

My Notes....

NATIONAL

WHO GCTM INAUGURATED

On 19 April 2022, Prime Minister, along with World Health Organization (WHO) Director-General, was performed the groundbreaking ceremony for the **first-of-its-kind WHO Global Centre for Traditional Medicine (GCTM)** in Jamnagar, Gujarat. Earlier, the Prime Minister had said the GCTM would go a long way in **enhancing wellness in society**.

What is traditional medicine?

1. The WHO describes **traditional medicine** as the **total sum of the “knowledge, skills and practices indigenous** and different cultures have used over time to maintain health and prevent, diagnose and treat physical and mental illness”.
2. Its reach encompasses ancient practices such as **acupuncture, ayurvedic medicine** and **herbal mixtures** as well as modern medicines, the WHO says.
3. **Traditional medicine in India** is often defined as including practices and therapies — such as **yoga, Ayurveda, Siddha** — that have been part of Indian tradition historically, as well as others — such as **homeopathy** — that became part of Indian tradition over the years.
4. **Ayurveda and yoga** are practised widely across the country; the **Siddha system is followed predominantly in Tamil Nadu and Kerala**; the **Sowa-Rigpa system** is practised mainly in Leh-Ladakh and Himalayan regions such as Sikkim, Arunachal Pradesh, Darjeeling, Lahaul & Spiti.

What is the GCTM?

1. The GCTM will **aim to focus on evidence-based research, innovation, and data analysis** to optimise the contribution of traditional medicine to global health.
2. Its main focus will to develop **norms, standards and guidelines** in technical areas relating to traditional medicine.
3. On 3 November 2020, **Dr Tedros** announced the establishment of the **WHO GCTM in India**.
4. The Union Cabinet in March this year approved its establishment in Jamnagar with the signing of a host country agreement between the Government of India and the WHO.

SMART CITY'S ICCCS ANNOUNCED

Smart Cities Conference was held in **Surat** on 18-19 April 2022, Union Housing and Urban Affairs Minister Hardeep Puri announced that **80 Integrated Command and Control Centres (ICCCs)** have already been set up, while the remaining 20 would be completed by 15 August 2022 this year. These **ICCCs are spread across various states** that have been developing Smart Cities, with states such as **Tamil Nadu, Uttar Pradesh, Madhya Pradesh** and **Gujarat** leading in terms of the **total number of ICCCs set up**.

What is an Integrated Command and Control Centre?

1. The **Smart Cities Mission** includes setting up ICCCs for each such city as a vital step. These ICCCs are designed to enable authorities **to monitor the status of various amenities in real time**.

2. Initially aimed at controlling and monitoring water and power supply, sanitation, traffic movement, **integrated building management**, city connectivity and Internet infrastructure, these centres have since evolved to monitor various other parameters.
3. The **ICCC acts of a smart city acts as a “nerve centre”** for operations management. It processes a complex and large pool of data sets at an aggregated level. For example, it is now the go-to source for integrated traffic management monitoring.

What is the Smart Cities Mission?

1. The **Smart Cities Mission** aims at **developing 100 cities**, which were shortlisted, into **self-sustainable urban settlements**.
2. The mission was launched on 25 June 2015 and was projected as one aimed at **transforming the process of urban development in the country**.
3. Key focus areas of the scheme include **construction of walkways, pedestrian crossings, cycling tracks, efficient waste-management systems**, integrated traffic management and assessment.

PRESIDENT GIVES ASSENT TO CRIMINAL PROCEDURE (IDENTIFICATION) BILL

President Ram Nath Kovind has given his assent to the **Criminal Procedure (Identification) Bill**, which empowers police to obtain **physical and biological samples** of convicts and those accused of crimes. The Act, which replaces the **Identification of Prisoners Act, 1920**, was passed by Lok Sabha on 4 April 2022 and Rajya Sabha on 6 April 2022.

More about the Act

1. Apart from providing **legal sanction to police** to obtain **physical and biological samples** of convicts and detainees for investigation in criminal matters, the legislation also empowers a magistrate **to order measurements or photographs of a person** to be taken to aid the investigation of an offence.
2. The Act explained the **types of data that may be collected**, people from whom such data may be collected and the authority that can authorise such collection. It also provides for the data to be stored in a **central database**.
3. Both **the 1920 Act and the 2022 legislation** clarified that resistance or **refusal to give data** will be considered as an offence of obstructing a public servant from doing his duty.
4. **Section 2(1)(b)** of the Bill defines “**measurements**” to include **finger impressions, palm-print impressions, footprint impressions**, photographs, iris and retina scans, physical and biological samples and their analysis, behavioural attributes including signatures and handwriting, or any other examination referred to in **Section 53 or Section 53A of the Code of Criminal Procedure (CrPC), 1973**. Section 53 relates to medical examination of a person arrested.

CENTER STOP PURCHASE OF PARBOILED RICE

Telangana Chief Minister **K Chandrashekar Rao** and members of his Cabinet staged a dharna at Telangana House, demanding a **uniform paddy procurement policy**. The protest came after the Centre said it was stopping the purchase of excess **parboiled rice**, of which **Telangana is a major producer**. The Centre has said demand is low and it cannot waste money on buying the excess quantity of parboiled rice.

What is parboiled rice?

1. The dictionary meaning of '**parboil**' is '**partly cooked by boiling**'. Thus, the expression parboiled rice refers to rice that **has been partially boiled at the paddy stage**, before milling.
2. Parboiling of rice is not a new practice, and has been followed in India since ancient times. However, **there is no specific definition of parboiled rice** of the **Food Corporation of India** or the **Food Ministry**.
3. Today, there are several processes for parboiling rice. For example, the **Central Food Technological Research Institute (CFTRI)**, Mysuru, uses a method in which the paddy is **soaked in hot water for three hours**, in contrast to the more common method in which **paddy is soaked for 8 hours**.
4. The water is then drained and the paddy steamed for 20 minutes. Also, the **paddy is dried in the shade** in the method used by the CFTRI, but is **sun-dried in the common method**.
5. The **Paddy Processing Research Centre (PPRC)**, Thanjavur follows a method known as the **chromate soaking process**.
6. It uses **chromate**, a family of salt in which the anion contains both **chromium and oxygen**, which removes the odour from the wet rice.
7. All processes generally involve **three stages—soaking, steaming and drying**. After passing through these stages, the **paddy goes for milling**.

What are the benefits?

1. **Parboiling makes rice tougher**. This reduces the **chances of the rice kernel breaking during milling**.
2. Parboiling also **increases the nutrient value of the rice**.
3. Third, parboiled rice has a **higher resistance to insects and fungi**.

INTEGRATED ROAD ACCIDENT DATABASE (iRAD)

Dharam Pal, UT Adviser to the Administrator launched the **Integrated Road Accident Database (iRAD) project** in Chandigarh. **iRAD** is an initiative of the Ministry of Road Transport and Highways (MoRTH), with an objective **to improve road safety in the country**. The **main idea** behind it is **to create a Centralised Accident Database** to host and access **all accident related data** by various departments/stakeholders.

What is iRAD?

1. The **iRAD application** is an **initiative of the MoRTH** to capture relevant details about the **accident prone areas throughout India**.
2. The details include **causes of road accidents, road engineering defaults, negligences on the part of individuals, pattern in accidents** and **to form a strategy** to reduce the number of accidents.
3. The **iRAD was proposed in 2019** but due to Covid-19, the implementation work was postponed.
4. In **February this year**, a **beta version of iRAD was launched** in at least **59 districts** of **six states** including **Madhya Pradesh, Maharashtra, Karnataka, Rajasthan, Tamil Nadu and Uttar Pradesh**.

5. **With iRAD**, any investigation officer visiting the spot of an accident will enter all details in the app, such as day and time of the accident, **type of collision**, **fatal/non fatal**, weather conditions, etc.
6. The data will further be **used by all concerned departments** to analyse cause of accidents and formulation of strategies such as **identification and rectification of blackspot**, engineering interventions, etc.

INTERNATIONAL

EU-INDIA TRADE AND TECHNOLOGY COUNCIL

President of the European Commission Ursula von der Leyen and **Prime Minister** held bilateral talks in New Delhi on 25 April 2022 and agreed to launch the **EU-India Trade and Technology Council** while also committing to strengthen the **strategic partnership**.

What

1. This **strategic coordination mechanism** will allow both partners to tackle challenges at the **nexus of trade, trusted technology and security**, and thus deepen cooperation in these fields between the **EU and India**.
2. Both sides agreed that **rapid changes in the geopolitical environment** highlight the need for joint in-depth strategic engagement.
3. The **Trade and Technology Council** will provide the **political steer** and the necessary structure to operationalise political decisions, **coordinate technical work**, and report to the political level to ensure implementation and **follow-up in areas** that are important for **sustainable progress of European and Indian economies**.
4. The decision to set up a **Trade and Technology Council** will be the **first for India** with any of its partners and the second for the European Union following the first one it has set up with the US.
5. They reviewed progress in the **vibrant India-EU Strategic Partnership** and agreed to deepen cooperation in areas of **trade, climate, digital technology** and **people-to-people ties**.
6. **EU-India's broad economic agenda**, with a focus on the **free trade agreement**, investment protection agreement and **Geographical Indications agreement** is on the agenda.

CHINA'S SECURITY PACT WITH SOLOMON ISLANDS

China and the Solomon Islands finalised a **controversial security agreement**, an early draft of which was leaked. **Solomon Islands Prime Minister Manasseh Sogavare** insists that the agreement was necessary to deal with the islands' "**internal security situation**". But Pacific countries including **Australia, New Zealand** and **the US** have raised concerns about the agreement — negotiated in secret late last year — potentially leading to Chinese military presence in the islands.

Why the Solomon Islands matter

1. With a **population of less than seven lakh**, the **chain of hundreds of islands** is located **near Papua New Guinea** in the Pacific Ocean — a **politically volatile region** that has been at the centre of a **long-running diplomatic power** struggle between the **West and China**.

2. In the **capital city of Honiara** on the island of Guadalcanal, that some of the **fiercest battles of World War II** were fought between the US and Japanese troops.
3. Between the **late 1990s and early 2000s**, the country was rife with ethnic unrest and military conflict between several armed groups, ultimately resulting in a coup that brought **Sogavare to power for the first time**.
4. With its economy in a state of near-collapse and **ethnic clashes still rampant**, the **Pacific Nation was forced to call in reinforcements** to stabilise state affairs.
5. In 2003, a **multinational Regional Assistance Mission to the Solomon Islands (RAMSI)**, led by **Australia**, was established.
6. As part of the mission, troops were deployed from Australia and New Zealand and a state of stability was eventually restored. But **political instability continues to persist**, making it difficult for new governments to stick around.

SWEDEN, FINLAND TO APPLY FOR NATO

Swedish newspaper Expressen on 25 April 2022 confirmed the information of the **Finnish media** that **Sweden and Finland are preparing to jointly apply to NATO** on 16-20 May. Last week, **Russia has warned Sweden and Finland** about the consequences of joining NATO.

What is NATO

1. **NATO**, or the **North Atlantic Treaty Organisation**, was **set up in 1949 by the US, Canada**, and **several western European nations** to ensure their collective security against the Soviet Union.
2. It was the **US's first peacetime military alliance** outside the western hemisphere.
3. **Thirty countries are members of NATO currently**. NATO is headquartered in **Brussels, Belgium**.
4. The headquarters of the Allied Command Operations is near **Mons**, also in Belgium.
5. Members of NATO are committed to **mutual defence in response to an attack by any external party**.
6. **Collective defence lies at the very heart of NATO**, "a unique and enduring principle that binds its members together, committing them to protect each other and setting a spirit of solidarity within the Alliance".
7. This is laid out in **Article 5** of the **North Atlantic Treaty**, the founding treaty of NATO.

DECLARATION FOR THE FUTURE OF INTERNET

The US, all the European Union (EU) member states and 32 non-EU countries have signed a "**Declaration for the Future of the Internet**" that calls for an "**open, free, global, interoperable, reliable, and secure**" internet. The declaration represents a **political commitment** among partners to advance a **positive vision for the internet and digital technologies**, the White House said on 28 April 2022.

What

1. It also **reaffirms and recommits** its partners to a **single global Internet** - one that is truly open and fosters competition, privacy, and respect for human rights.
2. The declaration said that globally, **we are witnessing a trend of rising digital authoritarianism** where some states act to repress **freedom of expression, censor**

- independent news sites, interfere with elections**, promote disinformation, and deny their citizens other human rights.
- At the same time, millions of people still **face barriers to access** and **cybersecurity risks** and threats undermine the trust and reliability of networks.
 - The declaration aims **to protect human rights** and fundamental freedoms of all people and **promote a global Internet** that advances the free flow of information.
 - It also advances inclusive and affordable connectivity so that all people can benefit from the **digital economy** and promote trust in the **global digital ecosystem**, including through **protection of privacy**.
 - The declaration emphasises that the **internet should be decentralised** and globally interconnected.
 - So far, **60 partners have endorsed the declaration** and more countries are expected to follow suit in the coming weeks.
 - The partners in the declaration affirm that the **Internet must reinforce core democratic principles, fundamental freedoms** and **human rights** as reflected in the **Universal Declaration of Human Rights**.

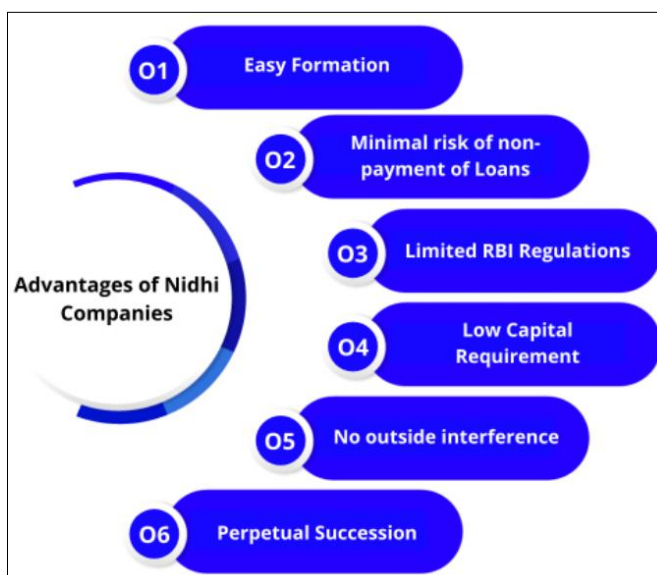
ECONOMY

GOVT AMENDS RULES GOVERNING NIDHI COMPANIES

To protect the interests of the public, the government has amended rules governing **Nidhi companies** whereby its prior declaration **will be mandatory for certain entities** before they start accepting deposits. Now, public companies desirous to function as **Nidhis must obtain prior declaration from the central government** before accepting deposits, the corporate affairs ministry said in a release on 20 April 2022.

What

- A public company incorporated as a **Nidhi** with a **share capital of Rs 10 lakh** should first get itself declared as a Nidhi by **applying in form NDH-4** with a **minimum membership of 200** and a **Net Owned Fund (NOF) of Rs 20 lakh** within 120 days of its incorporation.
- Further, **promoters and directors** of the company concerned have to meet the criteria of fit and proper person as laid down in the rules.
- For timely disposal, it has also been provided in **amended rules** that in case no decision is conveyed by the central government within 45 days of the receipt of applications filed by companies in form NDH-4, approval would be deemed as granted.



4. This would apply for such companies which shall be incorporated after **Nidhi (Amendment) Rules, 2022**. **Nidhi companies are non-banking finance entities** that are into lending and borrowing **with their members**.
5. Under the **Companies Act, 1956**, a **Nidhi or Mutual Benefit Society** meant a company which the Central Government declared as **Nidhi** or Mutual Benefit Society by notification in the official gazette.
6. Under the **Companies Act, 2013**, initially there was no need for a company to get declaration from Central Government to function as a Nidhi Company.
7. Such companies were required to only incorporate as a Nidhi and meet requirements under **sub-rule (1) of rule 5 of Nidhi Rules** viz., **minimum membership of 200, Net Owned Fund (NoF) of Rs 10 lakh**, NOF to deposit ratio of 1:20 and keeping 10 per cent unencumbered deposits in schedule commercial banks or post offices within one year of commencement of **Nidhi Rules, 2014**.

DIGITAL BANKING UNITS

Finance Minister Nirmala Sitharaman on 19 April 2022 reiterated her Budget announcement on **setting up 75 digital banking units in 75 districts** of the country this year. This is to take forward the government's agenda of **digital financial inclusion**.

What are these DBUs?

1. A digital banking unit is a **specialised fixed point business unit** or hub housing certain **minimum digital infrastructure** for delivering digital banking products and services as well as servicing existing financial products and services digitally in self-service mode at any time.
2. **Commercial banks** (other than **regional rural banks, payment banks** and local area banks) with past digital banking experience are permitted to open DBUs in **tier 1 to tier 6 centres**, unless otherwise specifically restricted, without having the need to take permission from the RBI in each case.
3. As per the RBI, **each DBU** must offer **certain minimum digital banking products** and services.
4. Such products should be on both liabilities and assets side of the balance sheet of the **digital banking segment**. **Digitally value-added services** to conventional products would also qualify as such.
5. The services include **savings bank accounts under various schemes**, current accounts, fixed deposits and recurring deposit accounts, digital kit for customers, mobile banking, Internet banking, debit cards, credit cards, and **mass transit system cards, digital kit for merchants**, UPI QR code, BHIM Aadhaar and point of sale (PoS).
6. Other services include making applications for and onboarding of customers for identified retail, MSME or schematic loans.

INDIA ALLOWS IMPORTS OF GM SOYMEAL

India has allowed imports of an extra 550,000 tonnes of **genetically modified (GM) soymeal**, according to a government order, to help the **poultry industry reeling** from a surge in local prices of the important animal feed. The shipments need to be imported before 30 Sept., according to the government order.

How is gene editing different from GMO development?

1. **Genetically modified organisms (GMO)** involve **modification of the genetic material** of the host by **introduction of a foreign genetic material**.
2. In the case of agriculture, **soil bacteria is the best mining source** for such genes which are then inserted into the host genome using genetic engineering.
3. For example, in case of cotton, introduction of **genes cry1Ac and cry2Ab** mined from the **soil bacterium Bacillus Thuringiensis (BT)** allow the native cotton plant to generate endotoxins to fight pink bollworm naturally.
4. BT Cotton uses this advantage to help farmers naturally fight pink bollworm which is the most common pest for cotton farmers.
5. The basic difference between **genome editing and genetic engineering** is that while the **former does not involve the introduction of foreign genetic material**, the latter does.
6. In the case of agriculture, both the techniques aim to generate variants which are better yielding and more resistant to **biotic and abiotic stress**.

SCIENCE AND TECHNOLOGY

INDIAN NAVIGATION SYSTEM USED TO LAND AIRCRAFT

An **IndiGo-operated ATR 72-600 aircraft** landed at **Kishangarh airport** on 28 April 2022, using an approach process guided by **India's own satellite-based augmentation system** named **GAGAN**, or **GPS-aided GEO Augmented Navigation**. With this trial landing at the small airport near Ajmer in Rajasthan, **India joined a small group** comprising the **US, Japan and Europe** with its own **satellite-based augmentation system (SBAS)**.

More about SBAS

1. While the SBAS developed by the **US, Japan, Europe and India** are already operational, there are several more under development.
2. These include **China's BeiDou SBAS, South Korea's Korea Augmentation Satellite System (KASS), Russia's System for Differential Corrections and Monitoring (SDCM)**, and the **Southern Positioning Augmentation Network (SPAN)** of Australia and New Zealand.
3. The test flight that **landed at Kishangarh is a part of the approval process** with aviation safety regulator DGCA, which includes training of pilots, validation of approach and simulator sessions.
4. The flight was performed with a DGCA team on board and after the approval; the procedure will be available for usage of commercial flights.
5. The **SBAS is a navigation system**, which builds on the **Global Navigation Satellite Systems (GLONASS)**, and adds to the accuracy and integrity of these navigation tools.
6. For aircraft operators, **both civilian and military**, it means that pilots can land aircraft at smaller airports and airstrips using navigation guidance without expensive instrument-based **landing systems** being installed on the ground.
7. According to a senior official at the **Airports Authority of India (AAI)**, guided approaches made using GAGAN are "**operationally nearly equivalent**" to ILS Category-1 without "**the need for ground-based navigational infrastructure**".

SUBMARINE VAGSHEER LAUNCHED

Vagsheer, the **sixth submarine of the P75 project** of the Indian Navy was launched on 20 April 2022 at Mazgaon Dock Ltd. It is the **last of the Scorpene class submarines** made under the **P75 project** and can join the Navy fleet within 12-18 months after sea trials.

About 'Vagsheer'

1. **Vagsheer is named after the sand fish**, a deep sea predator of the Indian Ocean.
2. The first submarine **Vagsheer**, from Russia, was commissioned into the Indian Navy on 26 December 1974, and was decommissioned on 30 April 1997.
3. The new **Vagsheer** will be officially named at the time of its commissioning.
4. Naval sources said **Vagsheer can take up to eight officers and 35 men.**
5. **Vagsheer is a diesel attack submarine**, designed to perform sea denial as well as access denial warfare against the adversary.
6. It can do **offensive operations** across the **spectrum of naval warfare** including **anti-surface warfare, anti-submarine warfare**, intelligence gathering, mine laying and area surveillance.

The project

1. **P 75 is one of two lines of submarines**, the other being **P75I**, as part of a plan approved **in 1999 for indigenous submarine construction** with technology taken from overseas firms.
2. The contract for six submarines under P75 was given to **Mazgaon dock** on 6 October 2005 and delivery was to start from 2012, but the project has faced delays.
3. Under P75, **INS Kalvari, INS Khanderi, INS Karanj** and **INS Vela** have been commissioned. Sea trials are on for **Vagir. Vagsheer is the sixth**; its production was delayed due to the pandemic.

NITI AAYOG'S DRAFT BATTERY SWAPPING POLICY

Government think-tank **Niti Aayog** has prepared a draft **battery swapping policy**, under which it has proposed offering **incentives to electric vehicles (EVs)**. Finance Minister had announced during this year's Union Budget that the government was set to roll out a **battery swapping policy**, in a bid to reduce **upfront costs of purchasing EVs**.

What are some of the key proposals?

1. The draft policy has suggested that the **GST Council** consider **reducing the differential across the tax rates on Lithium-ion batteries and electric vehicle supply equipment.**
2. Currently, the **tax rate on the former is 18 per cent**, and **5 per cent on the latter.**
3. The policy also proposes to offer the **same incentives available to electric vehicles** that come pre-equipped with a

What is battery swapping?

1. **Battery swapping** is a mechanism that **involves exchanging discharged batteries for charged ones.**
2. This provides the flexibility to charge these batteries separately by de-linking charging and battery usage, and **keeps the vehicle in operational mode** with negligible downtime.
3. **Battery swapping** is generally used for smaller vehicles such as two-wheelers and three-wheelers with smaller batteries that are easier to swap, compared to four-wheelers and e-buses, although solutions are emerging for these larger segments as well.

- fixed battery to electric vehicles with swappable batteries.
- The size of the incentive could be determined based on the **kWh (kilowatt hour) rating** of the battery and compatible EV," the draft policy states.
 - The policy also requires state governments **to ensure public battery charging stations** are eligible for **EV power connections with concessional tariffs**.
 - It also proposes to bring such stations under existing or **future time-of-day (ToD) tariff regimes**, so that the swappable batteries can be charged during off-peak periods when electricity tariffs are low.

MOST TECHNOLOGY FOR SOLAR ENERGY STORAGE

Researchers at the **Chalmers University in Sweden** and the **Shanghai Jiao Tong University** have come up with a **technique to harvest, store and transport solar energy** and then **derive electricity** from it. All of this will be possible **without the use of conventional photovoltaic cells** or batteries.

More about technology

- With their **MOST (Molecular Solar Thermal Energy Storage Systems) technology**, the researchers successfully devised a method **to store solar energy as chemical energy** within a special kind of molecule, for **up to 18 years**.
- This **molecule changes its chemical properties** when it comes in contact with sunlight and stores some of that energy within new chemical bonds.
- This chemical energy can then be released in the form of **thermal energy** with the addition of a catalyst if and when required.
- The device **can be used to store solar energy** when sunlight is available and provide thermal energy when it is not.
- But the storage of energy using MOST technology initially presented another problem: **this energy can then only be converted into thermal energy using a catalyst**.
- While thermal energy is very useful in many applications, including **heating**, it is nowhere near as **versatile as electrical energy** which can be used to power a large variety of devices and applications.
- The purpose of the project is **to store solar energy into chemical energy** inside organic molecules. And later when we want to use the stored solar energy, **it is released as heat**. And the next step was **to convert this stored energy into electricity**.

SATCOM ASSOCIATION, TSDSI INK PACK

SatCom Industry Association (SIA-India) on 25 April 2022 said it signed a **memorandum of understanding (MoU)** with **Telecommunications Standards Development Society, India (TSDSI)**, for cooperation in development of standards in India and international **standard development organisations (SDOs)** such as the **International Telecommunication Union (ITU)** and The **3rd Generation Partnership Project (3GPP)**.

What

- This would help address **common interests**, stimulate and assist future cooperation of their member organisations.
- The **SIA-India** said the aim is to bring cooperation and **support for the standardisation** towards an efficient and sustainable industry.

3. The collaboration will go a long way in strengthening the **standards-based manufacturing expertise** in the country.
4. It focus to build a strong ecosystem by representing **satellite operators, satellite-based service providers, satellite systems**, launch vehicles and ground and terminal equipment manufacturers and suppliers, space start-ups, innovation hubs, academic institutions, law firms and provides an interface with the government, regulators, policymakers and domestic and international standards bodies.
5. The **Next Generation Networks [NGN] for 5G, 6G** and beyond will be based on the **optimal utilisation of spectrum** using innovations like dynamic spectrum sharing.
6. It would heralds a **new era of co-existence and convergence of Satellite**, Broadcast and cellular networks to provide ultimate flexibility in applications, access and throughput.
7. The MoU is a first step towards collaboration of **satellite and telecom experts** to innovate leapfrog and **embrace the potential of NGN for India**.

CREW-4 MISSION LAUNCHES SUCCESSFULLY

SpaceX's Crew-4 astronaut mission for NASA has launched successfully launched atop the **Falcon 9 rocket** from NASA's Kennedy Space Center in Florida. The **SpaceX Crew Dragon spacecraft**, named **Freedom** by the crew, successfully separated from the second stage of the Falcon 9 rocket and is now flying on its own.

What

1. **Astronauts aboard Freedom** have settled in for a ride to the **International Space Station**, where they are scheduled to dock on 28 April 2022.
2. **Harrison Schmitt**, the last person to step on the moon with the **Apollo 17 mission** in 1972, was at the **Kennedy Space Center** where he witnessed the successful launch.
3. With this mission, Watkins will become the **first African American woman** to join a **long-duration mission aboard ISS**.
4. Only seven other Black astronauts have boarded the space station since its inception over twenty years ago.
5. The mission is part of **NASA's Commercial Crew Program** and the **fifth SpaceX flight to carry NASA astronauts**, including the **Demo-2 test flight** to the space station in 2020.

WHO RECOMMENDED PAXLOVID FOR COVID-19

The **World Health Organisation (WHO)** said **Pfizer's oral antiviral drug Paxlovid** was "strongly recommended" for **patients with non-severe Covid-19** who are at highest risk of developing severe disease and hospitalisation, such as **unvaccinated, older, or immunosuppressed patients**.

More about the drug

1. **Paxlovid** consists of **nirmatrelvir tablets and ritonavir tablets**, co-packaged for oral use.
2. It was given **emergency use authorisation (EUA)** by the USFDA in December last year.
3. **Nirmatrelvir inhibits** a viral enzyme called **protease** that is necessary for the virus to **replicate itself inside the host cell**.

4. **Ritonavir** slows down the **breakdown of nirmatrelvir** in order to help it remain in the body for longer at higher concentrations.
5. A drug like **nirmatrelvir** is considered to have an advantage over vaccines because it attacks vulnerability in the virus that **does not mutate like spike proteins** — which vaccines target — do.
6. As a result, the medication is seen to be effective against all variants. (The Omicron wave showed that in a very large number of cases, vaccines are unable to prevent infection, even though they do prevent serious illness and deaths.)
7. **Paxlovid is administered as three tablets — two of nirmatrelvir and one of ritonavir** — taken together orally twice daily for five days, that is, a total of 30 tablets. The USFDA authorised Paxlovid for use only up to five consecutive days.

MISCELLANEOUS

FIRST EVER 'RADIO AKSH' LAUNCHED

Country's first-ever radio channel for the **visually impaired**, named '**Radio Aksh**' has been launched in **Nagpur**, with the Blind Relief Association Nagpur and Samdrushti Kshamata Vikas Avam Anusandhan Mandal (Saksham) serving as the pioneers of the concept that will help the visually-impaired gain seamless access to **education resources** and **audiobooks**.

What

1. This concept was created as a substitute for audiobooks provided by **Samdrushti Kshamata Vikas Avam Anusandhan Mandal** to the visually impaired on their digital devices, access to which was cut off due to the **COVID-19 pandemic** due to restrictions on travelling.
2. **Educational resources** encompassing a variety of subjects are made available through this platform on **digital platforms** owned by **visually-impaired people**, who can access this **vast bank of information from anywhere** as unlike the FM and AM Radio, the technology of Internet Radio is used, which knows **no geographical limitations**.
3. A dedicated team of trained volunteers, mostly women, help in the **creation of content for the radio channel**, which can be streamed to the visually impaired **across India and the world**.
4. The complex, carefully-performed processes of going through large amounts of content, recording, sound editing and making corrections do not dampen the productivity and the sense of **servitude guides the entire team**.

EXTREME POVERTY IN INDIA DECLINED: WORLD BANK

Extreme poverty is estimated to have **declined 12.3 percentage** points between 2011 to 2019 in India, says a **World Bank Policy Research Working Paper**. The extreme poverty count fell from **22.5% in 2011 to 10.2% in 2019** and the decline in rural areas was much higher than in urban areas, estimates the study.

What

1. The paper titled '**Poverty has Declined over the last decade But Not As Much As Previously Thought**' is jointly authored by economists Sutirtha Sinha Roy and Roy van der Weide.

2. The **reduction in rural poverty** was more pronounced with a 14.7 percentage points' drop compared to a 7.9 percentage points' fall in urban areas.
3. The paper followed two approaches to **estimating extreme poverty**. Both approaches yield qualitatively similar levels and trends in **headcount poverty** estimated at the **\$1.90 line**: poverty is **about 12.3 percentage points** lower in 2019 than 2011.
4. The paper said **extreme poverty declined by 3.4 percentage points** from 2011 to 2015 - to 19.1% from 22.5%. Poverty saw a sharper fall of **9.1 percentage points** between 2015 and 2019 from 19.1% to 10%.

Faster rural decline

 1. **Rural poverty declined by 4.4 percentage points** between 2011 and 2015 from 26.3% to 21.9%, it fell more sharply by **10.3 percentage points** during the period 2015 to 2019 from 21.9% to 11.6%.
 2. **Urban poverty dropped by 1.3 percentage points** from 2011 to 2015 - from 14.2% to 12.9%, followed by a sharper decline of 6.6 percentage points - from 12.9% in 2015 to 6.3% in 2019.
 3. However, **urban poverty rose by 2 percentage points** in 2016, coinciding with the demonetisation event.
5. **Extreme poverty reduced by 3.2% percentage points** between 2017 and 2018, which was the fastest rate in over two decades. Since 2011, poverty reduction has slowed down, the paper pointed out.
6. The rate of poverty reduction between 2004 and 2011 is estimated at approximately 2.5% points per year.

EARTH DAY 2022 CELEBRATED

Earth Day, celebrated annually on 22 April, is a reminder **to protect the environment, restore damaged ecosystems and live a more sustainable life**. First celebrated in **1970**, this year marks its 52nd anniversary.

What is Earth Day?

1. **Earth Day** has been **celebrated since 1970**. It was first observed in the **United States**, when some 20 million people **took to the streets to protest** against the 1969 **Santa Barbara oil spill**.
2. Since then, the occasion has played an important role in raising awareness on other environmental issues.
3. In fact, the **landmark Paris Agreement**, which was signed by **nearly 200 countries** to set a common target **to reduce global greenhouse emissions**, was signed on **Earth Day in 2016**.
4. In 2009, the **United Nations designated April 22** as '**International Mother Earth Day**'.
5. According to the UN, **International Mother Earth Day** is celebrated as a reminder that the Earth and its ecosystems provide us with **life and sustenance**.
6. The **healthier our ecosystems are, the healthier the planet** – and its people. Restoring our damaged ecosystems will help to **end poverty, combat climate change and prevent mass extinction**.
7. This year, earthday.org has selected the theme, '**Invest In Our Planet**'. It explains, "This is the moment to change it all — the **business climate, the political climate,**

and how we take action on climate. Now is the time for the unstoppable courage to preserve and protect our health, our families, our livelihoods... together, we must **Invest In Our Planet**.' It also warns that time is short.

COMMITTEE REPORT ON WILD LIFE ACT

The Parliamentary Standing Committee on Science and Technology, Environment, Forests and Climate Change on 21 April 2022 submitted its report. The standing committee, chaired by Congress Rajya Sabha member Jairam Ramesh, has found that **some species were excluded from various schedules of wildlife and plants** that have been proposed by the Environment Ministry, and has recommended a revised listing of schedules to include these species.

What

1. **Wild Life (Protection) Act, 1972** provides a **legal framework** for the protection of various species of **wild animals and plants**, the management of **their habitats**, and the regulation and control of trade in **wild animals, plants** and products made from them.
2. The Act also **lists schedules of plants and animals** that are afforded various degrees of protection and monitoring by the government.
3. The Act has been amended several times, with the **last amendment having been made in 2006**.
4. The Ministry has **streamlined the scheduling of species** from the original six schedules **to just three** — **Schedule I for species that will enjoy the highest level of protection, Schedule II for species that will be subject to a lesser degree of protection and Schedule III that covers plants**.
5. The parliamentary committee said that while it was in agreement with the **rationalisation and reduction of schedules**, it “finds a number of species missing in all the three schedules”.
6. The committee has recommended **major changes in all the three schedules**, and also the restructuring of Schedules I and II in a manner that makes them “easy to read and look up”.
7. The Committee would also like to point out that due to the **reduction in the number of schedules in the Bill**, many species fail to appear in either Schedule I or Schedule II.
8. The Committee is deeply conscious of the fact that a **number of religious and cultural institutions** in some States own elephants which play a crucial role in daily worship and rituals.

GO 111 HAS NOW BEEN LIFTED

Environmentalists and activists are criticising the Telangana government for **withdrawing an over 25-year-old government order** protecting the historic **Osman Sagar and Himayat Sagar reservoirs** in Hyderabad, which they say will destroy the **fragile surrounding ecosystem**.

What was the government order?

1. On 8 March 1996, the government of erstwhile (undivided) Andhra Pradesh had issued **‘Government Order (GO) 111’** prohibiting development or construction works in the **catchment area of the Osman Sagar and Himayat Sagar lakes** up to a **radius of 10 km**.

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2. The GO prohibited the setting up of **industries, residential colonies, hotels**, etc. which **cause pollution**.
3. The total catchment area covers around **1.30 lakh acres, spread over 84 villages**. The aim of the restrictions was **to protect the catchment area, and to keep the reservoirs pollution-free**.
4. The lakes had been supplying water to Hyderabad for nearly 70 years, and were the main source of drinking water for the city at the time.

When and why were these reservoirs constructed?

1. The reservoirs were created by **building dams on the Musi** (also known as **Moosa or Muchkunda**) river, a **major tributary of the Krishna**, to **protect Hyderabad from floods**.
2. The proposal to build the dams came after a major flood during the reign of the **sixth nizam Mahbub Ali Khan** (1869-1911) in 1908, in which more than 15,000 people were killed.
3. The lakes came into being during the **reign of the last nizam Osman Ali Khan** (1911-48). **Osman Sagar was completed in 1921**, and **Himayat Sagar in 1927**. The nizam's guesthouse at Osman Sagar is now a heritage building.

SC PANEL REPORT ON BIRD DIVERTERS

A **Supreme Court** constituted **three-member committee** in its report has noted the **absence of bird diverters** in most of the existing power transmission lines in the **'Priority and Potential Great Indian Bustard (GIB) habitat'** in Rajasthan and Gujarat. The committee also found that the **bird diverters** currently installed on power lines are of poor quality.

What

1. A **bird diverter** is an **assembly of reflector disc, clamps and connectors**, with a glow in the dark feature, swinging and swaying on overhead cables so as to **alert birds from a distance** to change their path of flight to avoid collision with wires.
2. The committee was constituted in April last year to assess **the feasibility of laying underground transmission lines** in the states of Rajasthan and Gujarat.
3. It was also stated in the report that "the **CEA (Central Electricity Authority)** has received reports of the installation of **poor-quality diverters on power lines** that are falling off and are being found strewn below transmission lines, and has insisted power agencies to install good quality **Bird Flight Diverter**."
4. The committee had received a total of **eight applications for feasibility assessment**, including **three applications from Gujarat** — **two by Gujarat Energy Transmission Co Ltd (GETCO)** and **one by Paschim Gujarat Vij Company Ltd (PGVCL)** — for either existing transmission lines or new transmission lines.

LATA DEENANATH MANGESHKAR AWARD

Prime Minister on 24 April 2022 received the **first Lata Deenanath Mangeshkar Award** for his **selfless service to the country** and society at the 80th annual Master Deenanath Mangeshkar Awards ceremony held in Mumbai. Paying tributes to the legendary singer, he said she always **dreamt of a strong and prosperous India** and contributed to **nation-building**.

What

1. The award has been **instituted in memory and honour** of the legendary singer who passed away at the **age of 92 years** in Mumbai earlier this year.
2. The **Master Deenanath Mangeshkar Smruti Pratishthan Charitable Trust** had said in a statement that the award will be given every year to an individual "who has made **path-breaking, spectacular and exemplary contributions** to our nation, its people and our society.
3. She gave voice to India, even before its Independence. The **75-year journey of the country** was always tied to her 'sur'.
4. Our entire nation is grateful to the **contribution of the Mangeshkar family** towards the country. Apart from singing, the passion of '**rashtra bhakti**' that was within her, was due to her father, PM said and pointed out how **Master Deenanath Mangeshkar sung a song** penned by **Veer Savarkar** before a Viceroy in Shimla.
5. The **Master Deenanath Mangeshkar Award** was presented to **Rahul Deshpande (music), Asha Parekh (cinema) and Jackie Shroff (cinema)**.

INDIA 3RD LARGEST MILITARY SPENDER: SIPRI

India's military spending in 2021 is the **third highest in the world** at Rs 5.87 lakh crore or \$76.6 billion — **behind the United States and China** but ahead of the United Kingdom and Russia — data released 25 April 2022 by the **Stockholm International Peace Research Institute (SIPRI)** showed. **SIPRI is an independent international institution** that focuses on **conflict, armaments, arms control, and disarmament**.

What

1. The data takes into account **India's complete defence budget**, a major portion of which goes into pensions and salaries.
2. The SIPRI data also shows that **roughly 50 per cent of India's defence exports** from 2017 to 2021 were to its **immediate neighbour Myanmar**, followed by **Sri Lanka** at 25 per cent and **Armenia** at 11 per cent.
3. According to SIPRI, **India's annual defence** spending was **up 0.9 per cent from 2020, and 33 per cent from 2012** — a sign of the ongoing border situations with China and Pakistan as well as India's push towards developing **more indigenous weapons**.
4. Amid ongoing tensions and **border disputes with China and Pakistan** that occasionally spill over into armed clashes, **India has prioritised modernisation** of its armed forces and self-reliance in arms production.
5. In a drive to strengthen the indigenous arms industry, **64 per cent of capital outlays in the 2021** Indian military budget were earmarked for acquisitions of domestically produced arms.
6. The **increase in India's expenditure** forms part of an overall global increase in military expenditure, "as the **internationally consolidated figure crossed the \$2 trillion mark** for the first time ever, owing to worldwide economic recovery following the outbreak of the Covid-19 pandemic.

UNDER THE EFFECTS OF HEATWAVES

The **eastern states** of **Jharkhand, West Bengal and Odisha** have received a **lot less rainfall** than they usually do during the pre-monsoon season. With no rain spells to cool them down, these parts have been consistently sweltering under the summer heat. A **heatwave has gripped the Vidarbha and Marathwada regions** of Maharashtra.

What is a heatwave?

1. A region is considered **to be under the grip of a heatwave** if the maximum temperature reaches **at least 40 degrees Celsius** or more in the plains and **at least 30 degrees Celsius or more in hilly regions**.
2. When the maximum temperature departure ranges between 4.5 and 6 degrees, the **India Meteorological Department (IMD) declares a heatwave**.
3. A **severe heatwave** is declared when the recorded maximum temperature of a locality departure from normal is **over 6.4 degrees Celsius**.
4. Also, if an area records over **45 degrees and 47 degrees Celsius** on any given day, then the IMD declares heatwave and severe heatwave conditions, respectively.
5. The IMD has issued a **'yellow' alert**, warning of continuing heatwave conditions over Chandrapur, Wardha, Nagpur, Amravati, Akola, Jalgaon, Buldhana, Yavatmal, Ahmednagar and Nashik districts till 30 April.
6. A **gradual rise in maximum temperatures by 2-3 degrees Celcius** is very likely over most parts of the state this week.

FACT TO REMEMBER:

1. WHO GCTM INAUGURATED
2. SMART CITY'S ICCCS ANNOUNCED
3. PRESIDENT GIVES ASSENT TO CRIMINAL PROCEDURE (IDENTIFICATION) BILL
4. EU-INDIA TRADE AND TECHNOLOGY COUNCIL
5. GOVT AMENDS RULES GOVERNING NIDHI COMPANIES
6. DIGITAL BANKING UNITS
7. INDIAN NAVIGATION SYSTEM USED TO LAND AIRCRAFT
8. NITI AAYOG'S DRAFT BATTERY SWAPPING POLICY
9. FIRST EVER 'RADIO AKSH' LAUNCHED
10. COMMITTEE REPORT ON WILD LIFE ACT

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[HTTPS://WWW.ALJAZEERA.COM/OPINIONS/2022/4/28/WHY-IS-ELON-MUSK-BUYING-TWITTER](https://www.aljazeera.com/opinions/2022/4/28/why-is-elon-musk-buying-twitter)

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