

OFFICERS' PULSE

Issue no. 31 | 26th December, 2021 to 1st January, 2022



TO NEW
BEGINNINGS

AT A GLANCE
& IN DEPTH.

COVERAGE.

The Hindu

The Indian Express

PIB

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Polity and Social Issues

Economy

International Relations

Environment

Science and Tech

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CURRENT AFFAIRS WEEKLY
THE **PULSE** OF UPSC AT YOUR FINGER TIPS



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News @ a glance

POLITY

1) Atal Ranking of Institutions on Innovation Achievements

What's in the news?

- The Ministry of Education has released the Atal Ranking of Institutions on Innovation Achievements (ARIIA) 2021.

About ARIIA

- ARIIA is an initiative of the **Ministry of Education** to systematically rank all major higher educational institutions in India on **indicators related to innovation, start-up and entrepreneurship development** among students and faculties.
- ARIIA evaluates institutions on parameters such as patent filing and granted, number of registered students and faculty start-ups, fund generation by incubated start-ups, specialised infrastructure created by institutions to promote innovation and entrepreneurship, etc.
- ARIIA-2021 ranking has been announced in various categories which include Centrally funded technical institutions (eg. IITs, NITs, etc), State universities, State stand-alone technical colleges, private universities, private stand-alone technical colleges, non-technical government and private universities and institutions.

Highlights of ARIIA 2021

- Seven Indian Institutes of Technology and Indian Institute of Science, Bengaluru, are among the top 10 central institutions in promotion and support of innovation and entrepreneurship development.
- The top rank has been bagged by **IIT Madras** followed by IIT Bombay, IIT Delhi, IIT Kanpur and IIT Roorkee. This is the third time that IIT Madras has secured the first rank.

- Among the government and government aided institutions, the top rank has been bagged by **Panjab University**.

2) Healthy States Progressive India report

What's in the news?

- **NITI Aayog** has released the fourth edition of "The Healthy States, Progressive India" for 2019-20.
- The report has been prepared in collaboration with the **Ministry of Health and Family Welfare** with technical assistance from the **World Bank**.

About the Index

- The Health Index score is prepared based on States' performance across a large set of indicators that are divided into **three broad domains — health outcomes, governance and information, and key inputs and processes**.
- **Health outcomes**, for instance, includes parameters such as neonatal mortality rate, under-5 mortality rate, sex ratio at birth. **Governance** includes parameters such as institutional deliveries, average occupancy of senior officers in key posts earmarked for health. And the **'key inputs'** domain consists of proportion of shortfall in health care providers to what is recommended, functional medical facilities, birth and death registration and tuberculosis treatment success rate.
- The index's objective is not just to look at states' historical performance but also assess their incremental performance, and it encourages healthy competition and cross-learning among states and Union territories.
- The report, however, does not incorporate the impact of Covid-19 on

health outcomes or any of the other indicators as the index performance relates to **base year** (2018-19) and **reference year** (2019-20), largely the pre-Covid period.

- For the fourth edition of the health index report, all states and UTs participated except West Bengal. Ladakh was not included due to non-availability of data.

Highlights of the Index

Overall Performance

- **Kerala** has emerged as the state with the best overall health performance for the fourth consecutive year, while India's most populous state **Uttar Pradesh** is at the bottom of the list.
- Uttar Pradesh improved its overall score, topping in 'incremental improvement' in health outcomes such as maternal, neonatal and child mortality rate, immunization coverage, the sex ratio at birth and tuberculosis treatment success rate.
- Among the larger states, **Kerala and Tamil Nadu** ranked first and second in terms of overall performance with index scores of 82.20 and 72.42 respectively.
- Among smaller states, **Mizoram** emerged as the best in overall as well as incremental performance. Among Union territories, **Dadra and Nagar Haveli and Daman and Diu** and Chandigarh were the top overall performers.

Large inter-state variation

- According to the, there is **large inter-state variation** in neonatal mortality rate (NMR), under-five mortality rate (U5MR), maternal mortality ratio (MMR) and sex ratio at birth (SRB), the four key health outcome indicators.
- Among the larger states, Kerala has the lowest NMR, U5MR and MMR, while Madhya Pradesh had the highest NMR and U5MR and Assam had the highest MMR.
- **Kerala and Tamil Nadu have already reached the Sustainable Development Goals (SDG) NMR target**, recording 12 neonatal deaths per 1,000 live births, while Himachal Pradesh, Maharashtra and Punjab, with 13 neonatal deaths per 1,000 live births, are likely to hit the target soon.

UP has poorest institutional delivery

- From 2014-15 to 2019-20, **15 of the 19 larger states registered an increase in institutional deliveries**, while it declined in the remaining four states. Telangana registered the highest increase (62.8 per cent) while Gujarat (-5.2 per cent) registered the steepest decline.

Shortage of specialists

- **All the larger states had a shortage of required specialists in district hospitals.** This varied from 2 per cent in Rajasthan to 58 per cent in Madhya Pradesh.

3) Poverty key factor in determining institutional delivery

What's in the news?

- **Poverty, education, and exposure to a community health worker** are more important than age at marriage in determining whether a mother will be able to have a safe birth in a medical facility, according to a first-of-its-kind study on utilisation of institutional delivery in the country.
- The research comes at a time the government has proposed to **raise the age of marriage for women to 21 years** in order to reduce maternal deaths — a decision that has come under heavy criticism for ignoring social realities such as poverty, education and access to health services that are said to play a bigger role in preventing child marriages.

News in Detail

- Published in the peer-reviewed journal Global Health Action, the study analyses data on State-level maternal mortality ratio (2016 to 2018), as well as the National Family Health Survey-4 (2015-2016).
- The study is unique in its **exploration of socio-demographic factors as well as barriers in low coverage of institutional deliveries**, which is a key intervention in averting the risk of maternal mortality due to childbirth-related complications.
- It focuses on **nine low-performing States (LPS) with high burden of maternal mortality** — Assam, Bihar,

Chhattisgarh, Jharkhand, Madhya Pradesh, Odisha, Rajasthan, Uttar Pradesh and Uttarakhand.

- These States constitute about half of the country's population and contribute 62% of maternal deaths, 71% of infant deaths, 72% of under-five (years) deaths, and 61% of births in the country. They also account for 12% of global maternal deaths.
- India has a **maternal mortality rate of 113 per 100,000**, and **the rate remains "alarmingly high" in these nine States at 161 deaths per 100,000**.

Key Findings

- As far as socio-demographic factors are concerned **poverty is responsible for more than twice as much as age at marriage** in determining whether a woman will seek institutional delivery.
- **Education** is 1.5 times more important than age at marriage. Among other factors, **interaction with a community health worker** and **awareness campaigns** had a greater impact than age at marriage.
- As far as barriers in accessing institutional deliveries were concerned, about 17% of women expressed **distance or lack of transportation**, and 16% cited **costs**, to be some of the challenges. Other reasons were **facility closures** (10%), **poor service or trust issues** (6%).
- The authors recommend **State-specific interventions** not only to increase the number of public health facilities but also to improve associated quality of care, underlining that **inadequate clinical training and insufficient skilled human resources** affected the quality of available maternity services resulting in low coverage of institutional deliveries.

4) Assisted Reproductive Technology (Regulation) Bill, 2020

What's in the news?

- The Parliament has passed the Assisted Reproductive Technology (Regulation) Bill, 2020. The Bill seeks to provide for

the regulation of Assisted Reproductive Technology services in the country.

Highlights of the Bill

Assisted Reproductive Technology (ART)

- The Bill defines ART to include all techniques that seek to obtain a pregnancy by handling the sperm or the oocyte (immature egg cell) outside the human body and transferring the gamete or the embryo into the reproductive system of a woman.
- Examples of ART services include **gamete (sperm or oocyte) donation**, **in-vitro-fertilisation** (fertilising an egg in the lab), and **gestational surrogacy** (the child is not biologically related to surrogate mother).
- ART services will be provided through: (i) **ART clinics**, which offer ART related treatments and procedures, and (ii) **ART banks**, which store and supply gametes.

Regulation of ART clinics and banks

- The Bill provides that **every ART clinic and bank must be registered under the National Registry of Banks and Clinics of India**. The National Registry will be established under the Bill and will act as a central database with details of all ART clinics and banks in the country.
- Clinics and banks will be registered only if they **adhere to certain standards** (specialised manpower, physical infrastructure, and diagnostic facilities).
- The registration will be **valid for five years and can be renewed for a further five years**.
- Registration may be cancelled or suspended if the entity contravenes the provisions of the Bill.

Conditions for gamete donation and supply

- Screening of gamete donors, collection and storage of semen, and provision of oocyte donor **can only be done by a registered ART bank**. A bank can obtain **semen from males between 21 and 55 years of age**, and **oocytes from females between 23 and 35 years of age**.
- An oocyte donor should be an **ever-married woman having at least one alive child of her own (minimum three years of age)**. The woman can

donate oocyte **only once in her life** and **not more than seven oocytes can be retrieved from her**. A bank cannot supply gamete of a single donor to more than one commissioning couple (couple seeking services).

Conditions for offering ART services

- ART procedures can only be carried out with the **written informed consent** of both the party seeking ART services as well as the donor. The party seeking ART services will be required to provide **insurance coverage** in the favour of the oocyte donor (for any loss, damage, or death of the donor).
- A clinic is **prohibited from offering to provide a child of pre-determined sex**. The Bill also **requires checking for genetic diseases** before the embryo implantation.

Rights of a child born through ART

- A child born through ART will be **deemed to be a biological child of the commissioning couple** and will be entitled to the rights and privileges available to a natural child of the commissioning couple. A donor **will not have any parental rights over the child**.

National and State Boards

- The Bill provides that the **National and State Boards for Surrogacy** constituted under the Surrogacy (Regulation) Bill, 2019 will act as the National and State Board respectively for the regulation of ART services.
- Key powers and functions of the National Board include: (i) advising the central government on ART related

policy matters, (ii) reviewing and monitoring the implementation of the Bill, (iii) formulating code of conduct and standards for ART clinics and banks, and (iv) overseeing various bodies to be constituted under the Bill.

- The State Boards will coordinate enforcement of the policies and guidelines for ART as per the recommendations, policies, and regulations of the National Board.

Offences and penalties

- Offences under the Bill include: (i) abandoning, or exploiting children born through ART, (ii) selling, purchasing, trading, or importing human embryos or gametes, (iii) using intermediates to obtain donors, (iv) exploiting commissioning couple, woman, or the gamete donor in any form, and (v) transferring the human embryo into a male or an animal.
- These offences will be punishable with a fine between five and ten lakh rupees for the first contravention.
- Any clinic or bank advertising or offering sex-selective ART will be punishable with imprisonment between five and ten years, or fine between Rs 10 lakh and Rs 25 lakh, or both.
- No court will take cognisance of offences under the Bill, except on a complaint made by the National or State Board or any officer authorised by the Boards.

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ENVIRONMENT

1) Omicron has high Immune Escape Potential: INSACOG

What's the news?

- According to the **Indian SARS-CoV-2 Genomics Sequencing Consortium (INSACOG)**, there is clear experimental and clinical data supporting very **high immune escape potential of Omicron** which appears to be the major component of its growth advantage over Delta, but initial estimates show the severity of illness being lower than what was seen in previous outbreaks.

About INSACOG

- Indian SARS-CoV-2 Genomics Sequencing Consortium (INSACOG) is a **consortium of 10 labs and 18 satellite labs across India** tasked with **scanning coronavirus samples** from swathes of patients and flagging the presence of variants that were known to have spiked transmission internationally.
- The INSACOG is mainly involved in **genomic sequencing** which is done by isolating the genetic material of the coronavirus samples and tracking certain combinations of mutations that become more widespread in India.
- The INSACOG sequenced about **1,00,000 samples** as of early December 2021.
- The purpose of genome sequencing is to understand the **role of certain mutations in increasing the virus's infectivity**. Some mutations have also been linked to immune escape, or the virus's ability to evade antibodies, and this has consequences for vaccines.

2) Average time for Environmental Clearance down to less than 90 days

What's the news?

- According to the Union Environment ministry, the average time to grant environmental clearances in all sectors **has reduced significantly from over**

150 days in 2019 to less than 90 days in 2021.

- It also added that the clearance time is as low as 60 days in some sectors.

News in detail

- The ministry has automated various processes through **Parivesh portal** such as development of online modules for dispensing requirements for environmental clearance for expansion / modernisation of industries provided there is no increase in pollution load; Online generation of environmental clearance with unique ID number and several others.
- The ministry has decided to upgrade the Parivesh portal to provide a **"single window" solution** for administration of environmental regulations.
- However, researchers said the reduction in clearance times was **not benefiting conservation** as well as faster rates of clearance do not ensure financial viability or a project and neither does it ensure that proposals are ecologically wise and socially legitimate.

About PARIVESH Portal

- **PARIVESH (Pro Active and Responsive facilitation by Interactive and Virtuous Environmental Singlewindow Hub)** is a web based, role based workflow application which has been developed for **online submission and monitoring of the proposals** submitted by the proponents for seeking **Environment, Forest, Wildlife and CRZ Clearances** from Central, State and district level authorities.
- It automates the **entire tracking of proposals** which includes online submission of a new proposal, editing/updating the details of proposals and displays status of the proposals at each stage of the workflow.

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ECONOMY

1) Geographical Indication

About GI Tag

- A geographical indication (GI) is a sign used on products that have a **specific geographical origin** and possess qualities or a reputation that are due to that origin. In order to function as a GI, a sign must identify a product as originating in a given place.
- It is used for **agricultural, natural and manufactured goods**. **Darjeeling tea** became the first GI tagged product in India.
- The registration of GI is valid for **10 years** after which it needs to be renewed.
- It should be noted that registration of a product is **not compulsory**.
 - Registration affords better legal protection to facilitate an action for infringement
 - The registered proprietor and authorised users can initiate infringement actions
 - The authorised users can exercise the exclusive right to use the geographical indication.

Legislations

- In India, GI is given under the **Geographical Indications of Goods (Registration and Protection) Act, 1999**.
- The Act is administered by the **Controller General of Patents, Designs & TradeMarks, GI (CGPDTM-India)** under the Department for Promotion of Industry and Internal Trade, Ministry of Commerce and Industry.
- India enacted its GI legislation to comply with India's obligations under the Trade-Related Aspects of Intellectual Property Rights (**TRIPS**) agreement.
- GI registration gives to the registered proprietor and its authorized users, the legal right to the exclusive use of the GI and also the right to obtain relief in case of its infringement.
- GI is a **collective intellectual property right** and is thus owned by all the producers within the defined GI territory unlike intellectual properties

like patent and trademark which are owned by an individual or a business entity.

Benefits of registration of Geographical Indications

- It confers **legal protection** to Geographical Indications in India
- **Prevents unauthorised use** of a Registered Geographical Indication by others
- It provides legal protection to Indian Geographical Indications which in turn **boost exports**.
- It **promotes economic prosperity** of producers of goods produced in a geographical territory.

Why in News?

- An application seeking Geographical Indication tag for the Arunachal Pradesh Apatani textile product has been filed by a firm, Zeet Zeero Producer Company Ltd.
- The Apatani weave comes from the **Apatani tribe living at Ziro**, the headquarters of Lower Subansiri district. The woven fabric of this tribe is known for its geometric and zigzag patterns and for its angular designs.
- The Apatani community weaves its own textiles for various occasions, including rituals and cultural festivals. The tribe predominantly weaves shawls known as **jig-jiro**, and **jilan or jackets** called **supuntarii**.
- The people use leaves and plant resources for organic dyeing of the cotton yarns in their traditional ways. And **only women folk** are engaged in weaving.

2) Electoral bonds

What are Electoral Bonds?

- An electoral bond is designed to be an **interest-free bearer instrument** like a **Promissory Note** — in effect, it will be similar to a bank note that is payable to the bearer on demand.
- It can be purchased by any **citizen of India or a body incorporated in India**. A person being an individual can

buy Electoral Bonds, either singly or jointly with other individuals.

- The electoral bonds were announced in the **2017 Union Budget**.
- The bonds will be issued in multiples of ₹1,000, ₹10,000, ₹1 lakh, ₹10 lakh and ₹1 crore and will be available at specified branches of **State Bank of India**. SBI is the only authorised bank to issue such bonds.
- They can be bought by the donor with a **KYC-compliant account**.

Features

- The bonds will be available for purchase for a period of 10 days each in the beginning of every quarter, i.e. in January, April, July and October as specified by the Central Government.
- The donor will remain **anonymous**. The electoral bonds will **not bear the name of the donor**. The intention is to ensure that all the donations made to a party will be accounted for in the balance sheets **without exposing the donor details to the public**.
- Political parties are allotted a verified account by the Election Commission and all the electoral bond transactions are done through this account only.
- **Only political parties registered under Section 29A of the Representation of the Peoples Act, 1951** and have **secured no less than one per cent votes** in the last General Election to the House of the People or the Legislative Assembly of the State, are eligible to receive electoral bonds.
- A donor will get **tax deduction** and the recipient, or the political party, will get **tax exemption**, provided returns are filed by the political party.
- The information furnished by the buyer shall be treated confidential by the authorised bank and shall not be disclosed to any authority for any purposes, except when demanded **by a competent court or upon registration of a criminal case by any law enforcement agency**.

Criticisms

- The key critique is that, for something meant to bring transparency to the system, electoral bonds actually make political funding **more opaque – but**

only for the public. Companies don't have to say who they are donating money to and parties don't need to say from whom they're getting the cash.

- Experts have said this undercuts the freedom of political information, which is an integral element of **Article 19(1)(a)** of the Constitution (the free expression clause).
- Prior to 2017, **Companies Act, 2013**, stipulated that a company can donate **only up to 7.5% of its average profit of the last three years**. Now, through the electoral bonds, there is **no limit** to the amount companies can donate, and the requirement for such firms to **have existed for the last three years on a profit-making basis** has also been deleted.
- The implication is that even **loss-making companies or shell companies** can be used to purchase electoral bonds.
- In 2016 and 2017, **amendments were made to the Foreign Contribution (Regulation) Act (FCRA), 2010**, with retrospective effect. Thus, **enabling the Indian subsidiaries of foreign companies to make donations to political parties** through electoral bonds.
- This allows **anonymous financing by foreign entities** opening Indian elections to the influence of foreign interests.
- The **Reserve Bank of India (RBI) and the Election Commission** had both said the sale of electoral bonds had become an avenue for shell corporations and entities to park illicit money and even proceeds of bribes with political parties.
- The Election Commission of India criticised electoral bonds saying it would **wreck transparency** in political funding and allow for **unchecked foreign funding** of Indian political parties.
- However, the government defended the scheme, saying it allowed anonymity to political donors to protect them from "political victimisation".

Why in News?

- The government has approved the issuance of the 19th tranche of electoral

bonds, which will be open for sale from January 1 to 10.

3) Financial Stability Report

What is NPA?

- A non performing asset (NPA) is a loan or advance for which the principal or interest payment remains overdue for a period of **more than 90 days**.
- Banks classify NPAs further into Substandard, Doubtful and Loss assets.
 - **Substandard assets:** Assets which have remained NPA for a period less than or equal to 12 months.
 - **Doubtful assets:** An asset would be classified as doubtful if it has remained in the substandard category for a period of 12 months.
 - **Loss assets:** Loss asset is considered uncollectible and of such little value that its continuance as a bankable asset is not warranted, although there may be some salvage or recovery value.
- With respect to agriculture, a loan granted for short duration crops will be treated as NPA, if the instalment of principal or interest thereon remains overdue for **two crop seasons**.
- A loan granted for long duration crops will be treated as NPA, if the instalment of principal or interest thereon remains overdue for **one crop season**.

Capital to Risk-weighted Assets Ratio (CRAR)

- CRAR, also known as **Capital Adequacy Ratio (CAR)**, is the capital needed for a bank measured in terms of the assets or loans disbursed by the banks. It measures capital adequacy in terms of riskiness of the assets or loans given.

$CAR = (Tier I + Tier II + Tier III (Capital funds)) / Risk\ weighted\ assets$

- According to the RBI's capital adequacy norms, banks (including RRBs) are required to maintain CRAR at **9%**.

Provisioning Coverage Ratio

- A Provisioning Coverage Ratio or PCR is the **percentage of funds that a bank sets aside for losses due to bad debts**. A high PCR can be beneficial to banks to buffer themselves against losses if the NPAs start increasing faster.

Why in News?

- **The Reserve Bank of India (RBI)** has released its **Financial Stability Report (FSR)** of December 2021.

Highlights of the report

- The **gross non-performing asset (GNPA)** of scheduled commercial banks (SCBs) may increase to **9.5%** by September 2022. This compares with 6.9% seen in September this year.
 - *Gross NPA is the total value of non-performing assets of the bank.*
- The report noted that SCBs would, however, have sufficient capital even under stress conditions.
- It said the **capital to risk-weighted assets ratio** of SCBs rose to a new peak of 16.6% and their **provisioning coverage ratio** stood at 68.1% in September 2021.
- In the report, the RBI said global economic recovery had lost momentum in the second half of 2021 with resurfacing COVID-19 infections, the Omicron variant, supply disruptions, elevated inflationary levels and shifts in monetary policy stances and actions across economies.

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INTERNATIONAL RELATIONS

1) Iran nuclear deal

Background

- **The Joint Comprehensive Plan of Action (JCPOA)**, more commonly known as the Iran nuclear deal, was reached between Iran and six world powers known as the **P5+1** (China, France, Germany, Russia, the United Kingdom, and the United States) in July 2015.

What did Iran have to do to meet the requirements of the deal?

- According to this framework, Iran would **redesign, convert, and reduce its nuclear facilities** in order to lift all nuclear-related economic sanctions.
- The deal also allowed for the tracking of nuclear activities with robust transparency and inspections by the **International Atomic Energy Agency (IAEA)**.

U.S. withdrawal from JCPOA

- Former US President Donald Trump unilaterally withdrew from the Iran nuclear deal in 2018, claiming it did not address Iran's ballistic missile programme or its roles in Middle Eastern conflicts.
- The US also re-imposed tough economic sanctions against Iran. Iran reacted by violating many of the deal's restrictions on its nuclear programme.

Why in News?

- Negotiations between Iran and world powers aimed at restoring the 2015 nuclear deal have resumed in Vienna.
- The United States has participated indirectly in the talks because it withdrew from the accord in 2018 under then-President Donald Trump. President Joe Biden has signalled that he wants to rejoin the deal.

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SCIENCE AND TECHNOLOGY

1) James Webb Space Telescope (JWST)

Why in News?

- NASA's James Webb Space Telescope was recently launched, opening a new era of astronomy.
- The telescope is an **international collaboration led by NASA** in partnership with the **European and Canadian space agencies**.

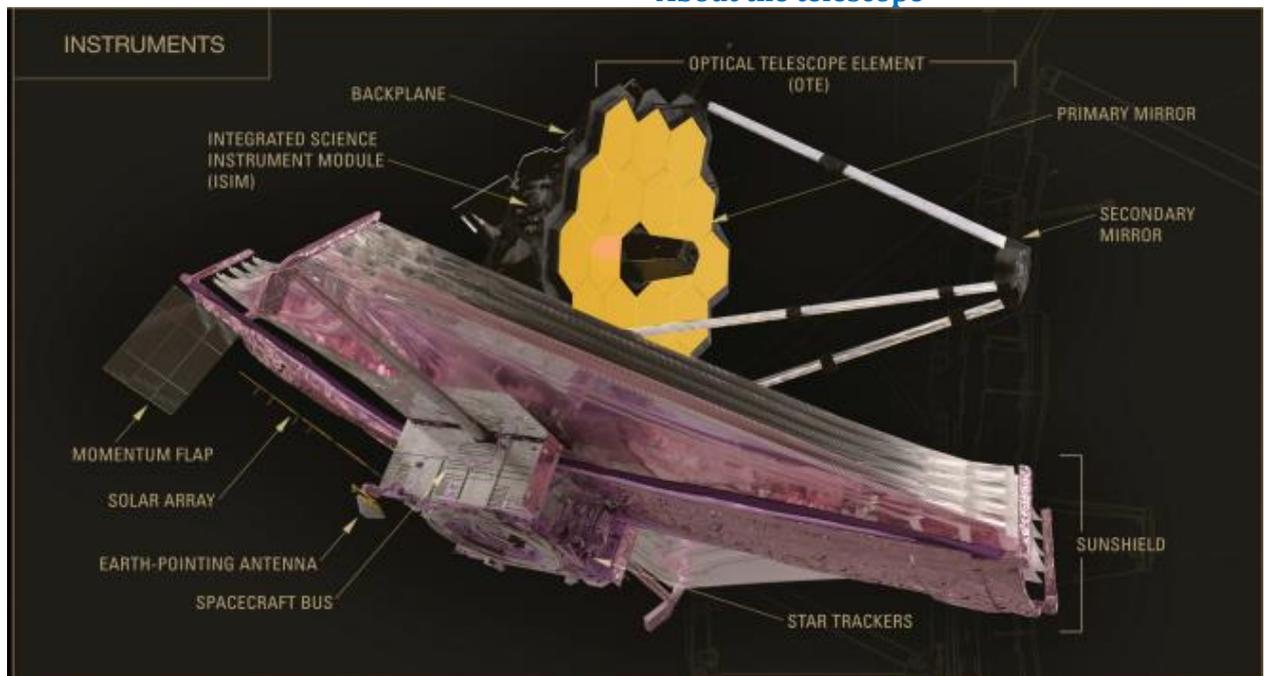
Functions of JWST

- Webb will **gaze into the epoch when the very first stars and galaxies formed**, over 13.5 billion years ago.
- Ultraviolet and visible light emitted by the very first luminous objects has been stretched or "redshifted" by the universe's continual expansion and arrives today as infrared light. **Webb is designed to see this infrared light**

with unprecedented resolution and sensitivity.

- Webb will be a **powerful tool for studying the nearby universe**.
- Scientists will use Webb to **study planets and other bodies in our solar system** to determine their **origin and evolution** and compare them with exoplanets, planets that orbit other stars.
- Webb will also **observe exoplanets located in their stars' habitable zones**, the regions where a planet could harbor liquid water on its surface, and can determine if and where **signatures of habitability** may be present.
- Using a **technique called transmission spectroscopy**, the observatory will examine **starlight filtered through planetary atmospheres to learn about their chemical compositions**.

About the telescope



- The Webb telescope will **reach its destination in solar orbit** about 1.6 million km from Earth — about four times farther away than the moon.
 - And Webb's special orbital path will keep it in constant alignment with the Earth as the

planet and telescope circle the sun in tandem.

- By comparison, Webb's 30-year-old predecessor, the Hubble Space Telescope, orbits the Earth from about 550 km away, passing in and out of the planet's shadow every 90 minutes.

- The **instruments** on board JWST have very simple functions — **an infrared camera** will take **images of astronomical objects**, while **spectrometers would break the incoming infrared light into different colours for analysis**.
- The new telescope's primary **mirror** — consisting of 18 hexagonal segments of **gold-coated beryllium metal** — also has a much bigger **light-collecting area**, enabling it to observe objects at greater distances, thus farther back into time, than Hubble or any other telescope.
- It will bring into view a **glimpse of the cosmos never previously seen** — dating to just 100 million years after the Big Bang, the theoretical flashpoint that set in motion the expansion of the observable universe an estimated 13.8 billion years ago.
- Webb's **instruments** also make it ideal to search for **evidence of potentially life-supporting** atmospheres around scores of newly documented exoplanets — celestial bodies orbiting distant stars — and to observe worlds much closer to home, such as Mars and Saturn's moon Titan.
- JWST will also be **positioned much deeper into the space**, about a million miles from Earth, at a **spot known as L2**. It is **one of the five points, known as Lagrange's points**, in any revolving two-body system like Earth and Sun, where the gravitational forces of the two large bodies cancel each other out.
 - **Lagrange points** are positions in space where objects sent there tend to stay put. At Lagrange points, the **gravitational pull of two large masses precisely equals the centripetal force required** for a small object to move with them. These points in space can be used by **spacecraft to reduce fuel consumption needed to remain in position**. There are **five such points in the Sun-Earth system** and they are denoted as **L1, L2, L3, L4 and L5**.
 - Objects placed at these positions are **relatively stable and require minimal external energy** to keep

themselves there. L2 is a position directly behind Earth in the line joining the Sun and the Earth.

The significance

- Powerful space telescopes, like JWST or the Hubble Telescope, are often called time-machines because of their ability to view very faraway objects. The **light** coming from those objects, stars or galaxies, which is **captured** by these telescopes, **began its journey millions of years earlier**. Essentially, what **these telescopes see are images of these stars or galaxies as they were millions of years ago**. The more distant the planet or star, the farther back in time are the telescopes able to see.
- **Webb is about 100 times more sensitive than Hubble** and is expected to transform scientists' understanding of the universe and our place in it.
- JWST is much more powerful and has the **ability to look in the infrared spectrum**, which will allow it to peer through much deeper into the universe, **and see through obstructions such as gas clouds**.
- As **electromagnetic waves travel for long distances**, they **lose energy, resulting in an increase in their wavelength**. An ultraviolet wave, for example, can slowly move into the visible light spectrum and the infrared spectrum, and further weaken to microwaves or radio waves, as it loses energy. Hubble was designed to look mainly into the ultraviolet and visible regions of the electromagnetic spectrum. JWST is primarily an infrared telescope, allowing it to gaze through clouds of gas and dust where stars are being born, the first of its kind.

2) Magnetar

What is it?

- A **magnetar is a rare compact type of neutron star teeming with high energy and magnetism**. They experience **violent eruptions or intense bursts** in the form of transient **X-ray pulses** which are several orders higher than that of the Sun.

- Magnetars are relatively rare objects, with only about thirty having been spotted within the Milky Way so far.

Why in News:

- An international group of **researchers** has **succeeded** in **measuring** for the first time the **characteristics of a flare on a distant magnetar**.
- The team includes astronomers from Norway, Spain and the Aryabhata Research Institute of Observational Sciences (ARIES), Nainital.
- The magnetar they have studied is about 13 million light years away, in the direction of the NGC 253, a prominent galaxy in the Sculptor group of galaxies.
- Scientists involved in the research say that the single event released energy equivalent to what the Sun would radiate in one lakh years.

How magnetars form

- During the course of their evolution, massive stars – with **masses around 10-25 times the mass of the Sun** – eventually **collapse and shrink to form very compact objects called neutron stars**. A **subset of these neutron stars** are the so-called **magnetars** which **possess intense magnetic fields**. These are **highly dense and have breathtakingly high rotation speeds** – they have rotational periods that can be just 0.3 to 12.0 seconds.
- **Magnetars have high magnetic fields** in the range of 10^{15} gauss and they **emit energy** in the range given by **luminosities** of 10^{37} – 10^{40} joules per second. Compare this to the luminosity of the sun which is in the order of 10^{26} joules per second.

Significance of the discovery

- **Eruptions in magnetars** are **believed** to be due to **instabilities in their magnetosphere**, or “**starquakes**” **produced in their crust** - a rigid, elastic layer about one kilometre thick. This **causes waves in the magnetosphere**, and **interaction** between these waves **causes dissipation of energy**.
- This **instability triggers Alfvén waves** that are **also common in the Sun**. The **interactions between multiple Alfvén waves** ultimately **release massive**

energies, appearing as giant flares lasting for a few milliseconds.

- Magnetars are **very difficult to observe** when they are silent. It is **only during a flare** that **they can be observed**, and these flares are so short-lived that it presents a formidable problem.
- **This is the first extragalactic magnetar** that has been **thoroughly researched**.
- **Comprehension** of these eruptions can **give information** on the **structure** of these **enigmatic things**.
- The **finding** might open the **path** for future **research** into **how magnetic stresses** are **generated around neutron stars**.

3) Log4j

What's in News?

- A **new vulnerability named Log4Shell** (Log4j) is being touted as **one of the worst cybersecurity flaws** to have been discovered. The vulnerability is **based on an open-source logging library** used in most applications by enterprises and even government agencies.
 - The term **open source** refers to something **people can modify and share** because its **design is publicly accessible**.

About Log4j

- **Log4j is an important Java-logging framework** that is **open-source software** maintained by a group of volunteer programmers.
- The Log4j library is **incorporated in every Java-based online service** or application and is used by a variety of businesses to provide application logging. Java is one of the world's most popular programming languages.

The issue

- The vulnerability **grants hackers access to an application**, and could potentially let them **run malicious software** on a device or servers.
- The **vulnerability** is dubbed **Log4Shell** and is **officially CVE-2021-44228** (CVE number is the unique number given to each vulnerability discovered across the world).

- The problem **impacts** Log4j 2 versions which is a very **common logging library used** by applications across the world. **Logging lets developers see all the activity of an application.** Tech companies such as Apple, Microsoft, Google all rely on this open-source library.
- The vulnerability is serious because exploiting it could allow hackers to control java-based web servers and launch what are called '**remote code execution**' (**RCE**) attacks. In simple words, the vulnerability could allow a hacker to take control of a system.
 - The **process of storing application events is known as application logging.** It differs from conventional event logs in IT systems in that the information gathered by an application event log is mandated by the programme itself, rather than the operating system. They **aid in providing visibility** into how our apps perform on each of the infrastructure components. **Out of memory exceptions and hard drive errors are examples of log data.**

Why the worry

- Security experts have **rated Log4Shell a severity rating of 10**, the **maximum degree conceivable.**
- The flaw might allow a **hacker to gain control of a system.**
- A simple log entry might wind up being a **malware installation** event as a single line of code may be used to exploit the vulnerability, allowing attackers to

execute remote instructions on a victim's PC.

- Attackers can use it to take control of any Java-based web server and launch **Remote Code Execution (RCE) attacks.** In an RCE attack, the attackers get complete control of the targeted system and may execute any function they choose.

The extent of impact

- In India, approximately 41% of business networks in India have previously been subjected to an attempted attack.
- Because they deploy Java-based apps, Indian enterprises are not more vulnerable than their Western counterparts. Because of their inadequate security posture, Indian enterprises are at great danger, particularly smaller companies that may lack the know-how or resources to detect and resolve the issue fast.

What is a zero-day vulnerability and is log4j one of this kind?

- A **0day (or zero-day vulnerability)** refers to a **security flaw** which has **not been publicly disclosed** and for **which a software patch or remediation technique is not available.**
- Considering that attempts at **exploiting Log4Shell were observed** at least a **week prior to it being publicly disclosed**, it could be said that **it was a 0day vulnerability.**

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ART AND CULTURE

1) Sahitya Academy Awards

Why in News:

- The Sahitya Akademi announced its awards for 2021.

About the awards

- The Sahitya Akademi award is considered as the Government of India's second-highest literary honour, following the Jnanpith prize. The Akademi is under the central government's Ministry of Culture, but works as an autonomous institution.
- Every year since its inception in 1954 (and first awarded in 1955), the Sahitya Akademi Award prizes to the most outstanding books of literary merit published in any of the major Indian languages recognised by the Akademi.
- Akademi bestows 24 prizes on literary works in the languages it has recognised, as well as an equal number of honours for literary translations from and into Indian languages.
- In addition to the 22 languages listed in the Indian Constitution, the Sahitya Akademi has designated English and Rajasthani as the languages chosen.
 - The most recent additions were Bodo and Santhali in 2005.
 - Awards in English began in 1960 — the first recipient was R K Narayan for his novel "The Guide".

Conditions of bestowing the award

- The author must be of Indian origin.
- The book/work must be an excellent contribution to the language and literature
- When two or more works have similar worth, specific factors such as overall literary contribution and author status must be considered before awarding a prize.

2) Aryan Invasion Theory (AIT)

About AIT

- It was German linguist Max Muller who in the 19th century proposed that 3,000-4,000 years ago an Indo-European (the Aryans) tribe invaded

the subcontinent and brought along with it Indo-Aryan religion (Hinduism), its culture and the caste system.

- The Aryans purportedly displaced the indigenous Dravidians, pushing them down South. and the imposition of. It proposed that substantial migrations from the Central Asian Steppe occurred between 2000 BCE and 1000 BCE, bringing Indo-European languages into India.
- So far, it has served as the foundation upon which Indian history has been written. Its central premise is comprised of three major components:
 - The original inhabitants of India were "dark-skinned" Dravidians who established a peaceful, highly developed urban civilisation known as the Indus Valley Civilization.
 - The Indo-Aryans were white-skinned people who spoke Vedic Sanskrit, wrote the Vedas, and enforced Indo-Aryan religion (Hinduism).
 - Around 1500 BCE, a nomadic race known as the Indo-Aryans invaded and conquered India from the West. These 'Aryans / Indo-Europeans were proposed to have a variety of homelands, including Central Asia, Scandinavia, North Germany, Hungary, and Ukraine. They destroyed the ancient Dravidian civilisation, oppressed the locals, and drove them to relocate to the south of India.

Opposing views

- The opposite viewpoint holds that the Indo-Aryan people and their languages originated on the Indian subcontinent, and that the Indus valley civilization was the Vedic culture, not a Dravidian civilization as described in the AIT.
- Archeologists claim that there is no evidence for conflict or invasion, and that the narrative of Aryan migration is

also a lie. **Rather than collapsing quickly**, the **Harappan** civilisation around the now-defunct Sarasvati river **progressively deurbanized** owing to **dwindling monsoons**.

- Critics of AIT point out that the **Sarasvati river is referenced frequently in the Rig Veda** and is referred to as the "largest of rivers." This **refutes the AIT story** that the Rig Veda was written following a putative Aryan invasion/migration about 1,500 BCE, and suggests that it was written closer to 5,000 BCE, when the river was at its peak.
- Extensive **archeological evidence** suggest that many of the **traditions and customs prevalent in the Indus valley civilization**, such as **Yoga**, the use of **sindur**, the **namaste greeting**, and so on, **refuting the AIT theory** that the Indus valley civilization was destroyed and supplanted by a "foreign" Hindu culture and civilization.
- Some **genomic investigations** have found **no major foreign genetic influence** in India during the **last 10,000 - 15,000 years**.
- There is **no evidence** of any form of **large-scale migration** in the Harappan culture to support the Aryan invasion.
- The **study found no Central Asian Steppe ancestry among the Harappans**, indicating that **Steppe**

pastoralists came to India after the Harappan civilisation died out.

- Between 1800 BC and 1600 BC, the indigenous people moved from north to south India, most likely following the fall of the Indus Valley Civilisation. This was about 100 years before the arrival of Arabians and Central Asian Steppe people in India.
- Because the **Harappans traded with Mesopotamia, Egypt, the Persian Gulf**, and nearly every other country in South Asia, **there was going to be population migration**, resulting in a **mixed genetic past**.
- As part of the **Rakhigarhi Project**, **DNA samples** from 5000-year-old **Harappan bones** were found to be **identical to current Indians' DNA**, **debunking the idea**.

Socio political impact of Aryan Invasion Theory

- The most significant socio-political aspect of this idea was that **it generated the appearance that North Indians are foreigners and Dravidians are native Indians**.
- It also **widened the social divide between lower and upper castes**, leading to **lower caste movements in Western and Southern India** during the nineteenth century.

Views by major thinkers and political figures

THE 'ARYANS' AND HINDU NATIONALISM



The German Orientalist **Max Müller** suggested that an Aryan-speaking population introduced Sanskrit language and culture to ancient India



Dayananda Saraswati, founder of the Arya Samaj, argued that the 'Aryas came to this country from Tibet shortly after the dawn of creation'



Bal Gangadhar Tilak argued that the Aryans migrated to India from the Arctic circle in 8000 BC



RSS leader '**Guruji** **Golwalkar** suggested that Tilak was right about the Arctic origin of the Aryans, but that the North Pole was in India at the time



Swami Vivekanand argued that the Aryans came from India and that ancient India included Afghanistan



Sri Aurobindo believed that Dravidian languages were closely related to Sanskrit

Why in News:

- The Indian Institute of Technology-Kharagpur's 2022 calendar on the theme of "evidence" has caused a controversy for calling the Aryan invasion a myth.

Additional Information

To read about Ancient Dravidian Languages-

<https://officerspulse.com/ancestral-dravidian-language/>

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PIB ANALYSIS

1) DAY-NRLM

About

- Aajeevika-National Rural Livelihoods Mission (NRLM) was launched by the **Ministry of Rural Development (MoRD) in 2011.**
- Aided in part through investment support by the **World Bank**, the scheme aimed at helping the rural poor by enabling them to increase household income through sustainable livelihood enhancements and improved access to financial services.
- NRLM has the mandate of reaching out to 100 million rural poor in 6 lakh villages across the country.
- **In 2015, the program was renamed Deendayal Antyodaya Yojana-National Rural Livelihoods Mission (DAY-NRLM).**

Mission

- The poor have innate capabilities to overcome poverty. DAY-NRLM believes in harnessing these innate capabilities of the poor and complements them with capacities (information, knowledge, skills, tools, finance and collectivization) to participate in the growing economy of the country.
- NRLM rests on **three major pillars – universal social mobilization, financial inclusion and livelihood enhancement.**

Implementation

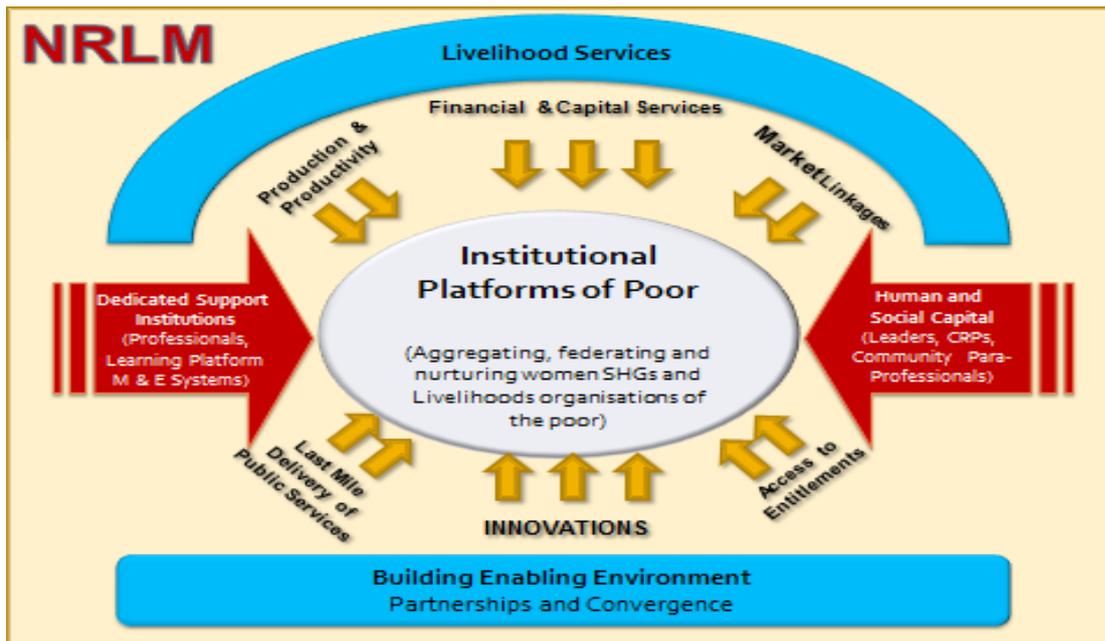
- It works towards **bringing at least one member (preferably a woman) from all poor families into the Self Help Group (SHG) network.**
- The SHGs and their federations offer their members microfinance services such as – savings, credit, bank linkages, insurance, remittances, equity etc. They

also offer collectivization and group activities. The SHGs offer social security and social action in various fronts including health, nutrition, food, gender, convergence etc., directly or through their federations.

- NRLM facilitates the SHGs to open and operate bank accounts and bank linkages. It also facilitates access to insurance to members. It encourages individual members too to open bank accounts.
- As the **Institutions of the Poor (IoP)** mature, they are facilitated to take up livelihoods/income-generating activities.
 - *SHGs, their federations at the village, cluster levels and beyond, and other collectives of the poor constitute IoP.*
- DAY-NRLM adopts a **demand driven approach**, enabling the States to formulate their own State specific poverty reduction action plans.

Beneficiaries

- NRLM's priority is to reach out to the poorest, most vulnerable and marginalized. It **begins with targeting women** and they are considered as representatives of their households.
- In case of **extremely vulnerable persons** like Persons with Disabilities (PwDs), elders etc., NRLM mobilizes **both men and women.**
- The NRLM Target Households (NTH) are identified through the **Participatory Identification of Poor (PIP).** The PIP is a community-driven process where the Community Based Organisations (CBOs) themselves identify the poor in the village using participatory tools. The list of poor identified by the CBO is vetted by the Gram Sabha.



Why in the news?

- The government has launched a facility for **overdraft (OD) of Rs. 5,000/-** to verified SHG members under DAY – NRLM having accounts under the prime Minister Jan Dhan Yojana.
- This facility has been initiated in pursuance of the announcement made by the Finance Minister in her budget speech of 2019-20.

2) Revamped Distribution Sector Scheme

About the scheme

- In July 2021, the government launched a Reforms-based and Results-linked, Revamped Distribution Sector Scheme.
- The Scheme seeks to **improve the operational efficiencies and financial sustainability of all DISCOMs/ Power Departments excluding Private Sector DISCOMs.**
- It provides **conditional financial assistance** to DISCOMs for strengthening of supply infrastructure.
- The assistance will be based on meeting **pre-qualifying criteria** as well as upon achievement of basic minimum benchmarks by the DISCOM evaluated on the basis of an agreed evaluation framework tied to financial improvements.

- The Scheme has a major focus on **improving electricity supply for the farmers** and for **providing daytime electricity to them through solarization of agricultural feeders.**
- A key feature of the Scheme is to enable consumer empowerment by way of **prepaid smart metering** to be implemented in Public-Private-Partnership (PPP) mode. Smart meters would allow consumers to monitor their electricity consumption on a routine basis instead of monthly basis, which can help them in usage of electricity as per their own needs and in terms of the resources available.
- The Scheme would be available till the year **2025-26.**

Implementation

- Implementation of the Scheme would be based on the **action plan worked out for each state** rather than a “one-size-fits-all” approach.

Nodal agencies

- **Rural Electrification Corporation (REC)** and **Power Finance Corporation (PFC)** have been nominated as nodal agencies for facilitating implementation of the Scheme.

Scheme Objectives

- **Reduction of AT&C** (Aggregate Technical & Commercial) **losses** to pan-India levels of 12-15% by 2024-25.
- **Reduction of cost-revenue gap to zero** by 2024-25.

- **Developing Institutional Capabilities** for Modern DISCOMs.
- **Improvement in the quality, reliability, and affordability of power supply** to consumers through a financially sustainable and operationally efficient Distribution Sector.

Components

- Major components of the scheme includes
 - **Prepaid Smart Meters for all consumers except Agricultural consumers**
 - **Funding for feeder segregation for unsegregated feeders**
 - **Modernization of Distribution system in urban areas**
 - **Rural and Urban area System strengthening**

Special Category States

- All Special Category States including North-Eastern States of Sikkim and States/Union Territories of Jammu & Kashmir, Ladakh, Himachal Pradesh, Uttarakhand, Andaman & Nicobar Islands, and Lakshadweep will be treated as Special Category States.
- For **Prepaid Smart metering, grant of Rs 900 or 15%** of the cost per consumer meter worked out for the whole project, whichever is lower, shall be available for **“Other than Special Category” States**. For **“Special Category” States**, the corresponding grant would be **Rs 1350 or 22.5%** of the cost per consumer, whichever is lower.
- For works other than Smart metering, **maximum financial assistance** given to DISCOMs of **“Other than Special Category” States will be 60%** of the approved cost, while for the DISCOMs in

Special Category States, the maximum financial assistance will be **90%** of the approved cost.

Why in News?

- The Ministry of Power has reviewed the implementation of the Revamped Distribution Sector Scheme.

3) Padhe Bharat

What's in the news?

- The Ministry of Education has launched a **100 days reading campaign 'Padhe Bharat'**.
- The launch of 100 Days Reading Campaign is in **alignment with the National Education Policy (NEP) 2020 which emphasises on promotion of joyful reading culture for children** by ensuring availability of age appropriate reading books for children in local/mother tongue/regional/tribal Language.
- Padhe Bharat campaign will **focus on children studying in Balvatika to Grade 8**. The reading campaign will be organised for 100 days (14 weeks) starting from 1st January 2022 to 10th April 2022.
- The reading campaign aims to have participation of all stakeholders at national and state level including children, teachers, parents, community, educational administrators etc.
- The 100 days reading campaign will also focus on Indian languages including mother tongue/local/regional languages.

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News in Depth

AIR NEWS

1) Smart Cities Mission

About the Mission

- Smart Cities Mission is an urban renewal and retrofitting program launched by the Government of India in 2015 with the mission to develop **100 cities across the country** making them citizen friendly and sustainable.
- The Smart Cities Mission is meant to set examples that can be replicated both within and outside the Smart City, catalysing the creation of similar Smart Cities in various regions and parts of the country.
- The strategic components of area-based development in the Smart Cities Mission are city improvement (retrofitting), city renewal (redevelopment) and city extension (greenfield development) plus a Pan-city initiative in which Smart Solutions are applied covering larger parts of the city.

Implementation

- The implementation of the Mission at the City level will be done by a **Special Purpose Vehicle (SPV)** created for the purpose.
- The SPV will plan, appraise, approve, release funds, implement, manage, operate, monitor and evaluate the Smart City development projects.
- Each smart city will have a SPV which will be headed by a full time CEO and have nominees of Central Government, State Government and ULB on its Board.

Key Objectives of the Mission

- To provide a **fillip to the development of new and innovative smart**

solutions that directly impact the needs of cities;

- To ensure **availability of funding** for practice research of direct relevance to the outcomes desired under the missions;
- To make available a large body of **pilot-tested and proven smart solutions** that can be adopted by cities as per their specific needs; and
- To promote a **culture of innovation** within the urban sector.

Why in News?

- The Central Government has released more than 27 thousand crore rupees so far under the Smart Cities Mission.

2) SMILE Scheme

What's in the news?

- The **Union Social Justice and Empowerment Ministry** is set to launch a scheme for rehabilitation of persons engaged in begging and for providing support to transgender persons.
- The Ministry said it had formulated an umbrella scheme, **SMILE (Support for Marginalised Individuals for Livelihood and Enterprise)**, that included two sub-schemes for the **welfare of transgender persons and persons engaged in begging.**
- The scheme will cover rehabilitation, provision of medical facilities, counselling, education, skill development and economic linkages.

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THE HINDU EDITORIALS

1) The gaps in the plan to tackle plastic waste

Context:

- This article highlights the drawbacks associated with the draft regulations on Extended Producer Responsibility (EPR) under Plastic Waste Management rules 2016, recently released by the Environment Ministry.

What is Extended Producer Responsibility?

- EPR is defined as an **environmental protection strategy** that makes the manufacturer of the product responsible for the entire life cycle of the product and especially for the take back, recycling and final disposal of the product.

How should an effective EPR framework be?

- An effective EPR framework should address
 - The issue of plastics and plastic waste management in tandem with the existing machinery
 - Minimize duplication and lead to a positive environmental impact
 - With monitoring mechanisms including penalties for non-compliance.

Issues with the draft regulations

- The draft guidelines fall short in three areas: **people, plastics and processing.**

People

- The guidelines disregards waste pickers and don't involve them as stakeholders in formulating the guidelines.
- It also directs producers to set up a private, parallel plastic waste collection and recycling chain.
- This is similar to dispossessing waste pickers of their means of livelihood as all plastic waste, contributing up to 60% of their incomes.
- *Between 1.5 and 4 million waste pickers in India work without social security, health insurance, minimum wages or basic protective gear.*
- *The SBM Plastic Waste Book attributes India's high recycling rate to the informal sector.*

Plastics

- The EPR guidelines are limited to plastic packaging and do not include multi-material plastic items like sanitary pads, chappals, and polyester that pose a huge waste management challenge.
- Plastic packaging can be roughly grouped into three categories:
 - **Recyclable and effectively handled by the informal sector:** Rigid plastics like PET and HDPE are effectively recycled.
 - **Technologically recyclable but not economically viable to recycle:** Flexible plastics like LDPE and PP bags are recyclable, but due to their contamination with organic waste, light weight, and high volume, the costs of recycling are prohibitively expensive relative to the market value of the output.
 - **Technologically challenging to recycle (or non-recyclable):** Multi-layered and multi-material plastics are low weight and voluminous, making them expensive to handle and transport. Since they are primarily used in food packaging, they often attract rodents, making storage problematic. Even if this plastic is picked, recycling is technologically challenging as it is **heterogeneous** material.

Processing

- Processes like waste-to-energy, co-processing and incineration have been proven to release carbon dioxide, particulate matter, harmful dioxins and furans which have negative climate and health impacts.
- Technologies like chemical recycling and pyrolysis are capital-intensive, yielding low returns and running into frequent breakdowns and technological problems.

Way forward:

EPR Funds

- EPR funds could be deployed for mapping and registration of the informal

sector actors, building their capacity, upgrading infrastructure, promoting technology transfer, and creating closed loop feedback and monitoring mechanisms.

- For easily recycled plastics, EPR requirements could have been fulfilled by formalizing and documenting the work of the informal sector and adequately compensating them.

Government support

- In keeping with the EPR objective that all recyclable plastics are effectively recycled at the cost of the producer, the government could support and strengthen the informal recycling chain by bridging gaps in adequate physical spaces, infrastructure, etc.

Increasing the market value

- Market value for the flexible plastics can be increased by increasing the demand for and use of recycled plastics in packaging, thus creating the value to accommodate the current costs of recycling.

Conclusion:

- The government should redo the consultation process for the draft guidelines and **involve informal workers**.
- The scope of plastics covered by the guidelines could be altered to exclude those plastics which are already efficiently recycled and to **include other plastic and multi-material items**.
- And **end-of-life processing technologies should be closely evaluated**, based not only on their health and environmental impacts, but also on the implications for continued production of low-quality and multi-layered plastics.

2) Looking beyond the Forest Rights Act

Context

- Even after 15 years of implementation of The Forest Rights Act (FRA) there are a lot of issues due to its improper implementation. The supporters of tribal rights allege that the Forest

Department is overlooking the genuine claims of the tribal people.

About Forest Rights Act

- The Forest Rights Act 2006 recognizes the rights of the forest dwelling tribal communities (FDST) and other traditional forest dwellers (OTFD) to forest resources, on which these communities were dependent for a variety of needs, including livelihood, habitation and other socio-cultural needs.
- The Act recognizes and vest the forest rights and occupation in Forest land in Forest Dwelling Scheduled Tribes and Other Traditional Forest Dwellers who have been residing in such forests for generations.

The Act identifies four types of rights:

- **Title rights:** It gives FDST and OTFD the right to ownership to land farmed by tribals or forest dwellers subject to a maximum of 4 hectares. Ownership is only for land granted.
- **Use rights:** The rights of the dwellers extend to extracting Minor Forest Produce, grazing areas etc.
- **Relief and development rights:** To rehabilitate in case of illegal eviction or forced displacement and that is actually being cultivated by the concerned family and no new lands will be to basic amenities, subject to restrictions for forest protection.
- **Forest management rights:** It includes the right to protect, regenerate or conserve or manage any community forest resource which they have been traditionally protecting and conserving for sustainable use.

Objective:

- To undo the historical injustice occurred to the forest dwelling communities
- To ensure land tenure, livelihood and food security of the forest dwelling Scheduled Tribes and other traditional forest dwellers
- To strengthen the conservation regime of the forests by including the responsibilities and authority of Forest Rights holders for sustainable use, conservation of biodiversity and maintenance of ecological balance.

Key Issues

- The FRA's provision for the **constitution of the Forest Rights Committee haven't been followed in many places**. These committees are often constituted by Panchayat Secretaries at short notice and upon the District Magistrates' directives.
- There is **lack of transparency** in the nomination of members for the committees at taluk- and district- levels.
- The FRA provides for **equal rights in titles issued under the Act for women**. They have an **equitable role at every stage of decision-making**. However, on the ground, the **women were hardly visible in this regard**.
- In the initial stages of implementation, there was insistence on satellite images as evidence while other admissible proofs were ignored, as happened in Gujarat resulting in mass rejections of claims.
- In some villages around Bastar, Chhattisgarh, the plots claimed and the documents confirming the award did not match. Besides, the extent of land that was awarded was far smaller than what was claimed.
- **Poor awareness levels of FR act among the tribal people** is also an issue, especially in the scheduled areas which are remotely located.
- The **involvement of NGOs** was missing in some interior areas in States like Chhattisgarh where insurgency was affecting the lives of the people. Evidence suggests that **implementation was better in areas which were fairly close to urban settings or where accessibility was easy**.
- Many tribal areas witnessed a **decline in the quality of forest produce in their vicinity**, thus forcing them to look for other sources of livelihood. In Chhattisgarh, in many villages, earnings from activities such as collection of tendu leaves for rolling local cigars were affected when there was an influx of labourers from Bihar who were willing to work for low wages.

Way forward

- It is essential to ensure that the potential of FRA is maximised. Several steps can be taken to achieve the law's goal.

- **Each state's intervention strategies need to be different** given the distinctive nature of forest history and landscape. To this effect, concerted political and administrative interventions to strengthen the enforcement of the law at the grassroots level would help ensure that forest-dwellers get their statutory rights.
- To improve the condition of the tribal people, especially those living in remote areas, there needs to be a push on every possible aspect of their socioeconomic life. This can be attained if schemes and programmes already drafted for the tribal people are implemented in letter and spirit across the country.
- With protective laws like the Panchayats (Extension to Scheduled Areas) Act, 1996, in place, it is only a matter of will. One way forward could be to **induct people who are sensitive to the cause of tribal people in the decision-making process at every stage**.

3) The cold truth about India's income inequality

Context:

- Recently the **World Inequality Report (Refer Pulse 29)** has shown that India has very high levels of inequality.

Current scenario of India's inequality

- The **gap between the top 1% and the bottom 50% is widest for India** among the major economies in the world and also **wider in India than the United States**, the United Kingdom, China, Russia and France.
- The foreword by Nobel laureate economists, Abhijit Banerjee and Esther Duflo, says, "**India is now among the most unequal countries in the world**".

Causes of this widely present inequality in India

- While the five-year plans which were inspired by the socialist principles contributed to reducing income inequality, **Deregulation and liberalization policies** after the 1980s have led to an increase in inequality.
- While the top 1% has majorly profited from economic reforms, **growth among**

low- and middle-income groups has been relatively slow due to which poverty has persisted.

- India, post-2014, seems to have got into a phase of an even greater reliance on big business and **privatization** to fix economics which results in even more inequality.

Trajectory of inequality and growth rate in India

- The income of the bottom 50% in India grew at the rate of 2.2% per year between 1951 and 1981, but the **growth rate has remained exactly the same** over the past 40 years.
- This makes it clear that irrespective of the economic policy, the state of the bottom half of India barely changed because of the social conditions and constraints in Indian society.

Way forward

- **Smashing social structures** that had pushed those at the bottom to a life in perpetual poverty and deprivation results in better economic prospects.
 - States like Tamil Nadu, Kerala, Karnataka made efforts in breaking the old social structures and those attempts showed in better economic prospects.

Conclusion:

- B.R. Ambedkar had issued a grim warning in 1949 that **if we continue to deny social and economic inequality for long, then the structure of political democracy will get destroyed.**

4) The efficiency myth of Aadhaar linking

Context

- One of the key provisions of the recently passed Election Laws (Amendment) Bill, 2021 is **linking Aadhaar with the electoral rolls**. This article tries to identify the myths associated with Aadhaar linking.

Claims made by the central government for Adhar linkage system

- It will prevent frauds and remove duplicate IDs.
- It ensures savings in welfare programmes due to Aadhaar.

- the estimated cumulative savings/benefits due to Aadhaar in MGNREGA till March, 2021 is Rs 33,475 crores.

Issues surrounding aadhar linkage with Voter ID

- Violates an individual's Right to Privacy
- Enables voter profiling
- Excludes genuine voters

Challenges associated with the Aadhaar project

- **No clear methodology:** Methodology used to arrive at such savings because of adhar in welfare programmes is unclear.
- **Persistent delays in wage payment:** An analysis of more than 18 lakh wage invoices for the first half of 2021-22 by LibTech India demonstrated that **71% of the payments were delayed (called stage 2 delays) beyond the mandated period by the Union Government.**
- **Inefficiency in the Aadhaar system:** In a recent survey of MGNREGA workers, **nearly 57% of job cards of genuine workers were deleted** in a quest to show 100% linking of Aadhaar with job cards.
- **Technical issues surrounding APBS:** The most common reason for payment failures through the APBS is called **"Inactive Aadhaar."** This happens due to an error in software mapping failure with the centralized National Payments Corporation of India, the clearinghouse for APBS.
- **Misdirected payments:** There are several cases of misdirected payments in APBS when the **Aadhaar number of one person gets linked to somebody else's bank account.** These are very hard to detect, as these will appear as successful transactions on the dashboard.
- **Challenges in grievance redressal:** As per UIDAI, its functions include "setting up of facilitation centers and grievance redressal mechanism for redressal of grievances of individuals." However, no such mechanisms exist.

Way forward

- The government has to emphasize the need for a push towards constitutional propriety and accountability for technologies.

- It is time to overhaul the nomenclature for recipients of welfare measures. Instead of calling them “beneficiaries” people should be referred to as “**rights holders**”.
- Conducting **pilot or independent cost-benefit analysis along with user experience** of the recipients or from field-level bureaucrats.

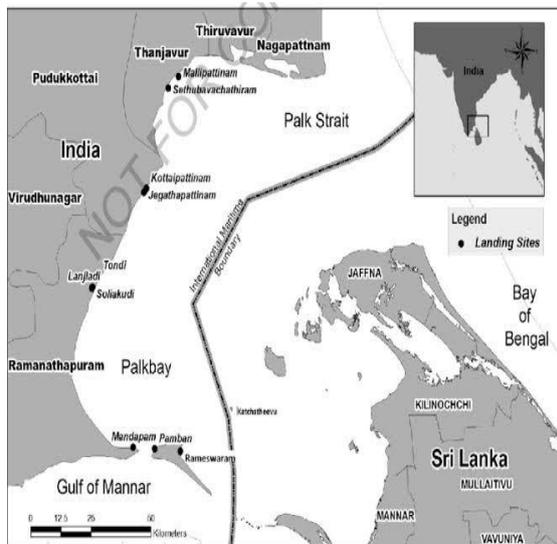
5) Palk Bay conflict

Context

- The arrest of 68 Indian fishermen by the Sri Lankan authorities between December 18 and 20 and the impounding of 10 boats for “poaching” in the territorial waters of Sri Lanka has flared up the conflict between the two countries.

About Palk Bay

- Palk Bay is an **important marine zone between south-eastern India and northern Sri Lanka**.



- Palk Bay is home to diverse resources including 580 species of fish, extends from Point Calimere of Nagapattinam district to Mandapam-Dhanushkodi of Ramanathapuram district over about 250 km.
- With a shallow and flat basin, the region has an average depth of about nine metres.

About the conflict

- The origin of the dispute can be traced to the **October 1921 negotiations** between representatives of the Governments of Madras and Ceylon, on

the need for the delimitation of the Palk Strait and the Gulf of Mannar.

- It was in the mid-1970s that two agreements were signed by India and Sri Lanka, under which the **International Maritime Boundary Line (IMBL)** came into being.
- Instead of settling the issues, the pacts gave way to new problems, including the recurring incidents of **Tamil Nadu fishermen crossing the IMBL and getting caught by the Sri Lankan authorities**.

Cause of the issue

- **Different fishing practices:** The asymmetric nature of fishing practices in Tamil Nadu and the Northern Province of Sri Lanka is said to be the cause of the problem.
 - While Tamil Nadu’s fishing community uses **mechanized bottom trawlers**, its counterpart uses **conventional forms of fishing, as trawling is banned in Sri Lanka**.
- **Difference in resources:** The fishermen of Tamil Nadu continue to cross the IMBL, as the **Sri Lankan side of the Bay is considered to have more fishery resources** than the Indian side.

Way forward

- **Wean away fishermen from bottom trawling:** The deep-sea fishing project, to wean away the fishermen of Tamil Nadu from bottom trawling, launched in July 2017, has not yielded the desired results and Relaxation of norms of the project is under the consideration of the Union Government, to draw greater response from the fishermen.
- **Motivation for deep-sea fishing:** Given the fact that deep sea fishing takes **longer duration and has a higher recurring cost per voyage** than what the fishing community experiences currently, the need for **providing continuous motivation to the fisherfolk assumes critical importance**.
- **Other strategies:** Various strategies, including open sea cage cultivation, seaweed cultivation and processing, and sea/ocean ranching should be adopted.

- **Forming Fish Farmer Producer Organization:** There is a view that if the community is encouraged to form fish farmer producer organizations, it may take to sustainable fishing practices.
- **Creation of International Institution of stakeholders:** A section of specialists favors the creation of an **international institution of stakeholders for regulating the fishing sector in the Bay.**

6) NFHS-5 report card- an analysis

Context

- The recently released fifth edition of the National Family Health Survey (NFHS)-5 although looks encouraging on several fronts, it also highlights the need for further improvement to address gender-based violence and harmful practices against women and girls

About NFHS-5

- NFHS-5 presents a bird's eye view of the state of the nation's health and related development indicators, looks encouraging on several fronts:
 - **Population growth is stabilizing**
 - **Family planning services have improved**
 - **Health systems are delivering better.**
- However, it also **highlights the need for further improvement to address gender-based violence and harmful practices against women and girls**, such as child marriage and gender-biased sex selection which have been exacerbated by **discriminatory social norms and practices** hindering the achievement of the Sustainable Development Goals (SDG) 2030 Agenda and India's development goals.

Total Fertility Rate

- It refers to the average number of children born per woman and it has declined from 2.2 to 2.0 at the national level.
- A total of 31 States and Union Territories (constituting 69.7% of the country's population) have achieved fertility rates below the replacement level of 2.1.

- **Reasons for decline in fertility**
 - **Increase in adoption of modern family planning methods** (from 47.8% in 2015-16 to 56.5% in 2019-21). This indicates significant improvements in access to family planning related information and services.
 - **Increased reach of the health system** to more non-user couples with information about family planning (from 18% in 2015-16 to 24% in 2019-21).
 - 62% of current users have received information about the side-effects of contraceptives which is a crucial indicator of the improved quality of family planning services.
 - **Significant improvements in female literacy:** With 41% women having received 10 or more years of schooling (compared to 36% in 2015-16), fertility decline has taken place alongside notable improvements in access to quality education, especially girls' education.

Improved health delivery

- **From 2015-16 to 2019-21**
 - Maternal health services are steadily improving.
 - **Antenatal care** in the first trimester has increased by 11.4% points and **postnatal care visits** have gone up by 15.6% points.
 - **Institutional births** were accessed by 88.6% of women in 2019-21, marking an increase of 9.8% points from 2015-16.
 - There has also been an increase in **institutional deliveries in public health facilities** (52.1% to 61.9%), demonstrating an improvement in quality of services.

Discriminatory social norms

- The proportion of women (aged 15-24 years) who use **menstrual hygiene products** has increased by almost 20% points between 2015-16 and 2019-21 and currently stands at 77.3%.
- The proportion of women who have their own **bank accounts** has gone up

- by 25.6% points over the same time period to reach 78.6%.
- Around 54% of women have their own **mobile phones** and about one in three women have used the Internet.
- This, coupled with the increase in the proportion of women with more than **10 years of schooling**, lays the building blocks for women's empowerment.
- The prevalence of **child marriage** has gone down marginally from 26.8% in 2015-16 to 23.3% in 2019-21.
- Similarly, **sex ratio at birth** has shown slight improvement (from 919 to 929 over the same time period).

Areas to focus on

Maternal Health

- The survey indicates a worrisome figure of 11% of pregnant women who were still either unreached by a skilled birth attendant or not accessing institutional facilities.
- Further analysis reveals an institutional delivery rate of under 70% in 49 districts of India. Over two-thirds (69%) of these districts are from five States (Nagaland, Bihar, Meghalaya, Jharkhand and Uttar Pradesh).
- Teenage pregnancy has declined marginally by 1% point, and 7.9% of women in the age group of 15-19 years who were already mothers or pregnant at the time of the survey.

Domestic violence and gender discrimination

- One in three women continue to face violence from their spouse.
- Women's participation in the economy continues to remain low (only 25.6% women engaged in paid work, a meagre increase of 0.8% point).
- Women still bear a disproportionate burden of unpaid domestic and care work, hindering their ability to access gainful employment.

Way forward:

Region specific approach

- There is the need for an area-specific approach to improving maternal health services.

Provide Comprehensive sexuality education

- There is a need to invest in comprehensive sexuality education as a key component of life-skills education for both in school and out-of-school adolescents, and ensuring access to quality sexual and reproductive health services for them.

Expand the basket of reproductive health services

- A very small segment of the population is currently accessing the full range of sexual and reproductive health services such as screening tests for cervical cancer (1.9%) and breast examinations (0.9%). These services should be included while expanding the basket of reproductive health services.

Ensure gender equality

- To empower women and ensure gender justice, it is imperative to address harmful practices, such as child marriage and gender-biased sex selection.
- There is a need to enhance the value of women and girls by working on transforming unequal power relations, structural inequalities and discriminatory norms, attitudes and behaviours.

Promote gender-equal values

- There is a need for engaging with men and boys, particularly in their formative years, to promote positive masculinities and gender-equal values.

Conclusion

- Challenging discriminatory social norms that drive gender-based violence and harmful practices, and empower women to exercise agency and autonomy in all spheres of life is need of the hour.

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INDIAN EXPRESS EXPLAINED

1) Why did India reject UNSC draft on climate?

Context

- Recently, India joined Russia in opposing a draft proposal at the United Nations Security Council which would effectively **bring climate change in the Security Council's purview**, allowing it to enforce and hold countries accountable for their promises to mitigate global warming.
- The proposal was sponsored by Niger and Ireland, who claimed that 113 countries, which included permanent Security Council members U.S., the U.K., and France, backed their view to **integrate climate-related security risks into the UNSC's conflict prevention mandate**.
- However, the proposal was vetoed by Russia, and the UNSC recorded 12 in favour, 2 against as well as an abstention from China.

Why are sponsors keen to introduce climate change into the UNSC mandate?

- Climate change has been discussed at the UNSC since 2007, and several UNSC statements reference the impact of global warming on conflicts.
- Both Niger and Ireland pointed out that people in countries most vulnerable to climate change are also most vulnerable to terror groups and violence, attempting to connect both to the UNSC's mandate on peacekeeping.
- They said climate-related conflicts over arable land, food security, desertification and forced migration, the increase in climate refugees due to global warming would all eventually lead to conflicts that the UNSC needs to weigh in on.
- According to a report by **Peace Research Institute SIPRI**, 10 of 21 ongoing UN peacekeeping operations are located in countries ranked as most exposed to climate change.
- Some commentators in favour, said it was only after 2000 when the UNSC passed **Resolution 1325 on women, peace and security** that gender

violence in conflict really entered the debate, and hoped they could do the same for climate.

Why did India vote with Russia?

- India's stand on the proposal is consistent with a desire **not to allow the UNSC too broad a mandate to intervene and overreach on sovereign issues**.
- While the **UN Framework Convention on Climate Change (UNFCCC)**, which held the **Conference of Parties (COP) in Glasgow** last month collates the voluntary contributions of countries in order to battle climate change and promote sustainability, India believes **these are not issues where the UNSC should interfere**.
- India suggested that it would support a more **limited draft that focused exclusively on the Sahel region of North Africa**, where desertification of arid areas is directly sparking water-related conflict, but this was not considered, and India then recorded its first negative vote in this term at the UNSC.

Will the climate security proposal be reviewed and resubmitted?

- Given the strong support the proposal has received, and the numerically small opposition from Russia and India at the UNSC at present, it is unlikely that the issue will go away, and it is only a matter of time before American, European, African and Latin American countries come together with another proposal to introduce climate change to the Security Council's mandate.
- The current proposal is a revised version of a draft proposed by Germany that was opposed in the UNSC in 2020.
- According to its backers, the **real objective is to ensure that the UNSC considers the impact of climate change along with other causes of conflicts it is debating**. However, those opposed to it, which include about 80 countries, say that bringing climate change into an already polarised

Security Council, torn between the U.S., the U.K. and France versus Russia and China will only deepen schisms over an issue that concerns the whole globe and requires an undivided approach.

- As one of the most populous countries in the UNSC at present, and representing a region that is itself highly exposed to the risks of climate change, India's voice will be important in deciding the debate between securitising climate change, and ensuring the global peacekeeping body doesn't overstep its mandate.

2) Surrogacy (Regulation) Act, 2021

About the Act

- The Surrogacy (Regulation) Act, 2021 was recently passed by the Parliament.
- The Act defines surrogacy as a practice where a woman gives birth to a child for an intending couple with the intention to hand over the child after the birth to the intending couple.

Highlights of the Act

Regulation of surrogacy

- The Act **prohibits commercial surrogacy, but allows altruistic surrogacy**. Altruistic surrogacy involves **no monetary compensation** to the surrogate mother other than the medical expenses and insurance coverage during the pregnancy.
- Commercial surrogacy includes surrogacy or its related procedures undertaken for a monetary benefit or reward (in cash or kind) exceeding the basic medical expenses and insurance coverage.

Purposes for which surrogacy is permitted

- Surrogacy is permitted when it is: (i) for intending couples who suffer from proven infertility; (ii) altruistic; (iii) not for commercial purposes; (iv) not for producing children for sale, prostitution or other forms of exploitation; and (v) for any condition or disease specified through regulations.

Eligibility criteria for intending couple

- The intending couple should have a '**certificate of essentiality**' and a '**certificate of eligibility**' issued by the appropriate authority.

- A certificate of essentiality will be issued upon fulfilment of the following conditions: (i) a certificate of proven infertility of one or both members of the intending couple from a District Medical Board; (ii) an order of parentage and custody of the surrogate child passed by a Magistrate's court; and (iii) insurance coverage for a period of 16 months covering postpartum delivery complications for the surrogate.
- The certificate of eligibility to the intending couple is issued upon fulfilment of the following conditions: (i) the couple being **Indian citizens and married for at least five years**; (ii) **between 23 to 50 years old (wife) and 26 to 55 years old (husband)**; (iii) they **do not have any surviving child** (biological, adopted or surrogate); this would not include a child who is mentally or physically challenged or suffers from life threatening disorder or fatal illness; and (iv) other conditions that may be specified by regulations.

Eligibility criteria for surrogate mother

- To obtain a **certificate of eligibility** from the appropriate authority, the surrogate mother has to be: (i) a **close relative** of the intending couple; (ii) a **married woman** having a child of her own; (iii) **25 to 35 years old**; (iv) a **surrogate only once** in her lifetime; and (v) possess a **certificate of medical and psychological fitness** for surrogacy. Further, the surrogate mother cannot provide her own gametes for surrogacy.

National and State Surrogacy Boards

- The central and the state governments shall constitute the **National Surrogacy Board (NSB) and the State Surrogacy Boards (SSB)**, respectively.
- Functions of the NSB include, (i) advising the central government on policy matters relating to surrogacy; (ii) laying down the code of conduct of surrogacy clinics; and (iii) supervising the functioning of SSBs.

Parentage and abortion of surrogate child

- A child born out of a surrogacy procedure will be **deemed to be the biological child of the intending couple**. An abortion of the surrogate

child requires the **written consent** of the surrogate mother and the authorisation of the appropriate authority. This authorisation must be compliant with the **Medical Termination of Pregnancy Act, 1971**.

- Further, the surrogate mother will have an option to withdraw from surrogacy before the embryo is implanted in her womb.

Offences and penalties

- The offences under the Act include: (i) undertaking or advertising commercial surrogacy; (ii) exploiting the surrogate mother; (iii) abandoning, exploiting or disowning a surrogate child; and (iv) selling or importing human embryo or gametes for surrogacy.
- The penalty for such offences is imprisonment up to 10 years and a fine up to 10 lakh rupees.

Why in News?

- President Ram Nath Kovind has given his assent to the Surrogacy (Regulation) Act, 2021.

3) Why raise legal age of marriage for women, or why not

What's in the news?

- The Prohibition of Child Marriage (Amendment) Bill, which seeks to increase the legal age of marriage of women from 18 to 21, has been referred to the Parliamentary Standing Committee on Education, Women, Children, Youth and Sports.
- The proposed law will apply to all communities in the country and, once enacted, will supersede existing marriage and personal laws.
- Accordingly, the government will bring amendments to seven personal laws — the Indian Christian Marriage Act; the Parsi Marriage and Divorce Act; the Muslim Personal Law (Shariat) Application Act; the Special Marriage Act; the Hindu Marriage Act; and the Foreign Marriage Act.

The rationale

- The Bill aims to increase the legal age of marriage of women because of its **correlation to health and social indices** such as infant mortality,

maternal mortality, and nutrition levels among mothers and children.

- The move is claimed to be based on the **rationale of women's empowerment and gender parity**.

The opposition

- Experts have been opposing a raised age of marriage on **two broad counts**. First, the **law to prevent child marriage does not work**. While **child marriage has declined, it has been marginal**: from 27% in 2015-16 to **23% in 2019-20**, according to National Family Health Survey (NFHS) 5. The decrease was, however, **dramatic in NFHS 4**, from 47% in NFHS 3.
- The marriage age at 18 was set in 1978, but child marriage started to decline only in the 1990s, when the **government stressed primary education of the girl child and took measures to reduce poverty**.
- The experts said girls being taken out of school to be married off is a reasoning blown out of proportion; often the girl child drops out after primary school simply because **she has no access to higher education, and is then married off**.
- The second objection being raised is the **criminalisation of a large number of marriages** that will take place once the law comes into effect. While 23% of marriages involve brides under age 18, **far more marriages take place under age 21**.
- The median age at first marriage for women aged 20-49 increased to 19 years in 2015-16 from 17.2 years in 2005-06, but remained under 21 years.

Who will be affected?

- Experts noted that **70% of early marriages take place in deprived communities** such as SCs and STs, and said the law will simply push these marriages underground instead of preventing them.
- According to NFHS 4 (2015-16), the median age at first marriage for women aged 25-49 is higher among the social categories of Others (19.5 years), OBC (18.5), ST (18.4) and SC (18.1).
- The experts said **rural women will be affected more than urban women**.

According to NFHS 4, the median age at first marriage (age 25-49) for urban women (19.8) is 1.7 years more than that for rural women (18.1).

- A study by the **International Centre for Research on Women** has found that **girls out of school are 3.4 times more likely to be married or have their marriage already fixed** than girls who are still in school.
- According to the **State of the World Report 2020 by UNFPA**, in India, 51% of young women with no education and 47% of those with only a primary education had married by age 18, compared to 29% of young women with a secondary education and 4% with post-secondary education.

4) Election Laws (Amendment) Act, 2021

Highlights of the Act

Objective

- The Election Laws (Amendment) Act, 2021 amends the Representation of the People Act, 1950 and the Representation of the People Act, 1951 to **implement certain electoral reforms**.
- The 1950 Act provides for allocation of seats and delimitation of constituencies for elections, qualifications of voters, and preparation of electoral rolls. The 1951 Act provides for the conduct of elections, and offences and disputes related to elections.

Linking electoral roll data with Aadhaar

- The 1950 Act provides that a person may **apply to the electoral registration officer for inclusion of their name in the electoral roll** of a constituency. After verification, if the officer is satisfied that the applicant is entitled to registration, he will direct the applicant's name to be included in the electoral roll.
- The 2021 Act adds that the **electoral registration officer may require a person to furnish their Aadhaar number for establishing their identity**. If their name is already in the electoral roll, then the **Aadhaar number may be required for authentication of entries in the roll**.

- Persons will not be denied inclusion in the electoral roll or have their names deleted from the roll, if they are unable to furnish Aadhaar number due to sufficient cause as prescribed. Such persons may be permitted to furnish **alternate documents** prescribed by the central government.

Qualifying date for enrolment in electoral roll

- Under the 1950 Act, the **qualifying date for enrolment in the electoral roll is January 1** of the year in which such roll is being prepared or revised. This implies that a person who turns 18 (i.e., eligible to vote) after January 1 can enrol in the electoral roll only when the roll is prepared/ revised the next year.
- The latest Act amends this to provide **four qualifying dates in a calendar year, which will be January 1, April 1, July 1, and October 1**.

Requisitioning of premises for election purposes

- The 1951 Act permits the state government to requisition premises needed or likely to be needed for being used as polling stations, or for storing ballot boxes after a poll has been conducted.
- The latest Act **expands the purposes for which such premises can be requisitioned**. These include using the premises for counting, storage of voting machines and poll-related material, and accommodation of security forces and polling personnel.

Gender-neutral provisions

- The 1950 Act permits certain persons who are **ordinarily resident in a constituency to register in electoral rolls**. Such persons include those **holding a service qualification**, such as members of the armed forces or central government employees posted outside India. The **wives of such persons are also deemed to be ordinarily residing** in the same constituency if they reside with them.
- The 1951 Act **enables the wife of a person holding a service qualification to vote either in person or by postal ballot**.

- The 2021 Act **replaces the term 'wife' with 'spouse' in both the Acts.**

What's in the news?

- President Ram Nath Kovind has given his assent to the Election Laws

(Amendment) Act, 2021 recently passed by the Parliament.

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INFOGRAPHIC OF THE WEEK

1) Zero Budget Natural Farming

Zero Budget Natural Farming

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About ZBNF

In the recent past, there has been a global demand to shift to sustainable farming systems, such as Zero Budget Natural Farming (ZBNF).



ZBNF



India, too, introduced ZBNF in its Union Budget 2019-20.



**UNION BUDGET
2019-2020**

ZBNF is a method of **chemical-free agriculture** drawing from traditional Indian practices.



Chemical Free



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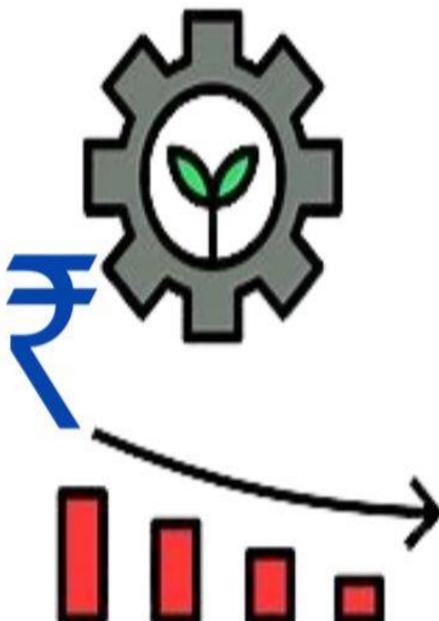
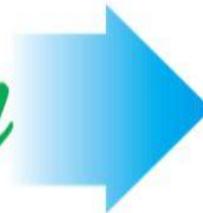
It was originally promoted by **Maharashtrian agriculturist** and Padma Shri recipient **Subhash Palekar**, who developed it in the mid-1990s as an alternative to the Green Revolution's methods driven by chemical fertilizers and pesticides and intensive irrigation.

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Subhash Palekar

green
Revolution



Without the need to spend money on these inputs or take loans to buy them, the cost of production could be reduced and **farming made into a “zero budget” exercise**, breaking the debt cycle for many small farmers.

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ZBNF is also **against vermicomposting**, which is the mainstay of typical organic farming.



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Jeevamrutha



Jeevamrutha

Instead of commercially produced chemical inputs, the ZBNF promotes the application of jeevamrutha, a **mixture of fresh desi cow dung and aged desi cow urine, jaggery, pulse flour, water and soil on farmland.**

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This is a fermented microbial culture that **adds nutrients to the soil**, and acts as a **catalytic agent** to promote the activity of microorganisms and earthworms in the soil.



200 LITRES

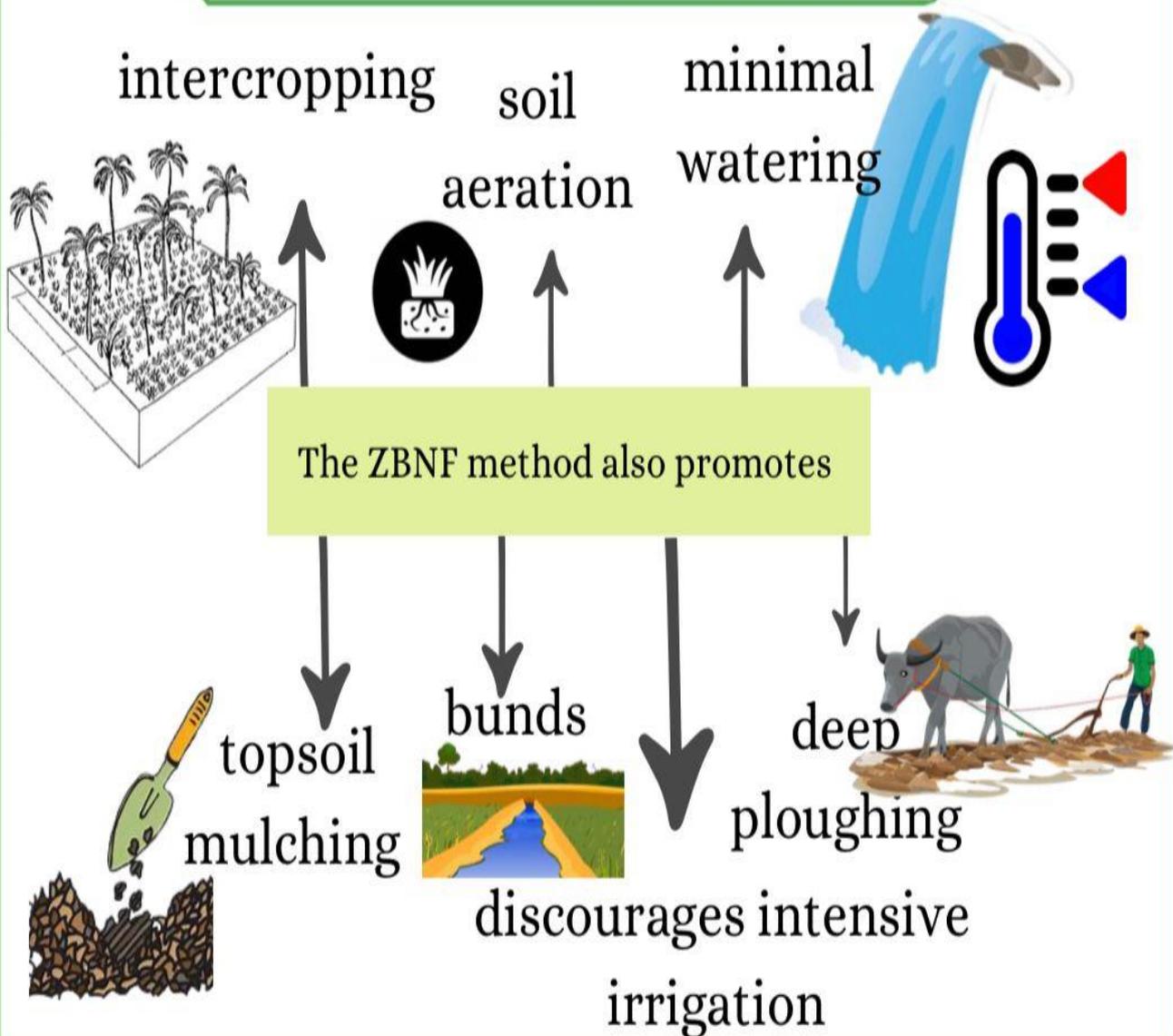


About 200 litres of jeevamrutha should be sprayed twice a month per acre of land. Only one local indian breed cow is needed for 30 acres of land.

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Other techniques in ZBNF



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Advantages of ZBNF

Input costs are near zero as no fertilizers and pesticides are used.



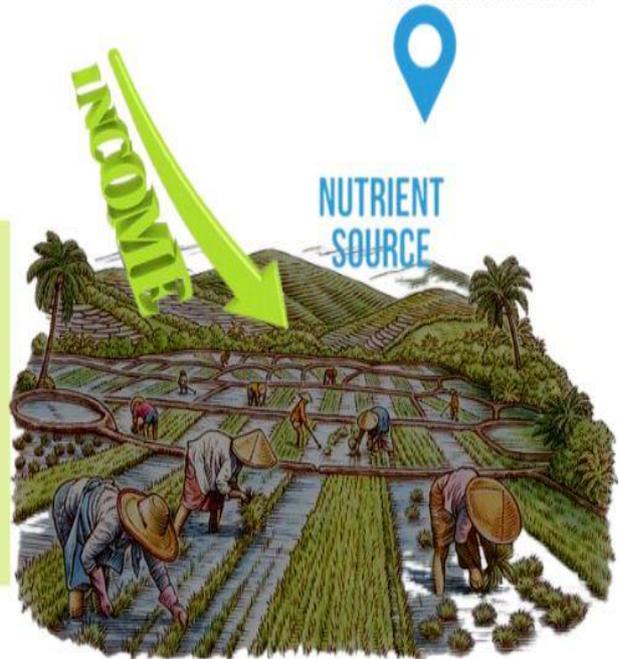
ZBNF farms were able to **withstand drought and flooding.**



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The planting of multiple crops and border crops on the same field provide **varied income** and **nutrient sources**.

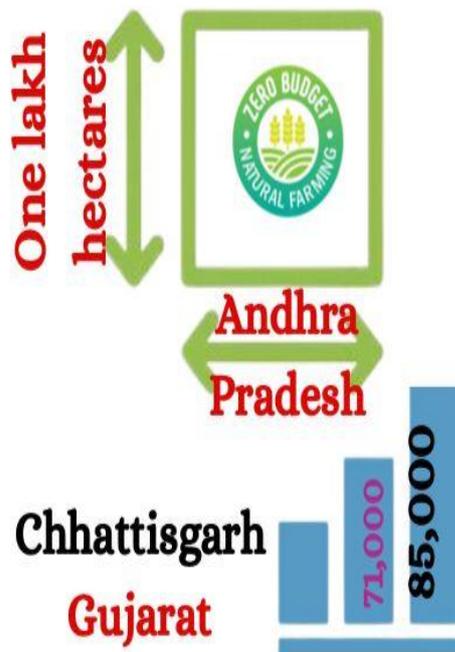


There is reduced usage of water and electricity, improved health of farmers, flourishing of local ecosystems and biodiversity and no toxic chemical residues in the environment.



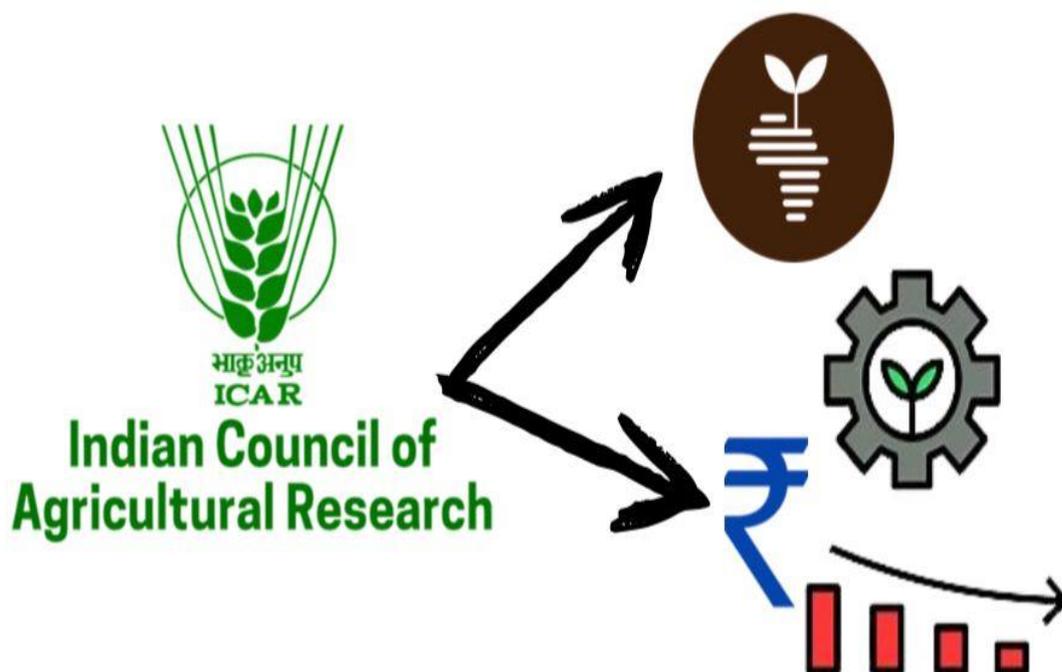
States with implementation plans for ZBNF

The Centre has sanctioned the proposals of **eight States** for support under the **Paramparagat Krishi Vikas Yojana** scheme this year.



Andhra Pradesh has the biggest ambition to bring **one lakh additional hectares** of land under ZBNF under the scheme, followed by **Chhattisgarh**, with **85,000 additional hectares** and **Gujarat**, with **71,000 additional hectares**.

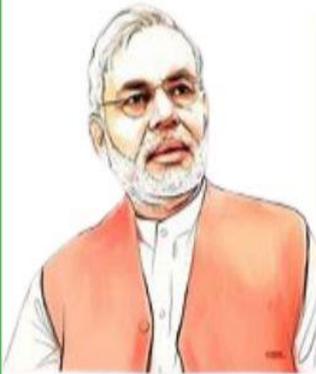
The Indian Council of Agricultural Research, which is conducting studies on the ZBNF methods practised by **basmati and wheat farmers** in Modipuram (Uttar Pradesh), Ludhiana (Punjab), Pantnagar (Uttarakhand) and Kurukshetra (Haryana), evaluating the **impact on productivity, economics and soil health including soil organic carbon and soil fertility**.



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Why in News



The Prime Minister is set to promote the ZBNF'S benefits and provide more details on the strategies to implement it at a national conclave in Anand, Gujarat.

Anand, Gujarat



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