

- **Response was made by SEBI** in Supreme Court (SC) in response to various suggestions made by SC appointed expert committee **in wake of Hindenburg report against Adani Group** on potential breaches of securities laws.
- Regulated by SEBI, **FPI regime is a route for foreign investment in India.**
 - **SEBI has authorized National Securities Depository Limited (NSDL)** to issue registration number and certificate to FPIs on its behalf.
- There are three categories of FPIs registered with NSDL:
 - **Category I:** Government entities, central banks, sovereign wealth funds, and international organizations such as World Bank and IMF.
 - **Category II:** Financial institutions such as **banks, asset management companies, investment managers, and pension fund.**
 - **Category III:** All other investors who do not fall under Category I or II, including **hedge funds and private equity funds.**
- **Significance of FPIs:** important source of capital for emerging economies like India, provide investors with an opportunity to diversify their portfolio across different markets etc.
- **Challenges identified in FPI's regulation**
 - **FPIs are using multiple platforms**, each individually below limit for identification as a beneficial owner (BO), **to hold stakes.**
 - **Presence in tax havens jurisdictions** which leave ambiguity around their ownership and control.

MICROSOFT ANNOUNCED TO HAVE FIND MAJORANA ZERO MODES TO REVOLUTIONISE QUANTUM COMPUTING

- Quantum computing is a **multidisciplinary field that utilizes quantum mechanics to solve complex problems** faster than on classical computers.
 - It **uses two key principles** of quantum physics: **superposition and entanglement.**
 - **All particles** in nature are **either bosons or fermions.**
 - Bosons **carry energy and forces** throughout the universe.
 - **All subatomic particles** that make up matter are **called fermions.**
 - In 1928, **Physicist Paul Dirac predicted** the existence of an **antiparticle for each particle**, such that if the two meet, **they annihilate each other.**
 - Based on his prediction, **scientists found the first antiparticle, the positron** (or the anti-electron).
 - **Later Physicist Ettore Majorana predicted particles** that satisfied certain **conditions to be their own antiparticles.**
 - In his honour, **fermions that are their own antiparticles are called Majorana fermions** (neutrinos are considered to be Majorana fermions).
 - **Pair, or bound states, of fermions** that are **their own antiparticles** are **called Majorana zero modes.**
 - **Majorana zero modes** could help build **quantum computers that are much less fragile** than they are today, making them **computationally superior.**
- **Superposition** means that each quantum bits or **qubit can represent both 1 and 0 at the same time.**
 - **Entanglement** means that **qubits** in a superposition **can be correlated with each other**; i.e., state of one (whether it is a 1 or a 0) can depend on state of another.

ABOUT NSDL

- Enactment of **Depositories Act** in 1996 **paved the way for establishment** of NSDL.
- It **handles most of the securities held and settled in dematerialized form** in Indian capital market.
- NSDL **provides bouquet of services** to **investors, stock brokers, custodians, issuer companies etc.** through its nation-wide network of Depository Partners.

INDIAN ECONOMY HAS MOVED AWAY FROM TWIN BALANCE SHEET PROBLEM: FINANCE MINISTER

- Twin balance sheet issue **refers to earlier problematic balance sheets of both companies and banks.**
 - **Companies had excessive debt** and **insufficient funds** to repay it.
 - And **banks were burdened with significant non-performing assets (NPAs)**- reached almost 12% in 2016-17.
- A twin balance sheet **problem follows a standard path.**
 - **Companies expand during a boom**, leaving them with **obligations that they cannot repay.**
 - So, **they default on their debts**, leaving **bank balance sheets impaired** and **limiting their ability to lend.**
- However, as per **RBI's recent Financial Stability Report** both banking and corporate sector **balance sheets have strengthened** and India might be on **cusp of a twin balance sheet advantage.**
 - **Gross NPA ratio** fell to a **10-year low of 3.9%.**
 - **Corporate balance sheet** is also at its **healthiest in 10 years.**
- **Steps taken to solve twin balance sheet problem**
 - **4R strategy** i.e. recognizing problem of NPA, recapitalizing banks, resolving their problems, and reforming them.
 - RBI introduced **Central Repository of Information on Large Credits (CRILC)** to enable banks to share information on large loans.
 - **Insolvency and Bankruptcy Code, 2016.**
 - **National Asset Reconstruction Company (NARCL)** to handle bad debt.

CHANDRAYAAN-3: WHY ISRO WANTS TO EXPLORE THE MOON'S SOUTH POLE

- Chandrayaan-3 is a **follow-up to Chandrayaan-2 mission** (2019), which **partially failed** after its lander and rover **couldn't execute a soft-landing** on Moon.
- **Landing site of Chandrayaan-3** is more or less the same as Chandrayaan-2: **near south pole of moon** at 70 degrees latitude.
 - **If successful**, Chandrayaan-3 will become **world's first mission to soft-land near lunar south pole**.
- **Moon's south pole has certain advantages** including:
 - **Its craters have been untouched by sunlight** for billions of years — **offering an undisturbed record of solar system's origins**.
 - **Its permanently shadowed craters** are estimated to **hold enough water** that could potentially be **used for future missions**.
 - Its **positional advantages** make it a suitable **pit stop for future space exploration**.
 - It has **traces of hydrogen, ammonia, methane, sodium, mercury, and silver** — making it an untapped source of essential resources.
- **All previous spacecraft** to have landed on Moon **have landed in equatorial region**.
 - It is **easier and safer to land** near equator.
 - **Terrain and temperature are more hospitable** and conducive **for a long and sustained operation** of instruments.
 - **Sunlight is present in abundance**, at least on the side facing earth.

ALSO IN NEWS



European Sky Shield Initiative' (ESSI)

- **Austria and Switzerland joined ESSI**.
- ESSI aims **to create a European air and missile defence system** through common acquisition of air defence equipment and missiles **by European nations to strengthen NATO's Integrated Air and Missile Defence**.
- Initiative was **last year spearheaded by Germany** after Russia invaded Ukraine.
 - **Number of ESSI members** has gone up to **19 including Belgium, Bulgaria, Czech Republic, Norway, Slovakia, UK** etc.



Project 75 (India)- P75 (I) - submarine program

- **Spain's Navantia and Larsen & Toubro to bid** for P75 (I) submarine program.
- **P75 (I)**, succeeds P75, is part of **30-year submarine building plan** that ends in 2030.
 - P75 (I) **requires Indian bidder to tie up with a foreign collaborator**.
- It envisages **construction of six conventional submarines** with better sensors and weapons and **Air Independent Propulsion System (AIP)**.
- It will provide boost to **indigenous design and construction capability** of submarines, in addition to bringing in **latest submarine design and technologies**



New Wheat variety

- **Punjab Agricultural University developed** a new **wheat variety called PBW RS1**, with RS being short for resistant starch.
- PBW RS1 with **high amylose starch content**, is known to **reduce risks of type-2 diabetes and cardiovascular diseases**.
 - Items made from it **won't cause an immediate and rapid rise in glucose levels**.
 - High amylose and resistant starch, instead, ensure that glucose is released more slowly into bloodstream.
 - **Being slower to digest also increases a feeling of satiety** thus helping in dealing with obesity.
- However, **average grain yield from this yield is recorded lower** than the average yield.

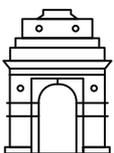


Marine Heatwave in the Bay of Bengal

- Marine heatwaves are **prolonged periods of anomalously high sea surface temperature**.
- **It may result in:**
 - **Meteorological implications:** a warmer-than-normal Bay of Bengal likely contributes to current extreme rainfall especially over northwest India.
 - **Affecting marine biodiversity:** 85% of the corals in the Gulf of Mannar near the Tamil Nadu coast got bleached after the marine heatwave in 2020.
 - **Socio economic impact** on coastal communities.



 <p>Palamau Tiger Reserve (PTR)</p>	<ul style="list-style-type: none"> ● Four soft-release centres for Cheetals are under construction in Jharkhand's PTR. ● About PTR: <ul style="list-style-type: none"> ➢ Location: Located in the western part of the Chotanagpur plateau. ➢ It forms part of Betla National Park and Palamau Wildlife Sanctuary. ➢ It falls under the Indo-Malayan realm. ➢ Rivers: North Koyal, Auranga and Burha. ➢ Flora: Moist and dry peninsular Sal, Aegle, Dry Bamboo Brake etc. ➢ Fauna: Tigers, leopards, wolves, wild dogs etc.
 <p>Beas river</p>	<ul style="list-style-type: none"> ● Beas River swells due to heavy rains. ● About Beas (Vipasa) River: <ul style="list-style-type: none"> ➢ States: Passes through Himachal Pradesh and Punjab. ➢ Origin: Rohtang pass, from where it flows through the Kullu valley towards south. ➢ Major tributaries: Bain, Banganga, Banner, Chakki, Gaj, Harla, Mamuni, Parvati, Patlikuhlal, Sainj etc. ➢ Converge with Sutlej at Harike.
 <p>Hydrazine Hydrate (HH)</p>	<ul style="list-style-type: none"> ● Gujarat Alkalies and Chemicals Ltd (GACL), a state PSU, started dispatch of indigenously made HH to reduce import dependency. <ul style="list-style-type: none"> ➢ India currently imports HH from Europe and other countries. ● HH is a colourless, fuming, and oily liquid used as a reducing agent, an oxygen scavenger in the treatment of boiler water, and raw material for polymer industry as foaming agents. ● Other applications: used as rocket fuel, manufacture pesticides, manufacture of active ingredients for anti-cancer drugs, antidepressants, antifungal drug etc and also as fuel in eco-friendly fuel cells.
 <p>Entamoeba moshkovskii</p>	<ul style="list-style-type: none"> ● It is a diarrhoea causing pathogen that has been found circulating in Kolkata. ● First described in 1941 in Moscow, Entamoeba moshkovskii is commonly found in anoxic sediments (oxygen deficient) to brackish coastal pools. ● E moshkovskii and other related species like E histolytica and Entamoeba dispar are morphologically identical. <ul style="list-style-type: none"> ➢ They also cause amoebiasis, which affects approximately 50 million people in tropical regions. ➢ Of them, E histolytica infections are prevalent.
 <p>Phosphine</p>	<ul style="list-style-type: none"> ● Scientists detected phosphine in Venus' atmosphere. <ul style="list-style-type: none"> ➢ Venus is the second planet from Sun and is Earth's closest planetary neighbor (often called Earth's twin). ➢ It's the hottest planet in our solar system. Venus rotates on its axis backward. ● Phosphine, which comprises hydrogen and phosphorus, is a flammable, colorless and toxic gas on Earth that's often thought of as swamp gas. <ul style="list-style-type: none"> ➢ It's produced by microorganisms living in a very low oxygen environment. ➢ Application: semiconductor industry, as a fumigant, intermediate in several flame retardants etc.
 <p>Hampi Group of Monuments</p>	<ul style="list-style-type: none"> ● Hampi Group of Monuments are inscribed as UNESCO World heritage Site. ● Hampi comprise mainly the remnants of Capital City of Vijayanagara Empire (14th-16th Cent CE). ● It is located in Tungabhadra basin in Central Karnataka, Bellary District. ● Surviving remains include forts, riverside features, royal and sacred complexes, temples (Dravidian architecture), shrines, pillared halls, Mandapas etc. <ul style="list-style-type: none"> ➢ Famous structure: Vitthla temple, Virupaksha Temple, Krishna temple complex, Narasimha, Ganesa, Hemakuta group of temples etc. ➢ Another unique feature of temples is wide Chariot streets flanked by the rows of Pillared Mandapas.



DELHI



LUCKNOW



JAIPUR



HYDERABAD



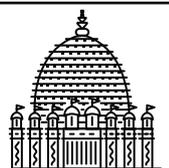
PUNE



AHMEDABAD



CHANDIGARH



GUWAHATI