

# My Notes....

## NATIONAL

### MID-DAY MEAL SCHEME IS NOW PM POSHAN

The **mid-day meal scheme** will now be known as **PM POSHAN**, with the Centre initiating a major political push pivoted around '**child nutrition**', and announcing that around 24 lakh students receiving **pre-primary education at government and government-aided schools** will also be **brought under the ambit of the scheme** from next year.

#### What

1. Under **PM Poshan Shakti Nirman** or **PM POSHAN scheme**, 24 lakh more children in pre-primary classes, currently covered **under the ICDS** will also be brought in.
2. Last year, the government had opened **pre-schools** called **Balvatikas** attached to anganwadis.
3. PM POSHAN has been launched for an **initial period of five years** (2021-22 to 2025-26).
4. **Primary (1-5) and upper primary (6-8)** schoolchildren are currently entitled to 100 grams and 150 grams of food grains per working day each, to ensure a minimum of **700 calories**.
5. The new scheme has a provision for **supplementary nutrition for children in aspirational districts** and those with high prevalence of anaemia.
6. Pradhan said that **under PM POSHAN, nutri-gardens** will be developed in schools to give children "**firsthand experience with nature and gardening**". Such gardens have been already developed in three lakh schools.
7. A social audit is being made mandatory in all the districts. To promote **vocal for local, women self-help groups** and **farmer producer organisations** will be encouraged to provide a fillip to locally grown traditional food items.
8. The scheme also plans "**inspection**" by students of colleges and universities for ground-level execution.

#### Flashback

1. Under the **mid-day meal scheme, hot cooked food** is provided currently to students from **Classes 1 to 8** — around 11.80 crore children in all, in 11.20 lakh government and government-aided schools.
2. The **National Education Policy (NEP)** has also recommended that **pre-school education should be formalised**. This is a step towards that.
3. Also, it will **help prevent leakages** and bring more transparency. We will become more hands on and nudge states to pay schools through the **direct benefit transfer (DBT) mode**, Pradhan told reporters.
4. **PM POSHAN does not propose any hike** in the honorarium of cooks and workers, though Pradhan said states are "**free to do that**".

### INDIA IN THE GLOBAL INNOVATION INDEX 2021

India has improved its ranking in the **Global Innovation Index (GII) 2021** to **46th place** among **132 economies**, up from 48 in the previous year's ranking, **World Intellectual Property Organisation (WIPO)** said on 20 September 2021. The index ranks world economies according to **their innovation capabilities** and **consists of roughly 80 indicators**. India's ranking was at **52 in 2019**.

#### What the GII said

1. **India ranks second** among **34 lower middle-income group economies** and **first among the 10 economies** in Central and Southern Asia.
2. Relative to gross domestic product, **India's performance is above expectations** for its level of development.

3. **Graduates in science and engineering disciplines and global corporate research** and development investors are India's strengths.
4. India has been portrayed as successful in **developing sophisticated services** that are **technologically dynamic** and can be traded internationally.
5. It continues to lead the world in the **information and communication technology** services exports indicator (1) and **holds top ranks in other indicators**, such as **domestic industry diversification** (12) and **graduates in science and engineering** (12).
6. India has improved its rank in **GII from 81 in 2015 to 46 in 2021**.

#### Flashback

1. The **GII report** is published by **WIPO** in partnership with the **Portulans Institute**, with **support of corporate network partners**, such as the **Confederation of Indian Industry**, **Brazilian National Confederation of Industry**, **Ecopetrol Group (Colombia)**, and the **Turkish Exporters Assembly**.
2. **WIPO's criteria to measure innovation cover institutions, human capital** and research, infrastructure, credit, investment, linkages, creation, absorption and diffusion of knowledge and creative outputs.

### SAFEGUARDS INFORMATION SYSTEM (SIS)

Complying with the **UN climate change body's decision** on a mitigation option through green cover – known as **REDD+ initiatives**, India has come out with a draft mechanism to report its progress on this front to the global body. The mechanism, called '**safeguards information system**' (SIS).

#### What

1. It will help the country report its **conservation processes** to the **United Nations Framework Convention on Climate Change (UNFCCC)** on various aspects of safeguards being adopted during its **afforestation drives**.
2. The move is necessary to access result-based financial support for **REDD+ (Reducing Emissions from Deforestation and forest Degradation)** which is one of the climate change mitigation options in developing countries **for conservation of forest carbon stock, sustainable management of forests and reducing emissions** from deforestation and forest degradation.
3. The SIS will be finalised after analysing comments and suggestions which may be shared with the ministry by 15 October.
4. As per the **Cancun Agreement of the UNFCCC**, developing countries are required to develop SIS to report on compliance of the safeguards while **implementing REDD+ activities**.
5. Once the SIS is finalised, **India will periodically submit the summary of information** on safeguards to the UN climate change body with biennial update reports, national communications or other appropriate means as decided by the UNFCCC.

#### Flashback

1. India had earlier developed its **national REDD+ strategy** which aims to achieve climate change mitigation by incentivizing forest conservation.
2. The strategy seeks to address **drivers of deforestation and forest degradation** and also develops a roadmap for enhancement of **forest carbon stocks** and achieving sustainable management of forests through REDD+ actions.
3. **India's National REDD+ strategy** is one of the tools to achieve the country's commitment to the Paris Agreement.

## AYUSHMAN BHARAT DIGITAL MISSION LAUNCHED

**Prime Minister** on 27 September 2021 launched the **Ayushman Bharat Digital Mission** via video conferencing. The pilot project of **Ayushman Bharat Digital Mission** was announced by the Prime Minister from the **ramparts of Red Fort** on 15 August last year. Currently, the programme is being implemented on a pilot basis in **six Union Territories**.

### About the Mission

1. **Ayushman Bharat Digital Mission** has potential to bring revolutionary changes in our health facilities, PM said.
2. Ayushman Bharat Digital Mission will **provide reliable data**, leading to better treatment and **ensuring savings for patients**.
3. Under the mission, people of the country will now **get a digital health ID**.
4. **Health records** of every citizen will be **digitally protected**, the poor and the middle class will benefit the most from this mission.
5. It will enable access and exchange of **longitudinal health records of citizens** with their consent.
6. The **key components** of the Ayushman Bharat Digital Mission include a **health ID for every citizen** that will also work as their **health account**, to which personal health records can be linked and viewed with the help of a mobile application.
7. A **Healthcare Professionals Registry (HPR)** and **Healthcare Facilities Registries (HFR)** that will act as a **repository of all healthcare** providers across both modern and traditional systems of medicine.
8. This will ensure **ease of doing business for doctors**, hospitals and healthcare service providers.

### How it will work

1. Based on the foundations laid down in the form of **Jan Dhan, Aadhaar and Mobile (JAM) trinity** and other digital initiatives of the government, **Ayushman Bharat Digital Mission** will create a seamless online platform through the provision of a wide range of data, information and infrastructure services, duly leveraging open, interoperable, standards-based digital systems while ensuring the security, confidentiality and privacy of health-related personal information.
2. The **Ayushman Bharat Digital Mission Sandbox**, created as a part of the mission, will act as a **framework for technology** and product testing that will help organisations, including private players, intending to be a part of the **National Digital Health Ecosystem** become a health information provider or a health information user or efficiently link with building blocks of **Ayushman Bharat Digital Mission**.
3. This mission will create **interoperability within the digital health ecosystem**, similar to the role played by the Unified Payments Interface in revolutionising payments.

## INDIA DIGITAL QUALITY OF LIFE INDEX 2021

**India ranks 33rd on e-government** and **47th on internet affordability**, according to a **global index on digital quality of life** in 110 countries. The **Digital Quality of Life Index 2021**, conducted by the **cybersecurity company Surfshark** based in British Virgin Islands.

### India in the Index

1. The Index ranks countries based on **five fundamental digital well-being pillars** — **internet affordability, internet quality, electronic infrastructure, electronic security, and electronic government**.
2. **Overall, India ranked 59th** among 110 countries, **dropping two spots**, on the index.
3. India has **witnessed a drop** compared to last year — **falling from 57th spot to 59th** — it now ranks **17th in Asia** and **first in the South Asia region**.

4. Its **e-security has also improved** and it now ranks **36th** (was 57th in 2020), **higher than China** which ranks 72nd.
5. **India has also outperformed Bangladesh on four digital well-being pillars — internet affordability, internet quality, electronic security, and e-government, but falls short on e-infrastructure**, where it ranks 91st.
6. According to the index, **India ranks 67th on internet quality indicator**.
7. The index further noted that **internet speed on mobile phones in India** is one of the **slowest in the world** with **12.33 megabits per second** and that the country ranks **95th** on the number of individuals using the internet.

#### Flashback

1. **Six out of 10 countries** with the highest score in the **DQL index** are located in Europe.
2. **Denmark topped the index** for the second year in a row, followed by **South Korea and Finland**, while the bottom five countries include **Ethiopia, Cambodia, Cameroon, Guatemala, and Angola**.
3. The study also found that **broadband is globally less affordable this year**.
4. The countries where the **internet is least affordable** are **Nigeria, Côte D'Ivoire and Mali**, where people are required to do approximately a week's worth of work to afford the internet.

#### TWO INDIAN BEACHES AWARDED 'BLUE FLAG' TAG

**Two more beaches in India** have been awarded '**Blue Flag**' certification, an **international eco-level tag**, taking the total number of such beaches in the country **to 10**, the Environment Ministry said on 21 September 2021. The **two beaches** to receive the certification this year are **Kovalam in Tamil Nadu** and **Eden in Puducherry**.

#### What

1. This was aimed at achieving the **globally recognized** and coveted **International eco-label "Blue Flag"**, accorded by the **International Jury** comprising of members from **IUCN, UNWTO, UNEP and UNESCO**.
2. **FEE Denmark** conducts regular monitoring and audits for strict compliance with the **33 criteria** at all times.
3. A waving "**Blue Flag**" is an **indication of 100 per cent compliance to these 33 stringent criteria** and sound health of the beach.
4. The Ministry is further committed to develop and deliver **100 more beaches** under its ICZM initiative in the ensuing **5 years of the Ministry's vision agenda**.

#### What is the 'Blue Flag' certification?

1. The '**Blue Flag**' is a certification that can be obtained by a **beach, marina, or sustainable boating** tourism operator, and serves as an **eco-label**.
2. The certification is awarded by the Denmark-based non-profit **Foundation for Environmental Education**, which sets **stringent environmental, educational, safety-related** and access-related criteria that applicants must meet and maintain.
3. It is awarded annually to **beaches and marinas** in FEE member countries. The **Blue Flag programme** was started **in France in 1985** and in areas out of Europe in 2001.
4. **Forty-seven countries currently participate in the program**, and 4,573 beaches, marinas, and boats have this certification.

#### COVLEX INITIATIVE LAUNCHED

**Union health ministry** and **NITI Aayog** launched a USAID-supported '**City-to-City Covid-19 Vaccination Learning Exchange (CoVLEx)** initiative to build a global Covid-19 vaccination knowledge management platform and initiate an exchange of ideas and **learnings on pandemic response**.

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### What

1. The **CoVLEx platform** will develop knowledge products such as an **interactive web-based knowledge portal, Best Practices Compendium**, and organize virtual forums for cities and countries to learn from each other's experiences.
2. The discussion topics will range from **vaccine procurement, governance, digital innovations planning, and management, vaccine supply chain**, communications and social mobilization, capacity building, adverse events following immunization, and monitoring and supervision.
3. India has played an important role in **supplying vaccines to 95 countries** under the '**Vaccine Maitri**' initiative very early on in its vaccination campaign under the leadership of Prime Minister of India and currently leads the largest free-for-all vaccination drive in the world.

## INTERNATIONAL

### INDIA AT SCO SUMMIT

Prime Minister 17 September 2021 virtually addressed the **Shanghai Cooperation Organisation (SCO) summit** where he called for developing a **template by SCO** to effectively deal with the **challenges of extremism and radicalisation**. The **20th anniversary of SCO** is right time to think about future of SCO.

#### What PM said

1. The biggest challenges in this area are related to-**peace, security and trust deficit** and root cause of these problems is the **increasing radicalisation**.
2. The SCO should develop a shared template to fight **radicalism and extremism**.
3. The prime minister started with welcoming **Iran as new member country of SCO**. This year we are celebrating the 20th anniversary of SCO.
4. India is committed to **increasing its connectivity with Central Asia**. Asserting that there should be respect for the **territorial integrity of all countries**.
5. The **SCO**, seen as a **counterweight to NATO**, is an **eight-member economic and security bloc** and has emerged as one of the **largest transregional international organisations**.

#### Flashback

1. **India and Pakistan** became its **permanent members in 2017**.
2. The **SCO** was founded at a summit in **Shanghai in 2001** by the presidents of **Russia, China, the Kyrgyz Republic, Kazakhstan, Tajikistan** and **Uzbekistan**.
3. **India was made an observer** at the **SCO in 2005** and has generally participated in the ministerial-level meetings of the grouping which focus mainly on **security and economic cooperation** in the Eurasian region.

### INDIA IN 76<sup>TH</sup> SESSION OF UNGA

Prime Minister addressed the **76th session of the United Nations General Assembly** in New York on 25 September 2021. In his speech, the PM focused on **global challenges** such as the **Covid-19 pandemic and terrorism**. He also lauded the role played by India at the global stage in fighting.

#### Key takeaways from PM's address:

1. Today, the world is facing an increased threat of **regressive thinking and extremism**. In such a situation, the entire world must make **science-based, rational and progressive thinking** the basis for development.
2. The countries reiterated their **shared vision** of a **free, open and inclusive Indo-Pacific region** with respect to **territorial integrity and sovereignty**, and international law.

3. The **Quad or Quadrilateral Security Dialogue** comprises **India**, the **US**, **Japan** and **Australia**.
4. India, the US and several other world powers have been talking about the need to ensure a free, open and thriving Indo-Pacific in the backdrop of China's rising military manoeuvring in the **resource-rich region**.
5. China claims nearly all of the **disputed South China Sea**, though Taiwan, the Philippines, Brunei, Malaysia and Vietnam all claim parts of it.
6. Beijing has built **artificial islands and military installations in the South China Sea**. China also has territorial disputes with Japan in the East China Sea.
7. The Prime Minister lauded the **role played by India** in helping the world **combat the pandemic**.
8. India's vaccine delivery platform - **COWIN**, is providing **digital support** for hundreds of millions of vaccine doses in a single day.
9. The Prime Minister also batted strongly for **reforms at United Nations** in order to safeguard global order, global laws and global values.

## G20 SHERPAS' MEETING

**Union minister for Commerce and Industry** and **India's G-20 Sherpa Piyush Goyal** participated in the two-day long **G20 Sherpas' meeting** on September 15-16 in virtual format, the Ministry of External Affairs (MEA) said in a statement on 17 September 2021.

### What

1. This was the first G20 meeting attended by Piyush Goyal since his appointment as India's G20 Sherpa.
2. The meeting was **chaired by Ambassador Luigi Mattiolo**, Italy's G20 Sherpa, who welcomed Piyush Goyal to the G-20 family.
3. The **agenda of the meeting** was to discuss and exchange views on the **Draft Rome Declaration**, which would be **adopted by G-20 Leaders at the Rome Summit** on 30-31 October 2021.
4. The **main themes of the Declaration** were **health and recovery from the COVID-19 pandemic, sustainable development**, environment, climate and energy, gender equality, education, labour, employment, tourism, culture and digital economy.

## UNSC EXTENDS MANDATE OF UNAMA

The **UN Security Council** on 17 September 2021 **extended for six months** the mandate of the **United Nations Assistance Mission in Afghanistan (UNAMA)**, unanimously voting on a resolution that emphasises the importance of the establishment of an inclusive and representative government. The **15-nation Council** voted on the draft resolution that **extended the mandate of UNAMA** until 17 March 2022.

### What

1. The resolution, stressing the important role that the United Nations will continue to play in promoting **peace and stability in Afghanistan**, recognises the need for strengthened efforts to **provide humanitarian assistance to Afghanistan** and **unhindered humanitarian access**, for United Nations humanitarian agencies and other humanitarian actors.
2. The resolution **stresses the critical importance of a continued presence of UNAMA** and other United Nations Agencies, Funds and Programmes across Afghanistan.
3. It calls upon all Afghan and international parties to **coordinate with UNAMA** in the implementation of its mandate and to ensure the **safety, security and freedom** of movement of United Nations and associated personnel throughout the country.
4. The adoption of the resolution extending the mandate comes just over a month after the **Taliban took control of Kabul** and has now established an interim hardline government whose cabinet members include **UN designated terrorists**.

## ECONOMY

### FM ANNOUNCES BAD BANK

Finance Minister Nirmala Sitharaman on 16 September 2021 announced a formal government guarantees on the securities receipts that the **planned 'bad bank'** will issue to banks as it takes on **non-performing assets from their books**. The government guarantee will be **Rs 30,600 crore**.

#### What

1. The **Union Cabinet** on 15 September 2021 cleared a proposal **to provide government guarantee to security receipts** issued by the **National Asset Reconstruction Company (NARCL)** as part of resolution of bad loans.
2. NARCL proposes to acquire stressed assets of **about Rs 2 trillion in phases** within extant regulations of RBI.
3. NARCL will **pay up to 15 per cent of the agreed value for the loans in cash** and the remaining **85 per cent would be government-guaranteed security receipts**.
4. Substantial amount of NPAs continue on balance sheets of banks primarily because the **stock of bad loans** as revealed by the **Asset Quality Review** is not only large but fragmented across various lenders.
5. High levels of provisioning by banks against legacy NPAs has presented a **unique opportunity for faster resolution**.
6. The Finance Minister in Budget 2021-22 announced that the high level of provisioning by public sector banks of their stressed assets calls for **measures to clean up the bank books**.
7. The guarantee will **be valid for 5 years**. **15% cash payment** will be made to banks for NPAs based on some valuation, **85% will be given as Security Receipts**.
8. For Security Receipts to have their value intact, Govt has to give a backstop arrangement, hence the govt guarantee of Rs. 30,600cr cleared by Union Cabinet.

### 45TH GST COUNCIL MEETING

Finance Minister Nirmala Sitharaman on 17 September 2021 announced **key decisions** taken in the **45th meeting of the GST Council**.

#### Key takeaways:

1. GST Council **extended concessional GST rates** on these drugs used in Covid treatment till 31 December 2021: **Amphotericin B -nil, Remdesivir – 5%, Tocilizumab -nil**, Anti-coagulants like **Heparin – 5%**
2. **Reduction of GST rate to 5%** on seven more Covid-19 treatment drugs till 31 December 2021.
3. **GST rate on biodiesel** for blending with diesel **cut from 12% to 5%**.
4. GST Council **exempts national permit fee charged by states** for operation of goods carriage.
5. GST Council felt it **isn't time to bring petroleum products under GST regime**.

### NATIONAL SINGLE WINDOW SYSTEM LAUNCHED

Commerce and Industry Minister **Piyush Goyal** on 22 September 2021 soft launched the **National Single Window System for businesses** and said the portal will usher in freedom from the legacy of running to government offices for approvals and registrations.

#### About the portal

1. The portal as of today hosts approvals **across 18 central departments** and **9 states**, and **another 14 central departments and 5 states** will be added by end-December.
2. This is **freedom from bureaucracy** and from windows within windows.
3. This is a big step towards **Ease of Doing Business**. Nobody wants to be a detriment to doing business. This is a giant leap towards making **India truly Aatmanirbhar**.

4. The **single window portal** will become a **one-stop-shop for investors for approvals and clearances**.
5. This platform is an **enabler for businesses**. The government has come together to work as Team India in partnership with industry, stakeholders and the people. This collective approach has resulted in **this game-changing initiative**.
6. The **National Single Window System** is envisioned to address **information asymmetry, duplication of information submitted across platforms** and authorities and inefficient tracking of approvals and registration faced by investors.

## GLOBAL STARTUP ECOSYSTEM REPORT 2021

**Bangalore rose up three spots** to be ranked **23rd** in an annual analysis of the **world's most favourable ecosystems** to build a globally successful **startup**, according to the **Global Startup Ecosystem Report 2021** released on 22 September 2021 that is **topped by the Silicon Valley in California**.

### What the report said

1. **Delhi** held on to its **36th position** in the '**Global Startup Ecosystem Report 2021**' by **Startup Genome**, with Mumbai topping a parallel '**Top Emerging Ecosystems**' ranking for the second year in a row.
2. The **Startup Genome report** analyses cities around the world where early stage startups have the best shot at building global success.
3. The research shows that **Indian startups raised \$12.1 billion** in the first half of this year, demonstrating the rapid growth of India as a global hub for tech and innovation.
4. As of **August 2021**, India has produced **24 unicorns in 2021**, including six in just four days in April.
5. The **city of Bengaluru** and the surrounding state of Karnataka is also the **world's 4th largest technology and innovation cluster** and home to more than **400+ global R&D centres**.
6. Alongside Mumbai, a **number of other Indian hubs** made it into the '**Top 100 Emerging Ecosystems**' list, including **Chennai, Pune and Hyderabad**.

## CAG MURMU BECOMES EXTERNAL AUDITOR OF IAEA

**India's Comptroller and Auditor General G C Murmu** was on 24 September 2021 selected as the **external auditor** of the **International Atomic Energy Agency (IAEA)**, a prestigious institution that **promotes peaceful use of nuclear energy**.

### What

1. The Ministry of External Affairs (MEA) said his candidature received majority support of the **IAEA general conference** and his tenure will be for six years, **from 2022 to 2027**.
2. The election is a "**recognition**" of **India's standing in the international community** and global acknowledgement of the **CAG's credentials, professionalism and experience**.
3. Murmu assumed office as the **Comptroller and Auditor General of India** on 8 August 2020.
4. Before assuming the charge, he served as the **first Lt Governor of the Union Territory of Jammu and Kashmir**.

### Flashback

1. **International Atomic Energy Agency (IAEA)**, autonomous intergovernmental organization dedicated to increasing the **contribution of atomic energy** to the world's peace and well-being and ensuring that agency assistance is **not used for military purposes**.
2. The agency was established by **representatives of more than 80 countries** in October 1956.
3. The **IAEA's statute** officially **came into force on 29 July 1957**.



## SCIENCE AND TECHNOLOGY

### ISRO'S NETRA WITH CSPOC

The '**NETRA**' in Bengaluru will soon start collaborating with the **Combined Space Operation Center (CSPOC)** located at the **Vandenberg Air Force Base** in California to **protect satellites** of India and the United States from **natural and man-made threats**.

#### What

1. The agreement will help the **Indian Space Research Organization's 'NETRA'** in Bengaluru to receive from the US data about **space debris** and other objects in the space and potential threat they could pose to the safety and security of the new launches as well as the **existing satellites and other space assets**.
2. The ISRO opened its **NETRA – Network for Space Object Tracking and Analysis** – within the ISTRAC campus at Peenya in Bengaluru on 14 December last year.
3. The **US Joint Space Operation Command Center (JSpOC)** transitioned into the **CSPOC** – a US-led multinational initiative involving the UK, Australia, Canada, France, Germany and New Zealand.
4. It receives inputs from the **Space Surveillance Network** and share data with the nations having **Space Situational Awareness agreement** with the US.

#### Flashback

1. Under the project, the ISRO plans to put up **many observational facilities: connected radars, telescopes; data processing units** and a **control centre**.
2. They can, among others, **spot, track and catalogue objects** as small as 10 cm, up to a range of 3,400 km and equal to a space orbit of around 2,000 km.
3. The project will give India its own capability in **space situational awareness (SSA)** like the other space powers — which is used to **'predict' threats** from debris to Indian satellites.

### INDIA'S MARS PROBE COMPLETES SEVEN YEARS

**India's Mars Orbiter spacecraft** has completed **seven years in its orbit**, well beyond its designed **mission life of six months**. **MOM** is the **maiden interplanetary mission** of ISRO. Launched on 5 November 2013, the probe was successfully **inserted into Martian orbit** on 24 September 2014 in its **first attempt**.

#### About MOM

1. **MOM** is primarily a **technology demonstration venture** and all the mission objectives were successfully met.
2. The main lessons learnt were in the **field of design and realisation of systems** and subsystems, launch for **interplanetary mission**, insertion into other planet's orbit, operation of the spacecraft and scientific instruments around Mars orbit.
3. ISRO has been continuously monitoring the spacecraft and its **five scientific instruments**, and officials said scientific analysis of the data being received from MOM spacecraft is in progress.
4. The **spacecraft's health is reasonably good** considering that we are in the seventh year.
5. On the reasons for the **long mission life**, ISRO had done corrections after learning lessons from the **Chandrayaan-1 venture**, in terms of **reconfiguring the spacecraft** and **optimisation of fuel management**, among others.
6. The spacecraft was **launched by PSLV as GSLV was not in operational condition** then. ISRO could apportion only about **15 kg for scientific instruments**, and the time available for scientists to develop them was only 18-19 months.

## INDIA'S SPACE-BASED OBSERVATORY TURNS SIX

**Astrosat**, India's maiden **space-based observatory** has completed **six years** of successful operations. Launched by the **Indian Space Research Organisation (ISRO)** on 28 September 2015, Astrosat has not only outperformed expectations of a five-year mission but also **continues to remain operational till date**.

### What

1. This **multi-wavelength observatory**, conceived in the 1990s, saw the collaboration of scientists from the **ISRO, Inter University Centre for Astronomy and Astrophysics, Raman Research Institute, Indian Institute of Astrophysics, Tata Institute of Fundamental Research** and the Physical Research Laboratory.
2. Owing to its unique onboard instruments, the **1,513-kg Astrosat** had opened newer areas of space explorations both for Indian and international astronomers.
3. The payloads including the **Ultra Violet Imaging Telescope (UVIT), Large Area X-Ray Proportional Counters (LAXPC), Soft X-Ray Telescope (SXT), Cadmium Zinc Telluride Imager (CZTI), Scanning Sky Monitor (SSM)** and Charged Particle Monitor (CPM), were carefully crafted for carrying out unique observations.
4. Following its success, the **scientific community** is in the process of putting together a successive mission with advanced instruments, works for which are presently underway.

## NEW VERSION OF AKASH MISSILE

A **new version of the Akash missile** was successfully **flight-tested** on 27 September 2021 from the integrated test range at Chandipur in Odisha. The missile - '**Akash Prime**' - intercepted and destroyed an unmanned aerial target mimicking an enemy aircraft in its **maiden flight test**.

### What

1. In comparison to the existing Akash system, **Akash Prime** is equipped with an indigenous **active RF seeker** for improved accuracy.
2. Other improvements also ensure more reliable performance under a **low-temperature environment** at higher altitudes.
3. The modified ground system of the **existing Akash weapon system** was for the flight test.
4. **Akash Prime system** will further boost the confidence of the Indian Army and Indian Air Force as the Akash system is already inducted and now getting improved with more lethal missiles.

### Flashback

1. The development of the **Akash SAM** was started by the DRDO in the late 1980s as part of the **Integrated Guided Missile Development Programme**.
2. **Akash** is primarily a **Short Range Surface to Air Missile** built to provide air defence cover to the vulnerable areas.
3. The **Akash weapon system** can simultaneously engage multiple targets in group mode or autonomous mode.
4. It has built-in **Electronic Counter-Counter Measures (ECCM)** features, which means that it has mechanisms on-board that can counter the electronic systems that deceive the detection systems.

## NEW AIR QUALITY GUIDELINES OF WHO

**Air pollution** is **one of the biggest environmental threats** to human health alongside **climate change**, the World Health Organisation said on 22 September 2021 as it released its **new air quality guidelines** for the first time since its **last global update in 2005**. The World Health Organisation (WHO) said its **new air quality guidelines (AQGs)** aim to save millions of lives from air pollution.

### What the guidelines said

1. New World Health Organisation **Global Air Quality Guidelines** provide clear evidence of the damage air pollution inflicts on human health, at even **lower concentrations than previously understood**.
2. The guidelines recommend **new air quality levels** to protect the health of populations, by reducing levels of **key air pollutants**, some of which also contribute to climate change.
3. **AQG is an annual mean concentration guideline for particulate matter** and other pollutants.
4. WHO's new guidelines recommend air quality levels for **six pollutants -- particulate matter (PM) 2.5 and PM 10, ozone (O3), nitrogen dioxide (NO2), sulfur dioxide (SO2) and carbon monoxide (CO)**.
5. The 2021 guidelines stipulate that **PM 10 should not exceed 15 µg/m3** (micrograms per cubic metre of air) annual mean, or **45 µg/m3 24-hour mean**. According to the 2005 guideline, the **limit was 20 µg/m3 annual mean** or **50 µg/m3 24-hour mean** for PM 10.
6. They recommend that **PM 2.5 should not exceed 5 µg/m3 annual mean**, or 15 µg/m3 24-hour mean. As per the **2005 guideline**, the **limit was 10 µg/m3 annual mean** or 25 µg/m3 24-hour mean for PM 2.5.
7. Under the **2005 guideline**, the AQG level of another pollutant **Nitrogen Dioxide** was 40 µg/m3 annual mean which has now been changed by the WHO to 10 µg/m3.

#### Flashback

1. **PM is primarily generated by fuel combustion in different sectors**, including transport, energy, households, industry and agriculture.
2. Every year, **exposure to air pollution** is estimated to cause **7 million premature deaths** and result in the loss of millions more healthy years of life.
3. In children, this could include reduced lung growth and function, respiratory infections and aggravated asthma.
4. **In 2013, outdoor air pollution and particulate matter** were classified as **carcinogenic** by WHO's **International Agency for Research on Cancer (IARC)**.
5. The **goal of the guideline** is for all countries **to achieve recommended air quality levels**.

### SURYA KIRAN BEGIN

India and Nepal on 20 September 2021 began a **15-day military exercise** in **Pithoragarh of Uttarakhand** with a focus on **counter-terror drills** and **disaster relief operations**.

#### What

1. The aim of the 15th India-Nepal military training exercise '**Surya Kiran**' is to boost overall interoperability between the two militaries.
2. During the exercise, an Infantry Battalion each from the Indian Army and the Nepali army will be training together to develop **inter-operability** and share their experience of **counter-terrorism operations** and **disaster relief operations**.
3. A traditional opening ceremony was organised to mark the commencement of the exercise which will **continue till October 3**.
4. Earlier on 18 September 2021, the Nepali army contingent arrived at Pithoragarh and was accorded a traditional military reception.

### AIRSPACE MAP FOR DRONE OPERATIONS RELEASED

The **aviation ministry** on 24 September 2021 released **India's airspace map for drone operations** which clearly demarcates where all can drones **be flown (green zone)**, **not flown (red list)** or **flown with previous clearance (yellow zone)**. The map is on DGCA's **digital sky platform**.

### What

1. The **drone airspace map** is an interactive map of India that demarcates the yellow and red zones across the country.
2. **Green zone is the airspace upto 400 feet** that has not been designated as a **red or yellow zone**; and upto 200 feet above the area located **8-12 km** from the perimeter of an operational airport.
3. **In green zones, no permission whatsoever is required for operating drones** with an all-up weight **upto 500 kg**.
4. **Yellow zone is the airspace above 400 feet** in a designated green zone; above 200 feet in the area located between 8-12 km from the perimeter of an operational airport and above ground in the area located 5-8 km from the perimeter of an operational airport.
5. Drone operations in **yellow zone require permission from the concerned air traffic control authority** – AAI, IAF, Navy, HAL etc. as the case may be.
6. **Yellow zone** has been **reduced from 45 km earlier to 12 km** from the airport perimeter.
7. **Red zone** is the **'no-drone zone'** within which drones can be operated only after permission from the Central Government. The airspace map may be modified by authorised entities from time to time.
8. Anyone planning to operate a drone should mandatorily check the latest airspace map for any changes in zone boundaries.
9. The **drone airspace map is freely available on the digital sky platform** to all without any login requirements.

## MISCELLANEOUS

### GETTING GOVT AID NOT A FUNDAMENTAL RIGHT: SC

**GOVERNMENT AID to an institution** is a matter of policy and it is **not a fundamental right**, Supreme Court ruled on 27 September 2021. It also stated that as regards aided institutions, there cannot be any difference between a **minority and non-minority one**.

#### What Supreme Court said

1. A decision **to grant aid is by way of policy**. While doing so, the government is not only concerned with the interest of the institutions but the ability to undertake such an exercise, SC said.
2. It said there are factors which the government is expected to consider before taking such a decision. **"Financial constraints and deficiencies** are the factors which are considered relevant in taking any decision qua aid, including both the decision to grant aid and the manner of disbursement of an aid.
3. Once it has been held that **"right to get an aid is not a fundamental right**, the challenge to a decision made in implementing it, shall only be on restricted grounds" said the bench.
4. The judgment came on an appeal filed by the Uttar Pradesh' government challenging the **2018 Allahabad High Court verdict** holding that Regulation 101 framed under The **Intermediate Education Act, 1921** is unconstitutional. The apex court set aside the HC verdict.

### INDIA'S LARGEST FLOATING SOLAR PV PLANT

State-owned **BHEL** on 16 September 2021 announced the commissioning of **India's largest floating solar photovoltaic plant** in Andhra Pradesh. **Located at NTPC Simhadri** in Andhra Pradesh, the 25-megawatt floating SPV project covers an area of 100 acres, Bharat Heavy Electricals Limited (BHEL) said.

#### What

1. BHEL has successfully commissioned **India's largest Floating Solar PV plant**. Notably, with its unique **state-of-the-art design**, the project is an engineering marvel, created by BHEL.

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 BENGALURU: KORMANGALA 7619166663 & CHANDRA LAYOUT 7619136662 | BHOPAL: 7509975361  
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2. BHEL said its scope of work in the project included **design, engineering, procurement and construction** of the solar project, which has been executed by the company's recently, formed Solar Business Division.
3. The project will help saving valuable land resources and **conserving water by reducing evaporation**.
4. It further said this **complex module array** has been designed for the first time in India to withstand gusts of wind up to **180 km/hr**.
5. Its **portfolio of floating solar PV projects** is also the largest in the country, with more than 45 MW projects commissioned and around **107 MW under execution**.
6. The company offers EPC solutions for both grid-interactive and off-grid, ground-mounted, rooftop, **floating and canal top solar plants**.

## ELECTRICITY GENERATION FROM RAINDROPS

Indian Institute of Technology (IIT)-Delhi researchers have designed a device that can generate electricity from water drops, raindrops, water streams, and ocean waves which can be stored in batteries for further use. The device has been developed using "Triboelectric Effect" and "Electrostatic Induction".

### What

1. It is called "**Liquid-solid Interface Triboelectric Nanogenerator**".
2. The device has a **very simple structure** consisting of specially designed **nanocomposite polymers** and **contact electrodes**.
3. It can generate a **few Milliwatt (mW) power** which is sufficient to power small electronic devices like watches, digital thermometers, **radio frequency transmitters**, healthcare sensors, pedometers.
4. When compared to conventional methods, such as the use of the **piezoelectric effect**, the present device can generate **significantly more electricity**.
5. Professor Neeraj Khare from the Department of Physics and his group at the **Nanoscale Research Facility (NRF)** have been working on **harvesting electrical energy from to be wasted mechanical vibrations** using the triboelectric effect.
6. Researchers have **filed an Indian patent** on "the various aspects of the use of **ferroelectric polymer for harvesting mechanical energy** including the present device".

### Flashback

1. **Triboelectric effect** is a known phenomenon for a long time, and in this effect, charges are generated when **two surfaces are in friction**.
2. The best examples we see are **sparkling lights** when **we move the blankets/jackets**.
3. It is only lately that it has been extensively investigated as a practical alternative for energy harvesting.

## NATIONAL FLORENCE NIGHTINGALE AWARD 2020

Deputy Director-General of Military Nursing Service Brig **S V Saraswati** has been bestowed with the **National Florence Nightingale Award 2020**. **President Ram Nath Kovind** conferred the award in a virtual ceremony for her immense contribution to the **MNS as a nurse administrator**, Ministry of Defence said on 20 September 2021.

### What

1. **National Florence Nightingale Award** is the highest national distinction a nurse can achieve for selfless devotion and **exceptional professionalism**.
2. Brig Saraswati hails from the **Chittoor district of Andhra Pradesh** and was commissioned into the MNS on 28 December 1983.
3. She has served in the MNS for more than three and half decades, especially in **perioperative nursing**.

## INTERNATIONAL DAY OF PEACE

Each year the **International Day of Peace** is observed around the world on 21 September. The **UN General Assembly** has declared this as a day devoted to strengthening the **ideals of peace**, through **observing 24 hours of non-violence and cease-fire**.

### What

1. The **International Day of Peace**, or also known as **World Peace Day**, is observed annually on 21st September globally.
2. The **2021 theme for the International Day of Peace** is “**Recovering better for an equitable and sustainable world**”.
3. The **Peace Bell** was donated by the United Nations Association of Japan in 1954.
4. It has become tradition to ring the **bell twice a year**: on the **first day of spring**, at the **Vernal Equinox**, and on 21 September to celebrate the International Day for Peace.
5. The **International Day of Peace** was established in **1981** by the **United Nations General Assembly**.
6. Two decades later, in **2001**, the General Assembly unanimously voted to **designate the Day** as a **period of non-violence and cease-fire**.

## MAIN BATTLE TANKS (MBTS) ARJUN

The **Defence Ministry** on 23 September 2021 sealed a contract to procure **118 Main Battle Tanks (MBTs) Arjun** for the Indian Army at a cost of Rs 7,523 crore, in a major move to boost its combat capabilities. The defence ministry placed the order for the **Arjuna Mk-1A tanks** with the **Heavy Vehicles Factory (HVF)**.

### What

1. The **MBT Mk-1A is a new variant of Arjun Tank** designed to enhance fire power, mobility and survivability, **infused with 72 new features** and more indigenous content from the **Mk-1 variant**.
2. The ministry said the tanks would ensure **effortless mobility in all terrains**, besides precise target engagement during day and night.
3. The **MK-1A** is equipped with **accurate and superior firepower**, all-terrain mobility and an invincible **multi-layered protection** provided by an array of advanced technology systems.
4. It can take on the enemy during **day and night conditions** and in **both static and dynamic modes**.

### Flashback

1. The **MBT Arjun Mk-1A** has been designed and developed by **Combat Vehicles Research and Development Establishment (CVRDE)**, along with other laboratories of DRDO **within two years (2010-12)**.
2. The development activities **commenced from June 2010** and the tank was fielded for user trials in June 2012.

## INTERNATIONAL DAY OF SIGN LANGUAGES 2021

The **International Day of Sign Languages** is observed on **23 September every year**. The UN General Assembly decided to commemorate the day as the **International Day of Sign Languages** in order to **raise awareness of the importance of sign language** in the full realisation of the human rights of people who are deaf. It is a **unique opportunity** to support and protect the **linguistic identity and cultural diversity** of all deaf people and other sign language users.

### What

1. **International Day of Sign Language** also acknowledges early access to sign language and various services in sign language like **quality education** which is vital to the development and growth of the **deaf individual**.

2. The **2021 theme**, declared by the **World Federation of the Deaf**, is “**We Sign For Human Rights**,” highlighting how each of us deaf and hearing people around the world — can work together hand in hand to promote the recognition of our right to **use sign languages in all areas of life**.
3. The **International Day of Sign Languages** offers an opportunity to support and protect the **linguistic identity and cultural diversity** of all sign language users.
4. The **first International Day of Sign Language** was observed across the world on 23 September 2018, with the theme “**With Sign Language, Everyone is Included!**”
5. The day was celebrated as part of the **International Week of the Deaf**, which will take place on **24-30 September**.
6. The **International Week of the Deaf** was **first celebrated in September 1958** and has since evolved into a global movement of deaf unity

#### About sign language

1. **Sign languages** are **fully-fledged natural languages**, structurally distinct from spoken languages.
2. Sign language is a **form of visual language** that uses **hand gestures and body language** to convey meaning.
3. Many examples of people using **visual gestures to express themselves** long before formal sign language have been established.

## INDIAN ORGANISATION SHARES ALTERNATIVE NOBEL

Delhi-based environmental organisation **Legal Initiative for Forest and Environment (LIFE)** is among **four activists and groups** which are awarded this year's **Right Livelihood Award**, known as the '**Alternative Nobel**', on 29 September 2021 for **empowering communities** in areas ranging from **child protection to environmental defence**.

### What

1. **Legal Initiative for Forest and Environment (LIFE)**, an organisation working to protect the **environment in India** through the creative use of law and legal processes, was among the winners.
2. **LIFE works with communities** through a grassroots approach.
3. It **assists and empowers often vulnerable populations** to stand up against powerful interests and have a voice in the decision-making process, while also strengthening institutions and reforming laws.
4. Noticing a **lack of judicial access on environmental issues**, LIFE was founded by lawyers **Ritwick Dutta** and **Rahul Choudhary** in 2005.
5. Today, the organisation's attorneys are among **India's leading public interest lawyers**.
6. The other winners are **Freda Huson**, a Canadian indigenous rights campaigner, **Marthe Wandou**, a Cameroonian woman fighting sexual violence against girls, and **Vladimir Slivyak**, a Russian environmental campaigner.

### Flashback

1. **Created in 1980**, the **annual Right Livelihood Award** honours efforts that the prize founder, Swedish-German philanthropist Jakob von Uexkull, felt were being ignored by the Nobel prizes.
2. The winners will each receive prize **money of 1 million kronor** (USD 115, 520) and will be honoured during a virtual award ceremony on 1 December 2021.
3. The foundation said that a record number of **206 nominees from 89 countries** were considered in 2021.
4. The **2021 Right Livelihood Laureates** are leaders in advancing the **rights of women and girls**, environmental protection and reclaiming Indigenous rights through mobilising communities and empowering grassroots initiatives.

## NAPRE 2030 UNVEILED

The Centre on the occasion of **World Rabies Day** on 28 September 2021 launched a **national action plan NAPRE** for the elimination of **dog mediated rabies by 2030**. Health Minister Mansukh Mandaviya and Fisheries, Animal Husbandry and Dairying Minister Parshottam Rupala unveiled the **National Action Plan for dog Mediated Rabies Elimination by 2030 (NAPRE)**.

### What

1. The Ministers urged all the States and UTs to make Rabies a **notifiable Disease**.
2. The two Union ministers also launched the **Joint Inter-Ministerial Declaration Support Statement** for the elimination of dog mediated rabies from India by 2030 through the One Health Approach.
3. Drawing from his own experience of **contracting a zoonotic disease** while treating an animal, Mandaviya acknowledged that most victims of the disease are those who are in the most productive years of their life.
4. **Zoonotic diseases like Rabies** claims the lives of people in their prime, denying the family of their earning member.
5. The **National Centre for Disease Control (NCDC)** has drafted the action plan in consultation with the Ministry of Fisheries, Animal Husbandry and Dairying.
6. **Rabies is 100 per cent fatal** but **100 per cent vaccine-preventable**. 33 per cent of global rabies deaths are recorded in India.
7. NCDC with its rich experience in tackling zoonotic diseases like **Nipah, Zika, Avian flu** and surveillance of diseases like **influenza, hepatitis** would play a great role in the government's effort to boost the **One Health approach**.

### What is One Health?

1. **One Health** is an approach that recognizes that the **health of people** is closely connected to the **health of animals** and **our shared environment**.
2. One Health is not new, but it has become more important in recent years.
3. This is because **many factors have changed** interactions between **people, animals, plants,** and **our environment**.

1.