

CURRENT AFFAIRS NOVEMBER 2021

PADMA AWARDS PRESENTED BY THE PRESIDENT

- These awards were instituted in the year 1954 and announced every year on the occasion of Republic Day except for brief interruption(s) during the years 1978 and 1979 and 1993 to 1997.
- o The award is given in three categories, namely
 - ✓ Padma Vibhushan for exceptional and distinguished service
 - ✓ Padma Bhushan for distinguished service of a high order and
 - ✓ Padma Shri for distinguished service
- o The award seeks to recognize achievements in all fields of activities or disciplines where an element of public service is involved.
- o They are conferred on the recommendations made by the Padma Awards Committee, which is constituted by the Prime Minister every year.
- ✓ Even self-nomination can be made.

DARJEELING TOY TRAIN

- More than two decades after the Darjeeling Himalayan Railway (DHR) was designated a UNESCO World Heritage Site, India has registered the two logos of the iconic 'Toy Train' internationally as its intellectual property.
 - o The use of these logos anywhere in the world will now require written permission from India and the payment of a fee.
- This will put the Darjeeling Toy Train's 'Iron Sherpa' blue steam locomotives of the Darjeeling heritage train on the same pedestal as the legendary transalpine Rhaetian Railway in Switzerland.

BEST TOURISM VILLAGES (BTV) BY UNWTO

- BTV is a global initiative to highlight those villages where tourism preserves cultures and traditions, celebrates diversity, provides opportunities and safeguards biodiversity.

- o It aims to support villages to enhance their rural tourism potential through training and access to opportunities for improvement.

- Pochampally Village (Telangana) was selected as one of the BTV by United Nations World Tourism Organisation (UNWTO).

- o Pochampally is often referred to as Silk City of India for the exquisite sarees woven through Ikat style.

- ✓ Pochampally Ikat received GI Status in 2004.

- o Acharya Vinobha Bhave launched Bhoodan Movement from Pochampally in 1951.

SRINAGAR JOINS UNESCO CREATIVE CITIES NETWORK (UCCN)

- Srinagar is the homeland to various decorative and renowned arts and crafts like Paper making, Kashmiri Shawl, Kashmiri Silk, Art of Woodwork, Kashmiri Carpets, Silverware work etc.

- o It is situated in the centre of the Kashmir Valley on the banks of the Jhelum River.

- By joining the Network, cities commit to sharing their best practices and developing partnerships involving the public and private sectors as well as civil society to strengthen creation, production, distribution and dissemination of cultural activities, goods and services.

- From India other cities in UCCN includes

- o Jaipur (Crafts and Folk Arts).

- o Varanasi and Chennai (Music).

- o Mumbai (Film).

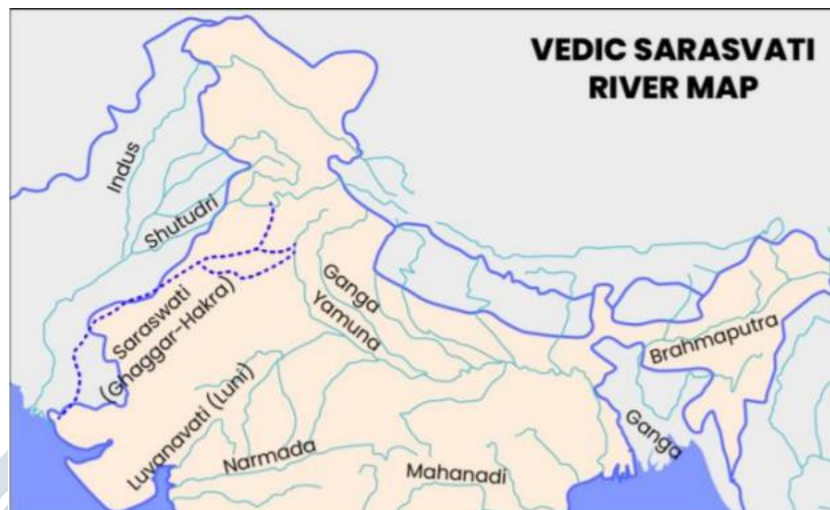
- o Hyderabad (Gastronomy).

- UNESCO is responsible for coordinating international cooperation in education, science, culture and communication.

- o It was established in 1946 and is based in Paris.

HARYANA: A 1,600-YR-OLD SITE OF 'CONTINUED HABITATION'

- The archaeological site has been discovered near Haryana's **Sandhai village** (Yamunanagar district) with its ties to lost habitations along the legendary Saraswati river.
 - o The Saraswati, a mythical river mentioned in ancient Hindu scriptures, is believed to be existed over 5,000 years ago but disappeared underground because of earthquakes and other geographical developments.
- Key findings
 - o Evidence of habitation: Bricks, earthenware and remains of a statue.
 - o Religious evidence: Nagara-style temple of stones, scriptural evidence of a pillar apart from material related to the base of a construction.
- Time period
 - o Indo-Sasanian (Iranians) coins of Sri-ha type which belong to the 7th century in this region.
 - o The artefacts found here look like the post Gupta empire to the Gurjara-Pratihara period (8th-9th Century AD).
 - o This site may be between the Kushanera to the Gurjara- Pratihara period. However, some bricks apparently belong to the Kushan period.
 - o The "actual chronology of the site will be known after clearance of the vegetation from the site as currently the area is under forest.



JANJATIYA GAURAV DIVAS

Recently, Union Cabinet decided to declare **November 15** as 'Janjatiya Gaurav Divas' to mark the birth anniversary of **Birsa Munda** and honour the contributions of Scheduled Tribes to Indian history and culture.

- The day will be celebrated every year and would recognize the efforts of the tribals for preservation of cultural heritage and promotion of Indian values of valour, hospitality and national pride.
- India's freedom struggle was strengthened by several movements by tribal communities such as **Santhals, Tamars, Kols, Bhils, Khasis** and **Mizos** to name a few.
- Tribal movements in different regions of the country against the British colonial rule got linked with the national freedom struggle and inspired Indians all over the country.

WOLBACHIA BACTERIA

- Recently, an Indonesian research showed reduction in dengue cases (as much as 77%) after breeding dengue mosquitoes with Wolbachia Bacteria.
- Wolbachia are common bacteria that occur naturally in almost 60% of insect species, including some mosquitoes, fruit flies, moths, dragonflies and butterflies. Wolbachia are safe for humans.

- Wolbachia does not occur naturally in Aedes aegypti mosquito species that spreads dengue and other diseases such as chikungunya, Zika and yellow fever.
 - o When Aedes aegypti mosquitoes carry Wolbachia, bacteria compete with viruses like dengue, Zika etc and makes it harder for viruses to reproduce inside the mosquitoes.

ZYCOV-D, THE WORLD'S FIRST NEEDLE-FREE COVID-19 VACCINE

- This is world's first needle-free plasmid DNA vaccine, administer in first two layers of the skin using a needle-free applicator.
 - o This same technology is used in diabetic patent for insulin.
- It is a three-dose vaccine administered in the interval of 0-28-56 days.
- Plasmid DNA vaccine
 - o A piece of DNA encoding the antigen (part of the disease-causing pathogen that induces an immunity response from our bodies) is inserted into a bacterial plasmid.
 - o This DNA plasmids carrying the antigen are injected into the muscle. Once the DNA gets inside our cells, they start producing antigens, which triggers an immune response.
 - o DNA vaccines can be easily manufactured, are inexpensive and safer.

WHO DESIGNATES NEW CORONAVIRUS STRAIN AS 'VARIANT OF CONCERN', NAMES IT 'OMICRON'

- This Variant, B.1.1.529 was first reported from South Africa and is being considered potentially more dangerous than the Delta variant.

WHO Classification of COVID-19 variants

Variant of Concern

- It is a variant that results in rise in transmissibility, increase in fatality and a significant decrease in effectiveness of vaccines, therapy and other health measures.
- The Alpha, Beta, Gamma and Delta variants fall under it.

Variant of Interest

- It is a variant with a genetic capability that affects characteristics of virus such as disease severity, immune escape, transmissibility and diagnostic escape, and causes a consequential volume of community transmission.
- The Eta, Iota, Kappa and Lambda fall under it.

Variants under Monitoring (VUM)

- It is a variant with genetic changes that are suspected to affect virus characteristics but evidence of phenotypic or epidemiological impact is currently unclear.
- It may pose a future risk.

DOUBLE ASTEROID REDIRECTION TEST (DART) MISSION

- It is NASA's first planetary defense test mission was launched recently.
- Aim of the mission is to test the newly developed technology that would allow a spacecraft to crash into an asteroid and change its course.
 - o Mission will test the new technology to be prepared in case an asteroid heads towards Earth in the future.
- The target of the spacecraft is a small moonlet called Dimorphos (that orbits a larger asteroid named Didymos).
 - o Moonlet is a small natural or artificial satellite

ISRO PREVENTS COLLISION OF CHANDRAYAAN-2 ORBITER AND WITH NASA'S LUNAR RECONNAISSANCE ORBITER (LRO)

- A collision avoidance manoeuvre (CAM) was performed by Indian Space Research Organisation (ISRO) after data showed that closest approach distance would be only about 3 km around Lunar North pole sparking tensions of possible collisions.

- o It is common for satellites in Earth Orbit to undergo CAMs to mitigate collision risk due to space objects including space debris and operational spacecraft.

- o However, this is the first time such a critically close conjunction was experienced for a space exploration mission of ISRO.

- **About Chandrayaan-2**

- o Mission was launched in 2019 with the aims of studying all areas of the Moon combining exosphere, the surface as well as the sub-surface of the moon in a single mission.

- o Chandrayaan-2 comprised an **Orbiter**, **Lander** (Vikram) and **Rover** (Pragyan) to explore the unexplored South Pole of the Moon.

- o Though mission spacecraft failed its soft landing on the Moon's surface, its Orbiter (which forms a significant chunk of the mission) continues to successfully collect and relay crucial insights about the Moon to date.

INTERNET PROTOCOL VERSION 6 (IPV6)

- Recently, DoT fixed 30 June 2022 as deadline for complete transition to IPv6 for government organisations and December 2022 for internet service providers

- IPv6 is the most recent version of the Internet Protocol (IP) to provide an identification and location system for computers on networks and routes traffic across the Internet known as IP address.

- o IP is a set of requirements for addressing and routing data on the Internet.

- o An IP address is a unique identifier assigned to a device or domain that connects to the Internet.

- As compared to IPv4, it is fast, more secure and offers 340 undecillion unique address spaces through its 128 bit address scheme.

IPv4	IPv6
Deployed 1981	Deployed 1998
32-bit IP address	128-bit IP address
4.3 billion addresses Addresses must be reused and masked	7.9×10^{28} addresses Every device can have a unique address
Numeric dot-decimal notation 192.168.5.18	Alphanumeric hexadecimal notation 50b2:6400:0000:0000:6c3a:b17d:0000:10a9 (Simplified - 50b2:6400::6c3a:b17d:0:10a9)
DHCP or manual configuration	Supports autoconfiguration

LASER INTERFEROMETER GRAVITATIONAL-WAVE OBSERVATORY (LIGO) PROJECT

- Hingoli revenue department (Maharashtra) has handed over land for Laser Interferometer Gravitational-Wave Observatory (LIGO) project for setting up a laboratory along with some other related infrastructure.
- In 2016, central government had given approval to LIGO-India (a Joint India-US detector) for research on gravitational waves.
- Project will be funded by Department of Atomic Energy (DAE) and Department of Science and Technology (DST).

About LIGO

- It was designed for direct detection of gravitational waves predicted by Einstein's General Theory of Relativity.
- It is being operated at two sites in US (Washington and Louisiana).
 - o Also, there are 3 LIGO's sisters' facilities: Virgo in Italy, GEO 600 in Germany and KAGRA (Kamioka Gravitational Wave Detector) in Japan and LIGO- India.

Significance of detection of Gravitational Waves by LIGO

- Information that Gravitational waves can provide
 - o Gravitational waves will provide a test of Einstein's theory of general relativity under extreme conditions of gravity where it has never before been tested.
 - o They will also give more information about the unimaginably dense form of matter that makes up neutron stars.
 - o Gravitational waves will also tell us about how many objects like black holes and neutron stars exist in the Universe.

About Gravitational Waves





- They are 'ripples' in space-time travelling at speed of light caused by some of most violent and energetic processes in Universe.
- They carry with them information about their cataclysmic origins, as well as invaluable clues to nature of gravity itself.
- They are created when
 - o objects move at very high speeds
 - o a star explodes asymmetrically (called a **supernova**)
 - o two big stars orbit each other
 - o two black holes orbit each other and merge

5G TECHNOLOGY

Reliance Jio, Bharti Airtel and Vodafone Idea received a six-month extension from the Department of Telecommunications (DoT) to conduct 5G trials till May 2022.

About 5G technologies

- 5G (the fifth generation of cellular networks) is designed to improve network connections by addressing the legacy issues of speed, latency and utility, which the earlier/ current generation of mobile networks could not address.
- It will also have an enhanced throughput to handle more simultaneous connections at a time than current generation networks.
- 5G mainly works in 3 bands, namely low, mid and high frequency spectrum.
- 5G has the potential to add between 0.35 to 0.5 percent to the GDP of India.

3G vs 4G vs 5G vs 6G					
		3G	4G	5G	6G
	Deployment	2004-06	2006-10	2020	2028-2030
	Bandwidth	2 mbps	200 mbps	>1 gbps	1 tbps
	Latency	100-150 millisecond	20-30 millisecond	<10 millisecond	<1 microsecond
	Average Speed	144 kbps	25 mbps	200-400 mbps	About 50 times faster than 5G

SWACHH SURVEKSHAN 2021

- SS is an annual survey of cleanliness, hygiene and sanitation in cities and towns across India under Swachh Bharat Mission-Urban (SBM-U).
 - o It is conducted by MoHUA with Quality Council of India (QCI) as its implementation partner.
 - o The objective of the survey is to encourage large scale citizen participation, ensure sustainability of initiatives taken towards garbage free cities (GFC) and open defecation free cities (ODF) among others.
 - o First Survekshan was done in 2016.

- With the participation of 4,320 cities, the 6th edition of SS has become the world's largest urban cleanliness survey.

- Key Findings

- o Indore won title of '**Cleanest City**' for fifth consecutive time followed by Surat and Vijayawada in the 'more than 1 lakh population' category
- o Varanasi emerged as '**Best Ganga Town**' while Ahmedabad Cantonment won title of 'India's Cleanest Cantonment'
- o Additionally, under Prerak Daaur Samman, a new performance category introduced under Swachh Survekshan 2021, five cities – Indore, Surat, Navi Mumbai, New Delhi Municipal Council and Tirupati were categorized as 'Divya' (Platinum).

HUNGER AND MALNUTRITION

India was ranked 101 among 116 countries in the Global Hunger Index (GHI) for 2021, trailing behind its South Asian neighbours Pakistan, Bangladesh and Nepal.

Key Highlights of report

- Global hunger, represented by a GHI score of 17.9, is in the moderate category. The world as a whole will fail to achieve a low level of hunger by 2030.
- Conflict, climate change, and the COVID-19 pandemic are the most powerful forces driving hunger.
- Level of hunger across the world:
 - o Somalia, suffers from an extremely alarming level of hunger.
 - o Africa, South of the Sahara and South Asia are the world regions where hunger levels are highest. Hunger in both regions is considered serious.
 - o Europe and Central Asia has the lowest 2021 GHI score of any region.
- Case in India: With a score of 27.5, India has a level of hunger that is serious. Performance under various indicators:
 - o Wasting in children under five years (%):17.3

- o Proportion of undernourished in the population (%): 15.3
- o Prevalence of stunting in children under five years (%): 34.7
- o Under-five mortality rate (%): 3.4

About Global Hunger Index (GHI)

- The GHI is a peer-reviewed annual report, jointly published by Concern Worldwide and Welthungerhilfe, designed to comprehensively measure and track hunger at the global, regional, and country levels.
- GHI scores are based on the values of four component indicators:
 - o **Undernourishment:** the share of the population with insufficient caloric intake;
 - o **Child wasting:** the share of children under age five who have low weight for their height, reflecting acute undernutrition;
 - o **Child stunting:** the share of children under age five who have low height for their age, reflecting chronic undernutrition;
 - o **Child mortality:** the mortality rate of children under age five, partly reflecting the fatal mix of inadequate nutrition and unhealthy environments.

E-AMRIT PORTAL

- E-Amrit', a web portal on electric vehicles (EVs) was launched by India at the COP26 Summit in Glasgow, UK.
- It is a one-stop destination for all information on electric vehicles—busting myths around the adoption of EVs and complement initiatives of government on raising awareness on EVs.
- The portal has been developed and hosted by NITI Aayog under a collaborative knowledge exchange programme with the UK government and as part of the UK–India Joint Roadmap 2030.

NATIONAL INTERLINKING OF RIVERS AUTHORITY (NIRA)

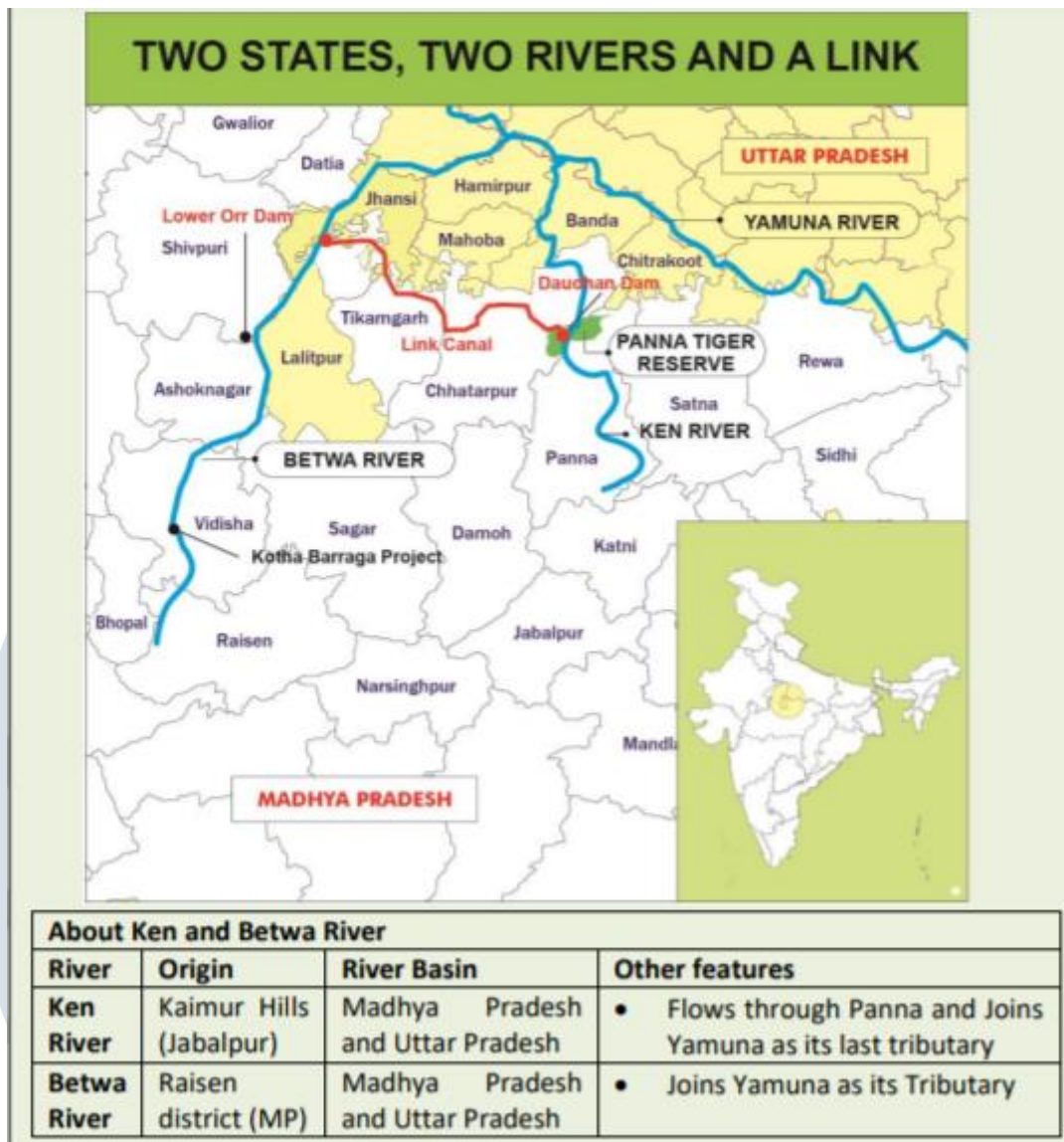
Recently, the Centre has set in motion the process of creating the exclusive body- National Interlinking of Rivers Authority (NIRA)- to implement river-linking projects in India.

What is National Interlinking of Rivers Authority (NIRA)?

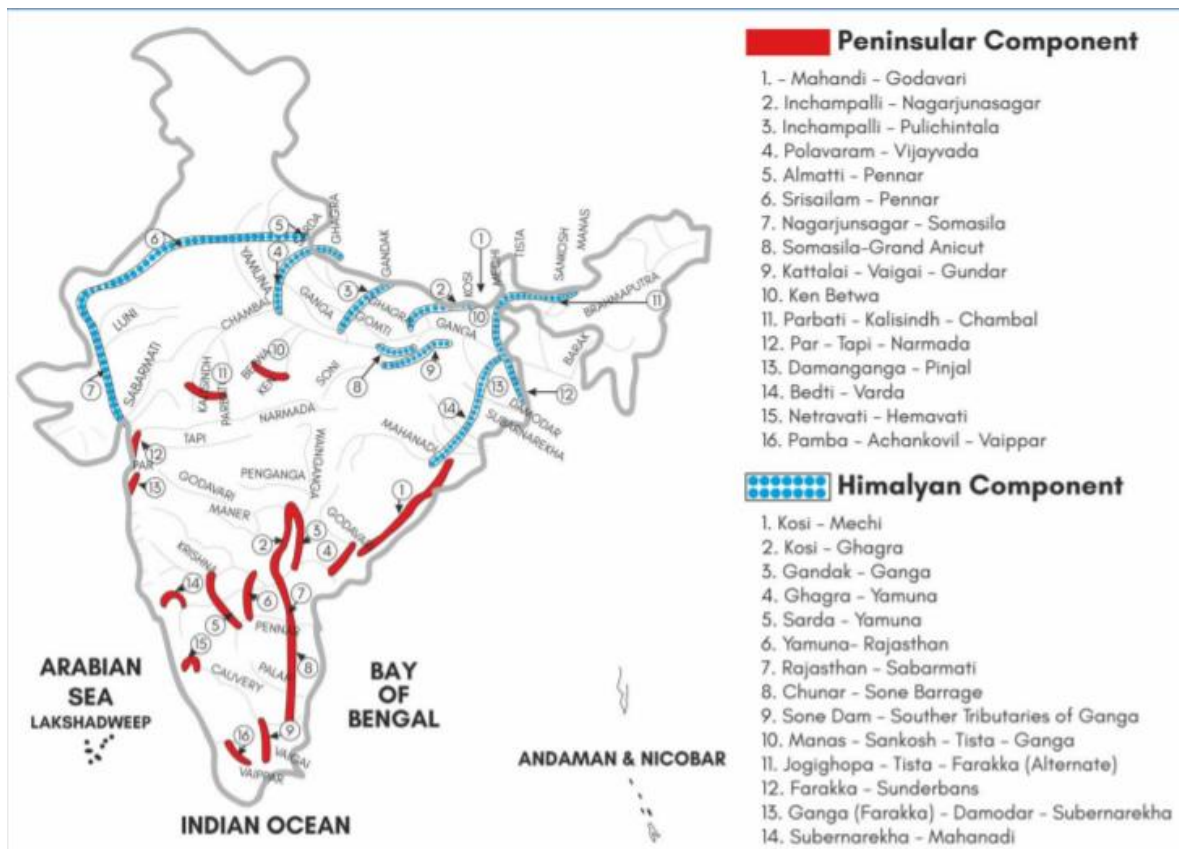
- NIRA is an independent autonomous body for planning, investigation, financing and the implementation of the river interlinking projects in the country.
- NIRA will be headed by a Government of India Secretary-rank officer.
- It will replace the existing National Water Development Agency (NWDA) and will function as an umbrella body for all river linking projects.

Ken-Betwa River interlinking Project (RLP)

- Recently, Cabinet approved the funding and implementation of Ken-Betwa RLP.
- It is the first project under the National Perspective Plan for interlinking of rivers.
- Ken-Betwa RLP transfers water from Ken to Betwa River through the construction of Daudhan Dam and a canal linking the two rivers. Both these rivers are tributaries of river Yamuna.
- It will carry water from water surplus areas to drought prone and water deficit areas in Bundhelkhand Region.
- Implementing Agency: Ken-Betwa Link Project Authority (KBLPA), a Special Purpose Vehicle.
- However, there are concerns like the project will partly submerge the Panna Tiger Reserve in MP and affect the habitat of vultures and jackals.



- **Aim of ILR:** It is aimed at linking different surplus rivers of country with the deficient rivers so that the excess water from surplus region could be diverted to deficient region
- As of now, there are **six ILR projects**: Ken- Betwa, Damanganga- Pinjal, Par- Tapi - Narmada, Manas- Sankosh –Teesta Ganga, Mahanadi-Godavari, and Godavari-Cauvery (Grand Anicut).



INTER-STATE BORDER DISPUTES IN INDIA

Recently, the Assam and Meghalaya government has agreed to settle the long pending inter-state border disputes in at least six areas.

- Meghalaya was carved out of Assam, and it became a full-fledged state in 1972.
- With over 884 km of border, there are 12 points of dispute between the two states including Langpih, Boko etc. in Kamrup, Kamrup Metropolitan and Hailakandi districts.
- These disputes stemmed from the Meghalaya government's refusal to accept the Assam Reorganisation (Meghalaya) Act of 1969.
- The recent decision came after the formation of special regional committees by both states to resolve the issue.

Indian Administrative Divisions and its Inter-state border disputes

- The present-day Indian Union was formed by joining over 550 Princely States and British Territories. The State Reorganization Commission (SRC) of 1953 divided Indian Territory into 14 states and 6 Union Territories (UTs) on linguistic and other basis.
- Today, through subsequent reorganizations, the total number of administrative divisions in India is 28 states and 8 UTs. This division is not without cracks in certain borders-
- The reorganization of the State of Assam, starting from Nagaland in 1963 gave rise to 4 inter-state border disputes in North-eastern region, including Assam-Meghalaya dispute, Assam-Nagaland dispute over Naga Hills and all Naga-dominated area in North Cachar and Nagaon districts, which were part of Naga territory under 1866 notification from British.
 - o Assam-Mizoram dispute over boundaries in southern Assam's Barak Valley and the Lushai Hills, based on two British-era notifications of 1875 and 1933 with Mizoram demand on boundary as decided in 1875.
 - o Assam-Arunachal Pradesh dispute over forested tracts in the plain areas of border.
- Apart from it, some other inter-state border disputes also exist in India, either active or dormant, such as:

Active	Dormant
<ul style="list-style-type: none"> • Haryana-Himachal Pradesh over Parwanoo region near Panchkula, • Maharashtra-Karnataka over Belgaum district with a large Marathi-speaking population. It was part of Bombay presidency before coming under Karnataka in 1956, and • Himachal Pradesh-Ladakh over Sarchu, lying along Leh-Manali highway. 	<ul style="list-style-type: none"> • Odisha-West Bengal had issues in the past along its mainland boundaries and over Kanika Sands Island in the Bay of Bengal, • Haryana-Punjab over Chandigarh, • Karnataka-Kerala over Kasaragod, part of Kerala with many Kannada- speaking people, • Gujarat-Rajasthan over Mangadh Hill.

Reasons which led to development and prevalence of Inter-state border disputes

- British Colonial policy to create and recreate boundaries based on administrative convenience or commercial interests leading to present day claims and counter claims in regions like Northeast.
- Lack of implementation of recommendation on border disputes. E.g., Nagaland rejected Sundaram Commission report on its dispute with Assam. Similarly, Meghalaya rejected the Y.V. Chandrachud Committee report on its dispute with Assam.

- Failure of constitutional mechanisms to address the border disputes.
 - o Under **Article 131 (c)**, the Original Jurisdiction of the Supreme Court extends to any dispute between two or more states involving legal rights (exclusively). But either the solutions come at a slow pace or states don't cooperate. E.g.
 - ✓ The Assam-Arunachal Pradesh dispute has been before the Supreme Court since 1989.
 - ✓ In the Assam-Nagaland dispute, the one or both states expressed reservation on the Supreme Court appointed commission report or not accepted Supreme Court appointed mediators report respectively.
 - o Similarly, **Article 263** provides for Inter-State Council. Under Article 263 (a), it is competent enough to inquire and advice upon disputes between states. But it was appointed only after Sarkaria Commission recommendations in 1990.
- Disappointment from **Zonal Councils** set up under the States Re-organisation Act, 1956 and North Eastern Council under the North Eastern Council Act, 1971. Like Inter-State Council, the meetings of zonal councils are less frequent and mainly revolve around other issues.

SEVENTH SCHEDULE

Fifteenth Finance Commission chairman NK Singh has called for a thorough review of the Seventh Schedule of the Constitution in the wake of current challenges of climate change and the pandemic.

About Seventh Schedule

- Article 246 confers legislative powers on the Parliament and the State Legislatures on the subjects enumerated in the Seventh Schedule.
- Broadly, entries that are related to national importance were allocated to the Union and entries of local concern were allocated to the States.
- As per **Sarkaria Commission**, concurrent list subjects are neither exclusively of national concern nor of local concern and hence occupy a constitutional 'grey' area.



PANCHAYATS (EXTENSION TO THE SCHEDULED AREAS) ACT, 1996

Recently, a one-day National Conference was organized to commemorate the 25th year of enactment of PESA, as part of Azadi Ka Amrit Mahotsav.

About Panchayats (Extension to the Scheduled Areas) Act or PESA Act, 1996

- **Article 243M** of the Constitution exempts the Fifth Schedule areas from Part IX of the Constitution but the Parliament is empowered to extend its provisions to the Scheduled and Tribal Areas by law without it being considered as an amendment to the Constitution.
- Based on the recommendations of Dileep Singh Bhuria Committee, PESA Act was enacted in 1996 for tribal empowerment and to bring them into the mainstream.

- PESA Act is called a '**Constitution within the Constitution**' as it extends the Provision of Panchayati Raj (Part IX) of the Constitution to the Fifth Schedule areas of 10 States under clause (1) of the Article 244 with certain modifications and exceptions.

- o The **10 states**: Andhra Pradesh, Chhattisgarh, Gujarat, Himachal Pradesh, Jharkhand, Madhya Pradesh, Maharashtra, Orissa, Rajasthan and Telangana.

- It recognizes the role of the Gram Sabha and the community in these areas and directs the state government to devolve power and authority directly to Gram Sabha and Panchayats.

- The Ministry of Panchayati Raj is the nodal Ministry for implementation of the provisions of PESA Act.

CBI AND ENFORCEMENT DIRECTORATE CHIEFS CAN NOW HOLD OFFICE UP TO 5 YEARS

- President promulgated two ordinances that would allow Centre to extend the tenures of the directors of Central Bureau of Investigation (CBI) and ED from two years to up to five years.

- o Government amended the **Delhi Special Police Establishment Act, 1946** (For CBI Director) and **Central Vigilance Commission Act, 2003** (For ED director).

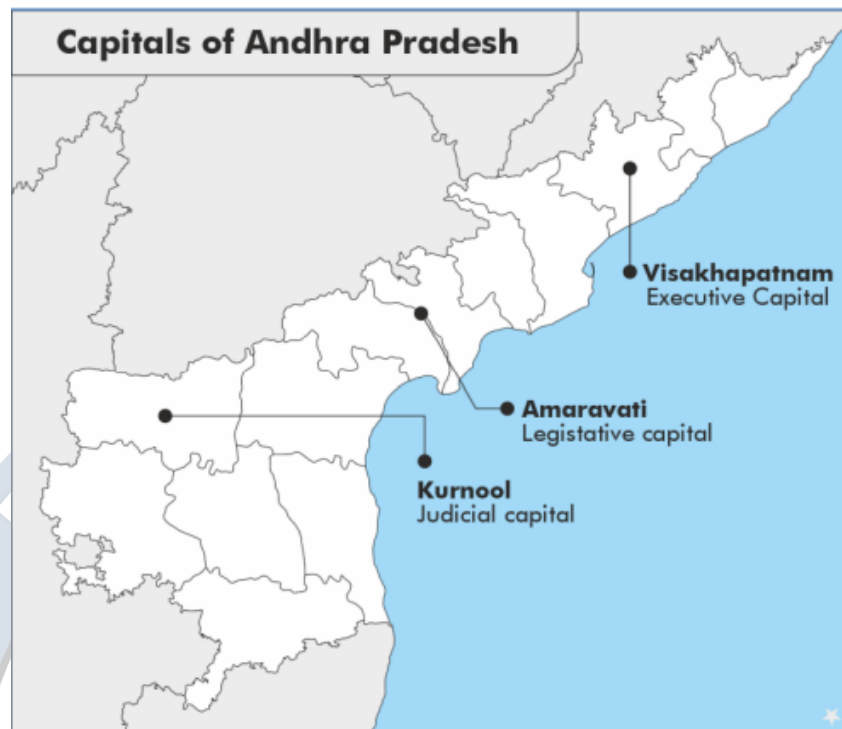
- Both have fixed two-year tenure, but ordinance allows for three annual extensions

ANDHRA PRADESH ASSEMBLY PASSES BILL TO REPEAL ACT INTENDING 3 CAPITALS FOR THE STATE

- The AP Decentralisation and Inclusive Development of All Regions Repeal Bill, 2021, repeals the 2020 Act that paved the way for the 'three capitals' plan for the state.

- Now, the state will undertake further consultations with all the stakeholders once again and to present suitable legislation in the future addressing all the concerns of all the regions of the State favoring decentralization.

- o The farmers of Amaravati region had been fighting the three capitals decision for more than 700 days now.



RBI WANTS DIGITAL CURRENCY INCLUDED UNDER DEFINITION OF 'BANK NOTE'

- Proposal was put forth by Reserve Bank of India in October, 2021 for amendment to the Reserve Bank of India Act, 1934 to enhance the definition of 'bank note' to include currency in digital format, popularly known as Central Bank Digital Currency (CBDC).

o CBDC is the legal tender issued by a central bank in a digital form. It is the same as a fiat currency (backed by govt) and is exchangeable one-to-one with the fiat currency. Only its form is different.

- CBDC for India comes with the following advantages o India has a unique scenario of increasing proliferation of digital payments in the country coupled with sustained interest in cash usage, especially for small value transactions.

ROLE OF TECHNOLOGY IN LAW ENFORCEMENT

Prime Minister recently called for adoption of future technologies for grass root policing requirements and development of inter-operable technologies which would benefit Police forces across the country.

TECHNOLOGIES USED IN LAW ENFORCEMENT

Some common technologies being used for Crime surveillance and Monitoring include CCTV cameras, Drones and Global Positioning System (GPS). Various other newly emerging technologies are:

Body-Worn Cameras and In-Car Videos



- for better evidence documentation, increased accountability and transparency.

Automatic Tag and License Plate Readers



- Mounted to the exterior of patrol cars, and instantly analyzes license plates on every vehicle that comes within their range of view.

Biometrics and Hand- Held Fingerprint Scanners



- Use of biometrics using unique biological traits such as finger- prints, retina scans, and DNA to identify individuals.

Brain Fingerprinting



- Uses brain scans to capture how a crime suspect's brain reacts when being questioned by police.

Google Glass



- Mobile interceptors that take photographs of traffic violations and instantly upload them to their police department's system.
- It is currently being used on the National Highways in India

Predictive-Analytics Software



- It helps find crime patterns and deploy police accordingly.
- Delhi government has recently collaborated with ISRO to start with new technology called **Crime Mapping Analytics and Predictive System (CMAPS)**.

BEST PRACTICES IN INDIA

Uttar Pradesh Police



An **AI enabled app** developed by startup Staqu digitizes and searches records of criminals and their associates and assists police forces with real-time information retrieval during investigations.

Odisha Police



An app named, '**MO SAATHI**' helps women who are stuck in dangerous situations to alert the police, make audio and video recording, and send it to the Modern Police Control Room.

Maharashtra Police



An **Automated Multimodal Biometric Identification System (AMBIS)** — a digital database of finger prints and photographs of criminals eliminates limitations of manual search on the biometric database.

DEFENCE EXERCISES

- **CORPAT** or Coordinated Patrol- 32nd military exercise between India and Thailand.
- **Shakti 2021**- 6th Edition of India-France military exercise.
- **SITMEX**: It is a Trilateral Maritime Exercise between India, Singapore and Thailand.

- **Sagar Shakti** exercise: It is the 'mega multi-agency military exercise' conducted in Kutch to test India's combat readiness.
- **Exercise Dosti**: 15th edition of the Maldives, India, and Sri Lanka biennial Trilateral Exercise.

VELA

- It is the fourth submarine (Kalvari, Khanderi, and Karanja are other three) of the Project-75 that was delivered to the Indian Navy recently.
- Project-75 includes construction of six submarines of Scorpene design.
- These submarines are being constructed at Mazagon Dock Shipbuilders Limited (MDL) Mumbai.

COP 26

The 26th Conference of the Parties (COP) of the United Nations Framework Convention on Climate Change (UNFCCC) in Glasgow, hosted by the UK, recently concluded.

