

My Notes....

NATIONAL

UN RANKS NAMAMI GANGE INITIATIVE

The **National Mission for Clean Ganga initiative** also called as **Namami Gange initiative** has been recognised by the **United Nations (UN)** as **one of the Top 10 World Restoration Flagships programmes** aimed at reviving the natural world. The award was received by G. Asok Kumar, the Director General of the Namami Gange project during a function at the **15th Conference of Parties (COP15)** to the **Convention on Biodiversity (CBD)** in Montreal, Canada on **World Restoration Day** on 14 December 2022.

What

1. The **recognition of Namami Gange** as one of the **top-10 ecosystem restoration initiatives** in the world bears testimony to the concerted efforts being made by the **National Mission for Clean Ganga**, Government of India for the restoration of the **riverine ecosystem**.
2. These initiatives were selected under the **United Nations Decade on Ecosystem Restoration**, a global movement coordinated by the **United Nations Environment Programme (UNEP)** and the **United Nations Food and Agriculture Organization (FAO)**.
3. It is designed to prevent and **reverse the degradation of natural spaces** across the planet.
4. The **recognized initiatives**, including **Namami Gange**, will now be eligible to **receive UN support**, funding or technical expertise.
5. This has come at a **very opportune moment** for us as India has taken over the **Presidency of the G20 group of nations**.

Flashback

1. The **Namami Gange Programme** was started in **2014** after recognizing the need to **rejuvenate River Ganga** and committed over 5 billion dollars to ensure that the **river gets clean**.
2. **Ganga is important for India** as it is home to **40 per cent of India's population**, **2500 species of flora and fauna** and 8.61 billion sq. km. basin, which is home to over **520 million people**.
3. The **National Mission for Clean Ganga (NMCG)** has previously won the "**Public Water Agency of the Year**" in the **Global Water Awards, 2019** by **Global Water Intelligence**

PARLIAMENT PASSES WILDLIFE BILL

The Rajya Sabha on 8 December 2022 passed the **Wild Life (Protection) Amendment Bill, 2022**, which has invited scrutiny on **two major issues**: the **exemption made to allow the transfer of captive elephants**, and the **sweeping powers given to the Centre to declare species as vermin**. Lok Sabha had cleared the Bill in August during the monsoon session.

The vermin conflict

1. Since 1972, the WLPA has identified a **few species** — **fruit bats, common crows** and **rats** — as vermin. Killing animals outside this list was allowed under two circumstances:
2. ***Under Section 62 of WLPA**, given sufficient reasons, any species other than those accorded the highest legal protection (such as tigers and elephants but not wild boars or nilgais) can be declared vermin at a certain place for a certain time.

3. ***Under Section 11 of WLPA**, the chief wildlife warden of a state can allow the killing of an animal, irrespective of its status in the Schedules, if it becomes “**dangerous to human life**”.
4. The state governments took the decisions **under Section 62** until 1991 when an amendment handed over the powers to the Centre. The purpose was apparently to restrict the **possibility of eliminating a large number of animals at a species level** as vermin. **Under Section 11**, the states could issue culling permits only locally and for a few animals.
5. In recent years, however, the Centre has started using its powers under **Section 62** to issue sweeping orders **declaring species as vermin** at even state levels, often without any credible scientific assessment.
6. For example, **nilgais were declared as vermin across 20 districts in Bihar for a year in 2015**. The Centre cited “**large-scale destruction of agriculture**” as the ground for **declaring monkeys (Rhesus macaque) vermin in Shimla municipality** in 2019.

The elephant question

1. **In 1927, the Indian Forest Act** listed the **elephant as cattle**. When **WLPA was enacted in 1972**, it identified the **elephant**, along with **bullock, camel, donkey, horse and mule**, as a “**vehicle**”.
2. Given the **highest legal protection in 1977**, the **elephant is the only animal in WLPA’s Schedule-I** that can still be owned legally — by means of inheritance or gift.
3. **Since 2003, Section 3 of the WLPA** prohibited trade in all captive wildlife and any (non-commercial) transfer across state boundaries without the permission of the respective chief wildlife warden.
4. This made the **live elephant trade** go underground as traders switched to dressing up commercial deals as fake gift deeds to bypass the amendment.

UN BIODIVERSITY SUMMIT: COP 15

Delegates of **196 nations** gather for the **UN biodiversity summit**, chaired by **China**, referred to as **COP15**, in **Montreal, Canada**, to agree on a new biodiversity framework, a **crucial moment as the world needs** set of goals and targets that will guide action on nature **through 2030** with over a million species of animals and plants face extinction because of human activity.

What's at stake at COP15?

1. It is about the **adoption of Post-2020 Global Biodiversity Framework**, contribute to keeping **global warming to 1.5 degrees Celsius**, and set the conditions for revert the loss of biodiversity by 2050.
2. The **Framework will be the first** global framework on biodiversity adopted since the **Aichi Biodiversity Targets in 2010**.
3. It **provides a** strategic vision and a global roadmap for the conservation, protection, restoration and sustainable management of biodiversity and ecosystems for the next decade.

Agenda of COP15

1. **Protecting biodiversity** and improving the state of species and habitats in terrestrial, inland water and marine areas.
2. Fair and equitable **sharing of benefits**, arising from the utilisation of genetic resources.
3. **Speed up actions**, including finances and even stronger mainstreaming of biodiversity into all sectors of policy-making and society.

ENERGY CONSERVATION BILL 2022 PASSED

The **Parliament** has passed the **Energy Conservation (Amendment) Bill, 2022** that aims to mandate the **use of green energy** and enables the government to **set up a carbon trading scheme**. The Bill also allows the government to specify the **minimum amount of non-fossil sources** to be used by designated energy consumers. The bill, which was passed in the Lok Sabha on 8 August 2022 got approval in Rajya Sabha on 12 December 2022.

Key features of the Bill:

1. **Promotion of non-fossil energy sources and non-fossil feedstock** - The Bill seeks to mandate the **use of non-fossil sources**, including **biomass** and **ethanol**, for energy and feedstock, along with the **use of green hydrogen** and **green ammonia**.
2. **Development of a framework for carbon markets** - The Act gives the **union government the authority** to designate a **carbon credit trading system**. A tradable permit to emit a **certain amount of carbon dioxide** or other **greenhouse gases** is implied by a carbon credit.
3. The **carbon price** would be determined **by the market** and the **Central Electricity Regulatory Commission (CERC)** would regulate **carbon credit trading**.
4. **Increasing the scope of the Energy Conservation Building Code (ECBC)** - The bill suggests that the **energy conservation code for buildings** be amended to an **energy-conserving and sustainable building code**.
5. The **code prescribes energy consumption standards**. It also proposes to bring **large residential buildings** within the ambit of the energy conservation regime.

CENTRE AWARDS NINE GI TAGS

Adding to the present collection of **Geographical Indications (GIs)**, **nine new items**, including **gamocha of Assam**, **Tandur red gram of Telangana**, **Raktsey Karpo apricot of Ladakh**, and **Alibag white onion of Maharashtra**, have been given the **coveted GI tag**. **Kerala** has been awarded five GI tags for its **agricultural produce**. With this, the **total number of GI tags in India comes to 432**.

What

1. The **top five states** holding the **maximum number of GIs** are **Karnataka, Tamil Nadu, Uttar Pradesh, Karnataka, and Kerala**. Of these, **401 are Indian-origin products, 31 foreign-origins**.
2. **Karnataka and Tamil Nadu** are states with the **highest number of GI tags**, followed by **Kerala (35), Uttar Pradesh (34), and Maharashtra (31)**.
3. Besides giving a boost to building **cross-cultural societies within the country**, such activities not only promote the transfer of diverse products among states but also contribute to building a **better vibrant cultural society in the future**.

Flashback

1. Recognised by the **World Trade Organization (WTO)**, **GI** is used to denote the **geographical territory** from where a product, be it **agricultural produce, natural product, or manufactured**, conveys the **assurance of quality, distinctiveness, and attributes** that are unique to that **specific geographic region/place of origin**.
2. **India became a signatory to this convention** when, as a member of WTO, it enacted the **Geographical Indications (Registration and Protection) Act, 1999**, which came into effect on 15 September 2003.
3. **To protect the GI of goods**, a GI registry has been established to administer the **GI of Goods (Registration and Protection) Act, 1999**, under the Controller General of Patents, Designs & Trade Marks.

4. Recently, the government supported the **promotion of GIs** by approving an expenditure of **Rs 75 crore for three years** for their advertising at awareness programmes.

AIM AND UNDP INDIA LAUNCH YOUTH CO:LAB

The **5th edition of Youth Co:Lab**, Asia Pacific's largest youth innovation movement was jointly launched by **Atal Innovation Mission (AIM)**, **NITI Aayog** and **UNDP India** on 15 December, 2022.

What

1. **Youth Co:Lab** is an **initiative launched in 2019 by UNDP India** in partnership with **Atal Innovation Mission, NITI Aayog** and aims to **establish a common agenda for Asia-Pacific countries** to invest in and empower youth to accelerate implementation of the **Sustainable Development Goals (SDGs)** through **leadership, social innovation** and **entrepreneurship**.
2. **Atal Innovation Mission**, along with **UNDP India** are driving this movement through the **fifth edition of Youth Co:Lab India** and have been supporting young social entrepreneurs who can be a powerful force in leading social change and furthering the implementation of **SDGs target actions**.
3. The **Youth Co:Lab initiative**, till date, has been **implemented in 28 countries** and territories, reaching **over 200,000 participants**, benefitting **more than 11,000 young social entrepreneurs** and supporting over 1,240 social enterprises.
4. **UNDP** is thrilled to launch the **5th Edition of Youth Co: Lab** with Atal Innovation Mission, NITI Aayog, and **provide young inspiring and existing entrepreneurs** a platform to scale up their solutions for the common good.
5. This is a **unique initiative with young people** at the forefront to solve **India's most pressing issues** through social entrepreneurship and innovation.

HORIZONTAL RESERVATION CLEARED BY UTTARAKHAND

The **Uttarakhand Assembly** on 30 November 2022 passed a Bill to **provide 30 per cent horizontal reservation** to local women in state government services. This comes weeks after the **Supreme Court lifted an Uttarakhand High Court stay** on a **2006 order of the government**, providing the same benefit. The **Uttarakhand Public Services (Horizontal Reservation for Women) Bill, 2022** has now been sent for the Governor's signature.

What does the Bill say?

1. In the Bill's statement of objects and reasons, the government says that **due to Uttarakhand's geographical structure**, people living in **remote areas** lead a **difficult life**, especially the **women**.
2. Because of this, their **standard of living is below the women of other**

What is horizontal reservation?

1. **In December 2020**, the **Supreme Court clarified the position of the law** on the interplay of **vertical and horizontal reservations**.
2. In simple terms, while a **vertical reservation applies separately for each of the groups** specified under the law, the **horizontal quota is always applied separately to each vertical category**, and **not across the board**.
3. **Reservation for Scheduled Castes, Scheduled Tribes, and Other Backward Classes** is referred to as vertical reservation.
4. **Horizontal reservation** refers to the **equal opportunity provided to other categories of beneficiaries** such as **women, veterans**, the **transgender community**, and individuals with disabilities, cutting through the vertical categories.

states. Also, women have very little representation in the state's public services.

3. The Bill proposes **to plug these gaps** by providing women **with 30 per cent horizontal reservation** in public services and posts, in addition to the existing quotas applicable in the state. The **beneficiaries need to be women** with a domicile certificate of Uttarakhand.

INTERNATIONAL

INDIA LAUNCHES 'GROUP OF FRIENDS'

India has launched a **'Group of Friends'** to promote accountability for **crimes against peacekeepers**, with External Affairs Minister S Jaishankar announcing that New Delhi will soon have a database that will **record all crimes against the Blue Helmets**.

What

1. **India, Bangladesh, Egypt, France, Morocco and Nepal are co-chairs of the 'Group of Friends** to Promote Accountability for Crimes Against Peacekeepers' launched on 15 December 2022 during **India's current presidency of the UN Security Council**.
2. The **Group of Friends** represents the **"political will"** of member states, particularly of the troop and police contributing countries, to champion the implementation of the provisions of **UN Security Council resolution 2589**, which was adopted in August last year under **India's Presidency of the Council**.
3. **Resolution 2589** had called upon member states, **hosting or having hosted United Nations peacekeeping operations**, to take all appropriate measures to bring to **justice perpetrators of the killing of**, and all acts of violence against **United Nations personnel**, including, but not limited to, their detention and abduction.
4. The resolution had also called on member states **to take all necessary measures** to investigate such acts and arrest and prosecute perpetrators of such acts in line with their **national law**, consistent with **applicable international obligations**, including under **international humanitarian law**.
5. The **UNSC resolution was co-sponsored by more than 80 member states** and unanimously adopted by the Council.
6. It is, therefore, very befitting that this **'Group of Friends'** being launched under **India's ongoing Presidency of the UNSC**, will seek to promote accountability in practical terms both within and outside the UNSC.
7. **India has facilitated the launch of a database** that will record all crimes against UN peacekeepers.

Flashback

1. **India, among the largest troop-contributing countries to UN peacekeeping**, has lost 177 of its peacekeepers in the line of duty, the largest by far from any troop-contributing country.
2. **Peacekeeping is one of the key tools** available with the **Security Council** to maintain **international peace and security**, to practically stabilise conflict zones and move towards peace building.

INDIA ABSTAINS ON UN ECOSOC RESOLUTION

India has **abstained** in the **UN Economic and Social Council (ECOSOC)** on a **draft resolution to oust Iran** from the **principal global intergovernmental body** dedicated to the **promotion of gender equality and women empowerment**. The **Economic and Social Council** adopted on 14 December 2022 the draft resolution, **introduced by the US**, on the **removal of Iran from the membership of the Commission** on the Status of Women for the remainder of its 2022-2026 terms, citing its **oppression of women and girls in the Islamic Republic**.

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More about the resolution

1. The **resolution** was adopted by a recorded **vote of 29 in favour** to **eight against** - Bolivia, China, Kazakhstan, Nicaragua, Nigeria, Oman, Russia, Zimbabwe and **16 abstentions**, including by Bangladesh, India, Indonesia, Mauritius, Mexico, and Thailand.
2. Through the draft '**Removal of the Islamic Republic of Iran from membership in the Commission on the Status of Women for the remainder of its 2022-2026 term**', the Economic and Social Council expressed serious concern over the actions of the Government of Iran since September 2022.
3. It said Iran continuously undermined and increasingly suppressed the "**human rights of women and girls**, including the **right to freedom of expression and opinion**, often with the use of excessive force, by administering policies flagrantly contrary to the **human rights of women and girls** and to the mandate of the Commission on the **Status of Women**, as well as through the **use of lethal force** resulting in the deaths of peaceful protestors, including **women and girls**."
4. The resolution decided to remove Iran "**with immediate effect**" from membership in the Commission on the **Status of Women** for the remainder of its 2022-2026 term.
5. **Iran has been rocked by protests** since the 16 September death of 22-year-old Mahsa Amini, who died after being detained by the country's morality police.
6. **At least 475 people** have been killed in the demonstrations amid a **heavy-handed security crackdown**, according to **Human Rights Activists in Iran**, a group that's been monitoring the protests since they began.

Flashback

1. The **Commission on the Status of Women (CSW)** is the **principal global intergovernmental body** exclusively dedicated to the **promotion of gender equality** and the **empowerment of women**.
2. A **functional commission of the Economic and Social Council (ECOSOC)**, it was established by the **ECOSOC resolution of June 1946**. The Commission comprises 45 Member States of the United Nations.
3. The commission consists of **one representative from each of the 45 member states** elected by the **Economic and Social Council** on the basis of **equitable geographical distribution**. Members are elected for a period of **four years**.

G7 NATIONS ESTABLISH INTERNATIONAL CLIMATE CLUB

The **Group of Seven** leading economies have created an **open, international climate club** for countries that want to cooperate in the **fight against global warming**, German Chancellor Olaf Scholz said 12 December 2022 after a video conference with other G-7 leaders. **Germany holds the presidency of the G-7** until the end of the year and then **passes it on to Japan**.

More about the forum

1. The **new forum group** is not intended to be a **G-7 initiative**; rather, it is to be a global undertaking.
2. **The climate club** aims to support the **rapid and ambitious implementation of the Paris Agreement**, which seeks to **limit global warming to 1.5 degrees Celsius** (2.7 degrees Fahrenheit). 12 December 2022 was the **seventh anniversary of accord's adoption**.
3. The club will work **to help accelerate the industrial transition to cleaner forms of energy** and to further develop **emission-reduction measures**.

4. The **Organisation for Economic Co-operation and Development** and the **International Energy Agency** would establish a **climate change secretariat** now that the forum is launched.
5. New figures published on 12 December 2022 show **Germany itself was slow to ramp up renewable energy production** this year. While the country increased its **solar capacity by 10% in 2022**, the amount of **additional wind power capacity** it installed on land and at sea was only about 3%.
6. The government aims to **increase offshore wind power capacity** from about **8 gigawatts to 20 gigawatts by 2030**, but this year only 0.2 gigawatts of new capacity were added.

Flashback

1. The **concept of a climate club** was developed by **Yale economist William Nordhaus in 2015** and has since gained popularity in policy circles.
2. **Mr. Nordhaus** also won the **2018 Nobel Prize in economics** for his work on climate change.
3. In his work, the economist argued that existing climate agreements such as the **1997 Kyoto Protocol** and the **2015 Paris climate accord** are flawed due to their voluntary nature, which he said induces free-riding while responsible nations bear the cost of switching to cleaner technologies.
4. **Germany's Olaf Scholz** has been a staunch supporter of the concept of an **international climate club**.

INDIA, KAZAKHSTAN START JOINT MILITARY DRILL

The **armies of India and Kazakhstan** on 15 December 2022 began a **fortnight-long joint exercise in Meghalaya**. The **sixth edition of 'Kazind-22'**, a joint training exercise aimed at enhancing the **level of defence cooperation** and **fostering bilateral relations** between the two nations, **started at Umroi**, 25 km from Shillong, and will conclude on 28 December 2022.

More about the exercise

1. This **joint exercise** will enable the two armies **to train, plan and execute** a series of **combined tactical drills** for neutralising likely threats that may be encountered during **UN peacekeeping operations**.
2. The two countries instituted a **joint annual training exercise in 2016** as '**Exercise Prabal Dostyk**', which was later upgraded to a company-level exercise and renamed '**Exercise Kazind**' in 2018.
3. The Kazakh soldiers were drawn from their **South-based Regional Command** while the **11 Gorkha Rifles** will be participating in the exercise representing the Indian Army.
4. **As both armies** will be participating in **various combat games** besides **joint tactical planning and drills**.
5. It is expected that the **exercise will improve military relations**, imbibe each other's best practices and promote the ability to operate together while undertaking **counter-terrorist operations in semi-urban or jungle scenarios** under a **UN peace enforcement mandate**.

ECONOMY

DIGITAL RUPEE PILOT PROJECT

Reserve Bank of India (RBI) has announced the launch of India's Central Bank Digital Currency (CBDC), **a sort of official cryptocurrency**, for retail users from 1 December 2022. **It has repeatedly flagged concerns over money laundering, terror financing, tax evasion, etc. with private crypto currencies like Bit coin, Ether, etc.**

Who can use the retail CBDC?

1. The **first phase of pilot project will cover select locations** and banks in a closed user group (CUG) comprising participating customers and merchants.
2. **Four banks will be involved** in the controlled launch of the digital currency, State Bank of India, ICICI Bank, Yes Bank, and IDFC First Bank.
3. It will **initially cover the four cities** of Mumbai, New Delhi, Bengaluru, and Bhubaneswar, where customers and merchants will be able to use the digital rupee (e₹-R), or e-rupee.
4. The **service will be subsequently extended** to the cities of Ahmedabad, Gangtok, Guwahati, Hyderabad, Indore, Kochi, Lucknow, Patna, and Shimla.
5. **RBI says four more banks**, Bank of Baroda, Union Bank of India, HDFC Bank, and Kotak Mahindra Bank **will join the pilot project**.
6. The **scope of the pilot** may be expanded gradually to include more banks, users and locations as needed.

Flashback

1. On November 1, **the RBI launched the digital rupee for the wholesale segment** to settle secondary market transactions in government securities.
2. **Wholesale CBDC is designed for restricted access** to select financial institutions. It has the potential to transform the settlement systems for **financial transactions undertaken by banks in the government securities (G-Sec) segment**, inter-bank market and capital market more efficient and secure in terms of operational costs, use of collateral and liquidity management.

About the retail digital rupee

1. **The retail e-rupee will be an electronic version of cash**, and will be primarily meant for retail transactions.
2. **It will be potentially available for use** by all the private sector, non-financial consumers and businesses and will be able to provide access to safe money for payment and settlement, as **it will be the direct liability of the central bank**.
3. It is **the legal tender issued by a central bank** in a digital form. It is the **same as a fiat currency** and is **exchangeable** one-to-one with the fiat currency. **Only its form** is different.

RBI REMOVES INFORMAL NDF RESTRICTIONS

The **Indian central bank** has lifted the **informal restrictions on rupee non-deliverable forward trades** it had placed on local banks in October. All banks are now backing to **building positions in this segment**.

What

1. The central bank had in October **informally communicated to banks** to halt building **new positions in the NDF market** to manage the **rupee's volatility**. The rupee had dropped to record low of 83.29 in October.
2. **NDFs are offshore dollar-settled currency derivatives** used by investors with limited access to onshore markets to hedge their exposure or speculate.
3. The rupee's decline to a record low in October had prompted the **gap between onshore and NDF rates to widen**, leading to arbitrage opportunities which added to the pressure on the local unit, according to bankers.
4. The **RBI's directions back in October were designed to alleviate this pressure** on the rupee.
5. **Onshore and offshore differentials** have since narrowed, thanks to the dollar's pullback against its major peers and the U.S. Federal Reserve's less hawkish outlook.

- The RBI, now, **does not think that banks exploiting any mispricing** between the two markets pose a threat to the rupee.
- The **2-year Treasury yield is down 52 basis points from its peak**. The Fed is expected to deliver a smaller 50 basis points rate increase this week after four back-to-back hikes of three-quarters of a percentage point.

SCIENCE AND TECHNOLOGY

FACIAL RECOGNITION TECHNOLOGY AT AIRPORTS

The **government launched DigiYatra** which will provide a **seamless entry and embarkation process for air passengers** at the airports in the national capital, Bangalore and Varanasi. DigiYatra is **based on facial recognition** technology.

More about the news:

- By March next year, it will be launched at four more airports** - Hyderabad, Pune, Vijayawada and Kolkata and subsequently to all airports.
- It will be **available for passengers taking domestic flights** from Terminal 3 (T3). **At present**, Air India, Vistara and IndiGo are part of DigiYatra.
- The app is available on** Android and iOS platforms.

Privacy and data issue

- The **data shared by the passengers** will be stored in an encrypted format and in a decentralised manner.
- The **secured, encrypted information** on a passenger's phone can be provided to the airport from which he or she is flying out, **24 hours before the journey**.

How to avail the facility

- A **passenger has to register** their details on **DigiYatra app** using Aadhaar-based validation and a self-image capture.
- In the next step**, the boarding pass has to be scanned and the credentials are shared with the airport.
- At the airport e-gate**, the passenger has to first scan the bar coded boarding pass and the facial recognition system installed at the e-gate will validate the passenger's identity and travel document.
- Once this process is done**, the passenger can enter the airport through the e-gate.
- The passenger **will have to follow the normal procedure** to clear the security and board the aircraft.

Flashback:

- Digi Yatra Foundation**, a not-for-profit company, is the **nodal body for DigiYatra**.
- The **foundation's shareholders** are Airport Authority of India (AAI), Cochin International Airport Ltd (CIAL), Bangalore International Airport Ltd (BIAL), Delhi International Airport Ltd (DIAL), Hyderabad International Airport Ltd (HIAL) and Mumbai International Airport Ltd (MIAL).

INDIA TEST FIRES AGNI-V

India on 15 December 2022 successfully **test fired nuclear-capable Agni-V ballistic missile** having a **range of over 5,000 km**, marking a significant boost to the country's strategic deterrence. The test-firing of the missile from the **Abdul Kalam Island off Odisha coast** came amid **India's lingering border row with China**. Existing variant **Agni IV** is

capable of hitting targets at a **range of 4,000 km** while **Agni-III has a range of 3,000-km**, and **Agni II can fly up to 2,000-km**.

What is the Agni-5 missile?

1. The **nuclear-capable missile**, which uses a **three-stage solid-fuelled engine**, has been developed by **India's Defence Research and Development organisation (DRDO)**.
2. The **development of Agni missiles** started in **early 1980** under the **Integrated Guided Missile Development Programme** spearheaded by scientist and former President Dr A P J Abdul Kalam, who was also a central figure in India's missile and space programmes.

What was the latest test for?

1. **Agni-5** has been successfully tested **multiple times since 2012**. Defence Ministry sources said the latest test was **carried out primarily** to validate various **new technologies** on board the missile.
2. The **flight performance of the missile** was tracked and monitored by **radars, range stations and tracking systems** all through the mission including by the assets deployed in the sea.
3. At the time of the **previous test in October 2021**, the **Ministry of Defence** in its statement had highlighted the posture of '**credible minimum deterrence**' and '**No First Use**' which are **pivotal points of India's nuclear doctrine, first published in 2003**.
4. This basically means **India would never use nuclear weapons first in a conflict situation but only as retaliation**, and the arsenal maintained is to only deter the possibility of an attack on India.

Who undertook the test?

1. The **SFC**, which carried out the test, is a **key tri-services formation** that **manages and administers all the strategic assets** and falls under the purview of the **Nuclear Command Authority of India**.
2. The **Nuclear Command Authority** is the **sole body** which can authorize the **use of nuclear weapons**.
3. It comprises a **Political Council and an Executive Council**. The **Political Council is chaired by the Prime Minister**.
4. The **Executive Council, chaired by the National Security Advisor**, provides inputs for decision-making by the **Nuclear Command Authority** and executes the directives given to it by the **Political Council**.

BREAKTHROUGH IN NUCLEAR FUSION ENERGY

Scientists in California have made a **breakthrough in nuclear fusion technology**, producing **more energy than consumed in a reaction for the first time**. The achievement was made at the **US Department of Energy's Lawrence Livermore National Laboratory** near San Francisco.

What is Nuclear Fusion?

1. **Nuclear fusion** reactions power **the sun and other stars**.
2. The reaction happens when **two light nuclei merge to form a single heavier nucleus**. Because the **total mass of that single nucleus is less than the mass of the two original nuclei**, the leftover mass is energy that is released in the process, according to the Department of Energy.
3. In the **case of the sun**, its intense heat - **millions of degrees Celsius** - and the pressure exerted by its gravity allow atoms that would otherwise repel each other to fuse.
4. Scientists have long understood **how nuclear fusion has worked** and have been trying to **duplicate the process on Earth as far back as the 1930s**.

- Current efforts focus on **fusing a pair of hydrogen isotopes - deuterium and tritium** - according to the Department of Energy, which says that particular combination releases "much more energy than most fusion reactions" and requires less heat to do so.

How are Scientists trying to do this?

- One way scientists have **tried to recreate nuclear fusion** involves what's called a **tokamak** - a **doughnut-shaped vacuum chamber** that uses powerful magnets to turn fuel into a **superheated plasma** (between 150 million and 300 million degrees Celsius) where fusion may occur.
- The **Livermore lab uses a different technique**, with researchers firing a **192-beam laser** at a small capsule filled with **deuterium-tritium fuel**.
- The lab reported that an August 2021 test produced **1.35 megajoules of fusion energy** - about 70% of the energy fired at the target.
- The lab said several subsequent experiments showed declining results, but researchers believed they had **identified ways to improve the quality of the fuel capsule** and the **lasers' symmetry**.
- The **most critical feature of moving fusion** from theory to **commercial reality** is **getting more energy out than in**.

GROWTH INDIA DISCOVERED BLACK HOLE

A **Himalayan telescope in Ladakh** and a group of Indian astronomers have alerted the world about the **death screams of a dying star**, which was torn apart by a **supermassive Black Hole** at a distance of **12.5 billion light years away** - more than halfway across the Universe.

More about the news

- Though the **rare cosmic event** that generated the **most powerful flash** from the farthest ever detected - **it is more than 1,000 trillion times more luminous than the Sun** - was observed by a **network of telescopes in four continents** and from space.
- It was the **GROWTH-India telescope at Hanle** that gave the first heads-up on the unusual nature of the flash to the astronomy community around the world within days of it being spotted.
- The story began with **California-based Zwicky Transient Facility** detecting a **new source of a bright flash in the sky** in the second week of February. Named **AT2022cmc**, it brightened rapidly and **was fading fast**.
- The **astronomers observed the last tango of a dying star**, which was being gobbled by a **supermassive black hole**, giving them ideas on what happens when a dying star flies too close to a **supermassive Black Hole**.
- Since the **Big Bang happened 13.8 billion years ago**, what scientists observed happened in a young universe. "It is hard to estimate the details of the star that died (it became bright only because it was already torn apart), but it was probably a normal star, perhaps similar to even the mass of the Sun. Also, it did something weird," Bhalerao told DH.
- India's uGMRT and Astrosat**, as well as the **VLA** and **Hubble Space Telescopes**, were among the instruments that were used to study the celestial event. The results appeared in two research papers in Nature and Nature Astronomy.
- The **GROWTH India data** showed us that the source was special. Without such data we would probably not have undertaken these observations which revealed the extreme nature of this object.

MISCELLANEOUS

WORLD SOIL DAY

World Soil Day (WSD) 2022, annually observed on 5 December, aligns with its guiding theme, 'Soils: Where food begins', is a means to raise awareness on the importance of maintaining healthy soils, ecosystems and human well-being by addressing the growing challenges in soil management, encouraging societies to improve soil health, and advocating the sustainable management of soil.

United Nation Role

- The United Nations observes world soil day every year on 5 December in a bid to raise awareness about the importance of maintaining healthy ecosystems by addressing challenges posed by soil management.
- This year, the theme for the observance of this day is 'soils: where food begins.'
- The proposal for an international day to celebrate soil dates back to 2002 and was initiated by the International Union of Soil Sciences.
- UN general assembly adopted the proposal officially almost a decade later and in 2014, the first official world soil day was observed.

India's conservation strategy

- The Government of India is implementing a five-pronged strategy for soil conservation.
- By making soil chemical-free, saving soil biodiversity, enhancing SOM, maintaining soil moisture, mitigating soil degradation and preventing soil erosion.
- Soil Health Card (SHC) scheme is launched in 2015, to give information relating to soil type, soil deficiency and soil moisture content.
- Pradhan Mantri Krishi Sinchayee Yojana is launched to prevent soil erosion, regeneration of natural vegetation, rainwater harvesting and recharging of the groundwater table.
- National Mission for Sustainable Agriculture (NMSA) has schemes promoting traditional indigenous practices such as organic farming and natural farming.

Soil significance

- Healthy soils are essential for our survival, support healthy plant growth to enhance both our nutrition and water percolation to maintain groundwater levels.
- They help to regulate the planet's climate by storing carbon and are the second largest carbon sink after the oceans.
- They help maintain a landscape that is more resilient to the impacts of droughts and floods.
- As soil is the basis of food systems, it is no surprise that soil health is critical for healthy food production.

INDIA'S FIRST REAL-TIME GOLD ATM

Unlike usual ATMs that dispense money, the Goldsikka ATM dispenses Gold coins. In what is India's first gold ATM, people can insert their debit or credit cards into the Goldsikka and buy gold coins. The ATM has a capacity of storing 5kgs of gold. There are 8 available options for the quantity of gold starting from 0.5 grams to 100 grams.

What is Goldsikka?

- Goldsikka Pvt Ltd launched its first Gold ATM with Technology support from M/s OpenCube Technologies Pvt Ltd, a Hyderabad-based startup company on 3 December 2022. This is India's first and the world's first real-time Gold ATM.

www.ksgindia.com

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- Each ATM has a **capacity of holding upto 5kgs of gold** which is worth around Rs.2-3 crores. The ATM machine dispenses coins ranging from **0.5 grams to 100 grams**.
- There are **8 available options**, including 0.5 grams, 1 gram, 2 grams, 5 grams, 10 grams, 20 grams, 50 grams and 100 grams.
- These coins are **24-carat gold** and **999 certified**. The customers will get their investment returns at a live price without any wastage.
- The **important feature of the ATM** is prices are updated live. The prices there are updated and displayed on the screen and so are the taxes.

FIRST WOMAN IOA PRESIDENT

Ushering in a new era in the **country's sports administration**, the **legendary P T Usha** was on 10 December 2022 elected as the **first woman president of Indian Olympic Association (IOA)**. The elections were held under the supervision of Supreme Court-appointed retired SC judge **L Nageswara Rao**. The polls were originally due to be held in December 2021.

What

- The 58-year-old Usha, a **multiple Asian Games gold medallist** and fourth place finisher in the 1984 Los Angeles Olympics 400m hurdles final, was declared elected unopposed for the top post in the polls.
- Usha's anointment to the top post was a foregone conclusion late last month after she emerged as the lone candidate for the top post.
- Nobody was willing to fight against Usha, who was nominated to the **Rajya Sabha** by the ruling Bharatiya Janata Party in July.
- Usha, fondly known as the '**Payoli Express**', had nominated her as a Rajya Sabha member in July.
- She also became the **first Olympian and first international medallist to head the IOA** in its **95-year-old history**, adding another feather in her cap after dominating Indian and Asian athletics for two decades before retiring in 2000 with a bagful of international medals.
- Usha is the **first sportsperson to have represented the country** and also become **IOA chief since Maharaja Yadavindra Singh**, who played a Test match in 1934. Singh was the third IOA president who held office from 1938 to 1960.
- At least **five of the 14 executive council members** (including IOC member in India, Nita Ambani), are former sports persons, which is unprecedented in the IOA history.

WORLD BANK'S NEW TOOLKIT FOR INDIAN WOMEN

On 8 December 2022, the **World Bank** launched a "**Toolkit on Enabling Gender Responsive Urban Mobility and Public Spaces in India**" with the aim of suggesting ways to make public transport in Indian cities **more inclusive of women's travelling requirements**. The **toolkit** brings **together 50 case studies of best practices** and efforts from across the world, along with a special inculcation of the Indian context.

What the case study said?

- Studies show that women, especially those from **lower socio-economic groups**, are among the **biggest users of public transport in Indian cities**. Their dependence on public transport stems from lower discretionary incomes.
- Women have unique mobility patterns**, often **travelling shorter distances**, using multiple modes of transport, and travelling with dependents, during "**off-peak hours**".

3. Studies have shown that **lack of safe, inexpensive and reliable public transport** has a profound impact on **women's ability** to access education and employment opportunities, in turn leading to **poorer life outcomes** for them.
4. **India's female labour force participation rate** is among the lowest in the world, standing at **just 30% in 2019-20**. Lack of **viable urban transport** is frequently cited as a major impediment for women to access better employment opportunities.

Why this toolkit?

1. **First**, women have to **stitch together various short commutes** to fulfil the many responsibilities they have.
2. For instance, a **typical day for a working mother might involve commutes from home to school back to home**, then **to her place of work**, then back to school and back to home. The World Bank recognises this as **"trip chaining"** and this increases travel costs.
3. **Second**, women often also make decisions to use **certain kinds of more expensive routes** or forms of transport on account of them being perceived to be safer.
4. For instance, **women often take longer routes to travel** which are perceived to be more safe, rather than travelling through **"unsafe areas"**.
5. All these factors amount together as a **"pink tax"** that specifically burden women and impede them from making optimal decisions for themselves.

What does the World Bank toolkit suggest?

1. The World Bank suggests a **four-pillared approach** to help address prevailing issues in **urban transport for women**.
2. **First**, there has to be greater effort made **to understand the on-ground situation** with a **gender lens**. **Gender blind planning and infrastructure development** leaves major gaps that specifically impact women but are often not overtly visible.
3. **Second**, once **prevailing issues are identified**, policies and development plans must reflect the **concerns of women**. For this to happen there must be **more women in key institutions in charge of decision making**.
4. **Third**, the **toolkit emphasises** on **building gender sensitivity and awareness among service providers** through **mandatory programmes** and **community action**.
5. **Fourth**, investment has to be made in better infrastructure and services with a **focus on women-friendly design**.

THE LAW ON ACID ATTACKS IN INDIA

A **17-year-old girl** was on 14 December 2022 attacked with **an acid-like substance in Dwarka** by three assailants while she was on her way to school, while **the victim has suffered 8% burns** and disfigurement of the face and neck area, the accused have been arrested by Delhi police.

How prevalent are acid attacks?

1. Though heinous, **acid attacks on women are not as prevalent a crime as others against women**.
2. According to data compiled by the **National Crime Records Bureau (NCRB)**, there were **150 such cases recorded in 2019, 105 in 2020 and 102 in 2021**. **West Bengal and UP consistently record the highest number** of such cases generally accounting for nearly 50% of all cases in the country year on year.
3. The **charge sheeting rate of acid attacks stood at 83%** and the **conviction rate at 54% in 2019**. In 2020, the figures stood at 86% and 72% respectively. In 2021, the figures were recorded to be 89% and 20% respectively.
4. In 2015, MHA issued an advisory to all states to ensure **speedy justice in cases of acid attacks** by expediting prosecution.

What is the law on acid attacks?

1. **Until 2013, acid attacks were not treated as separate crimes.** However, following amendments carried out in the IPC, acid attacks were put under a **separate section (326A) of the IPC** and made punishable with a minimum imprisonment of 10 years which is extendable to life along with fine.
2. The law also has **provisions for punishment for denial of treatment to victims** or police officers refusing to register an FIR or record any piece of evidence.
3. **Denial of treatment** (by both public and private hospitals) can lead to imprisonment of up to one year and dereliction of duty by a police officer is punishable by imprisonment of up to two years.

What is the law on the regulation of acid sales?

1. **In 2013, the Supreme Court took cognizance of acid attacks** and passed an order on the regulation of sales of corrosive substances.
2. on the order, the **MHA issued an advisory to all states on how to regulate acid sales and framed the Model Poisons Possession and Sale Rules, 2013 under The Poisons Act, 1919.** It asked states to frame their own rules based on model rules, as the matter fell under the purview of states.
3. According to the MHA's directions and the model rules, **over-the-counter sale of acid was not allowed unless the seller maintains a logbook/register** recording the sale of acid.
4. **This logbook** was to also contain the details of the person to whom acid is sold, the quantity sold, the address of the person and also specify the reason for procuring acid.
5. The sale is also to be made only when **the buyer produces a photo ID containing his address** issued by the government. The buyer must also prove he/she is above 18 years of age.
6. **Sellers are also required to declare all stocks of acid** with the concerned **Sub-Divisional Magistrate (SDM) within 15 days** and in case of undeclared stock of acid. The SDM can confiscate the stock and suitably impose a fine of up to Rs 50,000 for a breach of any of the directions.
7. In **August last year, MHA issued another advisory to all States/ UTs** to review and ensure that the **retail sale of acids and chemicals is strictly regulated** in terms of the **Poison Rules** so that these are not used in crime.

FACT TO REMEMBER:

1. **UN RANKS NAMAMI GANGE INITIATIVE**
2. **PARLIAMENT PASSES WILDLIFE BILL**
3. **CENTRE AWARDS NINE GI TAGS**
4. **INDIA LAUNCHES 'GROUP OF FRIENDS'**
5. **G7 NATIONS ESTABLISH INTERNATIONAL CLIMATE CLUB**
6. **DIGITAL RUPEE PILOT PROJECT**
7. **RBI REMOVES INFORMAL NDF RESTRICTIONS**
8. **FACIAL RECOGNITION TECHNOLOGY AT AIRPORTS**
9. **INDIA TEST FIRES AGNI-V**
10. **INDIA'S FIRST REAL-TIME GOLD ATM**

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PREVIOUS YEAR QUESTION 2022

Q. Consider the following statements:

1. Pursuant to the report of H. N. Sanyal Committee, the Contempt of Courts Act, 1971 was passed.
 2. The Constitution of India empowers the Supreme Court and the High Courts to punish for contempt of themselves.
 3. The Constitution of India defines Civil Contempt and Criminal Contempt.
 4. In India, the Parliament is vested with the powers to make laws on Contempt of Court.
- Which of the statements given above is/are correct?
- (a) 1 and 2 only
 - (b) 1, 2 and 4
 - (c) 3 and 4 only
 - (d) 3 only

Source: My Notes, May 1-15, Page no 1-2