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MINISTRY OF SCIENCE AND TECHNOLOGY



MK Yadav Sir

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THE HINDU

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KATCHATHEEVU ISLAND

(Syllabus: GS Paper 2 – IR)

The nagging problem of Katchatheevu

Though fisherfolk want to resume fishing in the islet, India cannot allow it

STATE OF PLAY

L. Srikrishna
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Katchatheevu islet, a part of Sri Lanka and located about 14 nautical miles from Rameswaram in Tamil Nadu, is back in the limelight for the wrong reasons.

On February 17, fishermen associations in Ramanathapuram district announced that they were boycotting the annual two-day festival, scheduled for February 23 and 24, at the St. Anthony's Church in the uninhabited islet. Every year, this event brings together the people from both sides of the Palk Bay separating India and Sri Lanka. The fisherfolk also announced that they would observe an indefinite strike. These decisions were a mark of protest against the Sri Lankan government's continuing arrests of Indian fishermen on charges of poaching.

Shift in approach

Though the response of the Sri Lankan authorities is not new, there seems to be a shift in the way the island nation's judiciary treats those accused of poaching. In February, Sri Lankan Navy personnel arrested 42 fishermen belonging to Rameswaram and Thangachimadam in Ramanathapuram, as well as other regions in India, in two separate incidents. A Sri Lankan court sentenced five of those fishermen to prison terms of between six months and two years, for the repeat offence of poaching. While ordering the release of the rest, the court warned that they would have to serve a jail term if they were caught again. "The fishing community of Ramanathapuram district was shocked by this," said fisher leader P. Jesu Raja.

According to one version, the original shrine of the Church was built by the Ramnad Diocese more than 100 years ago. As per the Sri Lankan Navy records, it was constructed in 1901. Though it was taken over by the Jaffna diocese after India ceded Katchatheevu to Sri Lanka in 1974, the two countries organise the festival together. In recent years, people from other States such as Karnataka have also been attending it.

Over the last 15-odd years, it has been a practice for the Church authorities to extend an invitation to the Verkodu parish, which, in turn, seeks applications from pilgrims. On producing valid documents, pilgrims are allowed to cross the Palk Strait using trawlers. Their actions are monitored by Central and State agencies such as the Customs and the Police. Apart from exchanging pleasantries and gifts, pilgrims from both sides also pray for improved relations between the two countries.

This year, the agitating fishermen and their families in Ramanathapuram argued that it wouldn't be fair for them to participate in a festival held in Sri Lanka when their own "brothers" were in jail in the neighbouring country. They were staying away from the celebrations to show solidarity, they said.

Whenever fishermen from Tamil Nadu are arrested in Sri Lanka, India's High Commission in Colombo and Consulate in Jaffna provide consular and legal assistance to the imprisoned fishermen and work towards their early release. New Delhi has been asking Colombo to treat the fishermen issue as "a purely humanitarian and livelihood concern." It says both sides should ensure that force is not used under any circumstance. Even though the Sri Lankan authorities release the fishermen as a matter of routine, they do not return the impounded fishing vessels. The Ramanathapuram fishermen believe that this adds insult to injury. This time too, vessels were impounded and not returned.

Resolving the issue

For about 10 years, the fishermen have been hoping that their issue will get resolved. Sushma Swaraj, as External Affairs Minister, had even organised a high-level meeting of fishermen from both the countries to work out a solution. "But this could not deliver results fully due to various political developments," Mr. Jesu Raja said.

Now, sections of the fisherfolk expect the Indian government to impress upon the Sri Lankan government to allow fishing activity in Katchatheevu, as was the practice in the past, and also retrieve the islet since the population of fishermen in Sri Lanka who depend on the Palk Bay is smaller compared to those from Tamil Nadu. But the Central government, which assured Sri Lanka that it would abolish bottom trawlers in a phased manner, hopes that the fishermen will diversify their activities to include deep sea fishing, seaweed cultivation, and open sea cage cultivation. If the fishermen are to do this, the deep-sea fishing scheme, which has been a non-starter so far, will have to be revised with liberal norms to ensure greater participation.



Context: Recently, Katchatheevu islet resurfaced for unfavorable reasons, as fishermen associations in Ramanathapuram district declared a boycott of the annual two-day festival at St. Anthony's Church on the uninhabited islet.

Katchatheevu Island

- **About**: It is a 163-acre uninhabited island administered by Sri Lanka.
- **Location**: Between Neduntheevu, Sri Lanka and Rameswaram, India.
- **Background**: In June 1974, an **agreement was signed by the then Prime Ministers of India and Sri Lanka**.
- **Issue**: The main problem continues to grow as more fisherman move into the Sri Lankan sea area for illegal poaching. In 2010 the Sri Lankan government issued a notice to the Tamil Nadu government saying the Indian court cannot nullify the 1974 agreement.
    - The agreement specifically delineated the boundary between the two nations in the historic waters spanning from Palk Strait to Adam's Bridge.
- **A Colonial Indian Island:** Katchatheevu was once part of the Ramnad Zamindari.
    - The Ramanathapuram principality (or Ramnad) was established in 1605 by the Nayak dynasty of Madurai.
    - It consisted of 69 coastal villages and 11 islets, including Katchatheevu.
- **Importance of Kachatheevu**: The island is important for fishing grounds used by fishers from both countries.
    - The Indo-Sri Lankan agreement allows Indian fishermen to fish around Katchatheevu and to dry their nets on the island.

INDIAN EXPRESS

Page 1

SIMULTANEOUS ELECTION

Syllabus GS Paper 2 – Polity)

Interim unity govt, common voter list: Law panel readies report on simultaneous polls

APURVA VISHWANATH
NEW DELHI, FEBRUARY 28

FROM MAKING express provisions for simultaneous polls, prescribing a common electoral roll to formation of a unity government in case a government falls before the end of its five-year tenure, the Law Commission of India has worked out three major Constitutional amendments to set the ball rolling for the 'One Nation, One Election' project in 2029, *The Indian Express* has learnt.

The 22nd Law Commission, headed by former Karnataka High Court Chief Justice Ritu Raj Awasthi, is set to recommend the addition of a new chapter on simultaneous polls in the Constitution, sources said.

Currently, Part XV of the Constitution deals with elections. It prescribes the role of the Election Commission and for elections to be based on adult suffrage among other aspects. The Commission is likely to recommend insertion of a new chapter, Part XVA, that would make provisions for simultaneous polls.

While the law panel has not submitted its report to the government, it has made detailed presentations of its likely recommendations before the high-level committee, headed by former President Ram Nath Kovind, to "examine and make recommendations for holding simultaneous

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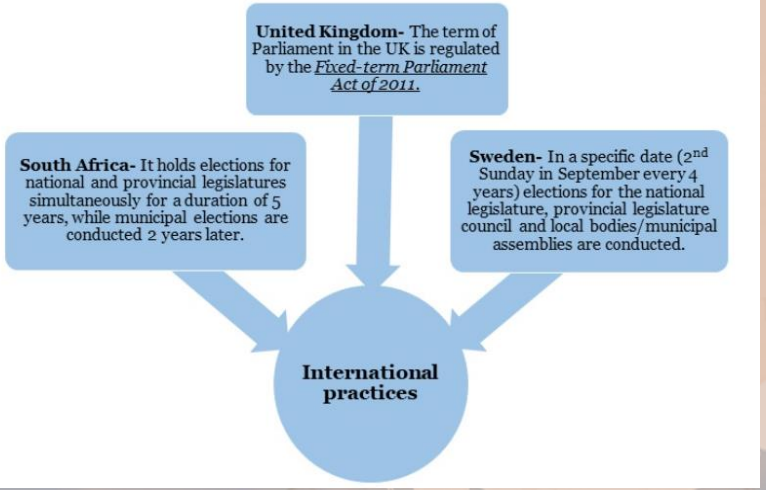


The Law Commission has made a presentation to the Kovind committee. *File*

EXPLAINED E.

A BJP promise

THE IDEA of simultaneous polls, for long a BJP promise, has been amplified in recent years by Prime Minister Narendra Modi. In its 2019 poll manifesto, the BJP said simultaneous polls were needed to reduce expenditure, ensure efficient utilisation of government resources and security forces and for effective policy planning. It said a common voter list will ensure every citizen gets the right to exercise his/her franchise for all public bodies.



Context: The Law Commission of India has proposed **three significant Constitutional amendments for the 'One Nation, One Election' project** in 2029, including provisions for simultaneous polls, a common electoral roll, and the formation of a unity government in the event of a government's premature fall.

Simultaneous Election

- **About:** It refers to synchronizing the Lok Sabha and State Assembly elections within India's electoral cycle, excluding elections to local bodies.
- **Early Suggestions by Election Commission** : The Election Commission proposed in its 1983 annual report the need for a system for simultaneous elections to Lok Sabha and State Legislative Assemblies.
- **Law Commission's Recommendation**: The 170th Report of the Law Commission, headed by Justice B P Jeevan Reddy in 1999, advocated returning to a scenario where elections to Lok Sabha and all Legislative Assemblies occur simultaneously.
- **Parliamentary Standing Committee and NITI Aayog's Support:** The 79th Report of the Parliamentary Standing Committee in 2015 and a NITI Aayog paper in 2017 reiterated support for the idea of Simultaneous Elections.
- **Historical Perspective**: The practice of Simultaneous Elections began in 1951-52, with the first three General Elections held simultaneously in 1957, 1962, and 1967. However, disruptions occurred due to premature dissolutions in subsequent years.
- **Disruption in the Cycle**: The cycle of Simultaneous Elections was disrupted after 1970, leading to separate elections for Lok Sabha and State Legislative Assemblies for the past forty-eight years.
- **Premature Dissolutions and Extended Terms**: Premature dissolutions and term extensions for certain Lok Sabha and State Legislative Assemblies contributed to the disturbance in the cycle of Simultaneous Elections.

ALL INDIA RADIO

Feb 28

SANGEET NATAK AKADEMI
(Syllabus: GS Paper 1 – Art and Culture)

Sangeet Natak Akademi Announces Akademi Ratnas and Akademi Puraskar for 2022-2023

Context: The Sangeet Natak Akademi recently announced its list of Akademi Ratnas and Akademi Puraskar.

Sangeet Natak Akademi

- **About**: The national level academy for performing arts set up by the Government of India.
- **Origin**: It was set up by the Indian education ministry on 31 May 1952 and became functional the following year, with the appointment of its first chairman, Dr. P. V. Rajamannar.
- **Awards:** The Akademi Ratna and Akademi Puraskar represent the pinnacle of achievement in the performing arts at a national level.
    - **Excellence Standard**: They symbolize the highest standard of excellence attained within the realm of performing arts.
- **Chairman Appointment**: By the President of India for a term of five years.
- **Nodal Ministry**: Ministry of Culture
- **Current Status**: It is presently an Autonomous Body of the Ministry of Culture, Government of India and is fully funded by the Government for implementation of its schemes and programmes.
- **Functions**: The academy functions as the apex body of the performing arts in the country to preserve and promote the vast cultural heritage of India expressed in music, dance and drama.
- **Honour:** 1,00,000/- (Rupees one lakh) besides a Tamrapatra and Angavastram.

New Akademi Fellows

- **Representation**: According to the Ministry of Culture, the selected artists represent various performing arts forms, including music, dance, drama, folk, tribal art, puppetry, and allied theater art forms.
- **Recognition**: The Akademi's General Council has unanimously elected six new Akademi Fellows, also known as Akademi Ratnas, highlighting their significant contributions to the arts.
- **Youthful Talent Acknowledged**: The Sangeet Natak Akademi Ustad Bismillah Khan Yuva Puraskar has been awarded to 80 young artists for their exceptional talent and dedication in the past two years.

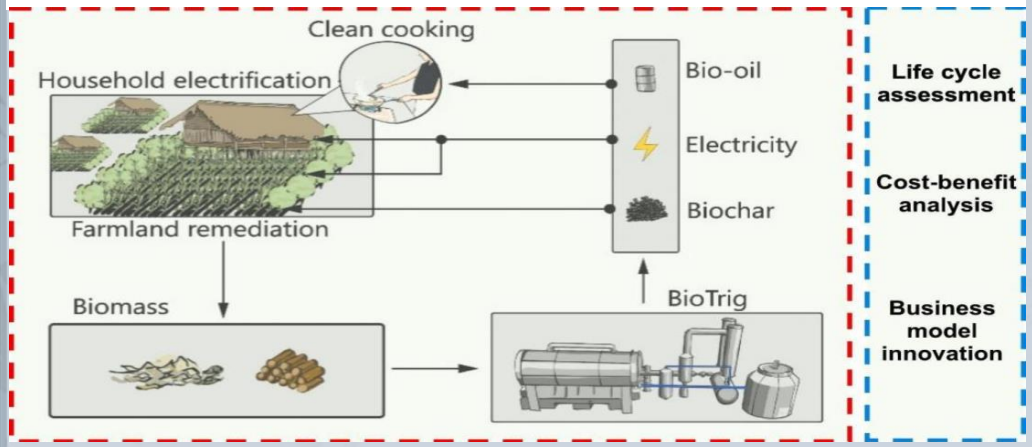
DTE

Feb 28

PYROLYSIS

(Syllabus: GS Paper 3 – Env & Eco)

New waste management technology could improve life in rural India, claims study



Key Highlights of Study

- **Pyrolysis Products for Healthier Lives**: The study highlights three key products of pyrolysis—bio-oil, syngas, and biochar fertiliser—as potential solutions for improving the health and environmental conditions of rural Indians.
- **Enhancing Farmland Productivity**: According to the paper, the utilization of pyrolysis by-products could lead to more productive farmland, offering a sustainable approach for rural communities.
- **Economic Viability Recommendations**: The researchers proposed a set of recommendations to maximize the economic viability of the system, emphasizing its potential benefits for rural communities.
- **BioTRIG Design**: The survey findings played a crucial role in designing 'BioTRIG,' a community-level pyrolysis system intended to operate on the waste generated by villagers, providing multiple benefits.
- **Syngas and Bio-Oil for Power and Heat**: The authors emphasized the role of syngas and bio-oil in powering the pyrolysis system, potentially offering surplus electricity to energize local homes and businesses.

Context: A new waste management technology (BioTRIG) that allows pyrolysis at a community level could help rural Indians cut indoor air pollution, improve soil health, and generate clean power, a recent study **(Trigeneration based on the pyrolysis of rural waste in India: Environmental impact, economic feasibility, and business model innovation)** has claimed.

Pyrolysis

- **About**: Pyrolysis is a technology utilized to convert biomass into an intermediate liquid product that can be further refined into various forms of biofuels and petrochemical replacements.
- **Principle of Pyrolysis**: It involves heating organic materials like biomass in the absence of oxygen, typically at or above 500°C, to facilitate thermal decomposition.
- **Product Formation**: During biomass pyrolysis, the absence of oxygen prevents combustion, leading to the formation of combustible gases and bio-char through thermal decomposition.
- **Composition**: The primary products of biomass pyrolysis include bio-oil (liquid), bio-char (solid), and syngas (gaseous), with the proportion of each depending on various factors.

'BioTRIG': It is a community-level pyrolysis system to run on the waste the villagers generate.

- It would provide a series of benefits to rural communities living below the poverty line (BPL).

INDIAN EXPRESS Page 17

KARNATAKA HINDU RELIGIOUS BILL 2024

(Syllabus: GS Paper 2 – Polity)



Row over Karnataka Bill: what changes it proposed to how temples are taxed

AJOY SINHA KARPURAM
NEW DELHI, FEBRUARY 28

THE KARNATAKA government's attempt to tweak the law that governs taxation of Hindu temples was last week stymied in the Legislative Council, where the primary Opposition, the Bharatiya Janata Party (BJP), holds a majority.

The Karnataka Hindu Religious Institutions and Charitable Endowments (Amendment) Bill, 2024 was introduced in the Legislative Assembly on February 19 and passed on February 22. However, it was rejected two days later in the state's Legislative Council.

What amendments did it seek?

The Bill was meant to amend multiple provisions in the Karnataka Hindu Religious Institutions and Charitable Endowments Act, 1997.

The first and the most contentious was that it intended to divert "10% of the gross income of institutions whose gross annual income exceeds Rs 1 crore" to a common pool for the maintenance of temples, instead of the existing "10% of the net income of institutions whose gross annual income exceeds Rs 10 lakh".

Net income is calculated based on the profits of the temple after accounting for its expenses, whereas gross income simply refers to the total amount of money the temple makes.

In addition, the Bill dedicated 5% of the income of institutions earning between Rs 10 lakh and Rs 1 crore to the common pool, changing the previous income bracket from Rs 5 lakh to Rs 10 lakh.

The common fund pool was created by the BJP government in 2011, by amending the 1997 Act.

If the recent amendments had been passed, they would have generated an extra Rs 60 crore, from 87 temples with incomes of over Rs 1 crore and 311 temples with income over Rs 10 lakh.

Section 19 of the Act lists the purposes for which the common fund may be utilised, including religious studies and propagation, temple maintenance, and other charitable causes.

The Congress government had said the enhanced funds would be used to grant aid to lower-income temples, provide terminal benefits to ailing priests, and provide scholarships to children from families of priests.

EXPLAINED LAW

What were the criticisms?

BJP leaders accused the Siddaramaiah government of attempting to "rob" temples and questioned why only Hindu temples were being targeted.

BJP state president BY Vijayendra said "The question from crores of devotees is why is the government eyeing the incomes of Hindu temples when it is not interested in the revenue of other religions?"

Siddaramaiah, however, maintained that there "has always been a mandate to create a common pool since the enactment of the Act in 1997 ... The common pool is administered solely for religious purposes connected with the Hindu religion... and it will continue to be used for the same purposes."

Did the Bill propose any other changes?

Under Section 25 of the Act, temples and religious institutions are required to form a "committee of management" consisting of nine people, including a priest, at least one member of a Scheduled Caste or Scheduled Tribe, two women, and one member of the locality of the institution. The Bill proposed to include, among the remaining four members, one person "skilled in Vishwakarma hindu temple architecture and sculpture."

The Bill also gave the Rajya Dharmika Parishat the power to appoint the chairman of these committees. The Rajya Dharmika Parishat is a state-appointed body empowered to make decisions on a variety of subjects related to religion, such as disputes over practices and customs.

Finally, the Bill also required the state government to create committees to oversee infrastructural projects that can facilitate pilgrimage to temples making more than Rs 25 lakh annually.

How is temple revenue handled in other states?

Telangana's approach shares similarities with the Karnataka model. Under Section 70 of the Telangana Charitable and Hindu Religious Institutions and Endowments Act, 1987, the Commissioner in charge of administration of religious institutions can create a "Common Good Fund". Religious institutions making more that Rs 50,000 annually are required to pay 1.5% of their annual income to the state government.

After the government is repaid for expenses it has incurred under the Telangana Act, the commissioner can direct the remaining funds to the Common Good Fund. These funds are utilised for the maintenance and renovations of temples, *vedapathasalas* (religious schools) and for the establishment of new temples.

Kerala employs an entirely different system, where temples are often managed by state-run Devaswom (temple) Boards. The state has five autonomous Devaswom Boards that manage over 3,000 temples. These boards are run by nominees appointed by the ruling government, who are often politicians.

Each Devaswom Board has a budget allocated by the state government and is not required to share revenue figures.

Context: The Karnataka government's attempt to tweak the law that governs taxation of Hindu temples was last week stymied in the Legislative Council, where the primary Opposition holds a majority.

Karnataka Hindu Religious Institutions and Charitable Endowments (Amendment) Bill, 2024

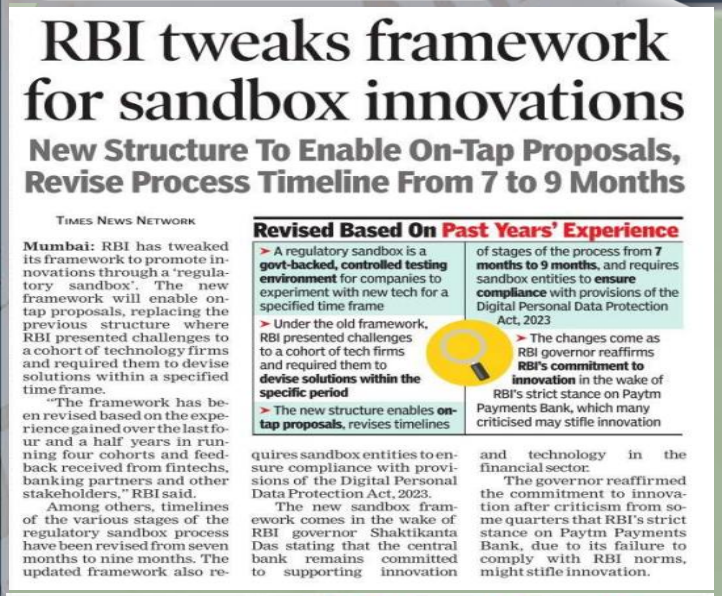
- **About:** The Bill was meant to amend multiple provisions in the Karnataka Hindu Religious Institutions and Charitable Endowments Act, 1997.
- **Provisions of the Bill**
  - **Government's Rationalization**: The government argues that the bill aims to redistribute revenues from temples with higher earnings to those with lower earnings for equitable distribution and upkeep.
  - **Opposition**: The opposition vehemently opposes the bill, branding it as "anti-Hindu" and a tactic to seize temple revenues.
  - **Temple Revenue Classification**: Temples are categorized into Grade A, B, and C based on their earnings, with Grade A temples earning more than Rs 25 lakh, Grade B between Rs 5 lakh and Rs 25 lakh, and Grade C below Rs 5 lakh.
  - **Current Allocation Scheme**: Presently, the government is permitted to allocate 5% of Grade B revenues and 10% of Grade A revenues to Grade C temples for their maintenance.
  - **New Mandates**: The proposed legislation mandates muzrai temples earning over Rs 1 crore annually to contribute 10% of their income to a common pool (Dharmik Parishad), and shrines with revenues between Rs 10 lakh to Rs 1 crore to contribute 5%, with the funds being redistributed among Grade C temples.

TIMES OF INDIA

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REGULATORY SANDBOX

(Syllabus: GS Paper 3 – Economy)



RBI tweaks framework for sandbox innovations

New Structure To Enable On-Tap Proposals, Revise Process Timeline From 7 to 9 Months

TIMES NEWS NETWORK

Mumbai: RBI has tweaked its framework to promote innovations through a 'regulatory sandbox'. The new framework will enable on-tap proposals, replacing the previous structure where RBI presented challenges to a cohort of technology firms and required them to devise solutions within a specified time frame.

"The framework has been revised based on the experience gained over the last four and a half years in running four cohorts and feedback received from fintechs, banking partners and other stakeholders," RBI said.

Among others, timelines of the various stages of the regulatory sandbox process have been revised from seven months to nine months. The updated framework also requires sandbox entities to ensure compliance with provisions of the Digital Personal Data Protection Act, 2023.

The new sandbox framework comes in the wake of RBI governor Shaktikanta Das stating that the central bank remains committed to supporting innovation and technology in the financial sector.

The governor reaffirmed the commitment to innovation after criticism from some quarters that RBI's strict stance on Paytm Payments Bank, due to its failure to comply with RBI norms, might stifle innovation.

Revised Based On Past Years' Experience

- A regulatory sandbox is a **govt-backed, controlled testing environment** for companies to experiment with new tech for a specified time frame
- Under the old framework, RBI presented challenges to a cohort of tech firms and required them to **devise solutions within the specific period**
- The new structure enables **on-tap proposals**, revises timelines of stages of the process from **7 months to 9 months**, and requires sandbox entities to **ensure compliance** with provisions of the Digital Personal Data Protection Act, 2023
- The changes come as RBI governor reaffirms **RBI's commitment to innovation** in the wake of RBI's strict stance on Paytm Payments Bank, which many criticised may stifle innovation



Revised Based On Past Years' Experience

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Context: RBI has tweaked its framework to promote innovations through a 'regulatory sandbox. The new framework will enable on tap proposals, replacing the previous structure where RBI presented challenges to a cohort of technology firms and required them to devise solutions within a specified time frame.

Regulatory Sandbox

- **About**: It refers to live testing of new products or services in a controlled regulatory environment, providing a "safe space" for businesses.
- **Participants and Processes**: The sandbox involves regulators, innovators, financial service providers, and customers conducting field tests to assess the benefits and risks of new financial innovations.
- **Benefits of Regulatory Sandbox:** Regulators gain firsthand insights into emerging technologies, aiding in informed regulatory decisions.
    - **Integration for Financial Service Providers**: Incumbent providers enhance their understanding of new technologies, integrating them into their business models.
    - **Compliance for Innovators**: Fintech companies grasp regulatory requirements, refining their products accordingly.
- **Facilitating Innovation**
    - **Product Viability Testing**: Users assess the feasibility of products without expansive roll-outs, expediting market authorization.
    - **Promoting Financial Inclusion**: Sandbox initiatives foster solutions in areas like microfinance, savings, remittances, and digital payments, enhancing financial accessibility.
- **Implementation Examples**: India's regulatory bodies, including the Reserve Bank of India and others, operate their own sandboxes to encourage innovation in the financial sector.

PIB

Feb 28

HAEMOPHILIA

(Syllabus: GS Paper 3 – Sci and Tech)

India has conducted the first human clinical trial of gene therapy for haemophilia A (FVIII deficiency) at Christian Medical College (CMC) Vellore, says Dr. Jitendra Singh

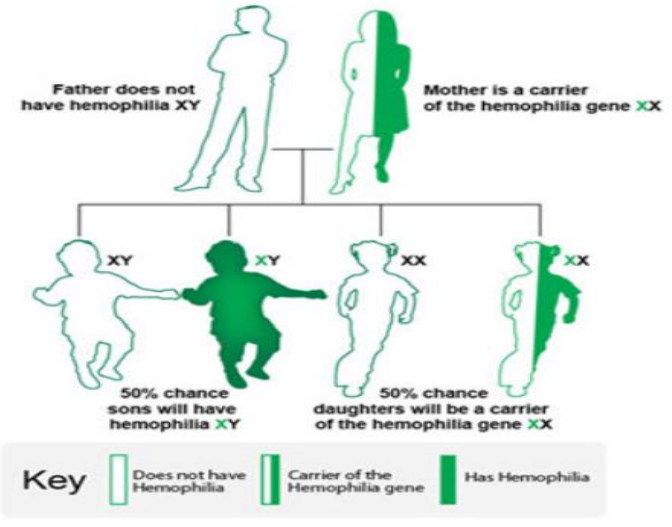
Context: India has conducted the first human clinical trial of gene therapy for haemophilia A (FVIII deficiency) at Christian Medical College (CMC) Vellore.

Haemophilia

- **About:** It is typically an inherited bleeding disorder characterized by ineffective blood clotting, leading to spontaneous or post-injury bleeding episodes.
- **Clotting Factors**: Blood contains clotting factors crucial for clot formation; individuals with haemophilia lack adequate levels of either factor VIII (8) or factor IX (9), determining the severity of the condition.
- **Types:** Hemophilia A (Classic Hemophilia) and Hemophilia B (Christmas Disease)
- **Inheritance and Occurrence**: Hemophilia is primarily inherited but can also develop later in life, particularly in middle-aged or elderly individuals, or in young postpartum women.
- **Causes**: Hemophilia stems from mutations in genes responsible for producing clotting factor proteins essential for blood clot formation.
- **Signs and Symptoms**: Bleeding into joints, skin, muscle, and soft tissues are common manifestations, often leading to pain, swelling, or bruising.
    - Oral bleeding, post-tooth extraction bleeding, and bleeding post-vaccination are also observed symptoms.
- **Affected Population**: Hemophilia affects approximately 1 in 5,000 male births, with an estimated 20,000 to 33,000 males in the United States living with the disorder, predominantly with hemophilia A. It affects individuals across all racial and ethnic groups.
- **Treatment:** The primary treatment for hemophilia involves the replacement of deficient clotting factors through the infusion of commercially prepared factor concentrates administered intravenously.

Gene Therapy

- **About:** Gene therapy is a technique aimed at treating, preventing, or curing diseases by utilizing specific genes.
- **Mechanism**: The process commonly involves introducing new copies of a defective gene or replacing it with a healthy version within the patient's cells.
- **Scope of Treatment**: Gene therapy addresses both inherited genetic disorders like hemophilia and sickle cell disease, as well as acquired disorders such as leukemia.



THE HINDU

Page 5

HYDROGEN FUEL FERRY
(Syllabus: GS Paper 3 – Sci and Tech)

PM Modi inaugurates country's first indigenous hydrogen fuel cell ferry

The Hindu Bureau
KOCHI

Prime Minister Narendra Modi flagged off India's first indigenously built hydrogen fuel cell ferry boat in virtual mode here on Wednesday.

The vessel has been built at the Cochin Shipyard. The pilot vessel is a 24-metre catamaran which can carry 50 passengers. It also has a fully air conditioned space for passengers. It will make urban mobility smooth and easy, according to a release issued by the Cochin Shipyard Limited (CSL).



Brand new: Built by the Cochin Shipyard, the hydrogen fuel cell ferry boat can carry up to 50 passengers. SPECIAL ARRANGEMENT

The launch of the vessel was part of a major programme organised in Thoothukudi in Tamil Nadu to mark the laying of the foundation stone for a ₹17,300-crore project in the district. The vessel built at the CSL underscores the pioneering step for embracing clean energy solutions and aligning with the nation's net-zero commitments, he said.

The hydrogen fuel vessel has fully home-grown technology and it can be replicated in other parts of the country for urban mobility application, according to the CSL.

Mr. Modi also said that the various rail projects launched on Wednesday will further boost connectivity between south Tamil Nadu and Kerala.

Context: Prime Minister of India will inaugurate the first indigenously developed and built hydrogen fuel cell ferry. The vessel constructed by Cochin Shipyard Ltd will be inaugurated in virtual mode from Thoothukudi.

- The inauguration of this project will provide impetus for use of hydrogen in marine application as envisaged under the National Green Hydrogen Mission.

National Green Hydrogen Mission (NGHM)

- **Approved in:** January 4, 2023.
- **Nodal Ministry:** Ministry of New and Renewable Energy.
- **Objective:** To make India the Global Hub for production, usage and export of Green Hydrogen and its derivatives.
  - To make India a leader in technology and manufacturing of electrolysers and other enabling technologies for Green Hydrogen.

Hydrogen Fuel Cell

- **About**: A hydrogen fuel cell is a device that converts the chemical energy from hydrogen into electricity through an electrochemical reaction.
- This technology involves combining hydrogen and oxygen to produce electricity, heat, and water.
- **Key Component :**
  - **Electrolyte**: The fuel cell contains an electrolyte, a substance that conducts ions. Commonly used electrolytes include proton exchange membrane (PEM), phosphoric acid, molten carbonate, and solid oxide.
  - **Anode**: Hydrogen gas is fed into the anode side of the fuel cell. At the anode, hydrogen molecules (H_2) are split into protons (H^+) and electrons (e^-) through a process called electrolysis.
  - **Cathode**: Oxygen from the air is supplied to the cathode side of the fuel cell. The oxygen molecules combine with electrons and protons that have traveled through an external circuit from the anode, creating water (H_2O) as a byproduct.
  - **Electrochemical Reaction**: The chemical reactions occurring at the anode and cathode generate an electric current. This electricity can be utilized to power electric vehicles, and electronic devices, or provide electricity for various applications.
- **Benefits:** Low-to-zero emissions, High Efficiency, Reliability, Fuel Flexibility, Energy Security, Durability, Scalability and Quiet Operation.
- **Applications:** Hydrogen fuel cells find applications in various sectors, including transportation (fuel cell vehicles), stationary power generation, and portable electronic devices.

PIB Feb 28

PEY JAL SURVEKSHAN AWARDS
(Syllabus: GS Paper 2 – Govt Policies)

First Pey Jal Survekshan Awards to be conferred by President on 5th March

Context: The Ministry of Housing & Urban Affairs announces the first Pey Jal Survekshan Awards scheduled for the 5th of March 2024 at Vigyan Bhawan.

Pey Jal Survekshan Awards

- **About**: It ensured clean water through independent NABL lab testing at source and citizen-end.
- **Nodal Ministry**: Ministry of Housing & Urban Affairs
- **Award Categories**
  - **Pey Jal Gold, Silver, and Bronze City Awards**: Gold signifies top performers in their respective population categories (1 to 10 Lakh, 10 to 40 Lakh, and More than 40 Lakh), Silver denotes the 2nd position, and Bronze the 3rd.
  - **Additional Awards**: Commendations for Best Water Body, Sustainability Champion, Reuse Champion, Water Quality, City Saturation, and AMRUT 2.0 Rotating Trophy of the Year.
- **Parameters for Evaluation:** Access, coverage, water quality at treatment plants and households, and sustainability regarding the health of water bodies, availability of SCADA/flowmeters, and reuse of treated used water.
- **Grading System**: Cities will be graded on a star rating scale, ranging from 5 stars to No star, encapsulating their performance across critical criteria..
  - Utilized a GIS-enabled web portal, geo-tagging, and infrastructure mapping, the survey collected accurate and transparent data.
- **Significance:** Its results are expected to drive ULB decision-making, enhance service delivery, and foster citizen engagement, instilling a sense of ownership and knowledge dissemination about water conservation and optimal use.

FINANCIAL EXPRESS

Feb 28

GENERAL AGREEMENT ON GOODS SERVICES

(Syllabus: GS Paper 3 – Economy)

Services pact with voluntary obligations comes into force

Context: Around 72 nations have agreed to take on additional obligations in services under the **General Agreement on Goods in Services (GATS)** to ease non-goods trade among themselves and extended the similar concessions to all other members of the World Trade Organisation (WTO).

General Agreement on Goods in Services (GATS)

- **About:** The GATS is a treaty of the World Trade Organization (WTO) established to extend the multilateral trading system to the service sector.
- **Entered into force**: January 1995 as a result of the Uruguay Round negotiations to provide for the extension of the multilateral trading system to services.
- **Creation and Implementation**: It was created to expand the trading framework to services, similar to how GATT operates for merchandise trade, and it came into effect on January 1, 1995, concluding the Uruguay Round of Multilateral Trade Negotiations.
- **Background**: The GATS was a significant outcome of the Uruguay Round of trade negotiations, spanning from 1986 to 1993.
  - **GATT Predecessor**: Its inception occurred almost 50 years after the establishment of the General Agreement on Tariffs and Trade (GATT) in 1947, which focused on merchandise trade.
- **Membership**: All WTO members, including India, are members of the GATS, which entails general obligations applying to all members and specific commitments outlined in individual schedules.
- **Scope and Exceptions**: GATS applies broadly to all service sectors, with exceptions for services under governmental authority and an exemption for air transport services.
- **New Obligations and Disciplines**: Recent obligations under GATS focus on mitigating trade-restrictive effects related to licensing, qualification requirements, and technical standards through disciplines named Services Domestic Regulation (DSR), which operate on a most-favored-nation principle benefiting all WTO members.

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