Major Trade Agreements of India

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MAJOR TRADE AGREEMENTS OF INDIA

Free Trade Agreement (FTA) With Neighbouring Countries

- India-Sri Lanka FTA
- India-Nepal Treaty of Trade
- India-Bhutan Agreement on Trade, Commerce, and Transit

A free trade agreement is a comprehensive deal between countries, offering preferential trade terms and tariff concessions, with a negative list excluding specific products and services.

Regional FTA's of India

- **India ASEAN Trade in Goods Agreement (11):** 10 ASEAN countries + India
- **South Asia Free Trade Agreement (7):** India, Pakistan, Nepal, Sri Lanka, Bangladesh, Bhutan, and the Maldives
- **Global System of Trade Preferences** (41 countries + India)

India's CECAs and CEPAs

CECA/CEPA is broader than FTAs, addressing regulatory, trade, and economic aspects comprehensively, with CEPA having the widest scope including services, investment, etc while CECA mainly focuses on tariff and TQR rates negotiation.

- CEPA with **UAE, South Korea, Japan**
- CECA with **Singapore, Malaysia**

- **Others:**
  - India-Australia Economic Cooperation and Trade Agreement (ECTA)
  - India-Thailand Early Harvest Scheme (EHS)
  - India-Mauritius Comprehensive Economic Cooperation and Partnership Agreement (CECPA)

An EHS precedes an FTA/CECA/CEPA, where negotiating countries select products for tariff liberalisation, paving way for broader trade agreements and fostering confidence.

Preferential Trade Agreements (PTAs)

Partners in a PTA grant preferential access to specific products by lowering duties on agreed tariff lines, maintaining a positive list of products eligible for reduced or zero tariffs.

- **Asia Pacific Trade Agreement (APTA):** Bangladesh, China, India, S. Korea, Lao PDR, Sri Lanka, and Mongolia
- **SAARC Preferential Trading Agreement (SAPTA):** Same as SAFTA
- **India-MERCOSUR PTA:** Brazil, Argentina, Uruguay, Paraguay and India
- India's PTA with **Chile, Afghanistan**

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Rare Disease Day 2024

Source: TH

Why in News?

Recently, Rare Disease **Day** was observed on the **last day of February.** This international awareness day is dedicated to raising awareness of rare diseases and their significant impact on patients and their families.

What is Rare Disease Day?

- Rare Disease Day is a globally coordinated movement dedicated to advocating for **equity in social opportunity, healthcare, and access to diagnosis** and therapies for individuals with rare diseases.
- The theme for Rare Disease Day 2024 is **"Share Your Colours,"** which emphasizes collaboration and support.
- It was established in 2008 and observed annually on **28th February (or 29 in leap years)**. Rare Disease Day is coordinated by the **European Organisation for Rare Diseases (EURORDIS)** and over 65 national alliance patient organization partners.
- It serves as a focal point for advocacy work on local, national, and international levels, engaging individuals, families, caregivers, healthcare professionals, researchers, policymakers, industry representatives, and the general public.

What is a Rare Disease?

- **About:**
  - Rare diseases are loosely defined as **occurring infrequently in the population**, with prevalence varying between nations.
  - The **World Health Organization** defines rare diseases as often debilitating lifelong conditions with a prevalence of **1 or less per 1000 population.**
  - Different countries have their own definitions; for instance, the US considers diseases affecting fewer than 200,000 patients rare, while the European Union sets the limit at no more than 5 in 10,000 people.
  - **India currently does not have a standard definition**, but the **Organisation of Rare Diseases India (ORDI)** has suggested that a disease is to be defined as rare if it affects 1 in 5,000 people or less.
- **Global Rare Diseases Burden:**
  - **300 million people** worldwide are affected by rare diseases.
  - Rare diseases affect approximately **3.5% to 5.9% of the population.**
  - 72% of rare diseases are **genetic**, with over 7000 characterized by diverse disorders and symptoms.
  - **75% of rare diseases affect children.** 70% of rare diseases have their onset during childhood.
- **Characteristics and Impact of Rare Diseases:**
  - Rare diseases present with a **broad diversity of disorders and symptoms**, varying not only between diseases but also among patients with the same disease.
  - The **chronic, progressive, degenerative, and often life-threatening nature** of rare diseases significantly affects patients' quality of life.
  - Lack of effective cures exacerbates the pain and suffering endured by patients and their

families.

- **Challenges Faced by Individuals with Rare Diseases:**
  - Delayed diagnosis due to lack of **scientific knowledge and quality information.**
  - Inequalities in **access to treatment** and care leading to **social and financial burdens.**
  - **Common symptoms** can mask underlying rare diseases, leading to initial misdiagnosis.
  - According to EURORDIS, 5 years is the time it takes on average for rare disease patients to get a diagnosis.
    - 70% of people with rare diseases wait more than 1 year to get a confirmed diagnosis after coming to medical attention.
  - Physicians' **lack of awareness and training in interpreting rare disease** signs and symptoms contributes to diagnostic challenges.

What is the Landscape of Rare Diseases in India?

- **Impact:**
  - India represents **one-third of global rare disease cases,** encompassing over 450 identified diseases.
  - Despite this significant prevalence, rare diseases remain largely overlooked in India, with limited awareness, diagnosis, and drug development.
  - Over **8 to 10 crore Indians are estimated to suffer from rare diseases,** with **over 75% being children.**
- **Challenges in Policy and Implementation:**
  - The Ministry of Health and Family Welfare formulated a national policy for rare diseases in 2017 but withdrew it in 2018 due to implementation challenges.
  - The revised **first** National Policy for Rare Diseases (NPRD) **was announced in 2021**, but problems persist, including the **absence of a clear definition for rare diseases.**
- **Treatment Accessibility and Funding:**
  - Less than **50% of identified rare diseases in India are treatable,** with approved treatments available for only about 20 diseases.
  - Access to approved treatments is limited to designated **Centres of Excellence (CoEs),** which are few (12) in number, unevenly distributed, and often lack coordination.
  - The NPRD guidelines provide limited financial assistance per patient, insufficient for lifelong management and therapy of chronic rare diseases.
- **Challenges in Fund Utilization:**
  - Budget allocations for **rare diseases have increased but remain low**, with Rs 93 crore allocated for 2023-2024.
  - Confusion and disparities in **fund utilization among CoEs** highlight inefficiencies in resource allocation.
    - A staggering 51.3% of allocated funds remain unutilized, despite patients urgently needing treatment.
  - Some CoEs struggle with **underutilization of allocated funds,** while others **exhaust their budgets quickly,** leading to unequal access to treatment.
    - For instance, **Mumbai exhausted all its funds** while treating only 20 out of 107 patients, **Delhi utilized less than 20% of its funds.**
  - The burden of funding treatment often falls on patients and their families, with governmental support falling short.
  - Patients and advocacy groups call for sustainable funding from both the central and state governments to support rare disease treatment.
    - Sustainable funding is crucial for patients, especially those who have exhausted their allotted funds and are struggling to continue treatment.

National Policy for Rare Diseases (NPRD), 2021

- The NPRD, 2021 aims to reduce the prevalence and incidence of rare diseases.
- Rare diseases are categorized into three groups: **Group 1, Group 2, and Group 3** based on treatment requirements.
  - **Group 1:** Disorders amenable to one-time curative treatment.
  - **Group 2:** Diseases requiring long-term/lifelong treatment with relatively lower treatment costs.

- - **Group 3:** Diseases with definitive treatment available, but challenges exist in patient selection and **high treatment costs.**
  - NPRD, 2021 has the provision for financial support of up to Rs. 50 lakhs for patients suffering from any category of rare diseases and for treatment in any of the CoE mentioned in NPRD-2021, outside the Umbrella Scheme of **Rashtriya Arogaya Nidhi(RAN).**
    - **RAN offers a maximum financial assistance of Rs 20 lakh for patients suffering from specified rare diseases.**

Way Forward

- Frame a **standard definition of rare diseases** to provide clarity and consistency in policy implementation.
- Increase **budgetary outlays** dedicated to rare diseases to support drug development, therapy, and research.
  - Expand the number of CoEs for rare diseases and ensure better coordination among them.
  - Develop satellite centres under CoEs to improve accessibility and outreach in underserved regions.
  - Enhance responsible utilization of funds to maximize impact and address disparities in fund utilization.
- There is a need for **a national registry for rare diseases to report** and clarify the list of rare diseases, as well as a centralized laboratory for the detection of rare diseases.
- Incentivize **domestic drug manufacturers** under the **Production-Linked Incentive Scheme** to encourage the production of affordable drugs.
- Implement the **Comprehensive Rare Disease Care (CRDC) model,** it aims to bridge the gap between patients and families suspected or affected by genetic etiology (gene abnormality).
  - The CRDC model establishes a technical and administrative roadmap for hospitals.
- Ensure affordable access to rare disease medicines, reduce tax on commercially available drugs, expanding access for patients.

UPSC Civil Services Examination, Previous Year Questions (PYQs)

Mains

Q. Appropriate local community-level healthcare intervention is a prerequisite to achieve 'Health for All' in India. Explain. **(2018)**

Rajya Sabha Elections

For Prelims: Cross-voting, Article 80 of the Constitution, Legislative Assembly**,** Representation of the People Act, 1951**.**

For Mains: Rajya Sabha Elections, Government policies and interventions for development in various sectors and issues arising out of their design and implementation

Source: TH

Why in News?

The **Rajya Sabha elections** in the States of Uttar Pradesh, Himachal Pradesh and Karnataka witnessed cross-voting by MLAs (Member of Legislative Assembly) belonging to different parties. This has once again raised concerns about the sanctity of the election process.

How are Rajya Sabha Elections Held?

- **Background:**
  - As per **Article 80** of the Constitution, representatives of each State to the **Rajya Sabha** are elected indirectly by the **elected members of their** Legislative Assembly.
  - The polls for Rajya Sabha will be required **only if the number of candidates exceed the number of vacancies.**
  - Till 1998, the outcome of Rajya Sabha elections was usually a foregone conclusion, the parties with a majority in the state assembly **often had their candidates win unopposed** due to a lack of competition.
    - However, the June 1998 Rajya Sabha elections in Maharashtra witnessed **cross-voting that resulted in the loss of a Congress party candidate.**
- **Amendment to the Representation of the People Act, 1951:**
  - In order to rein in the MLAs from such cross-voting, an amendment to the **Representation of the People Act, 1951** was carried out in 2003.
    - **Section 59 of the Act** was amended to **provide that the voting in elections to Rajya Sabha** shall be through an open ballot.
  - The MLAs of political parties are required to show their ballot paper to the authorised agent of their Party.
  - Not showing the ballot paper to the authorised agent or showing it to anyone else will **disqualify the vote.**
  - Independent MLAs are barred from showing their ballots to anyone.
- **Process of Election in Rajya Sabha:**
  - **Seat Allocation:** The Rajya Sabha has a strength of **250 members representing States and Union Territories** including Delhi and Puducherry.
    - Out of the total, **12 are directly nominated by the President** from the fields of art, literature, science, Social Service.
    - Rajya Sabha seats are distributed among states based on their population. For example, Uttar Pradesh **has a quota of 31 Rajya Sabha seats while Goa has just one.**
  - **Indirect Election System:** The Members of the state legislative assemblies choose **Rajya Sabha members through an indirect election** system of proportional representation by means of a **Single Transferable Vote (STV).**
    - In this system, the voting power of each **MLA is determined by the population of their respective constituencies.**
  - **Quotas:** To be elected, a candidate must secure a **specific number of votes known as quotas.** The quota is determined by dividing the total valid votes by the **number of seats available plus one.**
    - In states with multiple seats, the initial quota is calculated by multiplying the number of MLAs by 100, as each MLA's vote is valued at 100.
  - **Preferences and Surplus:** When filling out the ballot paper with names of candidates from various parties, MLAs **rank their preferences against each candidate** — with 1 indicating the top preference (the first preferential vote), 2 for the next, and so forth.
    - If a candidate receives enough first preferential votes to meet or exceed the quota, they are elected.
    - If a winning candidate has surplus votes, those votes are transferred to their second choice (marked as number 2). If multiple candidates have surpluses, the **largest surplus is transferred first.**
  - **Elimination of Fewer Votes:** To prevent wasted votes, if the required number of candidates are not elected after surplus transfers, the candidate with the **fewest votes is eliminated,** and their unexhausted ballot papers are redistributed among the remaining candidates.

- An "exhausted paper" refers to a ballot paper with no further preferences recorded for continuing candidates.
- This process of surplus vote transfers and eliminations continues until enough candidates reach the quota to fill all available seats.

Note

Shailesh Manubhai Parmar v Election Commission of India Case, 2018:

- SC denied the **None Of The Above (NOTA)** option to the electors in the Rajya Sabha election.
- The SC stated that making NOTA applicable in Rajya Sabha elections is contrary to **Article 80(4) of the constitution.**
    - Article 80(4) states that the representatives of each state in the Council of States shall be elected by the elected members of the legislative assembly of the state in accordance **with the system of proportional representation** by means of the single transferable vote.

JMM bribery case, 1998:

- The SC had to interpret the provisions of **Article 105(2) of the Constitution**, which provides immunity to lawmakers for their speech and votes in Parliament or any committee thereof.
    - The Supreme Court, laid down in the **JMM bribery case judgment of 1998**, that **lawmakers who took bribes were immune from prosecution** for corruption if they go ahead and vote or speak in the House as agreed.
- **In March 2024, a Seven-judge Bench overruled the judgment by a five-judge Bench in a 25-year-old JMM bribery case,** declaring that **parliamentary privilege or immunity** will **not protect legislators who take bribes to vote or speak in Parliament** or State Legislative Assemblies from criminal prosecution.
    - Privileges and immunities are not gateways to claim exemptions from the general law of the land.

Does Anti-Defection Law Apply to Rajya Sabha Elections?

- **Tenth Schedule and "Anti-Defection" Law:**
    - The **Tenth Schedule** of the Constitution, introduced by the **52nd Constitutional Amendment Act in 1985**, contains provisions related to the **"anti-defection" law.**
    - It states that a member of Parliament or a state legislature who voluntarily gives up the membership of their political party or votes against the instructions of their party is **liable for disqualification from the House.**
    - This instruction regarding voting is **usually issued by the party whip.**
- **Applicability of Tenth Schedule:**
    - However, the Election Commission clarified in July 2017 that the provisions of the Tenth Schedule, including the **anti-defection law, are not applicable to Rajya Sabha elections.**
    - Therefore, political parties cannot issue any whip to their members for Rajya Sabha elections, and members are not **bound by party instructions in these elections.**

What is Cross Voting?

- **Background:**
    - Rajendra Prasad Jain won a seat in Bihar through **cross-voting by Congress MLAs (in exchange for bribes) later,** Jain's election was declared **void by the Supreme Court in 1967.**
- **About Cross Voting:**
    - Cross voting refers to a situation in which **a member of a legislative body,** such as a Member of Parliament or a Member of a Legislative Assembly, belonging to one political party, **votes for a candidate or a party other than their own** during an election or any

other voting process.
- In the context of Rajya Sabha elections in India, cross voting can occur when members of a political party vote for candidates from other parties instead of the candidates nominated by their own party.
- This can **happen due to various reasons**, including disagreement with the party's candidate selection, inducements or pressures from other parties, personal relationships with candidates from other parties, or ideological differences.

What are the Implications of Cross Voting?

- **Negative Implications:**
  - **Undermining Representation:** Cross-voting can undermine the **representation of the electorate.**
    - MLAs are expected to vote in alignment with the **party's interests or the will of their constituents.** When they deviate from this, it can lead to the election of candidates who may not have the support of the majority.
  - **Corruption:** Cross-voting often occurs due **to bribery or other corrupt practices**, as illustrated in the example of **Rajendra Prasad Jain's election.** This undermines the integrity of the electoral process and erodes public trust in democracy.
    - Jain won a seat in Bihar through cross-voting by Congress MLAs (in exchange for bribes) later Jain's election was declared void by the Supreme Court in 1967.
  - **Party Discipline:** Cross-voting reflects a **lack of party discipline,** indicating internal divisions within political parties. It **weakens party cohesion** and stability, making it difficult for parties to pursue coherent policy agendas.
  - **Democratic Values:** Cross-voting goes against the democratic principle of accountability, where representatives are expected to **uphold the interests of their constituents** and the broader public good. It prioritizes personal gain or party politics over democratic principles.
- **Potential Positive Implications:**
  - **Independence:** Cross-voting can signal a **degree of independence among elected representatives**, allowing them to vote according to their conscience or the interests of their constituents rather than strict party lines.
    - This can lead to more nuanced decision-making and representation.
  - **Checks and Balances:** Cross-voting, if driven by genuine differences in opinion or ideology, can serve as a **check on the dominance of a single party or faction within the legislative body.**
    - It can prevent the concentration of power and promote greater balance and diversity of viewpoints.
  - **Accountability:** In some cases, cross-voting may reflect dissatisfaction with party leadership or policies, forcing parties to **introspect and address internal grievances.** This can ultimately lead to greater accountability and responsiveness to the electorate.

What are SC's Ruling Related to the Tenth Schedule and Rajya Sabha Election?

- ***Kuldip Nayar vs. Union of India, 2006:***
  - The [Supreme Court (SC)](link) **upheld the system of open ballot for Rajya Sabha elections.**
  - It reasoned that if secrecy becomes a source for corruption, then transparency **has the capacity to remove it.**
  - However, in the same case the court held that an elected MLA of a political party would not face disqualification under the **Tenth Schedule for voting against their party candidate.**
  - He/she may at the most attract disciplinary action from their political party.
- ***Ravi S. Naik and Sanjay Bandekar vs. Union of India, 1994:***
  - The SC held that **voluntarily giving up membership** under the Tenth Schedule is **not synonymous with only formally resigning** from the party to which the member belongs.
  - The conduct of a member both inside and outside the house can be looked into to infer if it qualifies as voluntarily giving up membership.

Way Forward

- Implementing stricter laws and regulations to combat electoral malpractices, including bribery and corruption.
- This could involve increasing penalties for offenders, enhancing transparency in campaign financing, and empowering independent electoral bodies to enforce compliance.
- Encouraging political parties to adopt internal **mechanisms for promoting discipline and accountability among** their members.
    - This could include strengthening party leadership, promoting intra-party democracy, and fostering a culture of ethical conduct.
- Raising awareness among voters and stakeholders about the importance of electoral integrity and the consequences of cross-voting. This could involve public education campaigns, media coverage of electoral issues, and civic engagement initiatives to empower citizens to hold their representatives accountable.

Previous Year's Questions (PYQs)

Q. Rajya Sabha has equal powers with Lok Sabha in: (2020)

A. the matter of creating new All India Services
B. amending the Constitution
C. the removal of the government
D. making cut motion

Ans: (B)

Q. Which of the following statements is/are correct? (2016)

1. A Bill pending in the Lok Sabha lapses on its prorogation.
2. A Bill pending in the Rajya Sabha, which has not been passed by the Lok Sabha shall not lapse on dissolution of the Lok Sabha.

Select the correct answer using the code given below:

A. 1 only
B. 2 only
C. Both 1 and 2
D. Neither 1 nor 2

Ans: (B)

Q. Consider the following statements: (2015)

1. The Rajya Sabha has no power either to reject or to amend a Money Bill.
2. The Rajya Sabha cannot vote on the Demands for Grants.
3. The Rajya Sabha cannot discuss the Annual Financial Statement.

Which of the statements given above is/ are correct?

A. 1 only
B. 1 and 2 only
C. 2 and 3 only
D. 1, 2 and 3

Ans: (B)

India's Cooperative Sector

Source: TH

Why in News?

Recently, the Indian Prime Minister inaugurated the pilot project of **World's Largest Grain Storage Plan,** which is currently launched in **11** Primary Agricultural Credit Societies (PACS) across 11 states.

- It marks a significant development in the **cooperative sector.**

What are the Features of the Grain Storage Plan?

- **About**: The Grain Storage Plan aims to establish **700 lakh tonnes of storage capacity** over the next 5 years, with an investment of ₹1.25 lakh crore.
  - This involves creating agricultural infrastructure at the PACS level, including **decentralised godowns, custom hiring centres, processing units, Fair Price Shops,** etc., by integrating various existing schemes of the Government of India.
- **Expected Outcomes:** Enabling farmers to store their produce at PACS godowns, offering bridge finance for the next crop cycle or selling at MSP to avoid distress sales.
  - Increased grain storage reduces post-harvest losses, improving farmer earnings and ensuring food security at the grassroots level, benefiting consumers.

What is the Status of the Cooperative Sector in India?

- **About:** Cooperatives are people-centred enterprises owned, controlled and run by and for their members to realise their common **economic, social, and cultural needs** and aspirations.
  - India has one of the world's largest cooperative networks, with over **800,000 cooperatives** spread across various sectors like agriculture, credit, dairy, housing, and fisheries.
- **Evolution of Cooperative Sector in India:**
  - **First Five-Year Plan (1951-56):** Highlighted the promotion of cooperatives for comprehensive community development.
  - **Multi-State Co-operative Societies Act, 2002:** Provides for the formation and functioning of multi-state co-operatives.
  - **97th Constitutional Amendment Act of 2011:** Established the right to form cooperative societies as a fundamental right **(Article 19).**
    - Introduced a new Directive Principle of State Policy on Cooperative Societies **(Article 43-B).**
    - Added a new Part IX-B to the Constitution titled "The Co-operative Societies" **(Articles 243-ZH to 243-ZT).**
    - Empowered **Parliament to enact laws governing multi-state cooperative** societies (MSCS) and delegated authority to state legislatures for other cooperative societies.
  - **Establishment of Union Ministry of Cooperation (2021):** Assumed responsibility for cooperative affairs, previously overseen by the Ministry of Agriculture.

- **Multi-State Co-operative Societies (Amendment) Act, 2022:** It aims to enhance regulation for multi-state cooperative societies.
  - Introduces the **Co-operative Election Authority** to oversee board elections in multi-state co-operative societies.
  - Requires multi-state co-operative societies to **obtain government permission** before redeeming their shareholding.
  - Calls for the establishment of a **Co-operative Rehabilitation, Reconstruction, and Development Fund,** funded by profitable multi-state co-operative societies, to revive struggling ones.
  - Permits state co-operative societies to merge into existing multi-state co-operative societies, subject to state laws.
- **Examples of Cooperatives in India:**
  - **Primary Agricultural Credit Societies:** They are the grass root level arms of the short-term co-operative credit structure.
    - It serves as the final link between the **ultimate borrowers (farmers)** on the one hand and the higher financing agencies, namely the **Scheduled Commercial Banks**, and the RBI/NABARD on the other hand.
  - **AMUL (Anand Milk Union Limited):** A dairy giant and a pioneer in India's White Revolution, AMUL is a federation of millions of milk producers in Gujarat. Its success transformed India into the world's largest milk producer.
  - **IFFCO (Indian Farmers Fertiliser Cooperative):** One of the world's largest fertiliser cooperatives, IFFCO plays a significant role in providing quality fertilisers and agricultural inputs to farmers across India.
  - **HOPCOMS (Horticultural Producers' Cooperative Marketing and Processing Society):** Well-known for its network of farm produce outlets, ensuring fair returns for farmers.
  - **Lijjat Papad (Shri Mahila Griha Udyog Lijjat Papad):** An inspiring women's cooperative empowering women through papad (Indian lentil cracker) production

Note

- The Supreme Court in the **Bengal Secretariat Cooperative Society vs Aloke Kumar case** proposed to empower the Parliament in respect of multi-state co-operative societies and the State Legislatures in case of state co-operative societies to make appropriate law.

What are the Major Challenges Faced by Cooperatives in India?

- **Governance and Management Issues:**
  - **Limited Professionalism**: Many cooperatives lack **professional management** structures, leading to inefficient operations and decision-making.
  - **Political Interference:** Political interference in the functioning of cooperatives undermine their autonomy and impact their ability to serve members' interests effectively.
- **Capital and Resource Constraints**:
  - **Inadequate Funding:** Cooperatives often struggle to access sufficient capital for **expansion, modernization, and development** of new ventures.
  - **Limited Infrastructure:** Lack of proper storage facilities, processing units, and market linkages hinder the growth and competitiveness of small cooperatives, particularly in rural areas.
- **Social and Cultural Factors:**
  - **Low Awareness and Participation:** Lack of awareness about the cooperative model and its benefits among potential members limits their participation.
  - **Social Inequalities:** In some cases, social hierarchies and caste-based divisions create barriers for equitable participation and representation within cooperatives.

What Measures can be taken to Enhance the Cooperative Sector in India?

- **Infrastructure Development:** There is a need for greater investment in the development of infrastructure such as warehouses, cold storage facilities, and processing units to strengthen value chains and **enhance market access for cooperative products.**
  - Also, there is a need to promote the adoption of technology and digitalization to improve efficiency in cooperative operations and management.
- **Cooperatives as Innovation Hubs:** Shifting the perception of cooperatives away from merely traditional and rural, to hubs of **experimentation and innovation.**
  - Also, there is a need to highlight cooperatives working with cutting-edge agricultural techniques and focusing on **renewable energy.**
- **Cooperative "Influencers":** Identifying and nurturing young, tech-savvy cooperative members to be advocates and thought leaders, changing the image of cooperatives through **social media and online platforms.**
- **Cooperative Acceleration Zones:** Designating specific geographic areas as cooperative acceleration zones where **regulations are temporarily relaxed** and incentives are given to encourage diverse cooperative experimentation with new business models.
- **Cooperative-led Tourism Initiatives:** Developing **cooperative-run** eco-tourism and community-based tourism initiatives in rural areas, allowing travelers to experience local culture, traditions, and livelihoods.
  - Empowering local communities to manage tourism activities collectively, generating income, preserving natural resources, and promoting sustainable development.

UPSC Civil Services Examination, Previous Years Question (PYQ)

Mains

Q. Discuss this statement in the background of agricultural finance in India. What constraints and challenges do financial institutions supplying agricultural finance face? How can technology be used to better reach and serve rural clients? **(2014)**

India Sri Lanka Relations

For Prelims: India Sri Lanka Relations, Unified Payments Interface (UPI)**,** Buddhism**,** Renewable energy**,** Indian Ocean.

For Mains: India Sri Lanka Relations, Bilateral, regional and global groupings and agreements involving India and/or affecting India's interests.

Source: TH

Why in News?

Recently, Sri Lanka Sustainable Energy Authority and Indian company **U-Solar Clean Energy Solutions** have signed a contract for building **"Hybrid Renewable Energy Systems"** in Delft or Neduntheevu, Nainativu and Analaitivu islands off the Jaffna peninsula in Sri Lanka.

- The project is supported through grant assistance of USD 11 million grant from the Government of India.
- The Sri Lankan Cabinet earlier cleared **Sinosoar-Etechwin Joint Venture in China,** a project

from China, to execute renewable energy projects in these three islands in Sri Lanka, **which now has been replaced by India.**

What is the Hybrid Renewable Energy System Project of Sri Lanka?

- **About:**
    - It involves the construction of hybrid renewable energy systems, **combining various forms of energy including** solar, wind, battery power, and standby diesel power systems.
    - This initiative is part of India's broader support for energy projects in Sri Lanka, particularly in the northern and eastern regions.
        - The National Thermal Power Corporation and the Adani Group are also involved in other renewable energy projects in different parts of Sri Lanka.
- **Capacity:**
    - The project aims **to address the energy needs** of the inhabitants of the three islands. It includes 530 kW of wind power, 1,700 kW of solar power, and 2,400 kWh of battery power and 2,500 kW of stand by diesel power system.
- **Geopolitical Context:**
    - The project reflects geopolitical dynamics, with **India offering grant assistance (insteasd of China's loan based project)** in response to concerns about a **Chinese-backed project in the region.**
    - This reflects a broader competition for influence between India and China in the **Indian Ocean region.**
    - The project **not only addresses energy needs but also has geopolitical implications,** demonstrating the strategic importance of energy infrastructure in the region.

How have Relations Between India and Sri Lanka Been?

- **Historical Ties:**
    - India and Sri Lanka have a long history of cultural, religious, and trade ties dating back to ancient times.
    - There are strong cultural ties between the two countries, with many Sri Lankans tracing their heritage to India. **Buddhism**, which originated in India, is also an important religion in

Sri Lanka.

- **Financial Assistance from India:**
    - India provided approximately **USD 4 billion worth of aid to Sri Lanka** during an unprecedented economic crisis, which was crucial for the country to survive the crisis.
    - Sri Lanka was hit by a catastrophic [financial crisis](#) **in 2022,** the worst since its independence from Britain in 1948, due to a severe paucity of **[foreign exchange reserves.](#)**
- **Role in Debt Restructuring:**
    - India has played a role in collaborating with the **[International Monetary Fund (IMF)](#)** and creditors to help Sri Lanka in restructuring its debt.
    - India became the first country to hand over its letter of support for financing and debt restructuring of Sri Lanka.
- **Joint Vision for Connectivity:**
    - Both countries have agreed on a joint vision that emphasises comprehensive connectivity, including People to People connectivity, [renewable energy](#) **cooperation,** [logistics](#), port connectivity, and grid connectivity for electricity trade.
- **[Economic and Technology Cooperation Agreement (ETCA):](#)**
    - Both countries are exploring the possibility of an ETCA to integrate their economies and foster development.
- **Agreement on a Multi-Project Petroleum Pipeline:**
    - Both India and Sri Lanka have agreed to establish a multi-product petroleum pipeline from the **southern part of India to Sri Lanka.**
    - This pipeline aims to ensure an affordable and reliable supply of energy resources to Sri Lanka. Recognition of energy's critical role in economic development and progress is driving the focus on establishing the petroleum pipeline.
- **Adoption of India's UPI:**
    - Sri Lanka has now **[adopted India's UPI service](#)**, which is a significant step towards enhancing fintech connectivity between the two countries.
    - **The** [use of rupee for trade settlement](#) is further helping Sri Lanka's economy. These are concrete steps to help Sri Lanka's economic recovery and growth.
- **Economic Ties:**
    - India is Sri Lanka's third largest export destination, after the US and UK. More than 60% of Sri Lanka's exports enjoy the benefits of the **[India-Sri Lanka Free Trade Agreement.](#)** India is also a major investor in **Sri Lanka.**
    - **[Foreign Direct Investment (FDI)](#)** from India amounted to around USD 1.7 billion over the years from 2005 to 2019.
- **Defence:**
    - India and Sri Lanka conduct joint military [(Mitra Shakti)](#) **and Naval exercise** [(SLINEX).](#)
- **Participation in Groupings:**
    - Sri Lanka is also a member of groupings like [BIMSTEC (Bay of Bengal Initiative for Multi-Sectoral Technical and Economic Cooperation)](#) **and** [SAARC](#) in which India plays a leading role.
- **[Tourism](#)**:
    - In 2022, India was the largest source of tourists for Sri Lanka with over 100,000 tourists.

What is the Significance of India and Sri Lanka Relations?

- **Focus on Regional Development:**
    - India's progress is intricately linked with its neighbouring nations, and Sri Lanka aims to enhance its **own growth by integrating with the Southern economy, in South Asia.**
- **Geographical Location:**
    - Sri Lanka, positioned near **India's southern coast across the** [Palk Strait](#)**,** holds a crucial role in the relationship between the two nations.
    - The Indian Ocean is a strategically important waterway for trade and military operations, and **Sri Lanka's location at the crossroads of major shipping** lanes makes it a critical point of control for India.
- **Ease of Doing Business & Tourism:**
    - The enhancement of digital payment systems across the two nations will promote economic integration and simplify business transactions between India and Sri Lanka.

- This advancement will not only streamline trade but also improve connectivity for tourism exchanges between the two nations.

What are the Challenges in India-Sri Lanka Relations?

- **Fisheries Dispute:**
    - One of the longstanding issues between India and Sri Lanka is related to fishing rights in the **Palk Strait** and the **Gulf of Mannar.** Indian fishermen have often been arrested by Sri Lankan authorities for allegedly crossing the maritime boundary and engaging in illegal fishing in Sri Lankan waters.
    - This has led to tensions and occasional incidents involving **fishermen from both countries.**
- **Katchatheevu Island Dispute:**
    - The Katchatheevu issue **revolves around the ownership and usage rights** of the uninhabited island of Katchatheevu, located in the Palk Strait between India and Sri Lanka.
        - In 1974, an agreement between the Prime Ministers of India and Sri Lanka recognized Katchatheevu as part of **Sri Lanka's territory,** altering its ownership.
        - However, the agreement **allowed Indian fishermen to continue fishing in the surrounding waters,** dry their nets on the island and permitted Indian pilgrims to visit a **Catholic shrine there.**
    - Despite historical usage by fishermen from both countries, **a supplementary pact in 1976 defined maritime boundaries** and exclusive economic zones, imposing restrictions **on fishing activities without explicit permission.**
- **Border Security and Smuggling:**
    - The porous maritime boundary between India and Sri Lanka has been a concern in terms of border security and the smuggling **of goods, including** narcotics **and** illegal immigrants.
- **Tamil Ethnic Issue:**
    - The **ethnic conflict in Sri Lanka**, particularly involving the Tamil minority, has been a sensitive topic in India-Sri Lanka relations. India has historically been concerned about the welfare and rights of the Tamil community in Sri Lanka.
- **China's Influence:**
    - India has expressed **concerns about China's increasing** economic and strategic influence on Sri Lanka, including Chinese investments in infrastructure projects and the development of the **Hambantota Port**. This has sometimes been viewed as a challenge to India's own interests in the region. Some Chinese Projects in Sri Lanka are:
        - In 2023, Sri Lanka reached an agreement with the **Export-Import (EXIM) Bank of China** to cover about USD 4.2 billion of its outstanding debt.
        - China has made investments as the South Asia Commercial and Logistics Hub (SACL) at Colombo Port, led by China Merchants Port Holdings.
        - **Faxian Charity Project,** involves distributing food rations and offering aid to vulnerable communities in Sri Lanka.

Way Forward

- Ensure that the project progresses smoothly from the planning phase to execution. Regular monitoring and evaluation should be conducted to track progress, identify any issues, and make necessary adjustments.
- Involve local communities in the project planning and implementation process. This could include consultations, capacity-building programs, and awareness campaigns to ensure community buy-in and support.
- Prioritise environmental sustainability by conducting thorough environmental impact assessments and adopting measures to minimize any negative impacts on local ecosystems and biodiversity.

UPSC Civil Services Examination, Previous Year Questions (PYQs)

Prelims

Q1. Elephant Pass, sometimes seen in the news, is mentioned in the context of the affairs of which one of the following? (2009)

(a) Bangladesh
(b) India
(c) Nepal
(d) Sri Lanka

Ans: (d)

Mains

Q2. In respect of India-Sri Lanka relations, discuss how domestic factors influence foreign policy. **(2013)**

Q3. 'India is an age-old friend of Sri Lanka.' Discuss India's role in the recent crisis in Sri Lanka in the light of the preceding statement. **(2022)**

Groundwater Contamination in India

For Prelims: National Green Tribunal, Central Groundwater Authority, Black foot disease, Blue baby syndrome, Itai Itai Disease, Atal Bhujal Yojana**,** Jal Shakti Abhiyan**,** Aquifer Mapping and Management Program**,** Pradhan Mantri Krishi Sinchayee Yojana

For Mains: Primary Agents Responsible for Contaminating Groundwater, Sources of Groundwater Contamination

Source: DTE

Why in News?

The National Green Tribunal **(NGT)** recently expressed dissatisfaction over the **Central Groundwater Authority's (CGWA)** response to the widespread issue of **toxic arsenic and fluoride in** groundwater across India.

- Groundwater contamination due to arsenic is prevalent in **230 districts across 25 states of India** while that caused due to **fluoride** is prevalent in **469 districts across 27 states.**

Note

- India is one of the **world's largest users of groundwater,** where groundwater contributes to more than **60% of the country's irrigation resources.**
- This **over-extraction of groundwater is non-renewable** since recharge rates are less than extraction rates and replenishing this resource can take thousands of years.

What are the Sources of Groundwater Contamination?

- **Naturally Occurring Contaminants:** High levels of arsenic**,** fluoride**,** iron**, and uranium** exist naturally in some geological formations, contaminating groundwater.
  - In terms of arsenic and iron pollution, **West Bengal and Assam** are the worst affected states respectively.
- **Agriculture**: Excessive use of fertilisers, pesticides, and herbicides leach harmful chemicals into the water table.
- **Industrial Waste:** Untreated industrial effluents often find their way into groundwater sources, introducing **heavy metals** and other toxins.
- **Urbanisation:** Leaky sewage systems and improper waste disposal in urban areas contribute to groundwater pollution.
- **Saltwater Intrusion:** In coastal areas, **over-pumping of groundwater** can cause saltwater from the ocean to infiltrate freshwater aquifers, rendering the water unusable for drinking or irrigation.
  - **Rajasthan** has the highest number of rural habitations affected by (salinity) contamination.

What is the Central Ground Water Authority?

- **About:** The authority has been constituted under **Section 3 (3) of the** Environment (Protection) Act, 1986 to regulate and control the development and management of groundwater resources in the country.
- **Major Functions:**
  - To regulate, control, manage and development of groundwater in the country and to issue necessary regulatory directions for the purpose.
  - Exercise of powers under **section 4 of the Environment (Protection) Act, 1986** for the appointment of officers.

What are the Primary Agents Responsible for Contaminating Groundwater?

- **Arsenic:** While arsenic occurs naturally, it is also present in human-made forms used in agriculture, mining, and manufacturing.
  - Seepage from industrial and mining discharges, as well as from **fly ash ponds** in thermal power plants, can introduce arsenic into groundwater.
  - Chronic exposure to arsenic can cause **black foot disease.**
- **Fluoride:** In India, fluorosis is a prevalent issue due to the consumption of water with high fluoride content.
  - Excessive fluoride intake can result in neuromuscular disorders, gastrointestinal problems, dental deformities, and skeletal fluorosis, characterised by painful and stiff joints.
  - **Knock-knee syndrome,** marked by outward bending of the legs from the knees, can also occur.
- **Nitrates:** Excessive nitrate levels in drinking water react with haemoglobin, forming non-functional **methaemoglobin** and hindering oxygen transport, leading to methemoglobinemia and **blue baby syndrome.**
  - High nitrate levels can also contribute to the formation of **carcinogens** and accelerate eutrophication.
    - **Blue Baby Syndrome** cause a bluish discolouration of the skin in babies, **not just methemoglobinemia,** due to excessive nitrate levels in drinking water.
    - **Methemoglobinemia** is a condition where an **abnormal form of haemoglobin** (methemoglobin) is present in the blood, reducing its ability to carry oxygen.
- **Uranium:** Uranium, weak radioactive with a **long physical half-life,** is found in concentrations above WHO guidelines in localised pockets in India.
  - In regions like **Rajasthan and northwestern states,** uranium is primarily present in alluvial aquifers, while in southern states like **Telangana**, it originates from crystalline rocks such as granite.
  - Elevated uranium levels in drinking water can cause kidney toxicity.
- **Radon:** Recently, in some areas of Bengaluru, groundwater used for drinking has been found to

contain significantly high levels of **radioactive radon.**

- Radon originates from **radioactive granites and uranium,** which undergoes decay to radium and radon.
- The presence of radon in air and water can **damage lung tissues, increasing the risk of lung cancer.**
- **Other Trace Metals:** Water may also be contaminated by trace metals such as **lead, mercury, cadmium, copper, chromium, and nickel,** which possess carcinogenic properties.
  - Water contaminated with cadmium can cause **Itai Itai disease**, also called **ouch-ouch disease.**
  - Mercury in water causes Minamata **(a neurological syndrome)** in humans

What are the impacts of water pollution?

Urban and domestic use

Increased water treatment and inspection costs, maintenance costs from scouring and premature ageing of infrastructure, increased wastewater treatment costs with implementation of more strict regulations. Emergency and clean-up costs from spills/accidents.
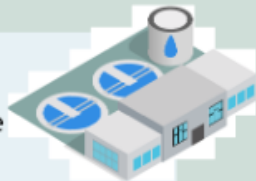
Ecosystem health

Damage to freshwater and marine ecosystems (e.g. fish kill, invertebrates, benthic fauna, flora, habitat degradation) and loss of ecosystem services, which may require investment in additional or different grey infrastructure alternatives to replicate these services.

Human health

Polluted water is the world's largest health risk, and continues to threaten both quality of life and public health. Associated with this are health service costs, loss life expectancy, and emergency health costs associated with major pollution events.

Industrial productivity

Exclusion of contaminated water for industrial use results in increasing water scarcity. Scouring of infrastructure, and clean-up costs from spills/accidents.

Social values and tourism

Prohibition from recreational use (e.g. swimming, fishing, seafood gathering), beach closure, impacts on aesthetics, cultural and spiritual values. Losses in fishing, boating, rafting and swimming activities to other tourism activities or to other ventures with superior water quality.

Agricultural productivity

Exclusion of contaminated water for irrigation results in increasing water scarcity. Irrigation with contaminated water causes damage to, and reduced productivity of, pasture and crops, soil contamination, impacts to livestock health and production, and scouring of infrastructure.

Commercial fisheries

Direct and indirect fish kill, contamination of shellfish.

Property values

Waterfront property values can decline because of unsightly pollution and odour.

What are the Current Government Initiatives Related to Groundwater Management?

- **Atal Bhujal Yojana**
- **Jal Shakti Abhiyan**
- **Aquifer Mapping and Management Programme (NAQUIM)**
- Pradhan Mantri Krishi Sinchayee Yojana **(PMKSY)**
- **Water (Prevention and Control of Pollution) Amendment Bill, 2024**
- **National Green Tribunal**
- **Central Pollution Control Board (CPCB)**
- **Environment (Protection) Act, 1986**

Way Forward

- **Strengthening Groundwater Regulation:** Enforcing stricter regulations on **industrial waste disposal** and agricultural practices.
  - Implementing a permit system for groundwater extraction, with quotas based on aquifer recharge rates.
- **Promoting Sustainable Agriculture**: Provide subsidies and training for farmers to adopt **precision agriculture** techniques, careful utilisation of fertilizers, and efficient irrigation practices like drip irrigation.
- **Investing in Infrastructure:** Increasing investment in building and maintaining wastewater treatment plants to prevent untreated sewage from contaminating groundwater.
- **Decentralised Management:** Empowering local communities by fostering participatory water management models. This can involve forming **Water User Associations (WUAs)** for planning, monitoring, and regulating groundwater extraction in localized areas.
- **Blue Credit:** Offering financial incentives like **Blue Credit** for **rainwater harvesting, greywater recycling,** and adoption of water-saving technologies in domestic and industrial sectors.
- **Utilising Artificial Intelligence (AI):** Leveraging **AI** to analyse vast sets of data on **water quality, usage patterns, and aquifer characteristics.** This can help predict contamination risks and develop targeted interventions.

UPSC Civil Services Examination, Previous Year Question:

Prelims:

Q. How is the National Green Tribunal (NGT) different from the Central Pollution Control Board (CPCB)? (2018)

1. The NGT has been established by an Act whereas the CPCB has been created by an executive order of the Government.
2. The NGT provides environmental justice and helps reduce the burden of litigation in the higher courts whereas the CPCB promotes cleanliness of streams and wells, and aims to improve the quality of air in the country.

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

Ans: (b)

Q. Which of the following can be found as pollutants in the drinking water in some parts of India? (2013)

1. Arsenic
2. Sorbitol
3. Fluoride
4. Formaldehyde
5. Uranium

Select the correct answer using the codes given below.

a) 1 and 3 only
b) 2, 4 and 5 only
c) 1, 3 and 5 only
d) 1, 2, 3, 4 and 5

Ans: C

Q. Which one of the following ancient towns is well known for its elaborate system of water harvesting and management by building a series of dams and channelizing water into connected reservoirs? (2021)

(a) Dholavira
(b) Kalibangan
(c) Rakhigarhi
(d) Ropar

Ans: (a)

Q. With reference to 'Water Credit', consider the following statements: (2021)

1. It puts microfinance tools to work in the water and sanitation sector.
2. It is a global initiative launched under the aegis of the World Health Organization and the World Bank.
3. It aims to enable the poor people to meet their water needs without depending on subsidies.

Which of the statements given above are correct?

(a) 1 and 2 only
(b) 2 and 3 only
(c) 1 and 3 only
(d) 1, 2 and 3

Ans: (c)

Mains

Q.1 What are the salient features of the Jal Shakti Abhiyan launched by the Government of India for water conservation and water security? **(2020)**

Q.2 Suggest measures to improve water storage and irrigation system to make its judicious use under the depleting scenario. **(2020)**

Household Consumption Expenditure Survey 2022-23
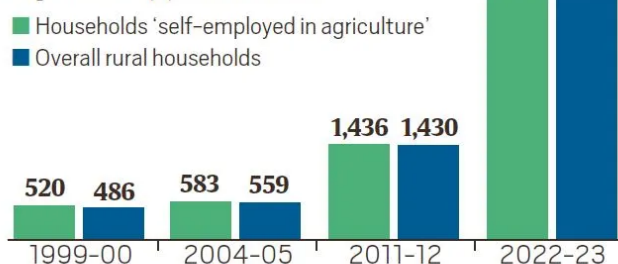
Source: TH

Why in News?

Recently, the **Ministry of Statistics and Program Implementation** disclosed the general results of the **All India** Household Consumption Expenditure Survey conducted from **August 2022 to July 2023.**

What are the Highlights of the Recent Household Consumption Expenditure Survey?

- **About:** The **Household Consumption Expenditure Survey** (HCES) is conducted by the **National Statistical Office (NSO)** every 5 years.
  - It is designed to collect information on the consumption of goods and services by households.
  - The data collected in HCES is also utilized for deriving various other macroeconomic indicators such as Gross Domestic Product (GDP)**, poverty rates, and** Consumer Price Inflation (CPI).
    - **NITI Aayog** has stated that the latest consumer expenditure survey indicated that **poverty has come down to 5%** in the country.
  - The findings of the last HCES, conducted in **2017-18** were not released after the government cited **"data quality" issues.**
- **Information Generated:** Provides information on the typical spending on both goods (including food and non-food items) and services.
  - Additionally, assists in calculating estimates for household **Monthly Per Capita Consumer Expenditure (MPCE)** and analyzing the distribution of households and individuals across different MPCE categories.
- **Highlights of the Recent Survey:** The estimates of average monthly per capita consumption **expenditure were generated without imputing the value figures of** the **items received free by the households** through various social welfare programmes such as **Pradhan Mantri Garib Kalyan Yojana.**
  - **Increase in MPCE:** It reveals a **33.5%** increase in **MPCE** in urban households since 2011-12, reaching **₹3,510**, while rural India's MPCE increased by **40.42%** to **₹2,008.**
    - In 2022-23, **46%** of rural household expenditure and 39% of urban household expenditure were on food items.

CONSUMPTION IN RURAL AREAS

Average monthly per capita expenditure (₹) in rural areas
- Households 'self-employed in agriculture'
- Overall rural households

Year	Self-employed in agriculture	Overall rural
1999-00	520	486
2004-05	583	559
2011-12	1,436	1,430
2022-23	3,702	3,773

- **Distribution of MPCE by Population Percentiles:** The **bottom 5% of India's rural population,** ranked by MPCE, **has an average MPCE of Rs. 1,373** while it is Rs. **2,001 for the same category of population in the urban areas.**
  - The **top 5% of India's rural and urban population,** ranked by MPCE, has an average **MPCE of Rs. 10,501 and Rs. 20,824,** respectively.
- **State-wise MPCE Variations: Sikkim** has the **highest MPCE** in both rural (₹7,731) and urban areas (₹12,105), while **Chhattisgarh has the lowest** with ₹2,466 for rural households and ₹4,483 for urban households.
  - The **rural-urban difference** in average MPCE, among the states is the highest in Meghalaya (83%) followed by Chhattisgarh (82%).
- **UT-wise MPCE Variations:** Among the UTs, **MPCE is the highest in Chandigarh** (Rural Rs. 7,467 and Urban Rs. 12,575), whereas, it is the **lowest in Ladakh** (Rs. 4,035) and Lakshadweep (Rs. 5,475) for rural and urban areas respectively.
- **Food Spending Trends:** Since the 1999-2000 survey, the **share of expenditure on food has gradually declined** and the share of non-food items has increased for both urban and rural households.
  - A decline in food spending is understood as an increase in incomes, which then means **having more money for other expenditures** like on medical, clothing, education, conveyance, durables, fuel, entertainment, among other things.
  - The recent survey result showed that the share of **cereals and pulses** within overall food consumption expenditure has been **reducing,** both in rural and urban households.
    - Among the non-food items, the share of spending on **conveyance** was the highest.
    - Till 2022-23, **fuel and light** used to see the highest consumption spending among the non-food items.

What is the National Statistical Office?

- **About:** Formed in 2019 by merging the **Central Statistical Office (CSO) and the National Sample Survey Office (NSSO).**
  - **C. Rangarajan Committee** first suggested the establishment of **NSO** as the nodal body for all core statistical activities.
  - It currently works under the **Ministry of Statistics and Programme Implementation (MoSPI).**
- **Function:** Collects, compiles, and disseminates reliable, objective, and relevant statistical data.

UPSC Civil Services Examination, Previous Year Question:

Obelisks

[Source: TH](#)

Why in News?

Scientists at Stanford University have identified a new, remarkably simple form of life, which they have named "**obelisks.**"

- These obelisks bridge the **gap between viruses and viroids** in terms of complexity, adding a new category to the existing spectrum of life forms.
- Obelisks were identified through an extensive analysis of RNA sequences from bacteria in the human gut, using **next-generation sequencing (NGS) technology.**

Note

- NGS is a [Deoxyribonucleic acid (DNA) sequencing](#) **technology** that uses parallel sequencing to determine the **sequence of multiple small fragments of DNA.** It is used to determine the **order of nucleotides** in entire genomes or targeted regions of DNA or RNA.
  - Nucleotides are organic molecules that are the basic building blocks of nucleic acids DNA and Ribonucleic acid (RNA).

What are Obelisks?

- Obelisks are a new class of virus-like entities. They are composed of diverse RNA molecules that reside within the human body and the global microbiome.
- Obelisks exhibit **highly symmetrical, rod-like structures** resembling the iconic **monuments (Obelisk).**
- Their genetic sequences are approximately 1,000 nucleotides long, with no detectable similarities to known biological agents.
- The new study analyzed RNA data from gut and oral bacteria but couldn't determine which bacteria hosted a given obelisk.
  - While initial findings suggest a possible link to the bacterial species **Streptococcus sanguinis**, commonly found in the human mouth.
- The discovery of obelisks raises questions about their genome replication, transmission, pathogenicity, evolution, and potential roles in human health and disease.
  - Further research is needed to unravel the mysteries surrounding Obelisks, shedding light on their ecological significance and impact on human health.

Feature	Viruses	Viroids
Discovery	**Dmitry Ivanovsky** was the first to discover viruses at the end of the 19th century.	Discovered by **Theodor Diener** in 1971 while studying the pathogen causing potato spindle tuber disease.
Composition	Each virion contains a nucleic acid (DNA or RNA) core surrounded by a **protein coat**, sometimes with a lipid layer outside.	Consists of **naked RNA without a lipid layer** or protein coat, primarily composed of a single-stranded **circular RNA molecule.**
Size	Varied in size, generally smaller (30-50 nm).	Smaller compared to viruses.
Host Range	Can infect a **wide range of organisms**, including plants and animals.	Primarily **infect plant cells**, causing various diseases characterized by stunted growth, leaf distortion, and other symptoms.
Replication Method	Depends on host cells to replicate and propagate themselves.	Enter a cell as RNA, force the cell to produce more copies of itself, and then infect other cells, primarily through mechanical transmission, seed transmission, pollen, and insect vectors.
Genetic Material	Contains either DNA or RNA, which may code for proteins.	Contains RNA, but does not code for any protein.
Examples	Influenza virus, rabies virus, Herpes virus, SARS-CoV-2.	Potato spindle tuber viroid (PSTVd), Citrus exocortis viroid (CEVd), Coconut cadang-cadang viroid (CCCVd).

UPSC Civil Services Examination, Previous Year Question:

Prelims

Q. Consider the following statements: (2017)

1. In tropical regions, Zika virus disease is transmitted by the same mosquito that transmits dengue.
2. Sexual transmission of Zika virus disease is possible.

Which of the statements given above is/are correct?

Bharat Tex 2024

Source: PIB

Bharat Tex 2024, the largest global **textile** event in India, concluded at Bharat Mandapam, New Delhi, inspired by the **5F Vision of the Prime Minister of India.**

- The **'5F' Formula** encompasses - **Farm to fibre; fibre to factory; factory to fashion; fashion to foreign.**
- The event was organised by a consortium of 11 Textile Export Promotion Councils and supported by the Ministry of Textiles.
- Leading textile states including Uttar Pradesh, Maharashtra, Gujarat, Madhya Pradesh, Telangana, Tamil Nadu and Karnataka actively participated with dedicated pavilions.
- Bharat Tex served as a launchpad for initiatives like the **'Innovative Business Practices and Economic Models in the Textile Value Chain in India' (IndiaTex) and Textile Grand Innovation Challenge**, aiming to drive innovation and sustainability in the textile industry.
    - IndiaTex is a four-year **UN Environment Programme** project that aims to accelerate the transition of the **Indian textile sector towards circularity.**
- Multiple **Memorandum of Understandings (MoUs)** were signed across various domains, including academic collaboration, research, product development, and market linkage.

Read more: PM MITRA Scheme and Textile Sector

World Wildlife Day

Source: WWD

United Nations World Wildlife Day (WWD) is celebrated every year on **3rd March** to celebrate the vast array of wild animals and plants on our planet and raise awareness about the threats they face.

- The **2024** theme is: **Connecting People and Planet: Exploring Digital Innovation in Wildlife Conservation.**
    - It highlights the growing role of technology in protecting wildlife. From tracking endangered species to monitoring illegal wildlife trade, digital tools are offering new hope for safeguarding biodiversity.
- On **20th December 2013**, during the **68th Session of the** United Nations General Assembly (UNGA), 3rd March was established as **WWD.**
    - This date commemorates the signing of the **Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES)** in 1973.

Read more:

Samudra Laksamana

Source: PIB

The **Samudra Laksamana** (Bilateral Maritime Exercise) between **India and Malaysia** was recently concluded off the coast of **Visakhapatnam.**

- It involved the participation of the **Indian Naval Ship Kiltan** and **Royal Malaysian Ship KD Lekir** aimed to reinforce ties and promote interoperability between the two navies.
- The other exercises between India and Malaysia are:
    - Exercise Udarashakti**: Air Force**
    - Exercise Harimau Shakti**: Army**

Read more:

India's First Dolphin Research Centre

Source: DTE

India's inaugural **National Dolphin Research Centre (NDRC)** marks a significant milestone in the

conservation efforts for the endangered **Gangetic dolphin (Platanista gangetica).**

- Located strategically near the **Ganga river in Patna**, **Bihar**, the NDRC aims to be a hub for comprehensive research on various aspects of Gangetic dolphins, including behavior, survival skills, and causes of mortality.
  - Bihar is home to around half of the estimated 3,000 Gangetic dolphins in India.
- The Ganges river dolphin, discovered in 1801, historically inhabits the **Ganges-Brahmaputra-Meghna and Karnaphuli-Sangu river systems in India, Nepal, and Bangladesh.**
  - Recent studies in the Ganga River Basin show their presence in the mainstream and tributaries like **Ghagra, Kosi, Gandak, Chambal, Rupnarayan, and Yamuna.**

GANGES RIVER DOLPHIN

(Platanista gangetica gangetica)

National aquatic animal of India

Facts

- Can only live in freshwater; prefer deep water
- Essentially blind; hunts by emitting ultrasonic sound
- Can't breathe in water; must surface every 30–120 seconds for air
- Also called 'susu' because of sound they make while breathing

Habitat & Distribution

- Distributed in Ganges and Brahmaputra River basins of India, Nepal and Bangladesh.
- Distribution range in India covers 7 states namely, Assam, Uttar Pradesh, Madhya Pradesh, Rajasthan, Bihar, Jharkhand and West Bengal.

Protection Status

- **IUCN Red List:** Endangered
- **CITES:** Appendix I
- **Wildlife Protection Act 1972:** Schedule I

Threats

- Habitat destruction
- Pollution
- Bycatch
- Climate Change
- Hunting

Conservation Efforts

- **Project Dolphin (2021):** On lines of project Tiger
- **National Dolphin Research Centre (2021):** India's and Asia's First; in Patna University (Bihar)
- **Dedicated Dolphin Sanctuary:**
  - Vikramshila sanctuary (Bihar) – 1991
  - Hastinapur sanctuary (UP) – Proposed

Drishti IAS

Read more: Gangetic River Dolphin