

Mekedatu Balancing Reservoir Project Dispute

❖ Context

- Karnataka has demanded that the **Cauvery Water Management Authority (CWMA)** give clearance for the **detailed project report (DPR)** of Mekedatu Balancing Reservoir Project in its next meeting.
- Earlier, **Tamil Nadu has protested against Karnataka's** step to build a reservoir on river Cauvery at Mekedatu. However, the **Karnataka Government has declared that there is no compromise** on the Mekedatu project and the state wants to undertake the project.

❖ About Mekedatu Project

- Mekedatu is a **deep gorge** situated at the confluence of the rivers **Cauvery and Arkavathi**, about 100 km from Bengaluru, in **Karnataka's Ramanagara district**.
- In 2013, the **Karnataka Government announced the construction** of a multi-purpose balancing reservoir project over the Mekedatu.
- The objective was to **alleviate the drinking water problems** of Bengaluru and Ramanagara district.
- It is also expected to **generate hydro-electricity** to meet the power needs of the state.



❖ Issues

- Soon after the project was announced **TN has objected over granting of permission** or environmental clearance.
- Explaining the **potential for damage to the lower riparian state of TN**, it said that the project was in violation of the final award of the Cauvery Water Disputes Tribunal.
- It stated that the **project will affect the natural flow of the river Cauvery** considerably and will **severely affect the irrigation in TN**.
- The **Centre has said the project required the approval of the Cauvery Water Management Authority's (CWMA)**.
- The Detail Project Report (DPR) sent by Karnataka was tabled in the CWMA several times for approval, but the **discussion on this issue could not take place** due to a lack of consensus among party states Karnataka and Tamil Nadu.



❖ Award by Cauvery Water Disputes Tribunal and the Supreme Court:

- The tribunal was set up in 1990 and made its **final award in 2007**, granting **419 tmcft of water to Tamil Nadu**, **270 tmcft to Karnataka**, **30 tmcft to Kerala** and **7 tmcft to Puducherry**. The tribunal ordered that in rain-scarcity years, the allocation for all would stand reduced.
- However, both **Tamil Nadu and Karnataka expressed unwillingness** to accept the award and there were protests and violence in both states over water-sharing. **Supreme Court then took up the matter and, in a 2018 judgment**, it **apportioned 14.75 tmc ft from Tamil Nadu's earlier share to Karnataka**.

Drones in Agriculture Sector

❖ Context

- Union Agriculture Minister releases **Standard Operating Procedure (SOP)** for use of Drone in Pesticide Application for **Crop Protection and for spraying Soil and Crop Nutrients**.
- Earlier, the Ministry of Health and Family Welfare had launched a **Drone-Based vaccine delivery model named, Drone Response and Outreach in North East (i-Drone)**.

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- The drones were used for the first time in **warding off locust attacks** in various states of the country.
- ❖ **Key Highlights**
- The SOP for drone regulation for pesticide application covers important aspects like statutory provisions, **flying permissions, area distance restrictions, weight classification, overcrowded areas restriction**, drone registration, **safety insurance**, piloting certification, operation plan, air flight zones, **weather conditions**, SOPs for pre, post and during operation, emergency handling plan.
 - The use of Unmanned Aerial Vehicles (UAVs) commonly known as drones have great potential to **revolutionize Indian agriculture and ensure the country's food security**.
 - The National drone policy** has been notified and the **Drone Rules 2021** have been made significantly easier for people and companies in the country to now own and operate drones.

- ❖ **Use of Drone in Agriculture Sector**
- Multi-features:** Drones are well-equipped with many features like **multi-spectral and photo cameras**.
 - Monitor:** It can be used in many areas of the agriculture sector such as **monitoring crop stress, plant growth, predicting yields, and delivering props**.
 - Assessment:** Drones can be used for assessing the **health of any vegetation or crop, field areas inflicted by weeds**.
 - Optimisation:** Based on this assessment, the exact amounts of chemicals needed to fight these infestations
 - Planting systems:** Drone planting systems have also been developed which allow **drones to shoot pods**. This technology increases consistency and efficiency of crop management.
 - Mitigating attacks:** The drones were also used for the first time in **warding off the locust attacks** in various states.

- ❖ **Pesticides**
- Pesticides are one of the important **agri-inputs** to address **protection of crops against a large number of pests** that can wash away entire investment of farmers and hence they act as an essential input that yields substantial returns to the farmers.
- Problems in Conventional Spraying of Pesticide**
- Excessive use of chemicals, lower spray uniformity, unnecessary deposition and **non-uniform coverage**.
 - Resulting in **excessive usage, water & soil pollution** as well as higher **expenditure on pesticides**.
 - With conventional manual sprayers, the **safety of operators** is also a major concern

New Warehousing Policy

- ❖ **Context**
- The government has proposed a new warehousing policy to set a roadmap for development for exclusive warehousing zones in PPP mode
- **Key Highlights**
- Warehousing zones will help India to cut logistics cost, which is **14-16%** of GDP, as compared to **China's 8-10% and USA's 12-13%**.
 - The idea is to minimize pollution and congestion in major cities by establishing them outside city centers.
 - The modern warehouse will have cold storage chains and will be able to store both wet and dry cargo
 - The policy will be framed and implemented by NHAI. Multimodal Logistics Parks are also being set up by NHAI**
 - MMLPs are aimed at fostering intermodal connectivity through dedicated railway lines and access from highways to airports, seaports or inland waterway terminals.
 - The e-commerce sector has been at the forefront in driving the demand for logistics and warehousing across the global markets. The sector's share in the transactions has grown from 18% (FY 17) to 31% (FY 21)

Vernacular Innovation Programme

- ❖ **Context**
- Atal Innovation Mission, NITI Ayog launches a new program to empower Innovators, Entrepreneurs in 22 mother tongues

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23 December, 2021❖ **Key Highlights**

- **Only 10.4% of Indians speak English**, most as their second, third, or fourth language. Not surprisingly, only **0.02% of Indians spoke English as their first language**. The figures may not change even a decade later
- In order to create equal opportunity for the **vernacular innovators** who represents 90% of the Indian population, a new program is launched
- It will help in **overcoming the barriers of language**
- It will assist local entrepreneurs, artisans and innovators to seamlessly assimilate knowledge cum technical materials that AIM will develop To build the necessary capacity for the VIP, AIM has identified and will be training a **Vernacular Task Force (VTF)** in each of the 22 scheduled languages.
- Each task force comprises vernacular language teachers, subject experts, technical writers, and the leadership of regional **Atal Incubation Centers (AICs)**.
- To get the program rolling, AIM NITI Aayog is launching a **train-the-trainer program** where it will collaborate with the Design Department of IIT Delhi **to coach the VTF in design thinking and entrepreneurship** and the adaptation of these subjects in the 22 languages and cultures.

Atal Innovation Mission

- It is Gol's flagship initiative to promote a culture of innovation and entrepreneurship in the country, launched in 2016
- NITI Ayog administers the mission
- Various programmes run under it are

- **Atal Tinkering Labs: a state of the art space established in a school** with goal to foster creativity and innovation in young minds between **6th -12th grade** through 21st century tools and technologies such as Internet of Things, 3D printing, rapid prototyping tools, robotics, miniaturized electronics, do-it-yourself kits and many more. Till date, AIM has selected 10,000 schools in 680+ districts of the country for the establishment of ATLS.
- **Atal Incubation Centers: world class incubators at universities, Institutions and corporates.** The AIC supports the incubated startups by providing **technical facilities, resource-based support, Mentorships, funding support, partnerships and networking, co-working spaces and lab facilities** among others. Till date AIM has successfully operationalized 68+ Atal Incubation Centers. So far 1800+ operational startups have been supported by these AICs of which 500+ startups are women led and have created 15,000+ jobs in the ecosystem.
- **Atal Community Innovation Centres:** To promote the **benefits of technology led innovation to the unserved/underserved regions of India** including Tier 2, Tier 3 cities, aspirational districts, tribal, hilly and coastal areas. AIM would grant upto Rs 2.5 crores to an ACIC subject to a partner proving equal or greater matching funding.
- **ARISE ANIC challenges:** To **promote innovation in a phased manner in the MSME/Startup sector** AIM has launched 15 ARISE-ANIC challenges along with partner Ministries (Ministry of Housing and Urban Affairs, Ministry of Health and Family Welfare, Indian Space Research Organization, Ministry of Defense and Ministry of Food Processing Industries) to improve research capabilities in the startup and MSME ecosystem. As part of this, deserving ideas will be converted to viable innovative prototypes followed by product development and commercial deployment.
- **Atal New India Challenges:** To create **product and service innovations having national socio-economic impact**, AIM has launched over 24 Atal New India Challenges in partnership with five different ministries and departments of central government.

Biogas plants❖ **Context**

- Government has withdrawn subsidy given in the form of Central financial assistance in respect of all Biogas plants: small, medium and larger
- Indian Biogas association has condemned the decision saying that it is going to effect 50 MN farmers looking for energy security and natural farming
- **Ministry of New and Renewable Energy** had extended the Central Financial Assistance (CFA) Scheme for FY 2020-21 which stands withdrawn
- The scheme **used to cover 15-25% of the capital cost** of a typical large scale bio-CNG project/plant
- MoPNG is in discussion with **Multilateral Financial Institutions** like World Bank, Asian Development Bank (ADB) etc. for enabling financing options via line of credit for CBG developers.

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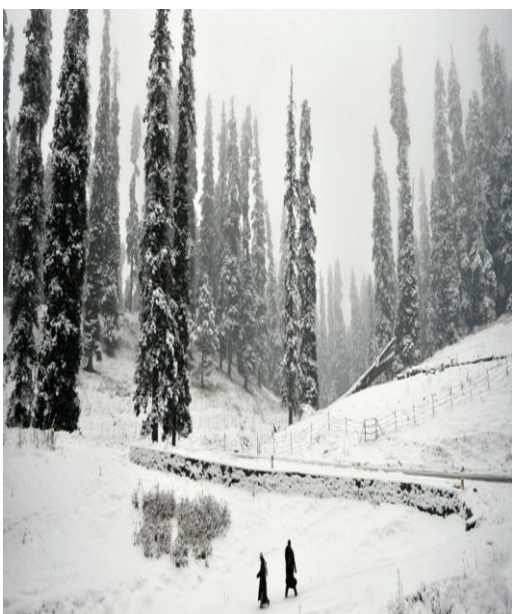
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❖ **About the scheme**

- Sustainable Alternative Towards Affordable Transportation scheme was launched by **Ministry of Petroleum and Natural Gas in Oct 2018**
- It aims to establish the ecosystem for production of compressed biogas (CBG) from various waste/biomass sources in the country
- It **targets to facilitate setting up 5,000 plants**.
- Under it, OMCs - IOCL, BPCL, HPCL, GAIL & IGL - are executing long term agreements for off-take of CBG at an assured price.
- **Bio manures** produced from CBG plants have been **included as “Fermented Organic Manure” under Fertilizer Control Order 1985**.
- Reserve Bank of India has notified inclusion of CBG projects **under Priority Sector Lending** vide directives to Banks dated 4.9.2020.

News in Between the Lines

Chillai Kalan



❖ **Context**

- Kashmir is in a deep freeze as the 40 day harshest spell of winter, locally called ‘chillai kalan’, started.
- The **minimum temperature already sub zero** in the entire Valley.

❖ **Key Highlights**

- Chillai Kalan is a **Persian word** which literally means **forty days of Major cold**.
- It is the **harshest winter period** in Kashmir starting from **21st December to 29th January** every year.
- Chillai-Kalan is followed by **20-day long Chillai Khurd** (small cold) and a **10-days long Chillai Bachha** (baby cold).
- Due to subzero temperature, tap water pipelines freeze partially during this period and world-famous Dal Lake also freezes.
- Kashmiris celebrate with **sumptuous Harissa**, a dish made of lean mutton mixed with rice and flavoured with spices like fennel, cardamom, clove and salt.

Albino Indian Flapshell turtle



❖ **Context**

- An international forest forensic investigator had a chance encounter with the rarely found species of **Albino Indian Flapshell turtle** a couple of months ago in **Sirnapally Forest in Telangana’s Nizamabad district**.

❖ **Key Highlights**

- There were only two instances earlier of having ‘recorded’ the presence across India.
- It is a **freshwater species of turtle**. They live in the shallow, quiet, often stagnant waters of rivers, streams, marshes, ponds, lakes and irrigation canals, and tanks.
- The turtle is commonly **found in Pakistan, Sri Lanka, India, Nepal, Bangladesh and Myanmar**.
- It is **omnivorous** and its diet consists of frogs, snails and even some **aquatic vegetation**. Albinism is a type of genetic disorder where there is little or no production of Turtles are smuggled and killed for their supposed **aphrodisiac properties** livestock feed, to make leather from their skins, to make potions from their blood and to use as fishing bait, and for medicines and meat.

❖ **Conservation Status:**

- IUCN Red List: Vulnerable
- CITES: Appendix II
- Wildlife (Protection) Act, 1972: Schedule I

National Mission on Edible Oils - Oil Palm (NMEO-OP)

❖ **Context**

- (NMEO-OP) has been launched with the **aim to augment the availability of edible oil** in the country by harnessing area expansion, increasing crude palm oil production with the aim to reduce the import burden.

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National Mission on Edible Oils - Oil Palm (NMEO-OP)



❖ Key Highlights

- The NMEO-OP will **replace the National Mission on Oil Seeds and Oil Palm** launched in 2014.
- Objective:- To ensure **self-sufficiency in edible oil production**.
- ❖ Aims:
 - To harness domestic edible oil prices that are dictated by expensive palm oil imports.
 - To **raise the domestic production** of palm oil by three times to **11 lakh MT by 2025-26**
 - This will involve raising the area under oil palm cultivation to **10 lakh hectares** by **2025-26** and **16.7 lakh hectares by 2029-30**
 - This will **reduce import** dependence from **60% to 45% by 2024-25**.
- The special emphasis of the scheme will be in **India's north-eastern states and the Andaman and Nicobar Islands** due to the conducive weather conditions in the regions.
- Oil palm farmers will be provided **financial assistance** and will get **remuneration** under a price and viability formula.
 - **Palm Oil:-** Palm oil is currently the world's most consumed vegetable oil.
 - It is used extensively in the production of detergents, plastics, cosmetics, and biofuels.
 - India is the largest consumer of vegetable oil in the world and Palm oil
 - Imports are almost 60% of its total vegetable oil imports.
 - Recently, India's dependence on expensive imports has driven retail oil prices to new highs. India imports palm oil from Indonesia and Malaysia, Soy from Argentina and Brazil, and Sunflower oil, mainly from Russia and Ukraine.
 - Top consumers of the commodity are India, China, and the European Union (EU).

Hurun Global Unicorn Index 2021



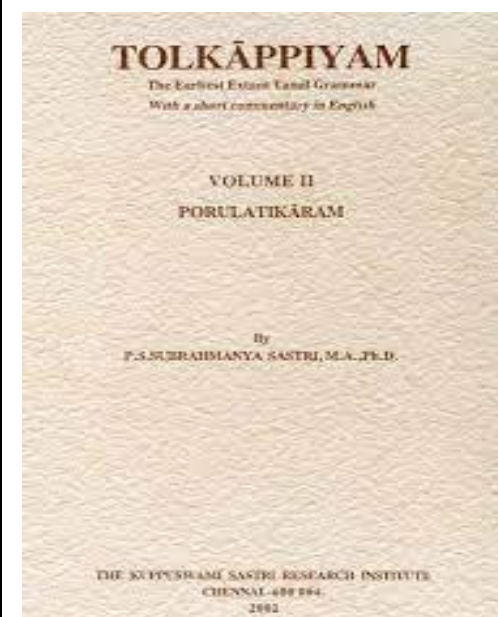
❖ Context

- Released by Hurun Research Institute
- **India** with 54 unicorns overtakes UK to **third spot** in the world in total number of unicorns

❖ Key Highlights

- The report said India has more than doubled the number of unicorns from last year
- There are further 65 unicorns founded by **Indians in Silicon valley** but the percentage of homegrown unicorns have increased from 33% to 45%
- This shows that **Indian start-up ecosystem is maturing**

Tolkappiyam



❖ Context

- Ministry of Education released Hindi translation of Tolkappiyam and Kannada translations of 9 books of classical Tamil literature

❖ Key Highlights

- Tolkappiyam is the **most ancient extant Tamil grammar text** and the **oldest extant long work of Tamil literature**.
- It is a unique work on grammar and poetics, dated by experts to 1st millennium BC or mythical second Sangam
- It is written by **Tolkappiyar**, believed to be, according to traditions, one of the 12 disciples of Agattiyar (Sage Agastya)
- It consists of **three books** each with nine chapters with a cumulative total of **1610 sutras**
- **Eluttatikaram-** Eluttu means sound, letter, phoneme. It covers the sounds of Tamil language. **Sollatikaram-** Sol means word. It covers etymology, morphology, semantics and syntax. **Porulatikaram-** Porul means subject matter. It covers two genres found in Tamil literature - **akam** (love, erotics, interior world) & **puram** (war, society, exterior world)

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