

## Minerals Security Partnership

### ❖ Context

- The **Ministry of Finance** has asked the **Ministry of External Affairs** to explore the possibility of how India can join the group.

### ❖ About the Group

- It is a group of 11 countries - **USA, Australia, Canada, Finland, France, Germany, Japan, the Republic of Korea (South Korea), Sweden, the United Kingdom, and the European Commission.**
- It is an international partnership that seeks to develop and **secure global supply chains for critical minerals** such as lithium, cobalt, nickel and **rare earth minerals.**
- The partnership seeks to catalyse **public and private investment** for mining, processing and recycling projects that adhere to the highest environmental, social and governance (ESG) standards.
- The alliance is seen as being primarily focussed on evolving an **alternative to China.** It produces **70% of the world's rare earth minerals.**
- China has created processing infrastructure in rare earth minerals and acquired mines in Africa for elements such as cobalt.

### ❖ India's Concerns

- The minerals like lithium, cobalt & nickel are critical due to their requirement in **manufacturing of batteries for electric vehicles** which is important for transition towards clean energy.
- One of key elements of India's growth strategy is powered by an ambitious shift in the mobility space through conversion of a large part of public and private transport to electric vehicles.

- Rare earth minerals are used in trace amounts in semiconductors and high end electronics manufacturing.
- There are **17 rare earth elements (REE)** which include the **15 Lanthanides** (atomic numbers 57 - which is Lanthanum - to 71 in the periodic table) plus **Scandium** (atomic number 21) and **Yttrium** (39).
- REEs are classified as **light RE elements (LREE)** and **heavy RE elements (HREE).**
- Some REEs are available in India - such as Lanthanum, Cerium, Neodymium, Praseodymium and Samarium, etc.
- Others such as Dysprosium, Terbium, and Europium, which are classified as HREEs, are not available in Indian deposits in extractable quantities.

### ❖ KABIL

- In 2019, **Khanij Bidesh India Ltd.** was incorporated by three state-owned companies - NALCO, Hindustan Copper and Mineral Exploration Ltd.
- The specific mandate of the company is to acquire **strategic assets** such as lithium and cobalt abroad.
- It has signed an agreement with **Argentina**, which has the third largest reserves of lithium in the world, to jointly prospect the mineral in the country.
- It is also exploring options in Bolivia, Chile and Australia.

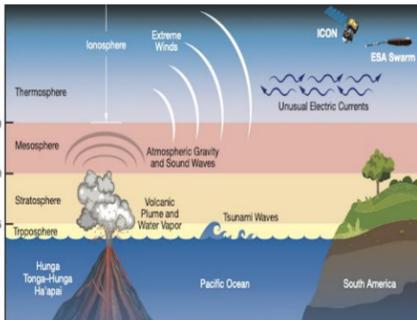
## Tonga Eruption Impact On Global Warming

### ❖ Context

- According to a new study, the volcanic eruption in Tonga recorded in January, 2022 is likely to add to global warming and the depletion of Earth's ozone layer.

### ❖ Key Highlights

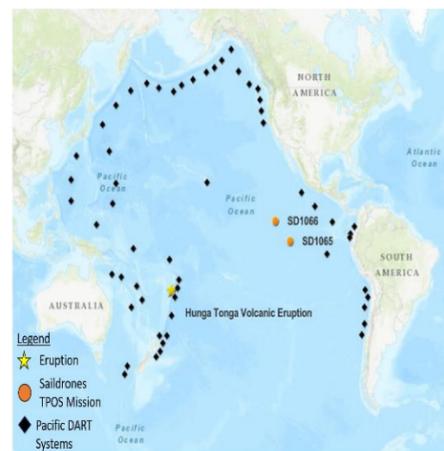
- The violent underwater eruption injected **146 teragrams of water vapour** into the stratosphere which is roughly **10 % of the water already present in the stratosphere.**



- It may be the **1st volcanic eruption** observed to **impact climate** not through surface cooling caused by volcanic sulphate aerosols, but rather **through surface warming** caused by excess water vapour.

- Volcanic plumes often contain carbon dioxide, sulphur dioxide (SO<sub>2</sub>), hydrogen chloride (HCl) and other trace gases. Massive emission of SO<sub>2</sub> often cools the planet as it forms compounds that reflect incoming sunlight.
- **Microwave Limb Sounder** device was used to measure atmospheric gases.

- The study noted the **50 m depth of caldera** as the main reason behind the phenomenon.



- If the caldera were shallower, there would not have been enough superheated seawater to reach the stratosphere.
- And if it were located at greater depths, the immense pressures in the ocean's depths are likely to have softened the release.

- **Superheated water** is liquid water under pressure at temperatures between the usual boiling point, 100 °C (212 °F) and the critical temperature, 374 °C (705 °F). It is also known as "**subcritical water**" or "**pressurised hot water**".

## Face to Face Centres



## India to Host (UNSC) Meet

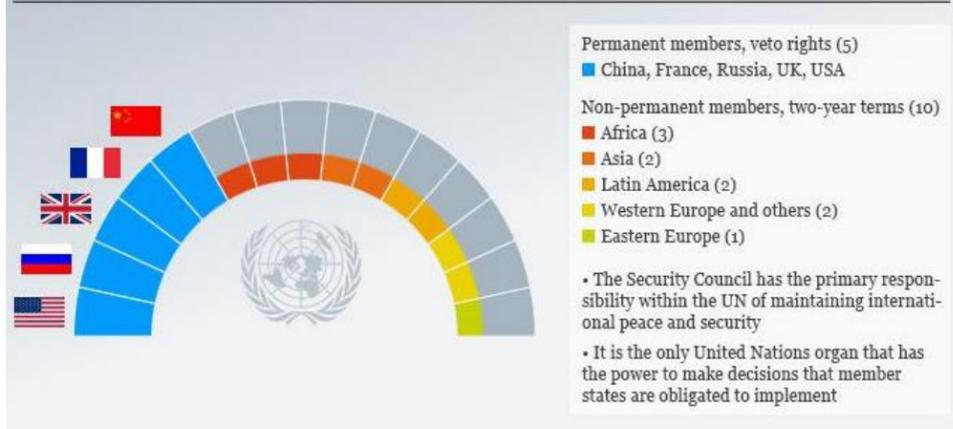
### ❖ Context

- India will host diplomats and officials from all 15 countries of the United Nations Security Council, including China, Russia and the United States, for a special meeting on terrorism, in Delhi and Mumbai in October 2022.

### ❖ Key Highlights

- The meeting of the **Counter-Terrorism Committee (CTC)**, which India is chairing for 2022 as a member of the UNSC, will focus particularly on challenges such as : terrorism financing, cyberthreats and the use of drones.
- India has been pushing for the UN members to adopt a Comprehensive Convention on International Terrorism (first proposed in 1996), which is likely to be raised during the meeting. "The event will showcase India's role as a victim of terrorism as well as a country at the forefront of global counter-terrorism efforts.

### United Nations Security Council



## National Anti Doping Bill, 2021

### ❖ Context

- The Parliament has passed the bill.

### ❖ Key Highlights

- The Bill prohibits athletes, athlete support personnel, and other persons from engaging in doping in sport.
- Violation of anti-doping rules may result in disqualification of results including forfeiture of medals, points and prizes, ineligibility to participate in a competition or event for a prescribed period, and financial sanctions.

### ❖ National Anti Doping Agency (NADA)

**National Anti Doping Agency**  
Ministry of Youth Affairs & Sports, Government of India

**ANTI-DOPING BILL 2021**  
The bill provides for constitution of the National Anti-Doping Agency- NADA for regulating anti-doping activities in sports.

**Functions**  
Its functions include planning, implementing, and monitoring anti-doping activities as well as investigating anti-doping rule violations.

**Recommendation**  
The bill proposes to establish the National Board for Anti-Doping in Sports. Make recommendations to the govt on anti-doping regulations & compliance with international commitments on anti-doping. The Board will oversee the activities of NADA & issue directions to it.

**Punishment**  
• Forfeiture of medals, points, and prizes.  
• Ineligibility to participate in a competition or event for a prescribed period.  
• Financial sanctions.

- Currently, anti-doping rules are implemented by the NADA, which was established as a society.
- The Bill provides for constituting NADA as a **statutory body** headed by a Director General appointed by the central govt.

- Functions of the Agency include planning, implementing and monitoring anti-doping activities, and investigating anti-doping rule violations.

### ❖ National Board for Anti Doping

- It will be established to make **recommendations** to the government on anti-doping regulations and compliance with international commitments on anti-doping.
- The Board will **oversee the activities of NADA** and issue directions to it.

- The Board will constitute a : **National Anti-Doping Disciplinary Panel** for determining consequences of anti-doping rule violations.

- **National Anti-Doping Appeal Panel** to hear appeals against decisions of the Disciplinary Panel

### ❖ World Anti Doping Agency (WADA)

- Doping is the consumption of certain prohibited substances by athletes to enhance performance.
- In **November, 1999** the **WADA** was set up under the **International Olympic Committee**.
- It is recognised by the **UNESCO International Convention against Doping in Sport (2005)**.
- Its primary role is to develop, harmonise, & coordinate anti-doping regulations across all sports and countries.
- It implements a **World Anti-Doping Code** and its standards, conducts investigations into doping incidents, research on doping, & educats sportspersons and related personnel on anti-doping regulations.
- It publishes the **list of prohibited substances at least once a year** and distributes it to all the signatories.
- Use of prohibited substances is exempted if needed for therapeutic use, as specified. According to WADA, in 2019, **most of the doping rule violations** were committed in **bodybuilding (22%)**, followed by athletics (18%), cycling (14%), and weightlifting (13%).
- Amongst the National Anti-Doping Organisations operating under WADA, in **2019, the maximum number of positive samples were reported in India** (225 out of 4,004 samples) followed by USA (194 out of 11,213 samples), & Russia (85 out of 9,516 samples).

## Union Cabinet Approves India's Climate Pledges

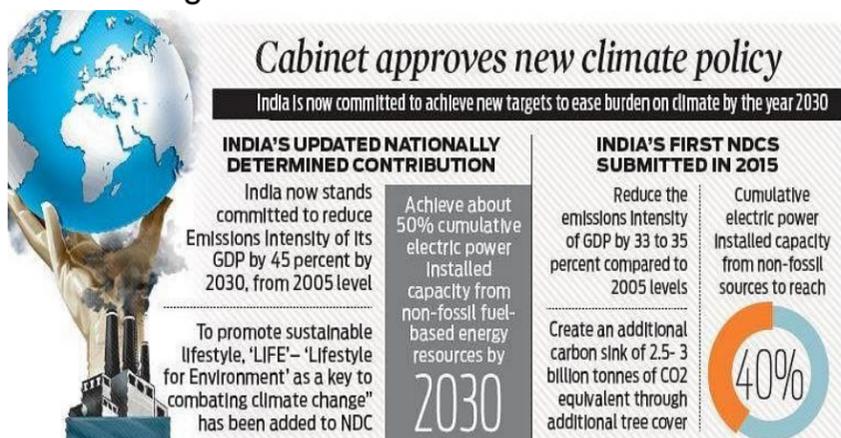
### ❖ Context

- India has ratified pledges made by Prime Minister in Glasgow last November 2021 to accelerate India's reliance on renewable energy to power the economy and be effectively fossil fuel-free by 2070.

### Face to Face Centres

## ❖ Key Highlights

- The pledge will lay out India's clean energy transition pathway from now through 2030 and will be communicated to the United Nations Framework Convention on Climate Change (UNFCCC).
- India's first pledge, also known as a **Nationally Determined Contribution (NDC)**, had three primary targets :
  - The 1<sup>st</sup> was to reduce emissions intensity of the economy by **33 - 35 %** below 2005 levels.
  - The second was to have **40 per cent** of installed electric power from non-fossil-based energy resources by 2030.
  - The third target was to create an additional (cumulative) carbon sink of **2.5-3 gigatonnes** of carbon dioxide equivalent (GtCO<sub>2</sub>e) by 2030 through additional forest and tree cover.



- In 2021, Indian Prime Minister announced the following new 5-point set of targets at COP 26 in Glasgow:
  - India will increase its non-fossil fuel energy capacity to 500 gigawatt (GW) by 2030.
  - It will meet 50 per cent of its energy requirements from renewable sources by 2030.
  - The total projected carbon emissions will be reduced by 1 billion tonnes from now through 2030.
  - The carbon intensity of its economy will be brought down to less than 45 per cent.
  - India will achieve its target of net zero by 2070.
- Three of these five targets had been approved by the Union Cabinet. "India now stands committed to reducing emissions intensity of its GDP by **45%** by 2030 from its 2005 levels, as per the updated NDC,"
- The country will also target about **50%** of cumulative electric power installed capacity from non-fossil fuel-based energy resources by 2030.

## ❖ Paris Agreement

- The Paris Agreement is a global treaty wherein some 200 countries agreed to cooperate to reduce GHG emissions and rein in climate change.
- The agreement seeks to limit global warming to well **below 2°C**, preferably to 1.5°C, compared to pre-industry levels.
- As per the Agreement's provisions, countries must 'update' their pledges every **five years** to make higher commitments to greenhouse gas (GHG) emissions reductions.

## Indigenously Developed Laser-guided ATGMs

### ❖ Context

- Indigenously developed Laser-Guided **Anti-Tank Guided Missiles (ATGM)** were successfully test-fired from **Main Battle Tank (MBT) Arjun** by Defence Research and Development Organisation (DRDO).

### ❖ Key Highlights

- The missiles hit with precision and successfully destroyed the targets at two different ranges.
- The all-indigenous Laser Guided ATGM employs a tandem **High Explosive Anti-Tank (HEAT)** warhead to defeat Explosive Reactive Armour (ERA) protected armoured vehicles.
- The ATGM has been developed with multi-platform launch capability & is currently undergoing technical evaluation trials from 120 mm rifled gun of MBT Arjun. With recent trials, the consistency of ATGM's capability to engage targets from minimum to maximum range has been established successfully.



- HEAT warheads:** They are made of an explosive shaped charge that uses the Munroe effect to create a very high-velocity partial stream of metal in a state of superplasticity that can punch through solid armor.
- Explosive Reactive Armour:** It is a peculiar type of armour that uses explosive charges to defend from other explosives which are fired at it.

## News in Between the Lines

### Concerns Over UAPA 1967



### ❖ Context

- A Rajya Sabha MP has demanded the repeal of **Unlawful Activities Prevention Act** in the **75th year of independence**.

### ❖ Key Issues of UAPA Highlighted

- Under section 43(d)** of the act, authorities are allowed to imprison an individual without trial for up to 180 days. The vague definition of terrorism.
- Conviction rates under UAPA have not been high.

### Face to Face Centres



## Calcium Ions Battery



### ❖ Context

- According to research by a polytechnic institute in the USA, calcium ions can be used as a strong alternative to lithium ions in batteries.

### ❖ Key Highlights

- Researchers demonstrated aqueous calcium ion battery using **molybdenum vanadium oxide (MoVO)** as a host for calcium ions. As compared to lithium, it is greener, more efficient, less expensive and more abundant.

## Lake Mead and Lake Powell



### ❖ Context

- UNEP has warned that the two of the largest reservoirs in the United States (US) have dwindled to 'dangerously low levels' due to the impacts of climate change.

### ❖ Key Highlights

- **Lake Mead**, on the **Colorado river**, located in the states of Nevada and Arizona, is the **largest artificial body** of water in the **US**.
- **Lake Powell** is another artificial reservoir on the **Colorado river**, straddling the border between the states of Utah and Arizona. These lakes are at risk of reaching '**dead pool status**' - a point at which the water level is low enough that it could no longer flow downstream and aid hydroelectric power stations.
- UNEP is among the lead agencies for the **UN Decade on Ecosystem Restoration**, aimed at countering climate change and halting biodiversity.

## Family Courts (Amendment) Bill 2022



### ❖ Context

- Recently Parliament has passed the Family Courts (Amendment) Bill 2022.

### ❖ Key Highlights

- It seeks to amend the **Family Courts Act, 1984**. The Act allows state governments to establish Family Courts. The Bill seeks to extend the application of the Act to the state of Himachal Pradesh with effect from 15th February 2019 & to the state of Nagaland with effect from 12 September 2008.
- The establishment of Family Courts in both states will be retrospectively valid from these dates.
- **Key Concern:** There are 11 lakh cases pending in 715 courts and Centre has urged the judiciary to dispose of them.
- **Significance:** Family, plays an important role in an individual's life. More family courts in the country will help to protect Indian family culture.

## Energy Conservation Law to Get a New Look



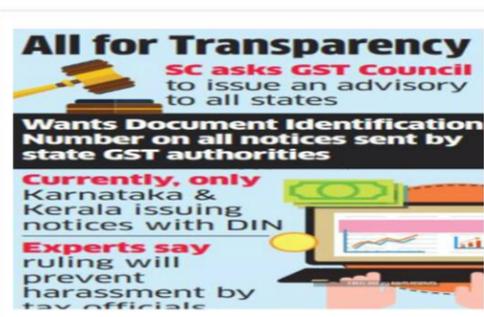
### ❖ Context

- Union power minister recently introduced amendments to the Energy Conservation Act in the Lok Sabha.

### ❖ Key Highlights

- It will enable provisions to make the use of clean energy, including green hydrogen mandatory and to establish carbon markets.
- The **Energy Conservation (Amendment) Bill, 2022**, seeks to mandate use of non-fossil sources, including biomass and ethanol for energy and feedstock along with the use of green hydrogen and green ammonia..
- The push for carbon markets comes when India aims to turn carbon-neutral by 2070.

## Document Identification Number (DIN)



### ❖ Context

- The Supreme Court has directed the Union of India/GST Council to issue an advisory to States regarding implementation of the system of electronic (digital) generation of a **DIN** in indirect tax administration.

### ❖ Key Highlights

- A DIN is a **20-digit identification** code that is affixed to every communication sent to taxpayers by the government. The States of Kerala & Karnataka have already implemented it.
- **Significance:** Implementing a system for electronic (digital) generation of a DIN would prevent any abuse by the departmental officers of pre-dating communications and ratifying actions by authorisations subsequently made out in the files.

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