

My Notes....

NATIONAL

CABINET AMENDS BIOFUELS POLICY

The **Union Cabinet** on 18 May 2022 approved advancing the **target of blending 20 per cent ethanol in petrol by 5 years to 2025-26** as well as allowing more feedstocks for the production of biofuels in a bid **to cut reliance on imported oil** for meeting the country's energy needs. The Cabinet, headed by Prime Minister approved the amendments to the **National Policy on Biofuels**.

Under the amendment

1. One of the amendments is that the government **will allow more feedstocks** for the production of biofuels.
2. The main amendment is for **advancing the target of blending 20 per cent ethanol** in petrol (20 per cent ethanol, 80 per cent petrol) to 2025-26 from 2030. **Currently, about 10 per cent of ethanol is blended** in petrol.
3. It will promote the production of biofuels in the country, under the **Make in India program**, by units located in **Special Economic Zones (SEZ)/ Export Oriented Units (EoUs)**.
4. The government has allowed adding of **new members to the NBCC**. Permission will be granted for the **export of biofuels in specific cases**.
5. The government allows delete/**amend certain phrases in the Policy** in line with decisions taken during the meetings of the **National Biofuel Coordination Committee (NBCC)**.
6. These decisions will help India, which **depends on imports for meeting 85 per cent of its oil needs**, to cut reliance on overseas shipments.
7. Since **many more feedstocks are being allowed for the production of biofuels**, this will promote the Atmanirbhar Bharat and give an impetus to Prime Minister's vision of India becoming '**energy independent**' by 2047.
8. The "**National Policy on Biofuels - 2018**" was notified by the **Ministry of Petroleum and Natural Gas** on 4 June 2018, in supersession of the **National Policy on Biofuels**, promulgated through the **Ministry of New & Renewable Energy, in 2009**.



THE PLACES OF WORSHIP ACT, 1991

The ongoing row over **Gyanvapi mosque** situated next to **Kashi Vishwanath temple complex in Varanasi** has once again brought to the fore the controversy around the **Places of Worship (Special Provisions) Act, 1991**. The recent controversy began when **five Hindu women filed a plea to worship idols** within the Gyanvapi mosque complex.

What is the Places of Worship Act, 1991?

1. The **Places of Worship Act, 1991**, prohibits "**conversion of any place of worship**" and provides "for the maintenance of the religious character of any place of worship as it existed on the 15th day of August, 1947, and for matters connected therewith or incidental thereto".
2. **Section 3 of the Act bars the conversion of places of worship.** It states, "No person shall convert any place of worship of any religious denomination or any section thereof into a place of worship of a different section of the same religious denomination or of a **different religious denomination** or any section thereof."
3. **Section 4(1) of the Act** states that "the **religious character** of a place of worship existing on the 15th day of August, 1947 shall continue to be the same as it existed on that day".
4. **Section 4(2) of the Act** further states that "**any suit, appeal or other proceeding** with respect to the **conversion of the religious character** of any place of worship, existing on the 15th day of August, 1947, is pending before any court, tribunal or other authority, the same shall abate, and no suit, appeal or other proceeding with respect to any such matter shall lie on or after such commencement in any court, tribunal or other authority".
5. The **original Gyanvapi mosque suit was filed in 1991** in the Varanasi district court for the restoration of the ancient temple at the site where the Gyanvapi mosque currently stands.
6. Section 5 of the Act stipulates that the **particular law does not apply to Ram Janmabhoomi-Babri Masjid case** or any suit, appeal or other proceeding relating to it.

SECOND STATE TO RECOGNIZE CFR RIGHTS

The **Chhattisgarh government** has become **only the second state in the country** to recognise **Community Forest Resource (CFR) rights** of a village inside a **national park**. The CFR rights of tribals living in **Gudiyapadar**, a hamlet inside the **Kanger Ghati National Park** in Bastar district, were recognised on 25 May 2022, giving the community power to **formulate rules for forest use**.

What is a community forest resource?

1. The **community forest resource area is the common forest land** that has been **traditionally protected** and conserved for sustainable use by a **particular community**.
2. The community uses it to access resources available within the traditional and customary boundary of the village; and for seasonal use of landscape in case

What are Community Forest Resource rights?

1. The **Community Forest Resource rights** under **Section 3(1)(i) of the Scheduled Tribes and Other Traditional Forest Dwellers (Recognition of Forest Rights) Act** (commonly referred to as the Forest Rights Act or the FRA) provide for recognition of the right to "**protect, regenerate or conserve or manage**" the community forest resource.
2. These rights allow the community **to formulate rules for forest use by itself** and others and thereby discharge its responsibilities under **Section 5 of the FRA**.
3. **CFR rights**, along with **Community Rights (CRs)** under Sections 3(1)(b) and 3(1)(c), which include **nistar rights** and **rights over non-timber forest products**, ensure sustainable livelihoods of the community.
4. These rights give the **authority to the Gram Sabha** to adopt local traditional practices of forest conservation and management within the community forest resource boundary.

of **pastoralist communities**.

- Each CFR area has a **customary boundary** with **identifiable landmarks** recognised by the community and its neighboring villages.
- It may include forest of any category – **revenue forest, classified & unclassified forest, deemed forest**, DLC land, reserve forest, protected forest, sanctuary and national parks etc.

PURI HERITAGE CORRIDOR PROJECT

The ambitious **Puri heritage corridor project** of the Odisha government has landed into a controversy. A recent affidavit filed by the **Archaeological Survey of India** in the Orissa High Court has further intensified the debate around the project.

What is the Puri Heritage Corridor Project?

- Conceived in 2016**, the **Puri Heritage Corridor Project** was unveiled in December 2019 to **transform the town into an international place of heritage**.
- The project includes **redeveloping** major portions of the town and in the vicinity of the temple for visitors and tourists.
- A resolution for the project was passed in the state assembly unanimously in **February 2020** to begin the first phase of work estimated at a cost of Rs 800 crore.
- Following this, the **Shree Jagannath Temple Administration (SJTA)** approved the architectural design plan of the project at an estimated cost of Rs 3,200 crore.
- A total of **22 different projects** will be executed in a phased manner. After the initial funds of Rs 800 crore from the state government's **Augmentation of Basic Amenities and Development of Heritage and Architecture at Puri (ABADHA) scheme**, another Rs 265 crore will be provided in the first phase.

What is the controversy about?

- The **12th century shrine is a centrally protected monument**, with the ASI as its custodian.
- As per rules laid down under the **Ancient Monuments and Archaeological Sites and Remains (Amendment and validation) Act**, construction activities within a 100 metre around such a monument's perimeter are restricted. Constructions can only be carried out with approval from the **National Monuments Authority (NMA)**.
- The NMA, a body under the **Union Ministry of Culture** was set up under the provisions of AMSAR Act for the protection and preservation of monuments and sites through management of the prohibited and regulated area around the centrally protected monuments.

INDIA'S FIRST WIND-SOLAR HYBRID POWER PLANT

Adani Green subsidiary **Adani Hybrid Energy Jaisalmer One Limited** has commissioned a **390 MW wind-solar hybrid power plant** at Jaisalmer on 28 May 2022. The plant will be **India's first wind and solar hybrid power generation plant**.

More about the plant

- The **hybrid power plant**, integrated through **solar and wind power generation**, harnesses the full potential of renewable energy by resolving the intermittency of the generation and provides a **more reliable solution to meet the rising power demand**.
- The new plant has a **Power Purchase Agreement (PPA)** with the **Solar Energy Corporation of India (SECI)** with tariff at Rs. **2.69 per kWh**, well below the Average

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- Power Procurement Cost (APPC) at national level, delivering access to affordable, modern, and **clean energy to all.**
- This project is a **part of the first construction facility** by international banks in Adani Green.
 - With the successful commissioning of the plant, AGEL now has an **operational capacity of 5.8 GW.**
 - This places AGEL's total renewable portfolio of 20.4 GW well on track to meet **its vision of 45 GW capacities** by 2030.

About Adani Green Energy Limited

- Adani Green Energy Limited (AGEL)** is the **renewable energy platform** of Adani Portfolio.
- The company has one of the **world's largest renewable portfolios**, with locked-in growth of **20.4 GW** across **operational, under-construction**, awarded and acquired assets, catering to investment grade counterparties.
- The company **develops, builds, owns, operates, and maintains** utility-scale grid-connected solar and wind farm projects.
- AGEL is focused on **decarbonization of power generation** and is helping India meet its sustainability goals.

WHO HONOURS ASHA VOLUNTEERS

The **World Health Organisation (WHO)** has recognized the contribution of **India's 1 million Accredited Social Health Activists (ASHAs)** during the **Covid-19 pandemic**. It is acknowledged that ASHAs facilitate linking households to health facilities, and **play pivotal roles in house-to-house surveys, vaccination, public health and Reproductive and Child Health measures.**

Who are ASHA workers?

- ASHA workers are volunteers** from within the community who are trained to provide information and aid people in accessing benefits of various healthcare schemes of the government.
- They act as a **bridge connecting marginalised communities** with facilities such as **primary health centres, sub-centres and district hospitals.**
- The role of these community health volunteers under the **National Rural Health Mission (NRHM)** was first established **in 2005.**
- ASHAs are primarily married, widowed, or divorced women** between the **ages of 25 and 45 years** from within the community.
- They must have good communication and leadership skills; should be literate with formal education up to Class 8, as per the programme guidelines.

How many ASHAs are there across the country?

- The aim is to have **one ASHA for every 1,000 persons** or per habitation in hilly, tribal or other sparsely populated areas.
- There are around **10.4 lakh ASHA workers across the country**, with the largest workforces in states with high populations – Uttar Pradesh (1.63 lakh), Bihar (89,437), and Madhya Pradesh (77,531).
- Goa is the only state with no such workers**, as per the latest National Health Mission data available from September 2019.

FIRST GAS PRODUCER TO TRADE ON IGX

State-owned **Oil and Natural Gas Corporation (ONGC)** on 23 May 2022 said it has become the **first gas producer** to trade domestic gas on the **Indian Gas Exchange**, trading unspecified volumes from its **eastern offshore KG-DWN-98/2 block**. In a statement, ONGC said it will increase volumes slowly.

What

1. **ONGC has become the first exploration and production (E&P) company** in India to trade domestic gas on Indian Gas Exchange.
2. The **first online trade** was made on 23 May 2022 by ONGC on India's first automated national level Gas Exchange, IGX.
3. After the **deregulation in gas pricing ecosystem** in 2000-21, ONGC has prepared itself to reap the benefits.
4. **Indian Gas Exchange Ltd. (IGX)** is **India's first automated national level Gas Exchange** to promote and sustain an efficient and robust Gas market and to foster gas trading in the country.
5. The exchange features **multiple buyers and sellers** to trade in spot and forward contracts at designated physical hubs.
6. IGX enables **efficient and competitive discovery of gas prices** and one of its most important objectives is also to maintain market integrity.
7. **IGX started operations on 15th June 2020** as Gas Trading Platform and has been operating as the Gas Exchange since **10th December 2020**.
8. The Exchange operates under the regulatory framework of **Petroleum and Natural Gas Regulatory Board (PNGRB)**.

INDIA JOINS FIRST MOVERS COALITION

India has joined the **First Movers Coalition**, a global initiative aimed at **decarbonising the heavy industry** and long-distance transport sectors responsible for **30 per cent of global emissions**, US Special Presidential Envoy for Climate John Kerry announced.

What

1. It was launched by US President Joe Biden and the **WEF at COP26** as a flagship **public-private partnership** to clean up the **most carbon-intensive sectors**, also saw 50 new corporate members with collective market cap of USD 8.5 trillion joining the force.
2. **Besides India**, Denmark, Italy, Japan, Norway, Singapore, Sweden and the United Kingdom have also joined the US as government partners to create early markets for clean technologies through policy measures and private sector engagements.
3. **India, along with Japan and Sweden**, has also joined the steering board of the coalition.
4. India has also taken global leadership with initiatives like the **International Solar Alliance**, **One Sun One World One Grid**, and the **Coalition for Disaster Resilient Infrastructure**.
5. The **First Movers Coalition targets sectors**, including **aluminium, aviation, chemicals**, concrete, shipping, steel and trucking, which are responsible for **30 per cent of global emissions** - a proportion expected to rise to over 50 per cent by mid-century without urgent progress on clean technology innovation.

INTERNATIONAL

INDIA JOINS INDO-PACIFIC ECONOMIC FRAMEWORK

India on 23 May 2022 joined US President Joe Biden in the launch of a US-initiated **trade framework** aimed at deeper cooperation among like-minded countries in areas like **clean energy, supply-chain resilience** and **digital trade**. The rollout of the **Indo-Pacific Economic Framework for Prosperity (IPEF)** by the US came as part of Washington's efforts to push forward a **strong economic policy for the Indo-Pacific** to counter **China's aggressive strategy on trade in the region**.

More about IPEF

- The **IPEF** seeks to **strengthen economic partnership** amongst participating countries with the objective of **enhancing resilience, sustainability, inclusiveness, economic growth, fairness** and **competitiveness** in the **Indo-Pacific region**.
- Prime Minister said that the announcement of the IPEF is a **declaration of a collective desire** to make the **Indo-Pacific region an engine of global economic growth**.
- India is committed to a **free, open, and inclusive Indo-Pacific region** and believes that **deepening economic engagement** among partners is crucial for continued growth, peace and prosperity.
- Nations joining the US in the **Indo-Pacific Economic Framework** are Australia, Brunei, **India**, Indonesia, Japan, South Korea, Malaysia, New Zealand, the Philippines, Singapore, Thailand and Vietnam. Along with the United States, they represent **40% of world GDP**.

Flashback

- In September the U.S. announced a **new partnership with Australia and Britain** called **AUKUS** that is aimed at deepening security, diplomatic and defence cooperation in the **Asia-Pacific region**.
- Through that **AUKUS partnership**, Australia will purchase **nuclear-powered submarines**, and the U.S. is to increase **rotational force deployments to Australia**.
- The U.S. president has also devoted great attention to the **informal alliance** known as the **Quad**, formed during the response to the **2004 Indian Ocean tsunami** that killed some 230,000 people.

INDIA, 195 NATIONS JOIN HANDS TO FIGHT DROUGHT

Pledging to accelerate the restoration of one billion hectares of **degraded land globally by 2030, 196 countries**, including **India**, on 21 May 2022 adopted **38 decisions to step up drought preparedness** and give new political and financial impetus to help nations deal with devastating impacts of **land/soil degradation**.

What

- Strengthening land tenure for gender equity**, involving women in land management and **mobilisation of \$2.5 billion** to help **future-proof supply chains** while tackling deforestation and climate change are also part of those decisions, taken by these countries after two weeks of deliberations at the **15th session (CO)** of the **United Nations Convention to Combat Desertification (UNCCD)** at Abidjan, Côte d'Ivoire, a west African country.
- The **CO was held against the backdrop of the latest UN findings** which noted that **40% of all ice-free land globally is degraded** and the world has already seen a 29% rise in droughts since 2000.

3. It projected that **three-quarters of the world's population** will be affected by **drought by 2050** unless urgent action is taken.
4. The countries have decided to establish an **inter-governmental working group** on drought for the 2022-24 period to look into possible options, including **global policy instruments** and **regional policy frameworks**, to support a shift from reactive to proactive drought management.
5. **India**, on its part, has **pledged to restore 26 million hectares** of its degraded land **by 2030** as part of ongoing efforts to achieve its 'land degradation neutrality' (LDN) targets.
6. The **LDN is a stage where the amount and quality of land resources remains stable** or increases within **specified temporal and spatial scales** and ecosystems, factoring in degradation and restoration.
7. Simply put, any country **will not have net loss in terms of land degradation** if it achieves LDN through restoration efforts.
8. The **previous conference (COP14) was held in India** in September, 2019, when the country had raised its target of restoring degraded land **from 21 million hectares to 26 million hectares by 2030**.

MARITIME TRACKING NETWORK LAUNCHED

The **four-nation group Quad** on 24 May 2022 launched a **new initiative**, in which **multiple maritime tracking agencies would be integrated** to keep an eye on **illegal fishing activities** and tactical movements in the **Pacific Islands, Southeast Asia**, and the **Indian Ocean region**.

More about new initiative

1. The network will allow tracking of "**dark shipping**" and **other tactical-level activities**, such as rendezvous at sea, besides improving the partner nations' ability to respond to **climate and humanitarian crises** and protect the fisheries that are vital to many **Indo-Pacific economies**.
2. The Quad leaders said that the **Indo-Pacific Partnership for Maritime Domain Awareness (IPMDA)** was designed to work with regional partners to respond to humanitarian and natural disasters, and **combat illegal fishing**.
3. The monitoring network's creation is one of the crucial outcomes of the **second in-person meeting of the Quad leaders** – US President Joe Biden, Japanese Prime Minister Fumio Kishida, Australian Prime Minister Anthony Albanese and Indian Prime Minister Narendra Modi – in Tokyo on 24 May 2022.
4. As the initiative proceeds, the **Quad will identify future technologies of promise**, allowing IPMDA to remain a **cutting-edge partnership** that promotes peace and stability throughout the region.
5. Quad is carrying a **constructive agenda for the Indo-Pacific region**. This will further strengthen the image of the Quad as a **Force for Good**.

COVID VACCINES UNDER QUAD UMBRELLA

The Centre on 19 May 2022 said that it has **supplied Covid-19 vaccines** to **Cambodia and Thailand** under an **initiative of the Quad group of countries** that also includes the **United States, Japan and Australia**. The leaders of the Quad countries could discuss the vaccine supply plan when they meet in Japan.

What

1. India separately shipped 325,000 doses of **Covishield**, a **version of the AstraZeneca** shot made **by the SII, to Cambodia**.

2. The Quad was originally supposed to **supply J&J doses made by Indian company Biological E Ltd** to Southeast Asian and other countries, as a counter to China's vaccine donations around the world.
3. The **Quadrilateral Security Dialogue (QSD)**, also known as the **Quad**, is a strategic security dialogue between **India, Australia, Japan and the United States**.
4. The group met for the **first time in 2007** on the sidelines of the **Association of Southeast Asian Nations (ASEAN)**.
5. It is considered an **alliance of maritime democracies**, and the forum is maintained by meetings, **semi-regular summits**, information exchanges and military drills of all the member countries.

NEPAL, INDIA SIGN 6 MOUS

Prime Minister on 16 May 2022 held **bilateral talks** with his Nepalese counterpart Sher Bahadur Deuba **in Lumbini** - the birthplace of Gautam Buddha - during which they discussed ways to strengthen ongoing cooperation and develop new areas in the multifaceted bilateral partnership.

What

1. After their talks, the two sides signed **Memorandum of Understandings (MoUs)** on cooperation in cultural and educational sectors.
2. The **Indian Council of Cultural Relations (ICCR)** inked separate MoUs with Lumbini Buddhist University on the establishment of Dr. Ambedkar Chair for Buddhist Studies; with **Tribhuvan University** on the establishment of ICCR Chair of Indian Studies and with the **Kathmandu University (KU)** on the establishment of the ICCR Chair of Indian Studies.
3. An MoU between **Kathmandu University (KU)** and the **Indian Institute of Technology Madras (IIT-M)** was also signed. A **Letter of Agreement (LoA)** between KU and IIT-M was signed for joint degree programme at Master's level.
4. It is the **prime minister's fifth visit to Nepal since 2014**. Modi and his entourage arrived here on a special Indian Air Force helicopter from Kushinagar, Uttar Pradesh.
5. **Land-locked Nepal** relies heavily on India for the transportation of goods and services.
6. **Nepal's access to the sea is through India** and it imports a predominant proportion of its requirements from and through India.
7. The **India-Nepal Treaty of Peace and Friendship of 1950 forms** the bedrock of the special relations between the two countries.

ECONOMY

INDIA'S STARTUP ECOSYSTEM

Prime Minister on 29 May 2022 praised **India's startup ecosystem** as he highlighted that the country has reached a **landmark figure of 100 unicorns** with a valuation of **more than \$300 billion**.

What is a unicorn startup?

1. Unicorns are privately held, **venture-capital backed startups** that have reached a value of **\$1 billion**.
2. The **valuation of unicorns** is not expressly linked to their **current financial performance**, but largely based on their growth potential as perceived by investors and venture capitalists who have taken part in various funding rounds.

3. American venture capitalist **Aileen Lee** is credited with **coining the term in 2013**.
4. From the time the term was first used, it has become more common for startups to bag the **unicorn tag**, but the **\$1 billion valuation still gets industry attention**, and is considered an impressive achievement.
5. According to Invest India, the government's **National Investment Promotion and Facilitation Agency**, "The year 2021, 2020, and 2019 saw the birth of the maximum number of Indian unicorns with **44, 11, and 7 unicorns** coming each year, respectively."
6. It adds that between 2015 and 2021, the **country's startup ecosystem** has seen a nine-time increase in the number of investors, and a **seven-time increase in the total funding of startups**.

INDIA ON TOP FOR TRUST IN DOMESTIC COMPANIES

Indian companies have **emerged as the most trusted** by the domestic population, followed by **China, Canada, the US and the UK**. The **Edelman Trust Barometer Special Report: The Geopolitical Business**, which was released on the sidelines of the **World Economic Forum Annual Meeting**, also showed that geopolitics is now a **litmus test** for trust in business.

What

1. The **corporate exit from Russia has set a precedent**, and the expectations for action at times of crisis are ever increasing. In fact, **fewer than 6 in 10 respondents** now say geopolitics is a business priority.
2. At a time when the **world has been challenged by geopolitical conflict**, economic uncertainty, climate threats and social inequalities, there is now urgent pressure for companies to respond to the **Russian invasion of Ukraine**.
3. In terms of **domestic trust** in companies headquartered in each market, **India has topped the charts** (89 per cent, with a gain of 4 per cent since January), followed by **82 per cent in China** and **70-76 per cent in Canada**, the US and the UK.
4. On the overall trust index, taking into account trust in NGOs, business, government and media, **India is now placed at the second place after China**, as against third in January this year.
5. Globally, scientists have emerged the **most trusted category**, while the United Nations is the **only trusted global institution**.
6. The survey was conducted in **14 countries** with 14,000 respondents between April and May.

SCIENCE AND TECHNOLOGY

INDIA'S FIRST 5G TESTBED INAUGURATED

Prime Minister on 17 May 2022 inaugurated the **country's first 5G testbed** to enable startups and industry players to test and validate their products locally and reduce dependence on foreign facilities. The testbed has been set up at a cost of around Rs 220 crore. The Prime Minister said the **5G testbed is an important step for self-reliance** in the direction of critical and modern technologies.

What

1. The **5G testbed** has been developed as a **multi-institute collaborative project** by eight institutes led by **IIT Madras**.

2. In the absence of a 5G testbed, startups and other industry players were required to go abroad to test and validate their products for **installation in a 5G network**.
3. The other institutes that participated in the project are **IIT Delhi, IIT Hyderabad, IIT Bombay, IIT Kanpur, IISc Bangalore, Society for Applied Microwave Electronics Engineering & Research (SAMEER) and Centre of Excellence in Wireless Technology (CEWiT)**.
4. **India** is targeting the **rollout of a 6G telecom network**, which will provide **ultra-high-speed internet connectivity**, by the end of the decade.
5. **India currently has 3G and 4G telecom networks** and companies are gearing up to launch 5G.
6. It is estimated that the **5G network rollout will add \$450 billion** to the Indian economy.
7. The **5G technology** will bring positive change in the governance of the country, **ease of living**, and **ease of doing business**.
8. It will boost growth in **agriculture, health, education, infrastructure, and logistics**.

NFGFHD INAUGURATED

The **National Facility for Gene Function in Health and Disease (NFGFHD)** was inaugurated in **Pune** by Dharmendra Pradhan, Union Minister of Education on 27 May 2022. The **NFGFHD** will be established at the **Indian Institute of Science Education and Research (IISER)**, Pune.

More about NFGFHD

1. It has been **funded by the Department of Biotechnology (DBT)**. It has dedicated space to house **Specific Pathogen Free (SPF) animal labs**, both for **mice and rats**.
2. It will be a primary centre where **transgenic** (transfer of genes within animals, naturally or artificially using **genetic engineering methods**) animal models will be made in-house.
3. Animal models of **rats, mice and rabbits** will be here. Otherwise, these are imported at huge costs, involve significant time to procure and often undergo strict import restrictions.
4. In all, the **NFGFHD houses 53 cleanrooms and 30 service or experiment rooms** that will ensure preservation of these animal models in **pathogen-free and temperature-controlled environments** required for **scientific and disease research**.

Why it is needed

1. With a **growing zoonotic disease burden on human health**, there is an increased urgency to perform disease studies based on **physiological evidence and methods**.
2. Since **human trials alone cannot suffice** for such studies, the need for having experimental setups using animal models has become imperative.
3. Hence, **animal, plant and microorganism-based models** are now being significantly deployed to study diseases in a time-bound manner. The most commonly used animal models are that of **mice, rats and rabbits**.
4. The **Pune-based NFGFHD** aims at making such models in-house, thereby also cutting India's dependence on imports and allied costs.

RFID TAGS USED TO TRACK AMARNATH PILGRIMS

After a **high-level security review** for the forthcoming **Amarnath Yatra**, the government has decided to track all pilgrims using **Radio Frequency Identification (RFID) tags**. What are RFIDs and how do they work?

What does RFID stand for?

1. **Radio Frequency Identification**, It's a **wireless tracking system** that consists of **tags and readers**.
2. **Radio waves** are used to communicate information/identity of objects or people to nearby readers – devices that can be **hand-held** or **built into fixed positions** like **poles or buildings**.
3. The tags can carry **encrypted information**, **serial numbers** and **short descriptions**.
4. There are also **high-memory tags** like the ones designed for use in the **aviation industry**.
5. There are **passive and active RFID tags**. Active RFIDs use their **own power source**, mostly batteries.
6. **Active tags** can ping information **every few seconds** like beacons, or they can **get activated when a reader is in the proximity**.
7. Passive RFIDs, on the other hand, are activated through **the reader using the electromagnetic energy it transmits**.
8. This is enough power for the tag to transmit information back to the reader. **Active tags have a longer read range**, around **300 ft**, compared to passive tags.

ASTROSAT DETECTS BLACK HOLE

India's first dedicated multi wavelength space observatory, **Astrosat**, has detected the **birth of a black hole** for the **500th time**, a key milestone that Indian scientists have called a "**remarkable achievement**".

What

1. Pune-based **Inter-University Centre for Astronomy and Astrophysics (IUCAA)** said in a recent statement, "One of the instruments in Astrosat is the **Cadmium Zinc Telluride Imager (CZTI)** - which has just witnessed the **birth of a black hole** for the five hundredth time.
2. The wealth of data obtained by **CZTI on Gamma Ray Bursts** is making a big impact worldwide.
3. **AstroSat**, launched by Isro in **September 2015**, is one of the **most sensitive space telescopes** in the world.

ASTRA MK-1 AIR-TO-AIR MISSILE

The **Ministry of Defence** said on 31 May 2022 that it has **signed a contract** with the Hyderabad-based public-sector **Bharat Dynamics Ltd (BDL)** for supply of the **Astra Mark-1**, at a cost of Rs 2,971 crore, for deployment on **fighter jets** of the **Indian Air Force and Indian Navy**. The **Astra Mk-1 is a beyond visual range (BVR)**, air-to-air missile (AAM).

More about Astra

1. The missile has been designed and developed by the **Defence Research and Development Organisation (DRDO)** for deployment on **fighter jets** like Sukhoi-30 MKI and **Tejas of the IAF** and the **Mig-29K of the Navy**.
2. **BVM missiles** are capable of engaging beyond the range of **20 nautical miles** or 37 kilometers. AAMs are fired from an airborne asset to destroy an airborne target.

3. The **Astra project was officially launched in the early 2000s** with defined parameters and proposed future variants. Around 2017, the development phase of Mk-1 version was complete.
4. Several successful tests have been conducted since 2017 from **Sukhoi-30 MKIs**. While the range for **Astra Mk-1 is around 110 km**, the **Mk-2 with a range over 150 km** is under development and Mk-3 version with a longer range is being envisaged.
5. The missile has been designed based on requirements specified by the **IAF for BVR** as well as **close-combat engagement**, reducing the dependency on foreign sources.
6. One more version of Astra, with a **range smaller than Mk-1** is also under development.

STARLINER CAPSULE RETURNS TO EARTH

Boeing Co's Starliner astronaut capsule returned from the **International Space Station** and landed in New Mexico on 25 May 2022, capping a high-stakes test flight as NASA's next vehicle for carrying humans to orbit. The **CST-100 Starliner capsule** plunged through Earth's atmosphere ahead of a parachute-assisted descent over the desert of White Sands Space Harbor, New Mexico.

What

1. The roughly **five-hour return trip from the space station**, an orbital outpost some **250 miles above Earth**, checks off the last leg of a repeat test flight that Boeing had first attempted in 2019, but failed to complete after running into software failures.
2. The latest test mission moves **Starliner**, beset by repeated delays and costly engineering setbacks, a major step closer to providing NASA with a **second reliable avenue** for ferrying astronauts to and from the space station.
3. **Starliner was lofted to orbit** on 19 May 2022 atop an **Atlas V rocket** furnished by the Boeing-Lockheed Martin joint venture United Launch Alliance and achieved its main objective – a rendezvous with the ISS, even though four of its multiple onboard thrusters malfunctioned along the way.
4. Since **resuming crewed flights to orbit from American soil in 2020**, nine years after the space shuttle program ended, the US space agency has had to rely solely on **Falcon 9 rockets** and **Crew Dragon capsules** from private company SpaceX.
5. Previously, the only other option for reaching the orbiting laboratory was by hitching rides aboard **Russia's Soyuz spacecraft**, an alternative currently less attractive in light of heightened US-Russian tensions over the war in Ukraine.
6. An ill-fated **first orbital test flight of Starliner in late 2019** nearly ended with the vehicle's loss following a software glitch that effectively foiled the spacecraft's ability to reach the space station.

INDIAN NAVY DECOMMISSIONS INS GOMATI

The Indian Navy on 28 May 2022 **decommissioned the INS Gomati**, a **Godavari class guided-missile frigate**, after 34 years of service. The ship, which had been deployed in Operations **Cactus**, **Parakram** and **Rainbow**, was decommissioned at sunset at the Naval Dockyard in Mumbai.

More about Gomati

1. **Gomati** was designed by the Indian Navy and **built in an Indian shipyard**, and these were initial steps towards an Atmanirbhar Bharat (self-reliant India).
2. **Gomati's legacy** will be kept alive in an open air museum being set up on the banks of the **Gomti river** (from which the frigate derives her name) **in Lucknow** where several of her combat systems will be displayed as military and war relics.

3. The **Uttar Pradesh government and Indian Navy** have also signed a Memorandum of Understanding for this purpose. The **INS Gomati** will be commissioned in a **new avatar in the Indian Navy**.
4. The **present INS Gomati** was commissioned on 16 April 1988, by then defence minister K C Pant at the **Mazgaon Dock**.
5. The ship was twice awarded the **coveted Unit Citation**, once in 2007-08 and in 2019-20. The **earliest avatar of INS Gomati was decommissioned in 1979**.

MISCELLANEOUS

FIRST WOMAN COMBAT AVIATOR IN ARMY

Captain **Abhilasha Barak** on 25 May 2022 became **the first woman combat aviator** in the Indian Army. She has been awarded the coveted '**wings**' along with 36 Army pilots by the director-general of the **Army Aviation** during a ceremony held at Combat Army Aviation Training School in Nashik.

What

1. **Captain Barak became the first woman officer** to join the **Army Aviation Corps** as combat aviator after successful completion of the **combat Army aviation course**.
2. She hails from Haryana and was commissioned into the **Army Air Defence Corps** in September 2018. The combat aviator is the daughter of Col S Om Singh (Retd).
3. The **Army Aviation Corps** is a component of the Army that was **formed in November 1986**.
4. The Corps is headed by a Lt Gen rank officer known as **Director General of Army Aviation**.
5. With the motto '**Swift and Sure**', the youngest corps of the Indian Army is set to further grow in its tactical importance in the battlefield to take further its role of force multiplier.

Flashback

1. **In 2020**, the Navy announced deploying its **first batch of women pilots** on the Dornier maritime aircraft.
2. In a significant move, **the Army in 2019 began the process of inducting women** into the military police.
3. The **role of the military police** includes policing cantonments and army establishments, **preventing breach of rules and regulations by soldiers**, and maintaining the movement of soldiers as well as logistics during peace and war.

WORLD NO TOBACCO DAY

On the annual **World no Tobacco Day** (31 May 2022), the **World Health Organization (WHO)** released a report "**Tobacco: poisoning our planet**" that looks at the devastating impact of the industry on the planet. According to the UN health agency, the **tobacco industry** is a far greater threat than many realize as it is one of the **world's biggest polluters**.

According to the report

1. The WHO called for the **tobacco industry** to be held to account and foot the bill for the cleanup.
2. The WHO said that tobacco is killing **more than 80 lakh people every year** around the world.
3. **China, Brazil, and India** are the largest tobacco leaf growers, with **China accounting for 3.2 million metric tones**.

4. Tobacco industry is responsible for the loss of **some 600 million trees each year**. Tobacco farming also accounts for about **5% of global deforestation** and drives the depletion of precious water resources.
5. Tobacco growing and production uses **200,000 hectares of land** and **22 billion tonnes of water** annually.
6. Tobacco accounts for a significant share of **global greenhouse gas emissions** -- with the equivalent of **one-fifth of the global airline industry's carbon footprint**.
7. Products like **cigarettes, smokeless tobacco**, and e-cigarettes also contribute significantly to the global build-up of **plastic pollution**.

INTERNATIONAL MUSEUM DAY

The **International Council of Museums (ICOM)** announced 18 May as **International Museum Day (IMD)** in 1977. Its objective is **to raise awareness** about the fact that, **“Museums are an important means of cultural exchange, enrichment of cultures and development of mutual understanding, cooperation and peace among peoples.”**

What

1. Officially established with the adoption of a resolution during the **ICOM General Assembly** in Moscow in 1977, the **idea of IMD goes back to 1951**, when the ICOM gathered the international museum community for a meeting called **Crusade for Museums**, to discuss the theme **“Museums and Education.”**
2. Every year, the ICOM also declares a **theme** and the participating museums are invited to create special activities in line with that.
3. The theme chosen for 2020 was **“Museums for Equality: Diversity and Inclusion”** and 2021 reflected on the pandemic, with the theme **“The Future of Museums: Recover and Reimagine.”**
4. The **theme for 2022** is **“The Power of Museums”**, elucidating that “museums have the power to transform the world around us. As **incomparable places of discovery**, they teach us about our past and open our minds to new ideas — two essential steps in building a better future.”
5. **Founded in 1814**, the **Indian Museum in Kolkata**, also known as the Imperial Museum, is the **oldest museum in India**.
6. Its collection boasts of a wide range, from **armor and antiques** to ornaments, skeleton, fossils and miniature paintings.

INDIA TOP IN SOUTH ASIA

India was on 24 May 2022 **ranked at the 54th place** in a **global travel and tourism development index**, down from 46th in 2019, but still remained on the **top within South Asia**. **Japan has topped the global charts**, followed by the US, Spain, France, Germany, Switzerland, Australia, UK, Singapore and Italy in the top ten.

What

1. The **World Economic Forum's biennial travel and tourism study** also showed a recovering sector following pandemic lows, though the recovery has been uneven and challenges remain.
2. The **Travel and Tourism Development Index** assesses **117 economies**, identifying key factors in enabling the **sustainable and resilient growth** of travel and tourism economies.
3. In this year's index consists of **five sub indexes, 17 pillars** and **112 individual indicators**.

4. **COVID-19 shutdowns** have re-emphasised the important contribution travel and tourism makes to many economies around the world, The World Economic Forum, said.
5. The **overall international tourism and business travel** is still below pre-pandemic levels, the sector recovery has been bolstered by greater vaccination rates, return to more open travel, and growing demand for domestic and nature-based tourism.
6. The **Travel and Tourism Development Index 2021** is a **direct evolution of the Travel & Tourism Competitiveness Index**, which has been published biennially for the **past 15 years**.

WHO CHIEF TEDROS REAPPOINTED

WHO Director-General **Tedros Adhanom Ghebreyesus** was reappointed to a **second five-year term** on 24 May 2022 by the **U.N. health agency's member countries**. No other candidate challenged Tedros for the post amid the ongoing difficulties of responding to the devastating coronavirus pandemic.

What

1. **Tedros, a former government minister from Ethiopia**, has directed WHO throughout its management of the **global response to COVID-19** and withstood occasionally withering criticism over its multiple missteps.
2. **He is the first African** to lead the agency and the **only director-general not qualified as a medical doctor**.
3. He is also the **first WHO leader not to be supported by their home country**; Ethiopia has previously accused Tedros of misconduct after his sharp criticism of the war and humanitarian crisis there and raised concerns about his leadership.

FIRST HINDI NOVEL TO WIN THE BOOKER PRIZE

Author Geetanjali Shree's translated Hindi novel, **Tomb of Sand**, became the **first Indian language book** to win the **International Booker Prize** on 27 May 2022. The 2018 novel titled '**Ret Samadhi**' was translated by **Daisy Rockwell** and published as '**Tomb of Sand**' in 2021.

What is the Booker Prize?

1. The **Booker Prize is one of the best-known literary awards** for fiction writing in English, including both novels and collections of short stories. It was **first awarded in 1969**.
2. Every year a panel of judges decides the best work of the year, with the criteria being that it must be **written in English and published in the UK and Ireland**.
3. This panel of judges is picked from among eminent **cultural historians, writers, professors, and novelists**, and others from related fields. The panel this year had five judges.

What about the International Booker Prize?

1. The **International Booker Prize began in 2005**. A **biennial prize initially**, it was then awarded for a body of work available in **English**, including translations, with **Alice Munro, Lydia Davis** and **Philip Roth** becoming some of the early winners.
2. **In 2015**, the rules of the International prize changed to make it an annual affair. The new rules stipulated that it will be awarded annually for a single book, written in another language and translated into English.
3. The **£50,000 prize money is divided equally** between the **author and translator each year**.

'PM CARES FOR CHILDREN' ANNOUNCED

In an attempt to address the **futures of children** who lost their parents to the **COVID-19 pandemic**, Prime Minister has launched the **PM CARES for Children programme**, under which children **orphaned by the coronavirus** will receive benefits including a scholarship.

What

1. **This program is for the children** who lost their parents during the pandemic. **PM CARES for Children Scheme** is an attempt to such children.
2. Benefits under the scheme include a **passbook of PM CARES for Children** and a health card under Ayushman Bharat - **Pradhan Mantri Jan Arogya Yojana**, which will be handed over to children during the announcement.
3. The government programme aims **to support children** who have lost both the parents or a legal guardian or adoptive parents or a surviving parent to the COVID-19 pandemic, between 11 March 2020 and 28 February 2022.
4. An online portal was also launched by the Centre to register the children; the **portal is a single window system** which facilitates the approval process and all other assistance for children.
5. The same **PM CARES** helped in **preparing hospitals, buying ventilators, and setting up oxygen plants** during Covid-19.

FACT TO REMEMBER:

1. CABINET AMENDS BIOFUELS POLICY
2. THE PLACES OF WORSHIP ACT, 1991
3. SECOND STATE TO RECOGNIZE CFR RIGHTS
4. PURI HERITAGE CORRIDOR PROJECT
5. INDIA'S FIRST WIND-SOLAR HYBRID POWER PLANT
6. WHO HONOURS ASHA VOLUNTEERS
7. FIRST GAS PRODUCER TO TRADE ON IGX
8. INDIA JOINS FIRST MOVERS COALITION
9. INDIA JOINS INDO-PACIFIC ECONOMIC FRAMEWORK
10. INDIA, 195 NATIONS JOIN HANDS TO FIGHT DROUGHT

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