

GOVERNANCE**Cauvery River Water Dispute**

Recently, the Cauvery Water Management Authority (CWMA) directed Karnataka to immediately release the balance quantum of water to Tamil Nadu. However, CWMA dropped discussion on the Mokedatu reservoir project following “strong protest” from Tamil Nadu, Kerala and Puducherry.

Key Points**Cauvery Water Dispute:****• About:**

1. It involves 3 states and one Union Territory (Tamil Nadu, Kerala, Karnataka and Puducherry).
2. The genesis of the dispute is 150 years old and dates back to the two agreements of arbitration in 1892 and 1924 between the then Madras presidency and Mysore.
3. It entailed the principle that the upper riparian state must obtain consent of lower riparian state for any construction activity viz. reservoir on the river Cauvery.

• Recent Developments:

1. From 1974, Karnataka started diverting water into its four newly made reservoirs, without the consent of Tamil Nadu resulting in a dispute.
2. To resolve the matter, the CWDT (Cauvery Water Disputes Tribunal) was established in 1990 which took 17 years to arrive at the final order (2007) on how Cauvery water should be shared between the 4 riparian states in normal rainfall conditions. CWDT was constituted by the Central Government, in exercise of the powers conferred by section 4 of the Inter-State River Water Disputes Act, 1956.
3. In distress years, a pro-rata basis shall be used, it instructed. The government again took 6 year and notified the order in 2013.
4. This was challenged in SC (Supreme Court) which directed Karnataka to release 12000 cusecs of water to Tamil Nadu prompting protests in the State.
5. The final verdict of the SC came in 2018 where it declared the Cauvery a national asset and largely upheld the water-sharing arrangements finalised by the CWDT and also reduced the allocation of water from Karnataka to Tamil Nadu.
 - ✓ As per the SC, Karnataka would get 284.75 thousand million cubic feet (tmcft), Tamil Nadu 404.25 tmcft, Kerala 30 tmcft and Puducherry 7 tmcft.
 - ✓ It also directed the Centre to notify the Cauvery Management Scheme. The central government notified the ‘Cauvery Water Management Scheme’ in June 2018, constituting the ‘Cauvery Water Management Authority’ and the ‘Cauvery Water Regulation Committee’ to give effect to the decision.

Mekedatu Reservoir Project:

- ✓ It aims to store and supply water for drinking purposes for the Bengaluru city. Around 400 megawatts (MW) of power is also proposed to be generated through the project.
- ✓ In 2018, Tamil Nadu approached the SC against the project even if Karnataka had held that it would not affect the flow of water to Tamil Nadu. TN is opposed to any project being proposed in the upper riparian unless it was approved by the SC.

River Cauvery

- It is known as ‘Ponni’ in Tamil, also known as Ganga of the south, and it is the fourth largest river of southern India.
- It is a sacred river of southern India. It rises on Brahmagiri Hill of the Western Ghats in southwestern Karnataka state, flows in a southeasterly direction through the states of Karnataka and Tamil Nadu, and descends the Eastern Ghats in a series of great falls and drains into Bay of Bengal through Pondicherry. Some of its tributaries are Arkavathi, Hemavathi, Lakshmana Theertha, Shimsa, Kabini and Harangi.



Way Forward

The states need to shed the regional approach as the solution lies in cooperation and coordination, not in conflict. The planning must be done at the basin level to make the solution sustainable and ecologically viable.

In the long term, there is a need to recharge the river through afforestation, river linking, etc and increased focus is needed on increasing water use efficiency viz. micro irrigation, awareness in people to prudently use water and water smart strategies.

2. Airspace Map of India

Recently, the Ministry of Civil Aviation has launched an airspace map of India for drone operations, which shows red, yellow and green zones across the country.

- It will allow civilian drone operators to check the demarcated no-fly zones or where they need to undergo certain formalities before flying one.
- Earlier, the 'Liberalised Drone Rules, 2021' based on "trust, self-certification and non-intrusive monitoring" was unveiled and also the Production-Linked Incentive (PLI) scheme for the drone industry was announced.

Key Points

About:

• Green Zone

1. It is the airspace up to 400 feet that has not been designated as a red or yellow zone, and up to 200 feet above the area located between 8-12 km from the perimeter of an operational airport.
2. No permission is required for operating drones with an all-up weight of up to 500 kg.

• Yellow Zone

1. It is the airspace above 400 feet in a designated green zone, and above 200 feet in the area located between 8-12 km from the perimeter of an airport, and above ground in the area located between 5-8 km from the perimeter of an airport.
2. Require permission from the concerned air traffic control authorities - which could be either the Airports Authority of India, the Indian Air Force, the Indian Navy, Hindustan Aeronautics Ltd, etc as the case may be.

Red Zone

1. It is the 'no-drone zone' within which drones can be operated only after a permission from the Central government.

The Drone Rules, 2021:

- The aim of the Rules is to create a 'digital sky platform' ("the Platform") which is a business-friendly single-window online system, with minimum human interference, where most of the permissions will be self-generated.
 - The Rules have reduced the red-tape involved in the process of seeking compliance:
2. Quantum of fee has been reduced to nominal levels and delinked with size of the drone.
 3. Easier process is specified for transfer and deregistration of drones through the digital sky platform.
 4. Nano and model drones (made for research or recreation purposes) are exempt from type certification.

- Coverage of drones under Drone Rules, 2021 has been increased from 300 kg to 500 kg. This will cover drone taxis also.
- Type Certificate is required only when a drone is to be operated in India. Importing and manufacturing drones purely for exports are exempt from type certification and unique identification number.
- Drone corridors will be developed for cargo deliveries.

Drones

About:

- Drone is a layman terminology for Unmanned Aircraft (UA). There are three subsets of UA- Remotely Piloted Aircraft, Autonomous Aircraft and Model Aircraft. Remotely Piloted Aircraft consists of remote pilot station(s), the required command and control links and any other components, as specified in the type design.
- Remotely piloted aircraft have been divided into five categories based on their weight (existing rules)
 1. **Nano** : Less than or equal to 250 grams.
 2. **Micro** : From 250 grams to 2kg.
 3. **Small** : From 2 kg to 25kg.
 4. **Medium** : From 25kg to 150kg.
 5. **Large** : Greater than 150kg.

Importance:

- Drones offer tremendous benefits to almost all sectors of the economy.
- These include – agriculture, mining, infrastructure, surveillance, emergency response, transportation, geo-spatial mapping, defence, and law enforcement to name a few.
- Drones can be significant creators of employment and economic growth due to their reach, versatility, and ease of use, especially in India's remote and inaccessible areas.

Recently, the Telangana government has selected 16 Primary Healthcare Centres (PHCs) for pilot testing the ambitious 'Medicine from the sky', the first-of- its-kind project. The project involves delivery of medicines through multiple drones.

INTERNATIONAL RELATION

PM Speech at United Nations General Assembly

US officials are set to visit Latin America to look for possible projects for the Build Back Better World (B3W) Initiative. B3W is an international infrastructure investment initiative announced by the Group of Seven (G-7) richest democracies in June 2021. The B3W initiative is being seen as the US' initiative to counter China's Belt and Road Initiative (BRI).

Key Points

B3W & its Guiding Principles:

- **Goal:** The Build Back Better Plan is a Covid-19 relief, future economic, and infrastructure package proposed by G-7 countries for developing and lower-income countries.
- **Components of B3W:** Through B3W, the G7 and other like-minded partners will coordinate in mobilizing private-sector capital in four areas of focus:
 1. Climate,
 2. Health and health security,
 3. Digital technology,
 4. Gender equity and equality.
- **Values-Driven Development:** Infrastructure development carried out in a transparent and sustainable manner - financially, environmentally, and socially - will lead to a better outcome for recipient countries and communities.
- **Good Governance and Strong Standards:** B3W to infuse investment by complying with the standards promoted by the Blue Dot Network, relating to the environment and climate, labor and social safeguards, transparency, financing, construction, anti-corruption, and other areas.
- **Climate-Friendly:** The investments will be made in a manner consistent with achieving the goals of the Paris Climate Agreement.

- **Strong Strategic Partnerships:** B3W will envisage countering the aggressive model of development and establish a more inclusive model of global development.

BRI & Associated Issues:

- The BRI project was launched in 2013, it broadly aims to facilitate cross-border transportation of goods, access to energy, creating demand for existing excess capacity in Chinese industries. China had an overall exposure of investment of around \$750 billion between 2013 to mid-2020.
- **However, BRI project has been heavily criticized for the following reasons:**
 1. Western critics have attacked the initiative as new colonialism, or the Marshall Plan for the 21st century.
 2. BRI is also being seen as a part of China's debt trap policy, wherein China intentionally extends excessive credit to another country with the intention of extracting economic or political concessions from the debtor country.
 3. Also, projects like China-Pakistan Economic Corridor (CPEC), building of Colombo Port City Project in Sri Lanka are not only commercial in nature but have strategic implications too.

Way Forward

- **Mobilising Funding:** The Infrastructure Bill is estimated to cost \$1.2 trillion over five years and the Reconciliation Bill, \$3.5 trillion over ten years.
 1. Together, both bills form the foundation for US President Biden's economic agenda and are part of his Build Back Better plan.
 2. However, these bills are being heavily debated in the American Senate and are less likely to be passed.
 3. Thus, there is a need to develop a sustainable funding model for the success of B3W.

Reinventing Capitalism: Covid-19 has exposed the fragility and societally negative outcomes of contemporary capitalist economies. Thus, in order to lead to global development as highlighted by the B3W blueprint, it will require fine-tuning of the current model of Capitalism.

Building Consensus in Democracies: Any plan formulated by vibrant democracies such as these countries usually takes time and has to go through many diplomatic and bureaucratic twists and turns. Thus, the main challenge for G-7 countries is to build global consensus and deliver projects in a time-bound manner.

SCIENCE & TECHNOLOGY

Landsat 9

Recently, NASA has launched an earth monitoring satellite called Landsat 9 from Vandenberg Space Force Base in California. The satellite is a joint mission of NASA and the US Geological Survey (USGS). This satellite is referred to as NASA's 'new eye in the sky' that will help study climate change.

Key Points

Background:

- Landsat-9 is the continuation of a series of Earth-observing spacecraft stretching back almost 50 years.
- The first Landsat satellite was launched in 1972 and since then, Landsat satellites have collected images of earth and helped understand how land usage has changed over the decades.
- In 2008, it was decided that all Landsat images will be free and publicly available and the policy has helped scores of researchers, farmers, policy analysts, glaciologists, and seismologists.
- Landsat images have been used to study the health of forests, coral reefs, monitor water quality and melting glaciers.

About Landsat 9:

- The Landsat 9 joins Landsat 8 that was launched in 2013 and the satellites together will collect images of Earth's surface. It takes 8 days to capture the whole Earth.
- Landsat 9 carries instruments similar to the other Landsat satellites, but it is the most technologically advanced satellite of its generation.
- The instruments aboard Landsat 9 are the Operational Land Imager 2 (OLI-2) and the Thermal Infrared Sensor 2 (TIRS-2).

1. OLI-2: It captures sunlight reflected off Earth's surface and studies the visible, near-infrared, and short wave infrared portions of the spectrum.
2. TIRS-2: It has a four-element refractive telescope and photosensitive detectors that capture thermal radiation and help study the Earth's surface temperature.
 - Along with the European Union's Sentinel-2 satellites, the Landsat Satellite will provide better estimation of the extent of climate change.

IMPORTANT FACTS FOR PRELIM

INSPIRESAT-1 Cubesat Satellite

INSPIRESat-1 CubeSat, developed under the International Satellite Program in Research and Education (INSPIRE), is ready for launch.

Key Points

About:

- It is a small scientific satellite which will be placed in a low earth orbit, equipped with a Compact Ionosphere Probe for studying the earth's ionosphere.
 1. The ionosphere is the part of the atmosphere that is ionized by solar radiation.
 2. CIP is an all-in-one plasma sensor that uses a single instrument to perform multiple sensor functions in a time-sharing mechanism.
- It will also provide a greater understanding of why the Sun's corona is orders of magnitude hotter than the photosphere, why there is an abundance of elements change during different solar events, and how these events affect the earth's ionosphere. An order of magnitude is an exponential change of plus-or-minus 1 in the value of a quantity or unit.
- It weighs less than 10kg and will be launched aboard an upcoming Polar Satellite Launch Vehicle (PSLV) of the Indian Space Research Organisation (ISRO).
 1. PSLV is the third generation launch vehicle of India. It is the first Indian launch vehicle to be equipped with liquid stages.
 2. It is a four-staged launch vehicle with first and third stages using solid rocket motors and second and fourth stages using liquid rocket engines.

Developed By:

- Laboratory for Atmospheric and Space Physics (LASP) at the University of Colorado Boulder in the U.S.
- National Central University, Taiwan
- Nanyang Technological University in Singapore
- Indian Institute of Space Science and Technology (IIST)

INSPIRE

- INSPIRE is a consortium of universities with active space programs, formed to advance space science and engineering.
- A constellation of earth and space-weather observation satellites is envisaged under the INSPIRE program which includes a series of INSPIRESats i.e INSPIRESat-1 to INSPIRESat-7.



Cubesat

- A cube satellite (cubesat) is a standardized, low cost, small satellite design typically used for technological demonstration and research.
- It is a Nanosatellite and other Nanosatellites include PocketQubes, TubeSats, Sun Cubes, ThinSats etc.
- Nanosatellites are any satellite weighing less than 10 kilograms.

2.Aapada Mitra Programme

Recently, the government has announced plans to have Disaster Management Volunteers (Aapda Mitras) in 350 districts of the country also released documents for Common Alerting Protocol (CAP)CAP is a simple but general format for exchanging all-hazard emergency alerts and public warnings over all kinds of networks.

Key Points**About:**

- It is a Central Sector Scheme that was launched in May 2016. NDMA (National Disaster Management Authority) is the implementing agency.
- It is a programme to identify suitable individuals in disaster-prone regions who can be trained to be first responders in times of disasters.

Aim:

- To provide the community volunteers with the skills that they would need to respond to their community's immediate needs in the aftermath of a disaster thereby enabling them to undertake basic relief and rescue tasks during emergency situations such as floods, flash-floods and urban flooding.

Objectives:

- Training institutions to be empanelled by respective States/UTs at the State/UT level.
- To train community volunteers in life saving skills of disaster response (flood relief and rescue), coordination, assistance, and provide personal protective equipment and emergency responder kits;
- To create a Community Emergency Stockpile/Reserve at the district/block level containing essential light search and rescue equipment, medical first aid kits, etc;
- To disseminate training and education tools developed under the project to more flood prone districts in subsequent phases of the scheme.

Other Disaster Related Initiatives:**Indian:**

1. National Disaster Response Fund.
2. Disaster Management Act, 2005.
3. Coalition for Disaster Resilient Infrastructure (CDRI).

Global:

1. Sendai Framework for Disaster Risk Reduction 2015-2030
2. United Nations Office for Disaster Risk Reduction (UNDRR).

DAILY ANSWER WRITING PRACTICE

Qns. Ayushman Bharat Digital Mission is the coming together of technological initiatives to enhance high quality healthcare across the nations. Analyse its potential and limitations to achieve interoperability within the digital health ecosystem. (250 words)

Ans:**Introduction**

The Prime Minister launched the Ayushman Bharat Digital Mission. Under this, a unique digital health ID will be provided to the people, which will contain all the health records of the person. The pilot project of the National Digital Health Mission was announced by the prime minister from the ramparts of the Red Fort on August 15, 2020.

Body**Features**

- The key components of this scheme, which is also called the National Digital Health Mission or the PM Digital Health Mission, are a health identity card for every citizen, a healthcare professionals registry, and healthcare facilities registries.
- It will also help ensure security, confidentiality and privacy of health-related personal information.
- The health ID for every citizen will also work as their health account, to which personal health records can be linked and viewed with the help of a mobile application.
- Healthcare Professionals Registry (HPR) and Healthcare Facilities Registries (HFR) will act as a repository of all healthcare providers across both modern and traditional systems of medicine.
- Currently, the project is being implemented in the pilot phase in six Union Territories.
- The nationwide rollout of the project coincides with National Health Authority (NHA) celebrating the third anniversary of Ayushman Bharat Pradhan Mantri Jan Arogya Yojana (AB PM-JAY).

Potential of Ayushman Bharat Digital Mission

- The mission will enable access and exchange of longitudinal health records of citizens with their consent.
- Ayushman Bharat Digital Mission will play a big role in eliminate problems in medical treatment of poor and middle class.
- The new programme will help create interoperability within the digital health ecosystem, similar to the role played by the UPI in revolutionising the payments.
- It will ensure ease of doing business for doctors and hospitals and healthcare service providers.
- Furthermore, the Ayushman Bharat Digital Mission Sandbox, created as a part of the mission, will act as a framework for technology and product testing that will help organisations, including private players to be a part of the National Digital Health Ecosystem to become a health information provider

Possible challenges

- The mission still does not recognize 'Health' as a justiciable right. There should be a push draft at making health a right, as prescribed in the draft National Health Policy, 2015.
- One of the biggest concerns is regarding data security and privacy of patients. It must be ensured that the health records of the patients remain entirely confidential and secure.
- Potential misuse of information by the insurance companies can affect, people's ability to buy insurance.
- The companies may charge high premium if health details are known or even deny in few cases.
- In addition, the failure of a similar National Health Service (NHS) in the United Kingdom must be learnt lessons from and the technical and implementation-related deficiencies must be proactively addressed prior to launching the mission on a pan India scale.

Conclusion

The Ayushman Bharat Digital Mission would be playing a huge role in solving the issues faced in medical treatment by different classes of Indians, mainly the poor. It can be done by connecting people via technology that is connecting the healthcare workers, hospitals to patients etc. This has a revolutionary potential like never before for the health sector, but caution must be taken that the information is not inadvertently shared.

DAILY QUIZ

Q1. Consider the following statements about the Competition Commission Of India:

1. It is a statutory body within the Ministry of Corporate Affairs.
2. It is responsible for enforcing the Essential Commodities Act (ECA) in India.

Which of the statements given above is/are correct?

- (a) 1 only
- (b) 2 only
- (c) Both 1 and 2

(d) Neither 1 nor 2

Q2. With reference to Prime Minister's Citizen Assistance and Relief in Emergency Situations (PM-CARES) Fund, consider the following statements:

1. The fund consists entirely of public contributions and does not get any budgetary support.
2. The minimum amount one can donate in the PM-CARES is RS 100.

Which of the statements given above is/are correct?

- (a) **1 only**
- (b) 2 only
- (c) Both 1 and 2
- (d) Neither 1 nor 2

Q3. Consider the following statements about the XENON1T experiment:

1. It is a particle physics experiment conducted by NASA.
2. It was operated deep underground at the Sanford Underground Research Facility.

Which of the statements given above is/are correct?

- (a) 1 only
- (b) 2 only
- (c) Both 1 and 2
- (d) **Neither 1 nor 2**

Q4. Which one among the following major Indian cities is most westward located?

- (a) **Ahmedabad**
- (b) Udaipur
- (c) Surat
- (d) Indore

Q5. With reference to India's Orang National Park, consider the following statements:

1. It located on the northern bank of the Dibang River.
2. It has a rich flora and fauna, including great Indian rhinoceros, pygmy hog and Asian elephant.

Which of the statements given above is/are correct?

- (a) 1 only
- (b) **2 only**
- (c) Both 1 and 2
- (d) Neither 1 nor 2