

Monthly

prepp IAS

Current Affairs

January 2024



Exercise Desert Knight

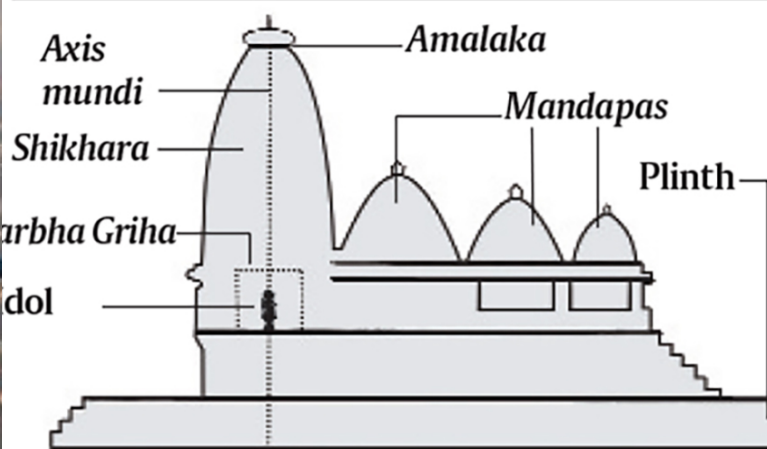
Attacks in the Red Sea

Houthi fighters have attacked Israel-linked ships in the Red Sea, disrupting maritime trade, in retaliation to Israel's war on Gaza. The map shows attacks from November 19 to January 11.



Red Sea Attacks

BASICS OF THE NAGARA STYLE



Based on sketches from EB Havell's *The Ancient and Medieval Architecture of India*, 1915. Not a visual representation of Andhya's Ram temple.

Nagara Architecture & Key Features of Ram Mandir



Rule of Law Vs Right to Liberty

Contents

POLITY.....	4
Chief Election Commissioner And Other Election Commissioners (Appointment, Conditions Of Service And Term Of Office) Bill 2023	4
Civil Society Under Siege, In India.....	6
Breaking New Ground the Kerala Way	7
Supreme Court Legal Services Committee	9
Rule of Law vs Right to Liberty: What the Supreme Court Said.....	11
Debating India's New Hit-and-Run Law	12
SC Report Exposes Severe Gaps In Accessibility For People With Disabilities At Courts Across India.....	14
What Is The Long-Running Legal Dispute Over AMU's Minority Character	16
The Laws Around Remission Policy: Bilkis Bano Case	17
Democratic Backsliding: On The State Wielding The FCRA As A Weapon	20
ECONOMY.....	22
Direct Tax Collections Cross 80% Of 2023-24 Target.....	22
India's Remittances.....	24
Asset Quality Of Indian Banks Improves To Decadal High: RBI.....	26
Robust FPI Debt Inflows Seen Ahead of Inclusion of Bonds in Global Indices.....	28
Commerce Ministry Takes Stock Of Concerns Of Shippers In Stakeholder Meeting Amid Red Sea Crisis	30
Why Is Upskilling Necessary For The Rural Youth.....	32
On The Necessity Of Economic Growth In Poor States	33
Zero-Duty Unrefined Gold Imports Take The Shine Off Local Players	34
Analysing the Rising Gap in Incomes	36
States Are Spending. The Economy Is Waiting	37
What Is Boeing's India Engineering And Technology Center, Which PM Modi Inaugurated In Bengaluru?	39
HEALTH	41
Ministry Notifies Revised Rules to Ensure Quality of Medicines	41
Global Surgery: Why Access To Essential Surgery Is Important?.....	42
How Indian Women Can Rid Themselves Of Cervical Cancer.....	44
Responding to the New COVID-19 Sub-variants.....	46
Drug War: Antimicrobial Resistance is a Health Issue that will Negate Advances in Medicine.....	48
DEFENSE & INTERNAL SECURITY.....	51
The Delusion Of Eliminating 'the Last Terrorist'	51
Is Pegasus Spyware Targeting Journalists in India?	53
ULFA Faction Signs Peace Agreement	55
Free Movement Regime To End At Myanmar Border	57
Punjab's Drug Crackdown: A Promise to Keep	58
DRDO Anti-Drone Tech Ready, Handed Over To BEL, Private Firms.....	61
Limits And Borders: On The Territorial Jurisdiction Of The Border Security Force	63
ART AND CULTURE.....	65
India's Oldest Living City Found In PM Modi's Native Village Vadnagar: Multi-Institution Study	65

From Red Ant Chutney To Black Rice, The 7 Odisha Products That Have Bagged GI Tags	67
Nagara Architecture, 392 Pillars, 5 Mandaps: The Key Features of Ram Mandir	71
HISTORY	73
Modi to Honour Valour, Martyrdom of Sahibzades	73
ENVIRONMENT	74
Denmark's Green Fuels Alliance To Boost Sustainable Energy Solutions Sector	74
The First-Ever IUCN Assessment Of The Himalayan Wolf Is Out	76
Achievements of National Tiger Conservation Authority (NTCA) During the Year 2023	77
Birders' Network Finds Rare Pelagic Birds on Karnataka's Coast	78
Bees are Fewer, Flowers Evolving to Self-Pollinate, New Study Says	80
Loss & Damage: 85% of Costliest Climate-linked Disasters in 2023 were Floods & Storms; Mostly Affected Poor	81
A Look At Project Tiger, 50 Years On	84
A 'Vulture Restaurant' In Jharkhand To Conserve The 'Critically Endangered' Species	86
Paramyrtetium Indicum – Scientists Discover New Species Of Fungus In Kerala	88
SCIENCE AND TECHNOLOGY	89
Quantum Gates: Devices That Translate Quantum Effects To Computing Awesomeness	89
Will SLIM Revolutionise Lunar Landings?	91
Researchers Develop 'Electronic Soil' to Enhance Crop Growth	93
XPoSat Launch: What Is India's First Mission Of This Year?	94
China Develops Groundbreaking Nuclear Battery That Can Last 50 Years Without Charging	96
AGRICULTURE	97
Kachchhi Kharek, Indigenous Dates Of Kutch, Become Gujarat's 2nd Fruit To Get GI Tag	97
India's Great Grain Mystery: Cereal Gap	98
INTERNATIONAL RELATIONS.....	101
India, UAE Ink Key Deals To Strengthen I2U2 Bloc	101
Taiwan's Elections And The Indo-Pacific.....	104
Iran, Also Ran: India's Interests In West Asia Don't Now Include Tehran	105
Red Sea Attacks, Panama Canal Drought: How Trouble At Two Shipping Choke Points Could Impact Global Trade	106
Why Many US Allies Have Not Joined Its Op Prosperity Guardian	109
Not Zero-Sum: Indian-Russia Ties	111
Is India 'losing' South Asia?.....	113
Maldives Suspends Three Ministers After Row	115
Why International Law Matters.....	117
Sheikh Hasina's Re-Election And The Growth Of India-Bangladesh Relations	119
India, France, UAE Conduct Mega Air Exercise over Arabian Sea	121
DISASTER MANAGEMENT	123
NGT Takes Suo Motu Cognisance Of Ennore Ammonia Gas Leak	123
INFRASTRUCTURE AND INDUSTRY.....	125
India's Stationary Course in the Shipping Value Chain as Compared to China.....	125
India Closing in on Lithium Deal with Argentina, tapping Australia, Chile	128
Angola Quits OPEC Amid Dispute Over Oil Production Quotas	132

ETHICS	133
Mulya Pravah 2.0 - An Ambitious Push For Values, Ethics In Higher Education	133
Case Study: Ethical Dilemma in Migration and Human Trafficking	135
Places in News - World	137
Places in News - India	138

POLITY

Chief Election Commissioner And Other Election Commissioners (Appointment, Conditions Of Service And Term Of Office) Bill 2023

SOURCE: INDIAN EXPRESS, THE HINDU

PRIORITY: HIGH

Why in the news?

- Recently, the President gave assent to the Chief Election Commissioner and Other Election Commissioners (Appointment, Conditions Of Service And Term Of Office) Bill 2023 which was passed by both houses of Parliament in December 2023.
- The Bill aims to repeal the Election Commission (Conditions of Service of Election Commissioners and Transaction of Business) Act, 1991 and establish a mechanism to appoint the top election officials i.e. the Chief Election Commissioner and Election Commissioners.

What are the key provisions of the Chief Election Commissioner and Other Election Commissioners (Appointment, Conditions Of Service And Term Of Office) Act 2023?

Feature	Current Process	New Process (2023 Bill)
Appointment Authority	The President makes the appointment on the advice of the Union Council of Ministers headed by the Prime Minister .	CEC and ECs will be appointed by the President of India on the recommendations of a selection committee
Selection Committee Composition	Not applicable (Appointment is based on the advice of the Prime Minister and Law Minister).	Prime Minister, a Union Cabinet Minister, and the Leader of Opposition or leader of the largest opposition party in Lok Sabha. - Recommendations would be valid even if there was a vacancy in the Committee. - A search committee, headed by the Cabinet Secretary, would propose a panel of names to the selection committee. (The Chief Justice of India has been dropped from the panel which was ruled by the Constitutional Bench of the Supreme Court).
Eligibility	Not specified in the Constitution. Typically involves senior government officials or bureaucrats.	Must hold or have held a post equivalent to the Secretary to the Government of India.
Salary and Conditions of Service	Equivalent to that of a Supreme Court Judge (as per the 1991 Act) .	Equivalent to that of the Cabinet Secretary.
Removal Process	- They can resign anytime or can also be removed before the expiry of their term. - The CEC can be removed from office only through a process of removal similar to that of a SC judge by Parliament. - Any other EC cannot be removed except on the recommendation of CEC.	Retains the constitutional provisions for removal: CEC like a Supreme Court Judge, ECs on CEC's recommendation.

News Summary: The Chief Election Commissioner and Other Election Commissioners (Appointment, Conditions Of Service And Term Of Office) Act 2023, recently assented by the President, raises concerns about potential government influence, lack of diversity, and impacts on the independence of the Election Commission.

UPSC Mains Practice Questions

Q.1) To enhance the quality of democracy in India the Election Commission of India has proposed electoral reforms in 2016. What are the suggested reforms and how far are they significant to make democracy successful? (GS2 2017)

Q.2) In light of the recent controversy regarding the use of Electronic Voting Machines (EVM), what are the challenges before the Election Commission of India to ensure the trustworthiness of elections in India? (2018)

Q.3) Analyze the proposed changes in the appointment process of Election Commissioners and the potential impact on the neutrality of the Commission. Examine the concerns raised about the composition of the selection panel and its implications for maintaining the integrity of the electoral process.

Q.4) Examine the evolution of the appointment process for members of the Election Commission of India. Discuss the potential advantages and challenges of the new appointment process in terms of ensuring the autonomy, impartiality, and effectiveness of the Election Commission.

MCQs

Question: Consider the following statements: (2017)

- The Election Commission of India is a five-member body.
- Union Ministry of Home Affairs decides the election schedule for the conduct of both general elections and bye-elections.
- Election Commission resolves the disputes relating to splits/mergers of recognised political parties.

Which of the statements given above is/are correct?

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

Answer: (d)

Legal Protection	Not specifically provided under the 1991 Act.	Safeguards CEC and ECs from legal proceedings for actions taken in official capacity, with certain conditions.
Terms & Reappointment	-	- Members will hold office for six years or until they attain the age of 65 years. - Members cannot be re-appointed. - If an EC is appointed as a CEC, the overall term may not be more than six years.

What are the concerns associated with the Act?

- **Government influence in selection:** Concerns have been raised that the selection process could be dominated by the government.
 - This could adversely impact the independence of the Commission.
- **Lack of independence:** The provision allowing for the Committee's recommendations despite vacancies in the body could grant the government a monopoly in the selection of candidates.
 - This would undermine the diversity and independence of the committee.
- **Salary and service conditions:** The salary of the CEC and EC has been made equivalent to that of the Cabinet Secretary which is determined by the government.
 - Unlike this, the salary of a Supreme Court judge was determined through an Act of Parliament.
 - Earlier, the orders of a commissioner when summoning government officials were seen to carry the authority of a SC judge. This will change when their status is made equal to that of Cabinet Secretaries.
- **Limiting of diversity:** Restricting the eligibility of CECs and ECs to senior bureaucrats would exclude several suitable candidates as the CEC and ECs also perform quasi-judicial functions.
- **Lack of parity:** The Bill allows the CEC to be removed like a Supreme Court Judge while ECs can only be removed on the recommendation of the CEC.
 - This raises concerns about the lack of fairness and parity in removal particularly since the CEC is considered to be the first among equals.
- **Alignment with the Intent of the Framers:** The Supreme Court has previously emphasized that the framers of the Constitution envisioned an independent body to oversee elections.
 - However, critics have questioned whether the amended Act aligned with the objectives of the Constituent Assembly.

Supreme Court ruling on Appointment of Election Commissioners

- In a landmark decision in March, the Constitution Bench of the Supreme Court exercised its powers under **Article 142** and ruled that the President must appoint the CEC and ECs on the recommendation of a panel comprising the Prime Minister, Leader of the Opposition in the Lok Sabha, and the Chief Justice of India.
- The Bench took into account past recommendations of the Dinesh Goswami Committee on **Electoral Reforms (1990)** and the **Law Commission in its 255th** report on Electoral Reforms (2015),
- As per the verdict, the high-power committee would advise the President until Parliament passed a law governing the appointment of Election Commissioners.

Models followed by other countries to appoint Election Commissioners

- **United Kingdom:** Candidates must be approved by the House of Commons.
- **United States:** Members of the electoral body are appointed by the President and confirmed by the Senate to ensure balance of power and to prevent unilateralism.
- **South Africa:** There is an emphasis on diversity with the selection process involving the President of the Constitutional Court, representatives of the Human Rights Court, and gender equality advocates.

Election Commission of India

Constitutional provisions:

- Article 324 of Part XV of the Constitution states that the EC is responsible for the superintendence, direction, and control of the preparation of the electoral rolls and the conduct of all elections to the office of President and Vice-President, and the Parliament and state legislatures.

Administrative Powers:

- Determine the territorial area of electoral constituencies
- Prepare and revise electoral rolls and register voters
- Recognize political parties and allot electoral symbols.

- Determine the election schedule and implement the Model Code of Conduct.

Quasi-judicial powers:

- Settle disputes related to recognition granted to political parties and disputes arising out of the allocation of the election symbol to political parties.
- Disqualify a contender who failed to lodge an account of his election expenses within a given time.

Advisory power:

- Advise President and Governor in the post-election disqualification proceedings of MLAs and MPs.
- Advise the President on holding elections in states under President's Rule.

Conclusion

The Chief Election Commissioner and Other Election Commissioners (Appointment, Conditions Of Service And Term Of Office) Act 2023 amends the appointment and service conditions but raises concerns about government influence, lack of diversity, and impacts on the independence of the Election Commission. The effective functioning of the critical constitutional body depends on a balance between political accountability and electoral autonomy.

Civil Society Under Siege, In India

SOURCE: THE HINDU

PRIORITY: MEDIUM

Why in the news?

- This article discusses the limited space available to civil society as a result of government action and the legal provisions used in such cases.
- It also highlights the severity of the attacks and its broader impact on democratic values.

What are civil society organizations and how have they been threatened?

- **Definition:** A **civil society organization (CSO)** or **non-governmental organization (NGO)** is a **non-profit, voluntary citizens' group that is organized on a local, national, or international level**.
- It is generally **task-oriented** and driven by people with a common interest.
- They perform various **humanitarian services** and functions such as acting as a link between the government and the public, monitoring of policies, and encouraging community-level political participation.
- **Threat faced:** The space available to civil society organizations, such as **Amnesty International, the Centre for Equity Studies, Citizens for Justice and Peace, Lawyers Collective, Centre for Promotion of Social Concerns, and Act Now for Harmony and Democracy (ANHAD)**, which are reliant on domestic and foreign donations have decreased.
- **Progressive organizations that were fighting communalism were found to be subject to the most severe attacks.**
- Some experts have claimed **India's diverse and vibrant civil society and the constitutional freedoms guaranteed by it were under attack.**
- This was concerning since a **free civic space regulated under constitutionally guaranteed principles was the essence of democracy.**

Classification of attacks

- **High level of attacks:** Organizations struggling financially and whose leaders were in prison or charged with crimes that could lead to imprisonment were impacted by high-intensity attacks.
- E.g: Citizens for Justice and Peace (CJP), Amnesty India, Oxfam, Centre for Equity Studies, and Lawyers Collective.
- **Moderate levels of attacks:** These are organizations whose activities have been severely curbed by multiple attacks by the state.
- E.g: Centre for Policy Research (CPR) and ANHAD.
- These organizations include anti-communal and neutral organizations.
- **Relatively low levels of attacks:** These are organizations that are generally not active in anti-communal activities but active in other areas.
- E.g: Navsarjan (Dalit rights) and Save The Children (child rights).
- These institutions have been attacked by just one instrument.

What are the instruments used by the state?

- **Money laundering:** The 2019 amendments to the **Prevention of Money Laundering Act, 2002 (PMLA)** have enabled the Department of Revenue to use a broader definition of **"proceeds of crime"**.
- As a result, attacks with penal consequences on charges of money laundering have been launched against civil society organizations.
- **Foreign funding:** The **Foreign Contribution (Regulation) Act, 2010 (FCRA)** has been strengthened under multiple governments against NGOs.
- This has led to around **18,000 organizations losing the right to access foreign funds between 2015 and 2022.**

News Summary: The article delves into the diminishing space for Indian civil society organizations, citing legal instruments like money laundering and foreign funding restrictions. Advocates have called for a secular stance, legal reviews, and public awareness to protect constitutional freedoms and preserve democracy.

UPSC Mains Practice Questions

- Q.1)** How can the role of NGOs be strengthened in India for development works relating to the protection of the environment? Discuss throwing light on the major constraints. **(GS2 2015)**
- Q.2)** Examine critically the recent changes in the rules governing foreign funding of NGOs under the Foreign Contribution (Regulation) Act (FCRA), 1976. **(GS2 2015)**
- Q.3)** Discuss the contribution of civil society groups for women's effective and meaningful participation and representation in state legislatures in India. **(GS2 2023)**
- Q.4)** Can Civil Society and Non-Governmental Organizations present an alternative model of public service delivery to benefit the common citizen? Discuss the challenges of this alternative model. **(GS2 2021)**
- Q.5)** Communalism arises either due to power struggle or relative deprivation. Argue by giving suitable illustrations. **(GS1)**

MCQs

Question: Consider the following statements about the financial legislation of NGOs

1. Foreign Contribution (Regulation) Act (FCRA), ensures that the recipients of foreign contributions for the stated purpose for which such contribution has been obtained.

- However, the impact of the FCRA against political parties has dropped over the years.
- It also **empowers the Central Bureau of Investigation (CBI) to investigate NGOs and their personnel.**
- Additionally, the **Prior Reference Category List** consists of around 80 internationally reputed donors who are monitored and intimidated for pursuing human rights-related causes.
- **Domestic funding:** NGOs and donors are provided tax exemptions under **Sections 12A and 80G of the Income-Tax Act.**
- Amendments to the Act in 2020 made renewal of 12A and 80G certificates mandatory every five years.
- Moreover, **data about donors, including their PAN numbers, must be available to the Union Ministry of Finance.**
- As a result, the **state can use these provisions to intimidate domestic donors.**
- **Income taxes:** Income-tax surveys have been used as a means to collect data to escalate and institute legal and penal actions against NGOs by the CBI or the Tax Department.

What was the impact of these instruments on organizations?

- The use of these disciplining instruments by the state could have a transforming effect on the organizations.
- For example, Greenpeace has transitioned from a strong stance on environmental and Adivasi rights to a more moderate stance.
- Consequently, it has moved from an organization under high-intensity attacks to one subject to low-level attacks.

Way Forward

- Politicians and civil society organizations must take a clear secular stance to combat communalism and strengthen anti-communal drives to protect and foster democracy.
- A stringent review of the laws impacting NGOs is necessary to ensure the protection of their constitutional freedom and to advance social well-being.
- Efforts must be taken to raise awareness about the role played by civic space in preserving democracy and encourage citizens to participate in it.

Conclusion

Increasing challenges to civil society organizations in India through money laundering charges and other regulations have limited the civil space available in the country, impacting democracy. Therefore, a call for a clear secular stance, legal reviews, and public awareness is crucial to safeguard constitutional freedoms and preserve democracy.

To know more, click the [link](#).

2. Foreign funding of voluntary organizations in India is regulated under the FCRA Act and is implemented by the Ministry of Finance.

Select the correct answer using the code given below

- (a) 1 only
- (b) 2 only
- (c) Both 1 and 2
- (d) None of the above

Answer: (a)

Breaking New Ground the Kerala Way

SOURCE: THE HINDU

PRIORITY: MEDIUM

Why in the news?

- Kerala has initiated an **Urban Commission**, marking a significant step since the **National Commission on Urbanisation** established 38 years ago by Prime Minister **Rajiv Gandhi** and led by architect **Charles Correa**.
- The commission in Kerala is seen as a critical step in addressing the challenges of urbanization in a state where around **90% of the population is urbanized, according to NITI Aayog**.

History and Evolution of Urban Development in India

Pre-Independence Era

- Prior to independence, urban development in India was significantly influenced by British colonial policies.
- Cities like Calcutta (now Kolkata), Bombay (now Mumbai), and Madras (now Chennai) were developed as major ports and administrative centers.
- Urban planning was limited and primarily focused on the needs of the colonial administration.

Post-Independence Era

- **Early Years (1947-1960s):** Post-independence, the focus was on nation-building, with an emphasis on industrialization as a means to achieve economic self-sufficiency.
- This led to the development of new towns and cities, primarily centered around industries. The planning was state-driven with a focus on centralized planning mechanisms.
- **Nehruvian Period (1950s-1980s):** Named after India's first Prime Minister, Jawaharlal Nehru, this period saw the creation of about 150 new towns with a holistic city approach.
- The focus was on centralized planning with an emphasis on master plans and development plans.
- However, this period also witnessed the shift of a large population from rural to urban areas, primarily for manufacturing jobs.
- **Economic Liberalization and Globalization (1990s onwards):** The 1990s marked a significant shift with the liberalization of the Indian economy.

News Summary: The establishment of the Kerala Urban Commission with its focus on holistic urban development can serve as a model for other Indian states in helping them address challenges associated with urbanization.

UPSC Previous Year Practice Question

Q. The states in India seem reluctant to empower urban local bodies both functionally as well as financially. Comment. **(2023)**

Q. What are 'Smart Cities? Examine their relevance for urban development in India. Will it increase rural-urban differences? Give arguments for Smart Villages' in the light of PURA and RURBAN Mission. **(2016)**

Q. The basis of providing urban amenities in rural areas (PURA) is rooted in establishing connectivity. Comment. **(2013)**

MCQs

Q. Consider the following statements: (UPSC 2022)

1. The India Sanitation Coalition is a platform to promote sustainable sanitation and is funded by the

- This period saw a move towards privatization and global standards in urban development.
- Cities began to be viewed as engines of growth, with an emphasis on real estate, competitive urban development, and reduced focus on social housing and public amenities.
- **Urban Missions and Projects:** Initiatives like the Jawaharlal Nehru National Urban Renewal Mission and the Smart Cities Mission were introduced.
- These focused on urban renewal and modernization but were often criticized for being project-oriented rather than adopting a holistic city approach.
- **74th Constitutional Amendment:** A significant milestone in urban governance, it aimed to strengthen urban local bodies and make them more democratic and efficient.

Necessity of an Urban Commission

- **Addressing Rapid Urbanization:** With more than half of the world's population now living in cities, the process of urbanization has led to significant changes, including **climate impact, spatial and temporal shifts in land use**, and the emergence of iniquitous city spaces.
- **Learning from Past Failures:** Historical approaches to urban development in India, such as centralized planning mechanisms and the push towards urban spaces driven by manufacturing, have not fully succeeded. An Urban Commission can reassess these strategies and propose more effective solutions.
- **Holistic City Approach:** Rather than piecemeal or project-oriented approaches, an Urban Commission can adopt a holistic view of urban development, considering various factors like social housing, public health, and education.
- **Understanding Objective Patterns of Urbanization:** The commission is essential for understanding various aspects of urbanization, such as **migration, settlement patterns**, and the impact of information technology.
- **Governance and Financial Architecture:** Addressing the complexities in governance and financial systems in urban areas, such as the transfer of responsibilities to city administrations and the implications of financial policies on urban development, is crucial.
- **Long-Term Planning:** The commission can provide a long-term roadmap for urban development, considering both national and global trends and contexts.

Challenges in Urban Development

- **Shift in Urban Policy and Planning:** Post-independence India experienced significant changes in urban policy and planning.
- Initially, there was a focus on centralized planning and the creation of new towns, but this approach failed to address the needs of urban migration effectively.
- Later, there was a shift towards privatization and global city models, often neglecting social housing, public health, and education.
- **Inadequate Housing and Infrastructure:** Rapid urbanization has led to a crisis in housing, water, and sanitation. The failure of urban plans to accommodate the influx of people from rural areas has resulted in the proliferation of informal settlements and inadequate infrastructure.
- **Environmental and Social Impacts:** Urbanization has contributed to climate change and created spatial and temporal changes, such as massive land use and building typologies.
- **Governance Challenges:** The governance of cities is complex, with issues surrounding the transfer of responsibilities to city administrations, over-centralization of financial architecture, and debates about the management of city affairs.
- **Economic Shifts and Informality:** The decline of manufacturing as a driver of urban migration and the rise of the informal sector has challenged traditional urban planning models.
- The focus on real estate and competitive city models has often sidelined other important aspects of urban life.
- **Project-oriented Approach:** The move towards a project-oriented approach in urban development, with missions like the Smart Cities Mission, has not always yielded the desired results.
- These approaches are often criticized for being disconnected from the objective realities of urbanization.
- **Need for Holistic Urban Commissions:** The urban commissions should be established at both national and state levels to address these complex issues.
- It emphasizes the need for a holistic understanding of urbanization processes, which cannot be reduced to mission approaches.
- **Financial Constraints and Performance-based Grants:** The linking of grants to cities based on their performance in collecting property taxes, as recommended by the Fifteenth Finance Commission, adds to the complexity.

What is Kerala Urban Commission and its Significance?

- The Kerala Urban Commission is a new initiative by the state of Kerala, India, aimed at addressing the complexities and challenges of urbanization.

Government of India and the World Health Organisation.

2. The National Institute of Urban Affairs is an apex body of the Ministry of Housing and Urban Affairs in Government of India and provides innovative solutions to address the challenges of Urban India. Which of the statements given above is/are correct?

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

Answer: (b)

- It's noteworthy for being the first such commission since the National Commission on Urbanisation was formed in 1985 under the then Prime Minister Rajiv Gandhi.

Key Aspects:

- Composition:** The commission includes notable members such as M. Sathishkumar, an urban professor from Dublin, Janaki Nair, a historian, and K.T. Ravindran, Professor and Head of Urban Design at the School of Planning and Architecture, New Delhi.
- Mandate and Duration:** The commission has a **12-month mandate** to address the challenges of urbanization, especially in the context of Kerala, where around **90% of the population is urbanized** according to NITI Aayog estimates.
- Goals and Focus:** The primary role of the commission is to create a roadmap for urban development in Kerala for at least the **next 25 years**. This includes a thorough understanding and estimation of urban processes at both national and global levels.

Significance:

- The Kerala Urban Commission is seen as a **potential model or 'lighthouse'** for other Indian states with high urban populations, like **Gujarat, Maharashtra, Tamil Nadu, and Punjab**.
- It aims to provide a learning lesson in managing urbanization and developing effective urban policies.

Conclusion

The Kerala Urban Commission is viewed as a potential lighthouse for other states, offering insights and lessons in urban planning and development. The commission's work is important not just for Kerala but as a template for understanding and addressing the challenges of urbanization across India.

Supreme Court Legal Services Committee

SOURCE: INDIAN EXPRESS

PRIORITY: HIGH

Why in the news?

- Recently, Justice BR Gavai was appointed the Chairperson of the Supreme Court Legal Services Committee.
- The Committee was established to provide free and competent legal services to the weaker sections of society in cases under the jurisdiction of the Apex Court.



What is the Supreme Court Legal Services Committee?

- Establishment:** The Supreme Court Legal Services Committee (SCLSC) was established under Section 3A of the Legal Services Authority Act, 1987.
- Aim:** Provide free and competent legal services to weaker sections in cases falling under the jurisdiction of the Supreme Court of India.
- The number, qualifications, and experience of members have been outlined in Rule 10 of the NALSA Rules.
- Under Section 27 of the Legal Services Authority Act, 1987, the Union Government is empowered to make the Rules to carry out the provisions of the Act in consultation with the Chief Justice of India.

Composition:

- Chairman:** Sitting judge of the Supreme Court
- Members:** According to Rule 10 of NALSA Rules, it should have not more than 9 members, including ex-officio members.
- Ex-officio members:** Attorney General of India, Joint Secretary of the Department of Justice, Additional Secretary of the Department of Expenditure (or his nominee), and the Registrar General of the Supreme Court.

Selection:

News Summary: Justice BR Gavai has been appointed Chairperson of the Supreme Court Legal Services Committee. The SCLSC aims to provide free legal services to the underprivileged in cases under the Supreme Court's jurisdiction.

Question: With reference to the National Legal Services Authority, consider the following statements: (2013)

- Its objective is to provide free and competent legal services to the weaker sections of society on the basis of equal opportunity
- It issues guidelines for the state legal service authorities to implement the legal programs and schemes throughout the country.

Which of the statements given above is/are correct?

- 1 only
- 2 only
- Both 1 and 2
- Neither 1 nor 2

Answer: (c)

- As per the 1987 Act, the Chairperson and members will be nominated by the Chief Justice of India.
- The secretary to the committee will also be nominated by the CJI, subject to the qualifications and experience prescribed.
- Union Government, can in consultation with the CJI, nominate other members from those with adequate qualifications and experience - a person of eminence in law, a person of repute with interest in implementing Legal Services Schemes, an eminent social worker in the area of upliftment of socially weaker sections.

What are the constitutional provisions related to the legal services committee?

- **Article 39A:** State shall secure the operation of the legal system to provide justice based on equal legal opportunity, and free legal aid through schemes or legislation to ensure that no citizen is denied justice due to economic or other disabilities.
- **Article 14:** The state is obligated to ensure equality before the law.
- **Article 22(1):** The state shall not deny an arrested person the right to consult and be defended by a legal practitioner of their choice.

Implementation and Dispensing of Legal Services

- **First implementation:** In 1980, a national-level committee - The Committee for Implementing Legal Aid Schemes - was established under the Chairmanship of then SC judge PN Bhagwati.
- It monitored legal services throughout the country.
- **National authority:** A nationwide uniform network for free and competent legal services was established once the Legal Services Authorities Act came into force in 1995.
- It also aimed to organize Lok Adalats and establish legal services authorities.
- In 1995, the NALSA was constituted to monitor and evaluate the implementation of legal aid programmes.
- **Regional authorities:**
- Following this, State Legal Services Authorities were established to implement NALSA's policies and directions at the state level.
- District Legal Services Authorities (DLSAs) and Taluk Legal Services Committees/Sub-divisional Committees were established in districts and most taluks.
- Similar to the SCLSC, a Legal Services Committee has been constituted at the High Courts.

Who is eligible?

- The following categories of people are eligible for free legal aid
- Scheduled Castes and Scheduled Tribes
- Victims of Trafficking or Begar
- Women and Children.
- Mentally Ill or Disabled Persons
- Industrial Workmen
- People in tough times such as those affected by natural disasters, ethnic violence, etc.
- Individuals in custody i.e in protective homes, juvenile homes, psychiatric hospitals or nursing homes, etc.
- **Based on income:**
- Individuals with an annual income less than the specified amount as per the schedule or prescription of state government are eligible for free legal services if the case is before any court other than the Supreme Court
- For cases before the Supreme Court, the income threshold is less than ₹5 Lakh.

NALSA

- The NALSA was founded in 1995 under the Legal Services Authorities Act of 1987.
- The Chief Justice of India is its patron-in-chief.
- The Executive Chairman of the Authority is the second senior-most judge of the SC
- **Functions:**
- Monitor and review the effectiveness of legal aid programs
- Develop rules and principles for providing legal services under the Act.
- Distribute funding and grants to state legal services authorities and non-profit organizations to help them execute legal aid systems and initiatives.
- Organize Lok Adalats and promote Alternative Dispute Resolution (ADR).
- Provide compensation to victims of crimes and help spread legal awareness.

State Legal Services Authority

- **Objective:** Implement NALSA's policies and directions, give free legal services to people, and conduct Lok Adalats
- **Composition:** Headed by the Chief Justice of the respective High Court who is also the patron in chief
- Senior HC judge as Executive Chairman

District and Taluk Legal Services Committee

- Organize legal awareness camps, provide free legal services, and supply and obtain certified order copies and other legal documents, among other functions.
- Located in the District Court Complex and headed by the respective district judge.

- The Taluk committee is headed by a senior civil judge.

Rule of Law vs Right to Liberty: What the Supreme Court Said

SOURCE: THE HINDU, INDIAN EXPRESS

PRIORITY: HIGH

Why in the news?

- Recently, the **Supreme Court quashed the Gujarat government's decision to grant remission** to the convicts in the **Bilkis Bano case**.
- The court emphasized the **importance of personal liberty** as a **fundamental right under Article 21** of the Constitution but also highlighted the need for the rule of law to prevail over it.

Background of the Case

- In 2002, during the Gujarat sectarian riots, Bilkis Bano, a Muslim woman, was gang-raped, and 14 of her family members were killed by a Hindu mob.
- This incident was one of the most violent episodes of religious unrest in India since its independence.
- Seven of the murdered individuals were Bano's relatives, including her three-year-old daughter. Bilkis Bano was five months pregnant at the time of the attack.
- In the years following the incident, the 11 men involved in the crime were convicted and sentenced to life imprisonment.
- However, in August 2022, the Gujarat government, controversially granted remission to these men, leading to their release.
- This decision was met with widespread outrage and condemnation, sparking nationwide protests.
- The Supreme Court's intervention came after Bilkis Bano challenged the authorities' decision to release the convicts early.
- The Court quashed the remission given to the 11 men, directing them to surrender to prison authorities within two weeks.

Supreme Court's Judgement/Observations

- **Fundamental Right to Personal Liberty vs. Rule of Law:** The Supreme Court acknowledged **personal liberty as a fundamental right under Article 21** of the Constitution. However, it also emphasized the importance of the rule of law prevailing over personal liberty in certain situations.
- **Invalidation of Remission Orders:** The Court declared the orders granting remission to the convicts as "illegal" and "wholly without jurisdiction."
- **Explanation of the Rule of Law:** The Court explained the rule of law as a concept that prevents the executive's lawlessness and ensures that no person can be detained without legislative sanction. It also stressed that the judiciary is the guardian of the rule of law and democracy.
- **Equality Before the Law:** The Court linked the rule of law with equality under **Article 14** of the Constitution. It stated that violating the rule of law negates the concept of equality and that such violations should be a matter of judicial scrutiny.
- **Judiciary's Role in Upholding the Rule of Law:** The Court emphasized the judiciary's responsibility to uphold the rule of law and warned against selective application of this principle, which could endanger democracy.
- **Rejection of Compassion and Sympathy in Legal Judgments:** The Court held that compassion and sympathy have no place where the rule of law is required, asserting that the rule of law forms the essence of democracy.
- **Rule of Law as a Deterrent:** The Court mentioned that the existence of the rule of law and the fear of punishment operate as deterrents against unlawful acts.
- **Justice and the Rule of Law:** The Court cited past judgments to reinforce that justice should remain loyal to the rule of law, and that the concept of justice includes the rights of victims and law-abiding citizens.
- **Final Ruling:** The Supreme Court held that the Gujarat government was not competent to release the convicts in 2022 and stated that allowing them to remain outside jail would validate "invalid orders."
- The Court noted that the appropriate government entitled to pass such orders was Maharashtra, where the trial in the Bilkis Bano case took place, and not Gujarat.

What is the Rule of Law?

- The concept of the rule of law is a fundamental principle in democratic governance and legal theory.
- It stipulates that **all actions and decisions, whether by government entities or private individuals, must be grounded in law**, not arbitrary power or discretion.
- This principle ensures **that every member of society, regardless of status or position, is subject to the same set of laws**.

Key Aspects of the Rule of Law:

News Summary: The Supreme Court nullified Gujarat's remission for Bilkis Bano case convicts, underscoring personal liberty's Article 21 importance while affirming the rule of law's supremacy. It highlighted equality, justice, and legal compliance.

MCQs

Q. 'Right to privacy' is protected under which Article of the Constitution of India? (UPSC 2021)

- Article 15
- Article 19
- Article 21
- Article 29

Answer: (c)

Q. With reference to the constitution of India, prohibition or limitations or provisions contained in ordinary laws cannot act as prohibitions or limitations on the constitutional powers under Article 142. It could mean which one of the following? (UPSC 2019)

- The decisions taken by the Election Commission of India while discharging its duties cannot be challenged in any court of law.
- The Supreme Court of India is not constrained in the exercise of its powers by laws made by the parliament.
- In the event of grave financial crises in the country, the President of India can declare a Financial Emergency without the counsel from the cabinet.
- State Legislatures cannot make laws on certain matters without the concurrence of the Union legislature.

Answer: (b)

Q. Right to Privacy is protected as an intrinsic part of Right to Life and Personal Liberty. Which of the following in the Constitution of India correctly and appropriately imply the above statement? (UPSC 2018)

- Article 14 and the provisions under the 42nd Amendment to the Constitution
- Article 17 and the Directive Principles of State Policy in Part IV
- Article 21 and the freedoms guaranteed in Part. III
- Article 24 and the provisions under the 44th Amendment to the Constitution

Answer: (c)

Q. Which of the following are regarded as the main features of the "Rule of Law"? (UPSC 2018)

- Limitation of powers
- Equality before law
- People's responsibility to the Government

- **Government of Laws, Not of Men:** This phrase, attributed to John Adams, underscores that decisions and actions should be based on established laws rather than the whims or preferences of individual officials.
- **Check on Executive Lawlessness:** The rule of law serves as a barrier against the misuse of power by the executive branch of the government. It requires that no official can arrest or detain a person without legal justification.
- **Judicial Enforcement:** The judiciary plays a crucial role as the **guardian of the rule of law**. Courts are expected to ensure that all actions, especially those of the government and its officials, comply with the law. If there is a violation, courts intervene to rectify the situation.
- **Equality Before the Law:** Central to the rule of law is the principle that all individuals are equal before the law. This means no one is above the law, and everyone must be treated equally in the eyes of the law, ensuring fairness and justice.
- **Judicial Independence and Obligation:** The judiciary must operate independently and impartially to uphold the rule of law, without being influenced by external pressures or biases.
- **Antithesis of Arbitrariness:** The rule of law is fundamentally opposed to arbitrariness. Every decision or action by the state must have a legal basis and follow due process.
- **Balance of Rights and Justice:** While recognizing individual rights, such as the right to liberty, the rule of law also encompasses the rights of victims and the broader interest of society. Justice is not solely about the rights of the accused but also about upholding societal order and peace.
- **Non-Est Orders and Legal Compliance:** Decisions or orders that are not grounded in law (non-est) are considered invalid. Compliance with the rule of law sometimes necessitates corrective measures, like revoking illegal orders or decisions.

Important Provisions

- **Article 14:** This article guarantees equality before the law and equal protection of the laws within the territory of India.
- The court connects the breach of the rule of law with the negation of equality as prescribed by Article 14, stressing that equality before law becomes meaningless if violations are not subject to judicial scrutiny.
- **Article 21:** This article guarantees the right to personal liberty as a fundamental right. The court acknowledges its importance while also weighing it against the rule of law.
- **Article 142:** This article empowers the Supreme Court to pass any order necessary for doing complete justice in any cause or matter pending before it.
- The court, in this case, held that Article 142 cannot be invoked to favor those who benefit from orders that are null and void, as it would undermine the rule of law.

Conclusion

The rule of law is a cornerstone of a fair and just society, ensuring that laws govern the nation, and not arbitrary decisions by individuals or groups. It balances individual rights with the collective interest of society, maintaining order, equality, and justice.

4. Liberty and civil rights

Select the correct answer using the code given below:

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

Answer: (c)

Debating India's New Hit-and-Run Law

SOURCE: THE HINDU

PRIORITY: HIGH

Why in the news?

- Transporters and commercial drivers in various Indian states have **protested against the new legislation on hit-and-run incidents**.
- **Section 106 (2) of the Bharatiya Nyaya Sanhita, 2023**, imposes a harsh penalty for fleeing an accident scene and failing to report it, adding to existing laws.

Contextual Background

- The new law, specifically **Section 106 (2) of the BNS**, imposes a penalty of up to **10 years in jail and a fine for drivers** who flee an accident scene and fail to report the incident to a police officer or magistrate.
- This law adds to existing legislation, notably Section 304A of the Indian Penal Code, 1860, which addresses death due to rash or negligent acts.
- The law has been enacted in the context of India's high rate of road accident fatalities. In 2022, India recorded a significant number of road crash fatalities, amounting to an **average of 462 deaths daily**, with a large proportion occurring on national and state highways.
- The legislation has **sparked protests in states** like Maharashtra, Chhattisgarh, West Bengal, and Punjab, with incidents of road blocks, strikes, and even some violence.

What is the New Hit-and-Run Law?

- Under the **Bharatiya Nyaya Sanhita (BNS)**, set to replace the British-era Indian Penal Code (IPC), stringent penalties have been proposed for hit-and-run cases.
- According to the BNS, a driver responsible for a severe road accident due to reckless driving, who then flees without informing the police or an official, may face up to **10 years in prison and a Rs 7 lakh fine**.
- The BNS categorizes "**causing death by negligence**" into two distinct sections.

News Summary: Protests by transporters against India's new hit-and-run legislation, Section 106 (2) of the Bharatiya Nyaya Sanhita, 2023, focus on perceived excessive penalties, unintentional accidents, and potential misuse concerns.

- The first covers deaths caused by any rash or negligent act not constituting culpable homicide, with a potential penalty of up to five years in jail and a fine.
- The second pertains specifically to deaths resulting from rash and negligent driving, where the perpetrator doesn't inform the police or a magistrate immediately. In such cases, the punishment can extend to 10 years in prison and a fine.
- Previously, under the British-era IPC, there was no specific provision for hit-and-run incidents.
- Such cases were generally prosecuted under **Section 304 A of the IPC**, where causing death due to a reckless or negligent act could lead to a **maximum of two years imprisonment or a fine**.
- All hit-and-run cases, along with other incidents categorized as causing death by a "rash and negligent act," were processed under this section.

What are the Reasons for the Protest?

- **Excessive Punishment:** The protesters argue that the law stipulates severe punishment for drivers who flee the scene of an accident without reporting it. Specifically, they are concerned about the harsh penalty of 10 years imprisonment and a fine of ₹7 lakh.
- They believe this is excessive and does not take into account their challenging work conditions, such as long driving hours and difficult roads.
- **Unintentional Accidents and External Factors:** The drivers assert that accidents can occur due to factors beyond their control, like poor visibility due to fog, and that the law fails to consider these aspects.
- **Fear of Mob Violence:** There is a concern about the potential for mob violence against drivers if they stop to assist at accident sites, which is a factor in their decision to flee from such incidents.
- **Perception of Unfair Blame:** They argue that the punishment provided by the law is disproportionate and does not align with the realities of road transport and the nature of accidents.
- **Potential Misuse by Law Enforcement:** There is a concern that the law could be abused by law enforcement agencies, to the detriment of the drivers.
- **Negative Impact on the Transport Industry:** The harsh penalties, according to the protesters, could deter people from joining or continuing in the profession, negatively impacting the transport industry.

Need for the Law

- **High Rate of Road Fatalities:** In 2022, it registered more than 1.68 lakh deaths due to road accidents, which is an average of 462 deaths daily. This statistic is concerning, especially since it represents a year-on-year increase in road accidents and fatalities.
- **Global Context:** Despite a global decrease in road crash deaths, India's figures have been on the rise. This trend places India among the top countries in terms of road crash fatalities.
- **Economic Impact:** Road accidents in India account for a significant economic loss, estimated to be around **5-7% of its GDP annually**. This loss is not just in terms of human life but also impacts the country's economic health.
- **Hit-and-Run Incidents:** The **National Crime Records Bureau** recorded a substantial number of hit-and-run incidents in 2022, leading to thousands of deaths.
- The law aims to deter drivers from engaging in rash and negligent driving and to hold them accountable for their actions in the event of an accident.
- **Moral and Legal Responsibility:** The law seeks to enforce a moral and legal responsibility on drivers to report accidents. This is in line with existing provisions like Section 134 of the Motor Vehicles Act, 1988, which requires drivers to assist accident victims.
- **Deterrent Effect:** The stringent penalties are intended to serve as a deterrent against negligent and rash driving. By imposing severe consequences, the law aims to encourage safer driving practices and reduce the likelihood of accidents.
- **Legal Duty and Victim Support:** The law creates a legal duty for the offender to report incidents, aiding in better support and compensation for victims.
- This is also aligned with the provisions of the **Motor Vehicles (Amendment) Act, 2019**, which provides compensation for victims of hit-and-run accidents.

Way Forward

- **Engage in Dialogue and Consultation:** The government should actively engage with transporters, commercial drivers, and other stakeholders to discuss their concerns.
- **Clarify and Educate about the Law:** There seems to be some confusion and misinformation about the specifics of the law, particularly regarding the penalties. A comprehensive awareness campaign to educate drivers and the public about the actual provisions of the law could help alleviate some of the concerns.
- **Review and Amend the Law:** The law could be reviewed to address the valid concerns raised by the transporters. This could involve:

- **Differentiating Between Rash and Negligent Driving:** Creating distinct categories for rash and negligent driving with corresponding liabilities and penalties could ensure a more fair and just application of the law.
- **Considering Contributory Factors:** The law should take into account factors like road conditions, vehicle condition, driver fatigue, and commuter behavior, which might contribute to accidents.
- **Graded Punishments:** Implementing a system of graded punishments based on the severity of the accident and the degree of negligence or rashness could be more equitable.
- Minor incidents could be dealt with less severely, perhaps with fines, community service, or mandatory retraining, while more serious incidents would incur harsher penalties.
- **Protection Against Mob Violence:** The government could ensure that drivers who stop to assist in an accident are protected from potential mob violence.
- **Enhance Road Safety Measures:** Alongside revising the law, the government should focus on improving road safety. This includes better road maintenance, stricter enforcement of traffic rules, and public awareness campaigns about safe driving practices.

Conclusion

There's a need for straightforward communication and legal transparency to eliminate confusion among drivers. It is vital for the government to strike a balance between promoting road safety and providing fair treatment to those in the transport sector. This entails crafting legislation that is not only just and effective but also takes into account the practical aspects of road transportation.

SC Report Exposes Severe Gaps In Accessibility For People With Disabilities At Courts Across India

SOURCE: THE HINDU

PRIORITY: MEDIUM

Why in the news?

- Recently, the Supreme Court's Centre for Research and Planning revealed that district courts across the country lacked adequate infrastructure for people with disabilities including wheelchairs, ramps, etc.
- The report stated that the deficiencies in infrastructure were a major impediment to people with disabilities in securing justice and a secure work environment.



What are the report's findings on the problems faced by people with disabilities?

- **Accessibility:** More than half of India's District Court complexes do not have ramps while only 25.2% have wheelchairs available.
- **Toilet access:** Only 30.4% of court premises have separate disabled-friendly toilets despite access to toilets being fundamentally important.
- **Visually impaired:** Only 5.1% of district courts have tactile paving to assist visually impaired people in navigating the court premises.
- **Hearing impaired:** Just 2.8% of districts in India had sign language interpreters engaged to assist persons with hearing impairment in accessing court proceedings.
- **Infrastructure gaps:** There are 20,831 courtrooms in the District Judiciary against a sanctioned strength of 25,081 judges highlighting an infrastructure gap of 4,250 courtrooms.
- 73.5% of the available court premises were owned by the judiciary, 13.3% were owned by the respective state governments, 2.6% were rented premises, and 10.6% were under construction.
- Courts functioning in private rented buildings or by stop-gap arrangements lack the necessary amenities and a secure work environment.
- Moreover, alterations to old or temporary accommodation is impeded by structural limitations and space constraints.

People with disability

News Summary: The Supreme Court's Centre for Research and Planning revealed widespread inadequacies in infrastructure for people with disabilities in Indian district courts, hindering access to justice. Urgent reforms are needed.

UPSC Mains Practice Questions

Q.1) The Rights of Persons with Disabilities Act, 2016 remains only a legal document without intense sensitization of government functionaries and citizens regarding disability. Comment. (GS2 2022)

Q.2) Does the Rights of Persons with Disabilities Act, 2016 ensure an effective mechanism for the empowerment and inclusion of the intended beneficiaries in society? Discuss. (GS2 2017)

MCQs

Question: India is home to lakhs of people with disabilities. What are the benefits available to them under the law? (2011)

1. Free schooling till the age of 18 years in government-run schools.
 2. Preferential allotment of land for setting up business.
 3. Ramps in public buildings.
- Which of the statements given above is/are correct?

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

Answer: (d)

- A “person with disability” refers to a person with long-term physical, mental, intellectual, or sensory impairments which, in interaction with barriers, hinder his full and effective participation in society equally with others.
- **Person with benchmark disability:** A person with not less than 40% of a specified disability where specified disability has not been defined in measurable terms.
 - It also includes a person with a disability where specified disability has been defined in measurable terms, as certified by the certifying authority.

Constitutional and legal provisions regarding the disabled

- **Article 41:** This Directive Principles of State Policy (DPSP) directs the State to implement provisions to secure the right to work, education, and public assistance in cases of unemployment, old age, sickness, and disablement within the limits of its economic capacity and development.
- **Article 46:** It directs the state to promote the educational and economic interests of the weaker sections and protect them from social injustice and exploitation.
- **Seventh schedule:** It mentions relief for the disabled and unemployable as a matter (Entry 9) in the state list.
- **Eleventh and Twelfth schedule:** Welfare of the Disabled and mentally retarded is listed as item 26 in the Eleventh Schedule and item 09 in the Twelfth Schedule.
- **Right of Persons with Disabilities Act 2016:** It replaced the Persons with Disabilities (Equal Opportunities, Protection of Rights and Full Participation) Act, 1995.
 - It reflects a shift in the understanding of disability from a social welfare concern to a human rights concern based on principles such as respect for inherent dignity, individual autonomy, and independence of persons.
 - The types of disabilities have been increased from 7 to 21 and authorized the government to notify any other category of specified disability.
 - It increases the quantum of reservations for people suffering from disabilities from 3% to 4% in government jobs and from 3% to 5% in higher education institutes.
 - The Act aims to bring domestic legislation in line with the United National Convention on the Rights of Persons with Disabilities (UNCRPD).
 - The Chief Commissioner for Persons with Disabilities and the State Commissioners will act as regulatory bodies and Grievance Redressal agencies, monitoring the implementation of the Act.
- **The Rehabilitation Council of India Act, 1992:** It provided statutory status to the Rehabilitation Council of India.
 - The RCI has been mandated to regulate and monitor services given to persons with disability, to standardize syllabi, and to maintain a Central Rehabilitation Register of all qualified professionals and personnel working in the field of Rehabilitation and Special Education.
- **The National Trust for the Welfare of Persons with Autism, Cerebral Palsy, Mental Retardation and Multiple Disabilities Act, 1999:** It was aimed at constituting a body at the national level for the welfare of persons with autism, cerebral palsy, mental retardation, and multiple disabilities.
 - The trust aims to provide total care to such persons and to manage the properties bequeathed to the Trust.
 - It aims to promote measures for their protection in case of the death of their parents, evolve procedures to appoint guardians and trustees and facilitate equal opportunities in society.
- **The Mental Health Act, 2017:** It was enacted to replace the Mental Health Act, of 1987.
 - It aims to provide mental healthcare and related services for persons with mental illness and to protect, promote, and fulfill their rights.

Initiatives

- **Accessible India Campaign:**
 - It was launched in 2015 for the creation of Accessible Environment for PwDs based on the principles of the Social Model of Disability.
 - **Aim:** A barrier-free and conducive environment for Persons with Disabilities with universal accessibility across three verticals - Built-up environment; transportation ecosystem; and ICT ecosystem.
- **Deendayal Disabled Rehabilitation Scheme (DDRS)**
 - It aims to create an enabling environment to ensure equal opportunities, equity, social justice, and empowerment of persons with disabilities.
 - NGOs are financially assisted in running their projects for the rehabilitation of persons with disability.
- **Assistance to Disabled Persons for Purchase/Fitting of Aids and Appliances (ADIP):** Assist disabled persons in procuring durable and scientifically manufactured appliances and promoting their physical, social, and psychological rehabilitation.
 - It is implemented by NGOs, National Institutes under the Ministry of Social Justice & Empowerment, and ALIMCO (a PSU that manufactures artificial limbs).
- **Indian Sign Language Research and Training Centre:** It aims to promote the use of sign language and the development of human resources in the field.

- **National Institute of Mental Health Rehabilitation (NIMHR):** It aims to work towards capacity building in mental health rehabilitation and develop community-based rehabilitation protocols for mainstreaming persons cured from their mental illnesses.

Way forward

- The report recommends regular inspection by concerned agencies like the Public Works Department in coordination with the district judiciary.
- This will help identify areas requiring upgrades and implement practical steps to make the judiciary more disabled-friendly.
- In 2023, the Supreme Court permitted a deaf lawyer to argue virtually using a sign language interpreter while the Delhi High Court employed a sign language interpreter to assist a hearing-impaired petitioner in understanding proceedings.
- Similar steps should be implemented across the district judiciary so that the disabled can seek and be provided justice at the earliest opportunity instead of having to seek out the higher judiciary.
- Providing visually impaired citizens with tactile or auditory senses could help improve inclusivity and accessibility to justice.

Conclusion

The report underscores critical challenges faced by people with disabilities in accessing justice, revealing significant gaps in infrastructure, facilities, and support services within India's district court system. The findings of the report emphasize the imperative for comprehensive reforms, highlighting legislative provisions and initiatives while urging proactive measures to ensure an inclusive and accessible judicial environment.

What Is The Long-Running Legal Dispute Over AMU's Minority Character

SOURCE: THE HINDU

PRIORITY: MEDIUM

Why in the news?

- Recently, a seven-judge Bench of the Supreme Court began hearing the matter pertaining to the minority character of Aligarh Muslim University.
- In 2019, a three-judge bench of the Supreme Court presided by then-CJI Ranjan Gogoi referred the petitions challenging the decision of the Allahabad HC overturning the 1981 amendment of the AMU Act, 1920 to a seven-judge bench.



Aligarh Muslim University

- The origins of the Aligarh Muslim University can be traced back to the establishment of the Muhammadan Anglo-Oriental (MOA) College established by [Sir Syed Ahmad Khan](#) in 1875.
- **Objective:** It was set up to help Muslims overcome educational backwardness and prepare for government services.
- What did it teach:
 - Western education to its students
 - Emphasized Islamic theology.
 - Advocated women's education
- AMU was conferred university status in 1920 and all assets of MOA College were transferred to it.

What is the 'minority character' of an institution?

- **Constitutional provisions:** Article 30(1) empowers all religious and linguistic minorities to establish and administer educational institutions.
- This provision reasserts the government's commitment to fostering the growth and development of minority communities by guaranteeing that it will not discriminate in giving aid based on the minority status.

What was the SC verdict in the S. Azeez Basha and another versus Union of India?

News Summary: The Supreme Court begins hearing the Aligarh Muslim University's minority character case, revisiting amendments and challenges. Persistent issues surround its minority status despite amendments and legal disputes.

MCQs

Question: Who among the following leaders did not believe in the drain theory of Dadabhai Naoroji ? (1996)

- B.G. Tilak
- R.C. Dutt
- M.G. Ranade
- Sir Syed Ahmed Khan

Answer: (d)

Question: Which of the following pairs are correctly matched? (1998)

- Theodore Beck: Mohammedan Anglo Oriental College, Aligarh.
- Ilbert Bill: Ripon
- Pherozeshah Mehta: Indian National Congress
- Badruddin Tyabji: Muslims League

Select the correct answer using the codes given below:

Codes:

- 1, 2, 3 and 4
- 2 and 4
- 1, 3 and 4
- 1, 2 and 3

Answer: (d)

- In *S. Azeez Basha and another versus Union of India*, the bench led by then Chief Justice KN Wanchoo reviewed the 1951 and 1965 amendments to the AMU Act, 1920 which altered the structure and running of the University.
- **Amendments:**
 - The 1951 amendment replaced the Governor General of India (Lord Rector) as the head of the University (as per the 1920 Act) with the President of India who would be the Visitor.
 - The amendments reduced the authority of the University Court and increased the powers of the Executive Council, turning the Court into a body appointed by the Visitor.
- **Petitioner's arguments:** The petitioners argued that AMU was established by Muslims, therefore, they had the right to manage it.

Ruling:

- **Establishment:** AMU was not established or administered by the Muslim minority.
 - AMU was established through a central Act as this would ensure its degrees were recognized by the government unlike if it was set up by the minority Muslim community.
 - The court ruled that the efforts of the Muslim minority to set up the University under the 1920 Act did not imply that was established by them.
- **Entry of non-muslims:** It allowed non-Muslims to join the University Court and removed a provision allowing only Muslims to be a part of it.
 - It removed a provision that permitted only Further, a provision that said only Muslims could be part of the University Court was removed, allowing non-Muslims to join.
- **Operation:** The apex court found that the university was not solely operated by Muslims but entrusted to the Lord Rector and other statutory bodies as per the 1920 Act.
 - It also noted that the University Court comprised only of Muslims was elected by an electorate including non-Muslims.

Why has the issue persisted?

- **Political action in 1981:** In response to the SC verdict and the subsequent protests by the Muslim community, an amendment to the AMU Act was introduced in 1981.
 - It explicitly reaffirmed the minority status of the AMU.
 - It introduced Section 2(l) and Subsection 5(2)(c) which stated that the university was an educational institution of their choice established by the Muslims of India and subsequently incorporated as the AMU.
- **Reservation policy of 2005:** In 2005, the AMU reserved 50% of seats in postgraduate medical courses for Muslim candidates.
- **Verdict of Allahabad HC:** The Allahabad High Court overturned the 2005 reservation policy and the 1981 Act.
 - According to the court, AMU could not maintain an exclusive reservation since it was not a minority institution as per the SC's judgment in the *S. Azeez Basha* verdict.
 - In 2006, 8 petitions before the Supreme Court (including one by the Union government) challenged the decision of the High Court.
 - However, in 2016, the government informed the SC that it was withdrawing the appeal on the basis that the executive government could not set up a minority institution in a secular state.

Conclusion

- The Aligarh Muslim University (AMU) has faced legal scrutiny over its minority status with challenges persisting despite subsequent amendments and reservations.

The Laws Around Remission Policy: Bilkis Bano Case

SOURCE: THE HINDU

PRIORITY: MEDIUM

Why in the news?

- Recently, the **Supreme Court of India** intervened in the remission policy issue, specifically addressing the case involving the **remission of 11 convicts** linked to the 2002 Gujarat riots.
- The Supreme Court **set aside the remission granted** by the Gujarat government to these convicts.

What is Remission?

- Remission is the process of diminishing or completely nullifying a punishment or fine that a court has imposed.
- It empowers the government or appropriate bodies to either fully exempt an individual from their sentence or lessen its severity.
- This concept is separate from **furlough and parole**, both of which provide temporary relief from prison life.
- In contrast, remission shortens the length of the sentence without altering its fundamental nature.
- Additionally, remission is not a guaranteed or automatic occurrence. It relies on the judgment of the concerned authorities.
- The procedures and standards for granting remission vary according to the legal stipulations associated with a specific crime.

News Summary: The Supreme Court set aside the remission of 11 convicts related to the 2002 Gujarat riots. Remission, governed by constitutional and statutory provisions, faces scrutiny and requires transparency for equitable application.

UPSC Previous Year Practice Question

Q. Instances of President's delay in commuting death sentences has come under public debate as denial of justice. Should there be a time limit specified for the President to accept/reject such petitions? Analyse. (2014)

MCQs

Q. 'Right to privacy' is protected under which Article of the Constitution of India? (UPSC 2021)

a) Article 15

What are the Grounds for Remission?

- In the case of '**Laxman Naskar v. Union of India**' (2000), the Supreme Court **established five criteria** for considering remission:
- The impact of the crime on society.
- The likelihood of the crime being committed again.
- The reduced capacity of the convict to commit the crime again.
- The benefits of continuing the convict's incarceration.
- The socio-economic status of the convict's family.
- Individuals sentenced to **life imprisonment can apply for remission** after completing a **minimum of 14 years** of their sentence.
- According to the Prison Statistics of 2020, 61% of inmates in prisons are serving life sentences.

Constitutional Provisions Governing Remission

The Constitution bestows the President and the Governor with the sovereign authority to pardon:

- **Article 72** empowers the President to grant pardons, reprieves, respites, or remissions of punishment, or to suspend, reduce, or change the sentence of any individual. This applies in cases where:
 - The sentence or punishment is imposed by a court-martial.
 - The sentence or punishment pertains to an offence related to the Union Government's executive power.
 - In all instances of death sentences.
- **Article 161** allows a Governor to exercise similar powers of pardoning, reprieving, respiting, or remitting punishment, or suspending, reducing, or changing sentences for offences under laws within the state's executive purview.
- The Supreme Court has ruled that a State Governor has the authority to pardon prisoners, including those on death row, even if they haven't completed a minimum of 14 years in prison.
- Notably, the President's pardoning powers under Article 72 are broader than those of the Governor under Article 161.

Statutory Provisions Governing Remission

- The Code of Criminal Procedure (CrPC) allows for the remission of prison sentences, meaning that a sentence can be fully or partially cancelled.
- The remission system is outlined in the **Prison Act of 1894**.
- **According to Section 432**, the 'appropriate government' is authorized to suspend or reduce a sentence, either in its entirety or partially, and this can be done with or without specific conditions.
- **Additionally, under Section 433**, any sentence can be converted to a less severe one by the appropriate government. This authority enables state governments to release prisoners before the completion of their full prison terms.
- **However, as per Section 433A**, there is a stipulation that convicts serving life sentences for crimes that could potentially receive the death penalty must serve a minimum of 14 years in prison.

Important Judgements Concerning Remission

Maru Ram v. Union of India (1980)

- In this landmark case, the Supreme Court acknowledged the growing inclination towards reformatory punishment, emphasizing the rehabilitation of criminals over their mere imprisonment, an approach that aligns with ideal objectives.

Laxman Naskar v. State of West Bengal (2000)

Here, the Supreme Court outlined the criteria for granting remission:

- Whether the crime was an isolated act without broader societal impact.
- The likelihood of the convict reoffending.
- Whether the convict has lost the capability to commit further crimes.
- The usefulness of continuing the imprisonment.
- The socio-economic status of the convict's family.

Epuru Sudhakar v. State of Andhra Pradesh (2006)

The Supreme Court declared that judicial review of remission orders is permissible on grounds such as:

- Lack of thoughtful consideration
- Malicious intent
- Decisions based on irrelevant or extraneous factors
- Exclusion of pertinent materials
- Arbitrary nature of the order

Union of India vs V. Sriharan (2015)

In this case, the Court made significant observations:

- b) Article 19
- c) Article 21
- d) Article 29

Answer: (c)

Q. With reference to the constitution of India, prohibition or limitations or provisions contained in ordinary laws cannot act as prohibitions or limitations on the constitutional powers under Article 142. It could mean which one of the following? (UPSC 2019)

(a) The decisions taken by the Election Commission of India while discharging its duties cannot be challenged in any court of law.

(b) The Supreme Court of India is not constrained in the exercise of its powers by laws made by the parliament.

(c) In the event of grave financial crises in the country, the President of India can declare Financial Emergency without the counsel from the cabinet.

(d) State Legislatures cannot make laws on certain matters without the concurrence of the Union legislature.

Answer: (b)

Q. Right to Privacy is protected as an intrinsic part of Right to Life and Personal Liberty. Which of the following in the Constitution of India correctly and appropriately imply the above statement? (UPSC 2018)

a) Article 14 and the provisions under the 42nd Amendment to the Constitution

b) Article 17 and the Directive Principles of State Policy in Part IV

c) Article 21 and the freedoms guaranteed in Part. III

d) Article 24 and the provisions under the 44th Amendment to the Constitution

Answer: (c)

Q. Which of the following are regarded as the main features of the "Rule of Law"? (UPSC 2018)

1. Limitation of powers
2. Equality before law
3. People's responsibility to the Government
4. Liberty and civil rights

Select the correct answer using the code given below:

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

Answer: (c)

- The appropriate government to decide on a remission application is the one in the state where the sentencing occurred.
- It was noted that the Gujarat government overstepped its bounds by granting remission, a power that belonged to the Government of Maharashtra in this instance.

Arguments in Favour of Remission

- **Acknowledgment of Positive Change:** Remission recognizes the positive transformation in individuals convicted of crimes, supporting their rehabilitation and reintegration into society.
- **Humanitarian Basis for Reformation:** Remission is rooted in humanitarian considerations, including factors like age, health, and other compassionate grounds.
- **Alleviating Prison Overcrowding:** By reducing the prison population, remission addresses the problem of overcrowding, leading to improved living conditions and better management in correctional facilities.
- **Promoting Good Conduct Among Prisoners:** The prospect of remission acts as a motivator for prisoners to maintain good behavior, comply with prison regulations, and participate in rehabilitation activities, fostering a positive atmosphere in prisons.
- **Enhancing Judicial and Correctional Efficiency:** Remission allows the system to allocate resources more effectively, focusing on cases requiring incarceration while offering a release path for those who are no longer considered a significant risk.
- **Financial Benefits:** Remission contributes to cost reductions related to prison upkeep and administration.

Arguments Against Remission

- **Public Safety Risks:** Critics point out that in some cases, prioritizing rehabilitation and good behavior doesn't sufficiently mitigate the public safety risks posed by offenders who have committed particularly grievous crimes.
- **Backlash in High-Profile Cases:** Remission decisions in notable or contentious cases can provoke public backlash. For example, the remission granted to the convicts in the Rajiv Gandhi assassination case by Karunanidhi stirred controversy.
- **Discrepancies in Implementation:** The subjective nature of remission can lead to inconsistent application, with similar cases sometimes receiving different treatment, raising concerns about impartiality and legal equality.
- **Possibility of Political Meddling:** There's a risk that political agendas could influence remission decisions, potentially undermining the legal system's integrity and justice principles.
- **Weakening of Deterrent Effect:** Some argue that remission might lessen the deterring impact of criminal sentences. The prospect of early release for good behavior could diminish the perceived severity of punishment for crimes.
- **Neglecting Victims and Survivors:** In instances where remission is granted, the needs and rights of victims or their families might be ignored. This can lead to a sense of injustice among victims, especially if the offender's release causes them distress or fear.
- **Transparency Issues:** The lack of clarity in the remission decision-making process can foster doubts about the factors considered by the authorities, potentially eroding public confidence in the criminal justice system.

Issues in Granting Remission

- **Requirements and Procedure for Remission Eligibility:** Convicts serving life sentences need to complete at least 14 years before they can seek remission. This uniform policy might impede the reformation process.
- Each remission request is evaluated by a committee considering various aspects like the crime's nature, reoffending risk, and the convict's socio-economic background.
- However, there is no clear information on the diverse makeup of these committees.
- **Transparency Issues in the Remission Process:** The formation of remission committees and the lack of clarity in their decision-making process raise concerns over potential arbitrary actions.
- **Judicial Scrutiny of Remission Decisions:** Referencing the Supreme Court's view in *Epuru Sudhakar vs State of Andhra Pradesh* (2006), judicial review of remission decisions is generally limited to situations involving a lack of due consideration.
- **Issues with Current Remission Policies:** Some Indian states have remission guidelines that either exclude certain types of offenders or necessitate longer prison terms before considering remission.
- This raises debates over the appropriateness of excluding specific offenders from remission and the balance between retributive and conditional punishment models.
- **Future Challenges for the Supreme Court:** The Supreme Court may encounter complexities in addressing fundamental questions about remission policies, particularly given the differences across states.
- There's an emerging need to tackle dilemmas like the remission eligibility of certain offenders and the assurance of equitable adherence to conditions, presenting future challenges for the Court.

Way Forward

- **Meticulous Evaluation of Cases:** Each case for remission should be thoroughly assessed. Authorities need to ensure that their decision aligns with the principles established by the Supreme Court in 'Laxman Naskar v. Union of India' (2000).
- **Transparent Decision-Making:** The process for granting remission should be clear and free from political bias.
- **Equity and Reasonableness:** Decisions regarding remission must be equitable and sensible, considering relevant factors such as the societal impact of the crime, the likelihood of the convict reoffending, and their potential for rehabilitation.
- **Logical and Inclusive Remission Policy:** The policy governing remission should be both humane and comprehensive, taking into account the possibility of the convict's reform while upholding the principles of law and public interest.

Conclusion

The Supreme Court's ruling in the Bilkis Bano case is a notable affirmation of the rule of law and a clear rejection of any administrative collusion or illegal actions. Nevertheless, this case also sheds light on the lingering concerns around the remission process, particularly revealing the unregulated discretion involved in making such decisions.

Democratic Backsliding: On The State Wielding The FCRA As A Weapon

SOURCE: THE HINDU

PRIORITY: MEDIUM

Why in the news?

- Recently, the Government of India canceled the FCRA (Foreign Contributions Regulation Act) license of the Center for Policy Research (CPR).
- This article discusses the state's use of the FCRA provisions and its impact on free speech and the sharing of knowledge and ideas.



Why was CPR registration cancelled?

- The Union Ministry of Home Affairs has alleged that CPR
 - Diverted foreign donations to fund protests and legal challenges against developmental projects
 - Misused funds to affect India's economic interests.
 - Engaged in the production of current affairs programmes in violation of FCRA norms.
- According to the Ministry, the CPR had furnished a report on air pollution "Overview on the Commission for Air Quality Management Act 2021, policy challenges for the new government, etc" which it claimed violated Section 3 of the FCRA.
- The government has stated that the NGO sector in India is vulnerable to risks posed by money laundering and terror financing.
 - Therefore, it was necessary to take steps to rigorously enforce the rules and coordinate with other countries.
- **Response of the CPR:** It claimed that the ministry's decision is incomprehensible and disproportionate, and some of the reasons given challenge the very basis of the functioning of a research institution.

Have other organizations lost their license?

- Since 2015, the FCRA registration of more than 16,000 NGOs has been cancelled for violation of rules with around 6,000 NGOs ceasing to operate since 2024.
 - As of January 22, 2024, there were 16,989 FCRA-registered NGOs active in the country.
 - The FCRA registration of nearly 6,000 NGOs ceased to operate from January 1, 2022, as the MHA either refused to renew their application or the NGOs did not apply.
- The registration of World Vision India (WVI) was also cancelled in 2024 for alleged FCRA violations from 2012-13 to 2020-21.

News Summary:

UPSC Mains Practice Questions

Q.1) Examine critically the recent changes in the rules governing foreign funding of NGOs under the Foreign Contribution (Regulation) Act (FCRA), 1976. **(GS2 2015)**

Q.2) In the Indian governance system, the role of non-state actors has been only marginal." Critically examine this statement. **(GS2 2016)**

Q.3) Can Civil Society and Non-Governmental Organizations present an alternative model of public service delivery to benefit the common citizen? Discuss the challenges of this alternative model. **(GS2 2021)**

- WWI is the recipient of the highest amount of foreign donations among all NGOs registered under the Act in 1986.

Who monitors the process?

- The implementation of the FCRA is done by the Union Ministry of Home Affairs.
- The ministry regulates foreign donations through the FCRA to ensure that the funds are not used to adversely affect the country's internal security.
- Associations, groups, or NGOs that intend to receive foreign funding must compulsorily register under the Act.
- The registration is valid for five years following which the NGO must apply for renewal.
- The registered groups will receive the renewal if they comply with all norms and can receive foreign contributions for social, educational, religious, economic, and cultural programmes.

What are the implications of the move?

- The CPR has been contributing to an ecosystem of governance and policy-making that supports divergent interests through consensus building, which is a highlight of democracy.
- The decision to cancel the license could imply that India was not open to the free flow of knowledge and ideas.
- Some experts have also alleged that the decision could be a part of moves by the state to silence dissenting opinions, especially on controversial topics like environment, civil liberties, and human rights.
- The FCRA is a legislation that was developed during the Emergency and has been accused of being used to target civil society for political or ideological reasons.
- The 2020 amendment of the FCRA Was criticized by the International Commission of Jurists as incompatible with international law as it could obstruct the functioning of civil society actors.
- **India's downgrading in global indices of freedom and democracy:** The U.S.-based non-profit, Freedom House, lowered India's grading on its Democracy Index to an "electoral autocracy" due to the erosion of civil liberties, such as shutting down the finances of civil society organizations.

FCRA

- The Foreign Contributions Regulation Act, 1976 was enacted during the Emergency period to deal with concerns about foreign interference in India's affairs through financial support to independent organizations.
- It aims to ensure that civil society organizations operate consistently with the values of a sovereign democratic republic.
- Individuals are permitted to accept foreign contributions without the permission of the MHA.
- The monetary limit for accepting such foreign contributions, however, shall be less than Rs. 25,000.
- The Act ensures that recipients of foreign contributions follow the stated purpose for which they were obtained.
- Organizations are required to register themselves every five years under the Act.
- **Amendments:**
 - **2010:** Aimed to regulate the acceptance and utilization of foreign contributions by certain individuals or associations and to prohibit acceptance and utilization of foreign contributions for any activities detrimental to the national interest.
 - **2020:** Prohibited the transfer of foreign contributions to any other person or organization and reduced the limit of usage of foreign contributions for administrative expenses from 50% to 20%.
- **FCRA Registration:** It is granted to individuals or associations engaged in various areas of work, including cultural, economic, educational, religious, or social programs, among others.
 - Entities can register under multiple categories based on their programs, allowing for diverse activities.
 - Applicants need to open a bank account for the receipt of the foreign funds at a specified branch of the State Bank of India in New Delhi.
- **Prohibitions of Activities Under FCRA Registration:**
 - The applicant must not represent fictitious entities.
 - The applicant should not have been involved in religious conversion activities, either directly or indirectly.
 - The applicant should not have a history of prosecutions related to communal tension or disharmony.
 - The applicant must not be engaged in activities related to sedition.
 - The FCRA prohibits candidates, journalists, media companies, judges, government servants, politicians, and political organizations from receiving foreign funds.
- **Validity and Renewal:**

- FCRA registration is valid for five years, and NGOs are required to apply for renewal within six months of the registration's expiry.
- The government has the authority to cancel an NGO's FCRA registration for various reasons, including violations of the Act or a lack of reasonable activity in their chosen field for two consecutive years.
- Once canceled, an NGO is ineligible for re-registration for three years.
- **FCRA 2022 Rules:**
- In July 2022, the MHA introduced changes to FCRA rules. These changes included increasing the number of compoundable offenses from 7 to 12.
- The rules also raised the limit for contributions from relatives abroad that do not require government intimation from Rs 1 lakh to Rs 10 lakh and extended the time limit for intimation of the opening of bank accounts.

Why is FCRA significant?

- **Preventing interference in Indian affairs:** The FCRA was enacted to regulate foreign donations in order to prevent foreign powers from interfering in India's affairs.
- **Transparency and accountability:** It aims to prevent the misuse of funds and ensure transparency and accountability.
- **National security:** It plays a critical role in safeguarding national security interests by ensuring that foreign entities are restricted from funding activities that could be detrimental to India's interests and security.
- **Promoting socio-economic development:** Foreign contributions, if properly regulated, can act as a significant source for funding socio-economic development in India.

What are the concerns associated with the FCRA?

- **Compliance and administration:** Extensive documentation, strict compliance, lengthy processes, and delays are major challenges for CSOs.
- Authorities have used the ambiguities in the regulations to target and restrict CSOs.
- **Political Influence:** Concerns have been raised over political influence in decisions under the FCRA.
- **Clarity:** There is a lack of clarity on the compliance requirements which has led to concerns about the transparency of their funding activities and potential influence on Indian civil society.

Conclusion

- The recent cancellation of the FCRA license for the Center for Policy Research raises concerns about the potential impact on free speech, knowledge-sharing, and civil society. The FCRA, while crucial for preventing foreign interference, requires careful balance to ensure transparency, accountability, and the protection of democratic values. Balancing national security interests with the principles of openness and democracy is essential.

ECONOMY

Direct Tax Collections Cross 80% Of 2023-24 Target

SOURCE: THE HINDU

PRIORITY: MEDIUM

Why in the news?

- As of January 10th, 2024, net direct tax collections in India reached ₹14.7 lakh crores indicating a growth of 19.4% over the same period in 2022-23.
- This has led to the country meeting over 80% of the target for 2023-24.



Trends in direct tax collection

- **Total collection:** Direct tax collection crossed ₹14.7 lakh crores which was around 80.6% of the budget estimates for FY23-24.

News Summary:

India's direct tax collections reach ₹14.7 lakh crores, exceeding 80% of the 2023-24 target, showcasing a robust 19.4% growth with personal and corporate income tax contributing significantly.

UPSC Mains Practice Question:

Q.1) What is the meaning of the term tax-expenditure? Taking the housing sector as an example, discuss how it influences the budgetary policies of the government. (GS3 2013)

Q.2) Comment on the important changes introduced with respect to the Long-term Capital Gains Tax (LCGT) and Dividend Distribution Tax (DDT) in the Union Budget for 2018-2019. (GS3 2018)

MCQs

Question: Consider the following: [2009]

1. Fringe Benefit Tax
2. Interest Tax
3. Securities Transaction Tax

- The net direct tax collection has grown ₹1 lakh crore since December 17, when growth was at 20.66%.
- **YoY Growth:** This was a 19.41% increase over the net collections for the corresponding period of the previous year.
- **Gross collections:** According to the Central Board of Direct Taxes, gross direct tax collections rose by 16.77% to ₹17.18 lakh crore.
- Personal Income Tax (PIT) inflows increased by 26.11% and Corporate Income Tax (CIT) by 8.32%.
- **Net growth:** Net growth in CIT collections is 12.37% and that in PIT collections is 27.26% (PIT only) after adjustment of refunds.
- **PIT and STT receipts:** Net of refunds, PIT and Securities Transaction Tax receipts rose by 27.22%.
- **Refunds issued:** Refunds of around ₹2.48 lakh crore have been issued to taxpayers.
- **Projections by ICRA:**
 - Direct tax collection for the full year should exceed Budget estimates by ₹1 lakh crores displaying 18% growth compared to provisional numbers for 2022-23.
 - In 2024-24, direct tax revenues are projected to grow by 12% due to beginning commodity prices and their favourable impact on corporate profitability which along with government efforts to boost compliance will support personal income tax inflows amid tax base widening.

What are direct taxes?

- **Definition:** A direct tax refers to a tax paid directly to the imposing entity by an individual or company.
- It cannot be transferred to another person or business.
- **Levying authority:** The Central Board of Direct Taxes is the authority responsible for levying and collecting direct taxes as well as formulating policies related to it.
- **Contribution to economy:** Direct taxes account for around half of the government's revenue.

What are the different types of direct taxes?

Tax	Description
Income Tax	● Income tax is paid based on the age and earnings of individuals according to tax slabs determined by the government. ● Individuals, Hindu undivided families, unregistered businesses, and other groups of persons are all subject to income tax. ● In India, income tax is progressive in nature.
Corporation Tax	● Corporate tax is a tax levied on the profits of corporations and business firms. ● Companies that are registered in India under the Companies Act 1956, both public and private, are subject to corporate tax.
Minimum Alternate Tax	● MAT is a provision in Direct tax laws to limit tax exemptions availed by companies so that they pay at least a minimum amount of corporate tax to the government. ● It aims to bring "zero tax companies", which despite having earned substantial book profits and having paid handsome dividends, do not pay any tax due to various tax concessions and incentives, into the tax net.
Alternate Minimum Tax	● It is the equivalent of the MAT to limited liability partnerships.
Capital Gain Tax	● A capital gain is any profit or gains derived from the sale of a capital asset. These profits are subject to taxation. ● The Capital Gains are charged differently for short-term (assets held for less than 36 months) and long-term gains (assets held for more than 36 months) based on the income gained.
Securities Transaction Tax	● Securities transaction tax is a tax on gains made on the domestic stock exchange on securities such as equities, options, and futures. ● It is levied and collected by the union government.
Commodities Transaction Tax	● Buyers and sellers of exchange-traded non-agricultural commodity derivatives in India are charged the CTT which is calculated based on contract size. ● Products covered include metals like gold and silver, and energy products like crude oil and natural gas.
Estate Duty	● It was first introduced in 1953 and is imposed on a person's entire estate (property and assets) when they die. ● It is also called Inheritance Tax.

Which of the above is/are Direct Tax/Taxes?

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

Answer: (d)

Question: Which one of the following is the correct statement?

Service tax is a/an: [2006]

- (a) direct tax levied by the Central Government.
- (b) indirect tax levied by the Central Government.
- (c) direct tax levied by the State Government.
- (d) indirect tax levied by the State Government.

Answer: (b)

	It has been discontinued since 1985.
Wealth Tax	- It is a tax that was imposed on individuals, joint Hindu families, and businesses with an excess of net worth. - It was first introduced in 1957 and abolished in 2015.
Fringe Benefits Tax	- To reduce profit and taxes, corporations provide bonuses to employees to keep them beneath their input costs. - The FBT is a tax that an employer must pay in lieu of the benefits provided to his or her employees. - It was repealed in 2009.

What are the pros and cons of direct taxes

Pros

- **Economic and Social balance:** Tax slabs have been determined by the government based on age, earnings, and the economic situation of the country.
- Exceptions have also been put in place to ensure that income inequalities are balanced out.
- **Productivity:** Direct taxes are considered productive as the returns increase with an increase in the working population.
- **Anti-Inflation:** The government raises taxes during an inflationary period which reduces the demand for goods and services.
- As a result, inflation is countered.
- **Certainty:** Direct taxes provide a sense of certainty to the government and the taxpayer on the amount to be collected and paid respectively.
- **Wealth distribution:** the government has adopted a progressive model of taxation in which individuals or organizations that can afford them are charged higher taxes.
- These funds are then used to help the less advantaged sections of society.

Cons

- **Invasibility:** One of the major challenges faced by direct taxation is the opportunities available for those not willing to pay taxes to conceal their income or submit false returns.
- **Arbitrariness:** Taxes have been criticized for the arbitrary nature of their determination and the potential burden on the poor in a proportional system.
- **Disincentivize development:** Another major criticism is that high taxes reduce an individual's capacity to save/invest.
- As a result, the economy does not grow as expected.

Conclusion

India's direct tax collections surpassing 80% of the 2023-24 target reflects a robust economic recovery. The substantial growth in both Personal and Corporate Income Tax, coupled with strategic government measures, suggests a positive outlook. However, challenges such as tax evasion and potential disincentives for development warrant ongoing attention for sustained economic health.

India's Remittances

SOURCE: THE WIRE

PRIORITY: MEDIUM

Why in the news?

- The article discusses **India's significant achievement in leading global inward Dollar remittances**, primarily through non-resident Indians working overseas.
- India's remittances hit an **all-time high of \$125 billion**, surpassing China's \$50 billion.

What are Remittances?

- Remittances refer to the transfer of money that migrants send to their families and acquaintances in their countries of origin.
- They hold significant importance as a source of income and foreign currency for numerous developing nations, particularly those in South Asia.
- Remittances play a crucial role in poverty reduction, enhancement of living standards, support for education and healthcare, and the stimulation of economic activities.
- They stand as one of the primary income sources for individuals in low-income and developing countries, often surpassing the amount received from direct investment and official development assistance.
- These funds enable families to afford essential necessities such as food and healthcare.
- Notably, India holds the distinction of being the world's largest recipient of remittances.
- This influx of remittances strengthens India's foreign exchange reserves and contributes to financing its current account deficit.

Historical Context

- **Indentured Labor Era:** Over a century ago, during British colonial rule, India became a significant source of 'indentured labour.'
- This involved transporting labourers, often in harsh and exploitative conditions, to work on plantations across the world, from Fiji to Surinam.

News Summary: India achieved a record high of \$125 billion in remittances, surpassing China. This economic milestone underscores the significant role of the Indian diaspora in global inward dollar transfers.

UPSC Previous Year Practice Question

Q. Why indentured labour was taken by the British from India to other colonies? Have they been able to preserve their cultural identity over there? **(2018)**

Q. Discuss the changes in the trends of labour migration within and outside India in the last four decades. **(2015)**

MCQs

Q. Consider the following statements: **(UPSC 2023)**

1. Recently, all the countries of the United Nations have adopted the first-ever compact for international migration, the 'Global Compact for Safe, Orderly and Regular Migration (GCM)'.

- These labourers, from regions like Bihar, Bengal, and the Coromandel Coast, faced challenging conditions, akin to slavery, and were motivated by the promise of better income and life.
- **Opposition and Change:** The system of indentured labour was met with opposition from figures like Mahatma Gandhi and the Indian National Congress. They played a crucial role in ending this exploitative system and improving the conditions of Indians overseas.
- **Post-Independence Shift:** Following India's independence, there was a shift from indentured labour to voluntary overseas employment. However, for a long time, the conditions of Indian workers, especially in the Gulf region, were poor and not much different from the indentured labourers of colonial times. The Indian government eventually intervened to demand better living conditions for these workers.

What is Indentured Labour?

- Indentured labour, also known as indentured servitude or **bonded labour**, is a historical labour system in which individuals, known as indentured servants, **would enter into a contract**, known as an indenture, binding them to work for a specific employer or master for a set period of time **in exchange for something of value, such as passage to a new country, training in a trade, or other benefits.**

What is the Current Scenario?

- **Remittance Economy:** In recent times, India has seen a substantial increase in remittances from its diaspora, especially from skilled and highly skilled workers. The country leads in global inward dollar remittances, significantly surpassing other countries like China.
- **Export of Skilled Labor:** Starting from the **Kerala model in the 1970s**, India has increasingly focused on exporting human capital, particularly skilled labour.
- This shift was further catalyzed by the **Y2K opportunity in 2000**, showcasing India's potential in exporting technically skilled manpower, such as **software services personnel**.
- **Economic Implications:** The export of labour, both skilled and unskilled, has become a key economic strategy for India. It helps in managing the country's **balance of payments** and supports the economy through remittances.
- However, this comes at the cost of a stagnating merchandise export sector, especially in manufactured goods.
- India's merchandise exports have declined, **from \$452 billion to \$429 billion in 2023, a drop of about 5%.**
- **Policy Focus:** Successive Indian governments have emphasized securing more overseas employment opportunities, seeing it as a way to address the lack of adequate job creation within the country. This approach also includes negotiating multilateral and bilateral agreements to facilitate labor service exports.
- **Cultural and Social Impact:** A significant number of Indians have renounced their citizenship in favour of settling in their host countries, a trend similar to the descendants of indentured labourers who chose to remain in their new countries.

Global Remittance Trends

- In 2022, the top five countries that received the highest remittances were **India, Mexico, China, the Philippines, and Pakistan.**
- **India** is currently leading globally in terms of inward remittances, with a record high of approximately **\$125 billion received from non-resident Indians** working overseas. This figure is **more than double the \$50 billion** recorded by China.
- Projections indicate that **remittances to low- and middle-income countries (LMICs) are expected to show a moderate growth** rate of 1.4% in 2023, with the total inflow estimated at USD 656 billion.
- **The East Asia and Pacific region** may experience a **slowdown in remittance** growth due to factors such as tight monetary policies, limited fiscal reserves, and global uncertainties related to geopolitical events.
- Remittances heading to **Europe and Central Asia are expected to grow** by approximately 1%, influenced by factors such as a high base effect, reduced flows to Ukraine and Russia, and a devaluation of the Russian ruble.
- **In the Middle East and North Africa**, a recovery in remittances may occur, especially for countries like Egypt, as oil prices decline.
- Projections for 2023 suggest that both East Asia and the Pacific, as well as Sub-Saharan Africa, are likely to experience remittance growth rates of around 1%.
- It's worth noting that remittance inflows have played a crucial role in financing current account and fiscal deficits in countries such as Tajikistan, Tonga, Lebanon, Samoa, and the Kyrgyz Republic.

Economic Implications of Remittances

- **Balance of Payments Support:** Remittances play a crucial role in India's balance of payments. The influx of foreign currency through remittances helps in managing the country's **external account deficit.**

2. The objectives and commitments stated in the GCM are binding on the UN member countries.
3. The GCM addresses internal migration or internally displaced people also in its objectives and commitments.

How many of the above statements are correct?

- (a) Only one
- (b) Only two
- (c) All three
- (d) None

Answer: (d)

- **Economic Stability and Growth:** The steady flow of remittances contributes to economic stability and growth. These funds are often used by families for consumption, education, health, and investment in small businesses, which in turn stimulates economic activity at the local level.
- **Dependency on Human Capital Export:** The reliance on remittances has underscored a shift in India's economic strategy, from focusing on manufacturing exports to exporting human capital.
- **Service Sector Expansion:** The export of skilled labor, especially in sectors like software and IT, has significantly boosted India's service sector. This shift is evident in the rise of the service sector's contribution to the national income, from 3% in the 1990s to over 10% in the early 2000s.
- **Regional Economic Disparities:** There are regional disparities within India, where less developed states rely heavily on remittances sent back by migrants working in more developed or foreign regions. This has led to certain states becoming 'remittance-based economies'.

Factors Impacting Remittance Flows to India

- **Top Contributors of Remittances to India:** Approximately 36% of India's remittances come from skilled Indian migrants in three affluent destinations: the **US, United Kingdom, and Singapore**.
- Post-pandemic economic recovery led to a tight labour market in these regions, resulting in higher wages that contributed to increased remittances.
- Other high-income destinations for Indian migrants, such as the **Gulf Cooperation Council (GCC) countries**, experienced favourable economic conditions, including elevated energy prices and controlled food price inflation, leading to greater remittance inflows.
- **Slower Growth in OECD Economies:** The Organisation for Economic Co-operation and Development (OECD) comprises 38 high-income democratic nations, significant for high-skilled Indian migrants who contribute to nearly 36% of India's remittances.
- The World Bank predicts a decrease in the growth rate of these economies from 3.1% in 2022 to 2.1% in 2023 and 2.4% in 2024.
- This may impact the demand for IT professionals and possibly divert formal remittances to informal money transfer channels.
- **Reduced Demand for Migrant Workers in GCC Countries:** GCC is a political and economic alliance of six Middle Eastern countries, including **Saudi Arabia, Kuwait, the United Arab Emirates, Qatar, Bahrain, and Oman**.
- These nations are the primary destination for less-skilled South Asian migrants, contributing approximately 28% of India's remittances.
- The World Bank anticipates a slowdown in the growth of these countries, from 5.3% in 2022 to 3% in 2023 and 2.9% in 2024, mainly due to declining oil prices affecting their fiscal revenues and public spending.

Strategies to Enhance Remittance Inflows in India

- **Unified Payment Interface (UPI):** UPI enables real-time fund transfers, facilitating instant remittances, eliminating the delays associated with traditional methods, and providing recipients faster access to funds.
- In January 2023, The National Payments Corporation of India (NPCI) granted NRIs living in ten countries the ability to use UPI with their international mobile numbers.
- **These countries include Singapore, Australia, Canada, Hong Kong, Oman, Qatar, USA, Saudi Arabia, United Arab Emirates, and the United Kingdom.**
- **Artificial Intelligence (AI)-Driven Risk Assessment:** India can employ AI algorithms to analyze transaction patterns, identify potential fraud, and assess risk factors related to remittance transfers.
- This approach enhances security, prevents illegal activities, and ensures compliance with regulations.
- **Integration with E-commerce Platforms:** Collaborating with e-commerce platforms allows India to integrate remittance services directly into these platforms.
- This empowers recipients to utilize remittance funds for online purchases or bill payments, promoting financial inclusion and expanding the scope of remittance utilization.

Conclusion

Despite the exploitative history, current labour export is celebrated as a benefit of globalization, underlining India's inability to provide sufficient local employment. Both colonial and democratic Indian governments facilitated labour export but under different conditions.

Asset Quality Of Indian Banks Improves To Decadal High: RBI

SOURCE: THE HINDU

PRIORITY: MEDIUM

Why in the news?

News Summary: The RBI's 'Trend and Progress of Banking in India' report

- Recently, the 'Trend and Progress of Banking in India' report released by the RBI revealed that the Gross Non-Performing Assets (GNPA) ratio of scheduled commercial banks (SCBs) in India had dropped to a decadal low.
- GNPA, which is used to measure asset quality, dropped from 3.9% in March 2023 to 3.2% by September 2023 meaning that asset quality had improved over this period.



What are the findings of the 'Trend and Progress of Banking in India'?

- **GNPA ratio of Scheduled Commercial banks:** It dropped to a then decadal low of 3.9% in March 2023 and further to 3.2% in September.
- **Asset quality measured by GNPA ratios has been improving since 2018-19.**
- In 2022-23, recoveries and upgradations contributed around 45% of the reduction in GNPA of SCBs.
- **SCB balance sheet:** The **consolidated balance sheet of SCBs, excluding Regional Rural Banks, grew by 12.2% in 2022-23**, which was the highest in nine years.
- According to the RBI, the growth of assets was mainly driven by bank credit, which expanded at its fastest part in more than a decade.
- By the end of September 2023, the **Capital to risk-weighted assets ratio (CRAR)** of SCBs was 16.8%.
- **Commercial banks:** Sustained credit growth in 2022-23 drove the double-digit expansion of the combined balance sheets of commercial banks.
- **Banks improved their profitability and capital positions aided by higher lending rates and lower provisioning requirements.**
- All bank groups met the regulatory minimum requirement and the **common equity tier 1 (CET1)** ratio requirement.
- **Urban Cooperative banks:** The **combined balance sheet of urban co-operative banks (UCBs) grew by 2.3% in 2022-23.**
- The major drivers of the growth in the balance sheet were loans and advances.
- According to the RBI, the capital buffers and profitability of UCBs improved throughout 2022-23 and in Q1 of 2023-24.
- **Non-Banking Financial Corporations (NBFCs):** The **consolidated balance sheet of NBFCs rose by 14.8% in 2022-23** mainly due to double-digit growth in credit.
- The sector's profitability and asset quality improved in 2022-23 and in the first half of 2023-24 while the CRAR was higher than the regulatory requirement.
- **Retail segment:** Growth of the unsecured retail segment had outpaced total bank credit growth, with the unsecured retail loan's asset quality not showing any deterioration.
- The RBI noted that the calibrated and targeted macroprudential measures announced in November for consumer credit loans and bank lending to NBFCs were pre-emptive.
- The Indian banking system was positioned to improve with better asset quality, high capital adequacy, and robust profitability despite the uncertain global environment.
- Strong financial performance of corporates and the deleveraging of their balance sheets underpinned financial stability.

What are NPAs?

- Non-Performing Assets (NPAs) is a term used to classify loans or advances that are in default or in arrears on scheduled payments of principal or interest.
- They are further classified into the following categories based on the period for which it has remained non-performing.
- **Sub-standard Assets:** An asset that has been nonperforming for less than or equal to 12 months
- **Doubtful Assets:** An asset that has been nonperforming for a period exceeding 12 months.
- **Loss Assets:** Loans with losses identified by the bank, auditor, or inspector that need to be fully written off.

To know more, click the [link](#).

What are the recommendations of the RBI?

- It recommended that **banks guard against credit losses** despite **higher capital buffers** and **provision coverage ratio (PCR)** providing cushions.

reveals a decadal low in Gross Non-Performing Assets (GNPA) ratio, dropping from 3.9% in March 2023 to 3.2% by September 2023.

UPSC Mains Practice Questions

Q.1) Do you agree that the Indian economy has recently experienced V-shaped recovery? Give reasons in support of your answer. (GS3 2021)

MCQs

Question: With reference to the governance of public sector banking in India, consider the following statements: (2018)

1. Capital infusion into public sector banks by the Government of India has steadily increased in the last decade.
2. To put the public sector banks in order, the merger of associate banks with the parent State Bank of India has been affected.

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

Answer: (b)

Question: With reference to Urban Cooperative Banks in India, consider the following statements:

1. They are supervised and regulated by local boards set up by the State Governments.
2. They can issue equity shares and preference shares.
3. They were brought under the purview of the Banking Regulation Act, 1949 through an Amendment in 1996

Which of the statements given above is/are correct? (UPSC 2022)

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

Answer: (b)

- Qualitative metrics like **enhanced disclosures, a strong code of conduct, and clear governance structures** in addition to **regulatory capital and liquidity requirements** would help ensure financial stability.
- In light of the **increasing interconnectedness between banks and NBFCs**, the **RBI advised NBFCs to focus on broadbasing their funding sources and reducing overdependence on funding from banks**.
- Banks and nonbanks should attempt to **increase the empathy in their customer services**.
- It highlighted the risk posed by **fraud, cyber attacks and data breaches** to the banking and payments system.
- Banks and NBFCs should adopt **robust governance and risk management practices** to strengthen their balance sheets and meet the emerging aspirations of the Indian economy.

On the resilience shown by the Indian financial sector

- The banking sector has displayed resilience over the course of the previous financial year while the economy had moved from strength to strength.
- Capital and other key ratios strengthened while the sector attempted to finance multiple large value projects at scale.**
- It has also contributed to the **transition to clean energy and mobility while building digital capabilities**.
- India has weathered headwinds affecting the global economic and geopolitical landscape and was set to regain its lost ground.
- Even in the present FY, **India was one of the fastest growth rates in the world at 7.7% in H1 FY23-24.**
- Although, **large banking institutions across the world have suffered failures, there has been a relative calmness in the Indian ecosystem** which indicates the Indian economy's potential to grow going forward.

Key terms

- GNPA:** It refers to the sum of all the loans that have been defaulted by individuals who have acquired loans from the financial institution.
- CRAR:** Capital Adequacy Ratio or Capital to Risk (Weighted) Assets Ratio is a measure of a bank's available capital expressed as a percentage of a bank's risk-weighted credit exposures.
- CET1:** Common Equity Tier 1 (CET1) capital is the core equity capital of the bank.
 - It includes shareholders equity, retained earnings, and accumulated other comprehensive income of the bank.

To know more about Asset Quality reviews click the [link](#).

Robust FPI Debt Inflows Seen Ahead of Inclusion of Bonds in Global Indices

SOURCE: THE HINDU

PRIORITY: MEDIUM

Why in the news?

- The article discusses the expected **surge in foreign portfolio investment (FPI)** in India's debt market in **early 2024**.
- This surge is anticipated ahead of the **inclusion of Indian bonds in global indices in June 2024**.

What is Foreign Portfolio Investment (FPI)?

- Foreign portfolio investment (FPI) involves foreign investors holding securities and financial assets without direct control over them.
- These investments are liquid to a degree that varies with market volatility and include assets like **stocks, bonds, mutual funds, ETFs, ADRs, and GDRs**.
- Recorded in a nation's **Balance of Payments** within the capital account, FPI tracks the cross-border flow of funds annually.
- SEBI updated the FPI regulations in 2019**, supplanting those from 2014.
- Known as "**hot money**," FPIs are **considered volatile** as they can quickly withdraw from an economy experiencing distress, making them **riskier than direct investments**.

What are Government Securities (GSecs)?

- A Government Security (G-Sec) is a marketable financial instrument that the Central or State Governments issue.
- It serves as a government's means to raise funds from investors to cover its fiscal shortfall.
- G-Secs, as **debt instruments**, signify the government's promise to repay the borrowed sum (principal) on a predetermined date.
- They exist as **short-term treasury bills** (with maturities under a year, offered in 91-day, 182-day, and 364-day terms) or as **long-term bonds with maturities** exceeding one year.
- The Central Government of India issues both treasury bills and bonds, while State Governments only issue long-term bonds known as **State Development Loans (SDLs)**.
- Considered virtually **default-risk-free**, G-Secs are **referred to as gilt-edged instruments**.

News Summary: The anticipated surge in Foreign Portfolio Investment (FPI) in India's debt market is driven by the expected inclusion of Indian bonds in global indices in June 2024. This move is set to bolster India's economic stability and attract significant inflows, but challenges such as the risk of capital flight and vulnerability to external shocks must be navigated.

UPSC Previous Year Practice Question

Q. Foreign direct investment in the defence sector is now said to be liberalised. What influence this is expected to have on Indian defence and economy in the short and long run? **(2014)**

Q. Though India allowed foreign direct investment (FDI) in what is called multi brand retail through joint venture route in September 2012, the FDI even after a year, has not picket up. Discuss the reasons. **(2013)**

MCQs

Q. With reference to the Indian economy, consider the following statements: **(UPSC 2022)**

- The **Reserve Bank of India (RBI)** manages the liquidity in the financial system by trading G-Secs via **Open Market Operations (OMOs)**, buying to inject liquidity and selling to absorb it.
- These operations, executed through commercial banks and not directly with the public, help regulate inflation and facilitate continued lending by banks.
- The RBI employs OMOs alongside other monetary tools like the repo rate, cash reserve ratio, and statutory liquidity ratio to modulate the money supply and its cost.

What are Global Bond Indices?

- Global bond indices encompass emerging debt markets that closely track locally issued government bonds from various developing nations.
- When a country's government bonds are incorporated into one or more of these indices, it provides a secure entry point for foreign portfolio investors, thereby enhancing the liquidity and ownership base of those bonds.
- One notable global bond index is the **JPMorgan Govt Bond Index-Emerging Markets (GBI-EM)**.

What is JP Morgan Government Bond Index-Emerging Markets (GBI-EM)?

- The JPMorgan GBI-EM stands as a **highly-tracked and influential benchmark index**, monitoring the performance of Sovereign Bonds denominated in local currencies, issued by emerging market nations.
- Its primary purpose is to furnish investors with a representative gauge of the fixed income market situated within emerging economies.
- This index **encompasses government bonds issued by a variety of emerging market countries**, and its composition may evolve over time, contingent upon eligibility criteria.
- JPMorgan has identified **23 Indian government bonds**, collectively valued at **USD 330 billion**, as meeting the eligibility criteria for incorporation into the GBI-EM.
- Consequently, India is anticipated to attain the maximum weight threshold of 10% in the GBI-EM Global Diversified index, and approximately 8.7% in the GBI-EM Global index.
- India's domestic bonds will be integrated into the GBI-EM index and its associated suite of indices, which function as benchmarks for an estimated USD 236 billion in global funds.

Economic Implications of the Inclusion of Indian Bonds in Global Indices

- **Surge in Foreign Portfolio Investment (FPI):** With the inclusion of Indian bonds, especially government securities (GSecs), in global indices like JP Morgan's Emerging Market (EM) Bond Index, there is an expectation of a significant increase in FPI in the debt market.
- **Impact on the Indian Bond Market:** The inclusion in a global index is expected to boost the Indian bond market. Foreign funds are likely to buy GSecs in larger quantities, which would increase demand and potentially lead to a rise in bond prices.
- **Financing the Current Account Deficit (CAD):** Economists and analysts anticipate that the influx of FPI will provide India with a cushion to comfortably finance its current account deficit.
- **Pre-Index Inclusion Inflows:** There is an expectation of "frontloaded FPI inflows" in the debt segment in the first quarter of 2024, as investors may start taking positions in Indian bonds in advance. This anticipatory action is likely to lead to additional investment inflows before the actual inclusion in the index.
- **Volume of Inflows:** JP Morgan's announcement includes the inclusion of 23 Indian bonds with a **notional value of \$330 billion** in its Global EM bond index, which is expected to gradually rise to **10% in 10 months**. Furthermore, the inclusion in other global indices could **attract additional inflows of \$40-50 billion**.
- **Impact on Bond Prices and Investor Behavior:** The anticipation of index inclusion is expected to drive investor behavior, with many taking positions in Indian bonds **three to six months in advance** to capitalize on price movements. This could lead to increased market activity and potentially higher bond prices.
- **Overall Economic Confidence:** The inclusion of Indian bonds in global indices and the resultant FPI inflows can be seen as a sign of confidence in the Indian economy and its financial markets.

Significance of India's Inclusion in a Major Global Bond Index

- **Expansion of the Investor Base for Government Securities:** An expanded investor base for government securities will improve the fiscal situation of the Indian government.
- **Strengthening of the Rupee:** The Indian Rupee is expected to appreciate due to an influx of dollars into the economy, as the dollar will need to be converted into rupees, increasing its demand.
- **Increased Capital Inflows:** India's inclusion in the index is expected to result in additional inflows of \$20-25 billion.
- **Lower Borrowing Costs:** Being part of global indices will reduce bond yields and can lead to decreased borrowing costs for both the Indian government and corporates.
- **Reduced Risk:** Investments are expected to be in rupee-denominated securities, making them less risky compared to dollar-denominated debt. India's sufficient forex reserves and the

1. If the inflation is too high, Reserve Bank of India (RBI) is likely to buy government securities.
2. If the rupee is rapidly depreciating, RBI is likely to sell dollars in the market.
3. If interest rates in the USA or European Union were to fall, that is likely to induce RBI to buy dollars.

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

Answer: (b)

Q. With reference to India, consider the following statements: (UPSC 2021)

1. Retail investors through Demat Accounts can invest in Treasury Bills and Government of India Debt Bonds in the primary market.
 2. The "Negotiated Dealing System-Ordering Matching" is a government securities trading platform of the Reserve Bank of India.
 3. The "Central Depository Services Ltd" is jointly promoted by the Reserve Bank of India and the Bombay Stock Exchange.
- Which of the statements given above is/are correct?

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

Answer: (b)

Q. Which of the following is issued by registered foreign portfolio investors to overseas investors who want to be part of the Indian stock market without registering themselves directly? (UPSC 2019)

- (a) Certificate of Deposit
- (b) Commercial Paper
- (c) Promissory Note
- (d) Participatory Note

Answer: (d)

Q. In the context of Indian economy, 'Open Market Operations' refers to (UPSC 2013)

- (a) borrowing by scheduled banks from the RBI
- (b) lending by commercial banks to industry and trade
- (c) purchase and sale of government securities by the RBI
- (d) None of the above

Answer: (c)

Q. Which of the following would include Foreign Direct Investment in India? (UPSC 2012)

1. Subsidiaries of foreign companies in India
2. Majority foreign equity holding in Indian companies

RBI's track record of managing large-scale inflows and outflows can help mitigate associated risks.

- **Enhanced Investment Appeal:** India's inclusion in the GBI-EM index elevates its status as an attractive investment destination, drawing the attention of global investors seeking opportunities in emerging markets. This could potentially result in substantial inflows of **USD 45-50 billion** within the next 12-15 months.
- **Promoting Economic Stability and Financing Accessibility:** Incorporating India into the index addresses financing challenges associated with India's fiscal and current account deficits by offering an alternative source of funds.
- **Positive Impact on Various Sectors:**
- **Corporate Sector:** India's inclusion is anticipated to decrease the entire Yield Curve, lowering financing costs for the corporate sector. This narrowing of corporate bond spreads is poised to stimulate investments and business expansion.
- **Banking Sector:** With reduced pressure to absorb government bonds, banks can allocate more resources to lending within the private sector, facilitating economic growth.
- **Infrastructure Development:** The ongoing infrastructure development initiatives in India receive a significant boost, as this inclusion offers a sustainable source of long-term financing through government securities.
- **On Par with Other Nations:** India's expected maximum weightage of 10% in the GBI-EM Global Diversified Index places it on equal footing with other countries like China, Brazil, Indonesia, and Malaysia.

Challenges of India's Inclusion in a Major Global Bond Index

- **Risk of Capital Flight:** There is a risk of passive investors reacting to changes in India's weightage in the index, potentially leading to an exodus of funds if India deviates from the preferences of major Western powers.
- **Vulnerability to Foreign Funds:** India may become dependent on the whims of foreign funds, which can be influenced by political pressures, similar to what occurred with Russia's exclusion from Western capital markets.
- **Pressure on Forex Market:** As holdings are converted into foreign currency for withdrawal, it can create significant pressure on India's relatively thin forex markets.
- **Rupee Depreciation:** A sudden surge in demand for dollars could lead to rupee depreciation, causing further implications such as inflation, an increase in the current account deficit, and a rise in fiscal deficit.
- **Impact on Domestic Industries:** An influx of foreign capital may impact domestic industries, potentially leading to currency appreciation, which could harm local industries.
- **Vulnerability to External Shocks:** Inclusion in global bond indices makes a country more susceptible to volatile international financial flows, which can destabilize the economy, leading to currency volatility, financial crises, and macroeconomic instability.
- **Market Volatility:** The inclusion could introduce fluctuations in local debt markets, especially during periods of global economic uncertainty or turmoil. This may require the Reserve Bank of India (RBI) to effectively manage and stabilize the markets.
- **Transparency and Fiscal Responsibility:** India may face increased scrutiny regarding its government finances, necessitating greater transparency and fiscal responsibility in managing the fiscal deficit.
- **Taxation Challenges:** Uncertainty in the tax treatment for foreign investors could discourage potential investors. Thus, there is a need for clear and favourable tax policies to attract foreign capital into Indian government bonds.

Conclusion

The inclusion of Indian bonds in global indices like JP Morgan's EM Bond Index is set to catalyze a significant rise in foreign portfolio investments in India's debt market. This development is poised to strengthen India's ability to finance its current account deficit and bring additional stability to the market, despite some risks associated with the widening trade deficit.

3. Companies exclusively financed by foreign companies
4. Portfolio investment

Select the correct answer using the codes given below:

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

Answer: (d)

Q. Global capital flows to developing countries increased significantly during the nineties. In view of the East Asian financial crisis and Latin American experience, which type of inflow is good for the host country? (UPSC 2002)

- (a) Commercial loans
- (b) Foreign Direct Investment
- (c) Foreign Portfolio Investment
- (d) External Commercial borrowings

Answer: (b)

Q. Gild-edged: (UPSC 2000)

- (a) bullion market
- (b) market of Government securities
- (c) market of guns
- (d) market of pure metals

Answer: (b)

Commerce Ministry Takes Stock Of Concerns Of Shippers In Stakeholder Meeting Amid Red Sea Crisis

SOURCE: INDIAN EXPRESS

PRIORITY: MEDIUM

Why in the news?

- Recently, shipping companies told the government that they could not cushion exporters from additional costs on contracts due to the situation in the Red Sea with freight rates for shipments from India to Europe and Africa predicted to rise.
- India is heavily reliant on the Bab-el-Mandeb Strait for its crude oil, LNG imports, and trade with parts of West Asia, Africa, and Europe.

News Summary: India faces rising freight rates and security concerns as shipping companies warn of additional costs due to the Red Sea crisis. Stakeholders seek added security measures and address the impact on exports.

UPSC Mains Practice Questions

Q.1) 'Sea is an important Component of the Cosmos' Discuss in light of the above statement the role of the IMO



What were the highlights of the stakeholder meeting organized by the Union Ministry of Commerce?

- **Additional security:** Shippers, exporters, and freight forwarders requested **additional security measures** for vessels passing through the **Red Sea**.
- Large shipping companies have been forced to halt operations through the region over fears that vessels could be attacked by the **Houthis**.
- **Additional cost impacts:** Shipping companies have cautioned the government that it would **not be possible for them to cushion exporters from additional costs associated with their contracts**.
- Re-routing of ships to longer routes (**Cape of Good Hope**) to avoid the tensions in the Red Sea have led to a **25-30% rise in freight rates** for Indian shipments to Europe and Africa.
- **Impact on exports:** Various stakeholders in the industry claimed that **traders and exporters were holding back goods** on account of security concerns and rising freight rates.
- **Energy security:** The attacks could **disrupt the global oil trade and the energy security of the country**.
- Although India's major exporter Russia's ships have not been harmed due to being an Iranian ally, **imports of Russian oil dropped to an 11-month low in December due to unattractive pricing**.

To know more, click the [link](#).

Crisis in the Red Sea

- Yemen-based Houthi rebels have been attacking vessels associated with Israel in the Red Sea to protest against Israel's military offensive in Gaza.
- According to media reports, the Houthis have carried out at least 23 attacks in response to the war in Gaza.
- **Attacks on Indian vessels:** In December, the **MV Chem Pluto** was targeted by a drone attack off India's west coast while another commercial oil tanker (**MV Sai Baba**) was targeted by a suspected drone strike in the Southern Red Sea.
- Large shipping firms including Danish firms Maersk and MSC, German Hapag-Lloyd, and French CMA CGM have stopped the movement of their vessels through the region.
- The USA and 12 allies issued a final warning to the Houthi rebels warning them of potential targeted military action if the attacks on commercial vessels continued.

What is the Strait of Bab al-Mandeb and how is it important for India?



- The **Strait of Bab al-Mandab** is a strait that connects the Red Sea to the Gulf of Aden and the Indian Ocean.

(International Maritime Organisation) in protecting the environment and enhancing maritime safety and security. (GS2 2023)

MCQs

Question: With reference to the United Nations Convention on the Law of Sea, consider the following statements:

1. A coastal state has the right to establish the breadth of its territorial sea up to a limit not exceeding 12 nautical miles, measured from a baseline determined in accordance with the convention.
2. Ships of all states, whether coastal or land-locked, enjoy the right of innocent passage through the territorial sea.
3. The Exclusive Economic Zone shall not extend beyond 200 nautical miles from the baseline from which the breadth of the territorial sea is measured.

Which of the statements given above are correct? (UPSC 2022)

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

Answer: (d)

Question: Match List-I with List-II and select the correct answer using the codes given below: (UPSC 2004)

List-I (Sea)	List-II (Country)
A. Black Sea	1. Bulgaria
B. Red Sea	2. China
C. Yellow Sea	3. Eritrea
D. Caspian Sea	4. Kazakhstan

Codes:

- (a) A-1; B-4; C-2; D-3
- (b) A-2; B-3; C-1; D-4
- (c) A-1; B-3; C-2; D-4
- (d) A-2; B-4; C-1; D-3

Answer: (c)

Question: Consider the following pairs : (UPSC 2019)

Sea:	Bordering country
1. Adriatic Sea:	Albania
2. Black Sea:	Croatia
3. Caspian Sea:	Kazakhstan
4. Mediterranean Sea:	Morocco
5. Red Sea:	Syria

Which of the pairs given above are correctly matched? (UPSC 2019)

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

Answer: (b)

- It is the marine commerce route **connecting the Mediterranean Sea to the Indian Ocean via the Red Sea and the Suez Canal.**
- **Borders:** Yemen on the Arabian Peninsula, and Djibouti and Eritrea on the African coast.
- **Significance:**
 - It is a crucial maritime chokepoint connecting the Red Sea to the Indian Ocean with around **12% of global maritime trade passing through it.**
 - **India is heavily reliant on the Strait for its imports of crude oil and LNG, and trade with parts of Europe, Africa, and West Asia.**
 - The Houthi actions leading to lowered traffic in the Red Sea and increased shipping costs could have a significant impact on India's economy and security.

How has India responded to the situation?

- **Naval action:** Indian naval ships and aircraft were deployed to the North and Central Arabian Sea in mission mode to maintain surveillance and perform maritime security operations.
- **Freedom of navigation:** India claimed that it prioritized **freedom of navigation** and free movement of commercial vessels.
- **Multilateral initiatives:** The U.S. has announced **Operation Prosperity Guardian**, a trans-national alliance to provide protection to commercial vessels in the region.
 - However, **India has not joined this or any other multilateral initiative in the region.**

Conclusion

The escalating crisis in the Red Sea, with Houthi attacks impacting shipping routes, has prompted concerns over rising freight rates and security issues in India since it is dependent on the Strait of Bab al-Mandeb for its trade requirements.

Why Is Upskilling Necessary For The Rural Youth

SOURCE: THE HINDU

PRIORITY: MEDIUM

Why in the news?

- This article discusses the rural economy, trends of migration to urban areas and how education can be used to empower rural youth.
- A group discussion at the Life Skills Collaborative revealed that most rural youths preferred to stay in their villages rather than migrate.
- On the other hand, a United Nations projection estimates that almost 50% of the Indian population will reside in urban areas by 2047.



What is the main source of income for the rural population?

- **Agriculture:** The major livelihood and source of income in rural areas is agriculture.
 - In most rural families, children supplement the family income by working on the family-owned land.
- **Transition to non-farm sectors:** However, there has been a shift away from agricultural jobs to non-farm sectors due to a possible agrarian crisis.
 - According to the National Sample Survey Office, between 2004-5 and 2011-12, around 34 million farmers transitioned away to other sectors such as construction.
- Experts have therefore cited the need to make agriculture a vocational aspiration among the youth while also generating other alternative employment opportunities.

How can migration be controlled?

- The major driver of migration among the youth from rural to urban areas is employment.
- **Vocational training:** In order to ensure that the youth can attain a living in their current place of residence, they must be provided with vocational training while they are students.
- **Alternative employment:** The relevant authorities must take steps to ensure alternative employment opportunities are created to meet the demand of those transitioning away from agriculture.
- **Skill development:** At present, the employment opportunities available to youth in a rural setting are extremely limited, highlighting the need for upskilling.
 - This upskilling must be accessible for rural villages and must involve adequate awareness building to ensure that the rural youth can take advantage.

News Summary: This article highlights the need for upskilling rural youth in India to address rural-urban migration. It emphasizes incorporating technical and life skills in education through technology and partnerships.

UPSC Mains Practice Questions

- Q.1)** 'Earn while you learn' scheme needs to be strengthened to make vocational education and skill training meaningful." Comment. (GS2 2021)
- Q.2)** "Demographic Dividend in India will remain only theoretical unless our manpower becomes more educated, aware, skilled, and creative." What measures have been taken by the government to enhance the capacity of our population to be more productive and employable? (GS2 2016)
- Q.3)** "Success of 'Make in India' programme depends on the success of 'Skill India' programme and radical labor reforms." Discuss with logical arguments. (GS2 2015)
- Q.4)** Does urbanization lead to more segregation and/or marginalization of the poor in Indian metropolises? (GS3 2023)

MCQs

- Question:** To obtain the full benefits of demographic dividend, what should India do? (2013)
- Promoting skill development
 - Introducing more social security scheme
 - Reducing infant mortality rate
 - Privatization of higher education

Answer: (a)

- For example, the **'Skills on Wheels' initiative** was launched by the Union government along with NSDC and IndusInd Bank to improve the livelihoods of rural households.
- It aims to empower over 60,000 rural youth over five years by providing relevant skills training and thus bridge the gap between industry requirements and skills of unemployed youth.

What is the current vocational education opportunity?

- Vocational training in rural India is dominated by the Industrial Training Institutes (ITIs) which aim to upskill rural populations.
- **Drawbacks of the ITI model:**
- **Future opportunities:** Rural students of ITIs have a limited number of placement opportunities.
- **Inadequate skills:** Very little focus on skill development
- **Low enrolment:** According to the LSC Voices Survey 2023, only 5 % of youth between 19 and 222 enrolled in these courses, and two-thirds have not taken any kind of vocational training.

How can education be improved?

- **Provision of technical and life skills:** Tailor rural education to empower the youth by providing both technical and life skills as a part of formal education.
- This will boost the employability and income sources of future generations.
- **Use of technology:** E-learning technologies can be leveraged to offer rural populations training in relevant skills such as agricultural mechanization, pollution monitoring, nursing, and digital technologies.
- This will help develop a vibrant rural economy in India and make the best use of the resources of the rural areas.
- **Partnering with civil society:** Cooperate with civil society organizations to provide upskilling opportunities to the rural youth.
- The NIIT Foundation has offered hybrid life-skilling programmes in collaboration with UNICEF through its self-learning platform.
- The Pratham Institute has been providing courses in both industry-specific skills (healthcare, electrical, construction) and life skills.
- **Replicate global best practices:** Tele-schools in Mexico and the well-being-infused curriculum used in Bhutan are two models that India can use to provide technical and life skills for its rural youth.
- The tele-schools model will help provide lessons on both subject material and values which will improve access to value-based secondary education in areas with scarce secondary schools.
- The model has proved to have trickling benefits in the local economy in terms of improvements in the attitudes and aspirations of children and their parents.

Conclusion

Upskilling is imperative to enhance the employability of rural youth and tackle the problems of rural-urban migration and rising demand for employment amid the transition from agricultural jobs. Therefore, there must be a focus on incorporating technical and life skills in the curriculum while leveraging technology and partnerships with civil society to foster sustainable rural development in India.

Question: With reference to the 'National Skills Qualification Framework (NSQF)', which of the statements given below is/are correct? (2017)

1. Under NSQF, a learner can acquire the certification for competency only through formal learning.
2. An outcome expected from the implementation of NSQF is the mobility between vocational and general education.

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

Answer: (b)

Question: With reference to Pradhan Mantri Kaushal Vikas Yojana, consider the following statements (2018)

1. It is the flagship scheme of the Ministry of Labour and Employment.
2. It, among other things, will also impart training in soft skills, entrepreneurship, financial and digital literacy.
3. It aims to align the competencies of the unregulated workforce of the country to the National Skill Qualification Framework.

Which of the statements given above is/are correct?

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

Answer: (c)

On The Necessity Of Economic Growth In Poor States

SOURCE: BUSINESS STANDARD

PRIORITY: HIGH

Why in the news?

- This article discusses the economic growth displayed by India's poorest states as well as the areas for potential growth.
- These states which account for around one-third of India's population have been described as a critical driver of India's growth.

What is the economic status of India's poorest states?

- **Low average income:** The average income in Bihar is only 32% of the national average while it is less than half (49%) in Uttar Pradesh.
- **Historically poor growth:** In the 2012-2022 period, and preceding decades Bihar and UP displayed growth below the national growth rate while West Bengal grew at just 3.9% in 2012-22.
- However, other poor states like Madhya Pradesh, Odisha, and Assam grew faster than the national average in both the 2012-2022 period and in FY23 powered by good governance, good programmes, and improved infrastructure.
- **Improved growth in 2023:** In FY23, the three states grew faster than the national average.
- Bihar - 10.7%
- UP - 8.4%
- West Bengal - 8.6%
- **Per capita income:** The per capita income of West Bengal has dropped from higher than that of Maharashtra (before the 1960s) to lower than Odisha and Chhattisgarh.

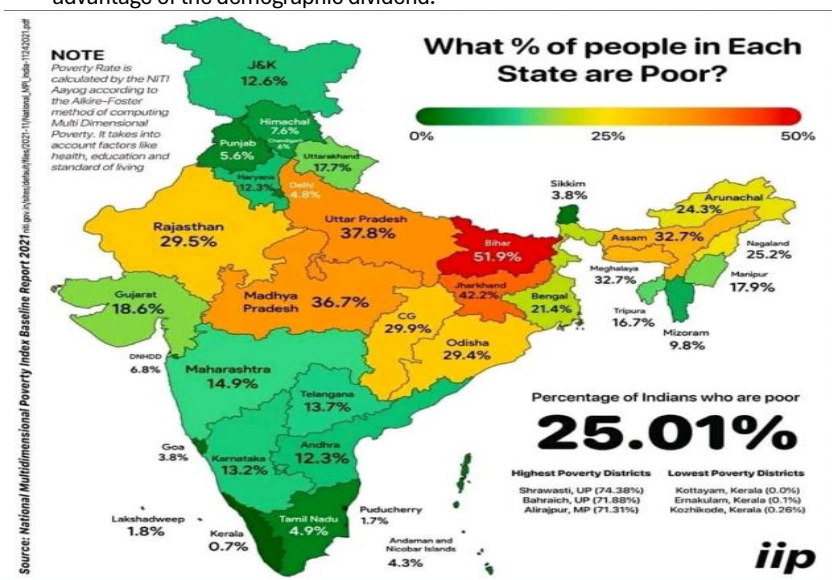
What are some of the areas these states should focus on?

News Summary: The article highlights the economic growth in India's poorest states, emphasizing the need for a focus on agriculture, transport, tourism, and demographic advantages, along with measures like education and infrastructure development.

UPSC Mains Practice Questions

- Q.1)** Discuss whether the formation of new states in recent times is beneficial or not for the economy of India. (GS1 2018)
- Q.2)** "Demographic Dividend in India will remain only theoretical unless our manpower becomes more educated, aware, skilled and creative." What measures have been taken by the government to enhance the capacity of our population to be more productive and employable? (GS2 2016)

- **Farming:** A second Green Revolution in UP and Bihar accompanied by a transition from cereals to high-value crops in traditional cereal growers like Punjab and Haryana will boost the farm sector.
- MP benefitted hugely from this focus on improving agriculture.
- **Transport:** The poorer states share the waters of the Ganga, so improvements in inland water transport would improve connectivity and trade in them.
- This could make the Ganges the Indian equivalent of Europe's Rhine and Danube.
- **Tourism:** The Ganaga and the rich cultural and natural heritage of the states offer an opportunity to boost domestic and foreign tourist footfalls.
- This will also boost local economies, and traders and provide a means of income for unemployed youth.
- **Demography:** The poorer states will see an increase in the working-age population for the next decade.
- On the other hand, birth rates in southern states could fall to the levels of advanced economies in Europe.
- This is likely to create an increased demand for labor from the poorer states that have the advantage of the demographic dividend.



What measures can these states take going forward?

- **Education and upskilling:** The government must focus on measures and initiatives that increase the employability of citizens from these states.
- Upskilling and vocational education can help meet the industry's demand for qualified personnel, thus reducing unemployment and contributing to economic growth.
- **Policing:** Crime and corruption should be tackled in these states to encourage large firms to invest and set up industrial zones.
- **Infrastructure:**
 - Develop expressways and improve rural roads
 - Prioritize rural electrification
 - Support IT-based services and raise digital awareness.
- **Bifurcation:** Another major problem faced by these states is their large area, which restricts good governance.
 - One possible solution is to bifurcate states into smaller states as Punjab was split into Haryana and Himachal.
 - This will also help as these states are some of the most populous states in the country.
- **Improve perceptions:** Anti-growth policies of governments in these states have discouraged large corporations from investing in these states.
 - Therefore, governments at the center and the states must ensure that the negative perception of the states as unfriendly is changed for the better.

Conclusion

A multi-faceted approach is necessary to address the economic challenges faced by India's poorest states. The states must prioritize agriculture, infrastructural development, education, and upskilling to catalyze growth. Comprehensive and targeted measures will help foster sustainable development in these states.

Q.3) While we found India's demographic dividend, we ignore the dropping rates of employability. What are we missing while doing so? Where will the jobs that India desperately needs come from? Explain. (GS3 2014)

Q.4) Hunger and Poverty are the biggest challenges for good governance in India still today. Evaluate how far successive governments have progressed in dealing with these humongous problems. Suggest measures for improvement. (GS2 2017)

MCQs

Question: In a given year in India, official poverty lines are higher in some states than in others because (2019)

- Poverty rates vary from state to state
- Price levels vary from state to state
- Gross state product varies from state to state
- Quality of public distribution varies from state to state

Answer: (b)

Question: To obtain the full benefits of demographic dividend, what should India do? (2013)

- Promoting skill development
- Introducing more social security scheme
- Reducing infant mortality rate
- Privatization of higher education

Answer: (a)

Zero-Duty Unrefined Gold Imports Take The Shine Off Local Players

SOURCE: BUSINESS STANDARD

PRIORITY: MEDIUM

Why in the news?

News Summary: The Indian government has taken steps to restrict zero-duty

- In 2023, the Union government asked all gold refineries to give an undertaking that they would not import gold under zero duty from LDCs since this was adversely impacting the domestic market.



What is unrefined gold?

- Unrefined gold refers to any gold alloy in its natural stage.
- It is not pure gold but rather a precious metal alloy with high gold content.
- It is a natural substance and is also known as gold dore.

What are the issues associated with gold dore in India?

- According to estimates, around 300-500 kg of gold is being imported daily.
- **Duty-free import:** Gold ore was being imported at zero duty under the Duty-Free Tariff Preference (DFTP) scheme from Less Developed countries (LDCs) like Tanzania and Guinea.
 - This was a concern for the government since the normal duty charged was 14.35%.
 - However, India cannot impose strict restrictions since it has to abide by WTO and U.N. treaty provisions to allow zero-duty import from LDCs.
- **Impact on domestic markets:** Illegitimate imports over the last year have resulted in the bullion trade operating at a \$25 per ounce discount in the official market compared to import costs for several months.
- **Uneven playing field:** The zero-duty imports distort the level playing field does not benefit all refiners equally.

What is the Duty-Free Preference Scheme?

- The DFTP scheme is a trade policy initiative under which the import of certain items from Least Developed Countries (LDCs) to other countries without imposing standard import duties is permitted.
- It was officially launched in 2008, making India the first developing country to introduce a preferential tariff program for LDCs.
- **Objective:** Promote trade with LDCs by making exports of specific goods to larger markets more economically viable.
 - Grant tariff preferences on the exports of the notified Least Developed Countries to India
- The beneficiary countries are entitled to a tariff preference on the export of all originating products except those specified in the Exclusion List.
 - However, they would have to satisfy the conditions prescribed under the Rules of Origin.
- A Standing Committee established by the Government of India will be responsible for the implementation of the DFTP Scheme for LDCs within the Department of Commerce.
- The government may suspend the tariff preference when
 - there is evidence of fraud, irregularities, or systematic failure to comply with the provisions of the scheme
 - Imports under the scheme exceed the usual production and export levels of the beneficiary country
 - The beneficiary country is no longer an LDC
 - The beneficiary country graduates out of the scheme based on criteria developed by the GoI.

What are the steps taken by the government?

- In 2023, the government directed all refiners to provide an undertaking that they would not import gold under zero duty from LDCs.
- In July 2023, the government directed all bullion refineries to submit their original licenses for restricted imports.
 - It also stated that a license was necessary for suitable amendments to be made to specific license conditions.
- The government has also disallowed importing of gold in the name of platinum blending.

unrefined gold imports, mainly from LDCs, citing adverse effects on domestic markets. Regulatory measures aim to ensure fair trade practices and market integrity.

UPSC Mains Practice Questions

Q.1) The craze for gold in Indians has led to a surge in the import of gold in recent years and put pressure on the balance of payments and the external value of the rupee. In view of this, examine the merits of the Gold Monetization Scheme. **(GS3 2015)**

Q.2) Account for the failure of the manufacturing sector to achieve the goal of labor-intensive exports rather than capital-intensive exports. Suggest measures for more labor-intensive rather than capital-intensive exports. **(GS3 2017)**

MCQs

Question: Consider the following statements:

Statement – I: Switzerland is one of the leading exporters of gold in terms of value.

Statement – II: Switzerland has the second largest gold reserves in the world.

Which one of the following is correct in respect of the above statements? (2023)

(a) Both Statement I and Statement II are correct and Statement II is the correct explanation for Statement I

(b) Both Statement I and Statement II are correct and Statement II is not the correct explanation for Statement I

(c) Statement I is correct but Statement II is incorrect

(d) Statement I is incorrect but Statement II is correct

Answer: (c)

Way forward

- Although, many refineries submitted the undertaking, the MMTC-PAMPS has stated that the government should issue written instructions.
- A level playing field must be ensured for all refiners and steps must be taken to ensure that all those that benefit from zero-duty imports should be brought in line.
- Although the preventive wing of customs has taken action against such illegal imports, it has faced difficulties in impounding goods due to regulatory difficulties.

Conclusion

Mitigating issues linked to unrefined gold imports in India requires robust regulatory measures and a commitment to fair trade practices. The government's steps to curb illegitimate imports and ensure a level playing field among refiners are crucial for sustaining transparency and integrity in the gold market.

Analysing the Rising Gap in Incomes

SOURCE: THE HINDU

PRIORITY: MEDIUM

Why in the news?

- The recent findings of the SBI report indicates a **reduction in income inequality** over the past decade, as shown by a **decrease in the Gini coefficient from 0.472 in 2014-15 to 0.402 in 2022-23**.
- However, this analysis is based on taxpayer data, which does not represent the majority of income earners in India, as about 80% earn below the taxable threshold.

Key Highlights of the SBI Report

- **Reduction in Income Inequality:** The report notes a significant decrease in income inequality over the last decade. **The Gini coefficient**, a measure of inequality, **dropped from 0.472 in 2014-15 to 0.402 in 2022-23**, indicating a near **15% reduction**.
- **Data Source Limitation:** The analysis is based on taxpayer data, which doesn't encompass all income earners since many fall outside the tax net. About 80% of income earners make less than ₹2.5 lakh per annum, below the minimum taxable amount.
- **PLFS Data Analysis:** The article extends the analysis using data from the **Periodic Labour Force Survey (PLFS) for 2017-18 and 2022-23**, encompassing all income earners and considering the nature of employment (self-employed, regular wage, and casual wage workers).
- **Polarisation in Incomes:** Despite the fall in the Gini coefficient, there's an observed polarisation of incomes. The top 10% have experienced faster income growth compared to the bottom 30%, especially among self-employed workers.
- **Gini Coefficient Variations by Employment Type:** The Gini coefficient has decreased for regular and casual wage workers but increased slightly for the self-employed.
- **Role of Women's Labor:** The increase in women's participation in the labor force, especially in low-paid, part-time, self-employed work, is suggested as a contributing factor to the growing income gap among the self-employed.

What is Gini Coefficient?

- The Gini coefficient, also known as the Gini index or Gini ratio, is a statistical measure of economic inequality, especially used to gauge the inequality of income or wealth distribution within a population or country.
- It was developed by the Italian statistician Corrado Gini in 1912.
- The Gini coefficient is a number between 0 and 1, where:
- 0 represents perfect equality, meaning everyone has the same income or wealth.
- 1 (or 100%) represents perfect inequality, meaning all income or wealth is possessed by a single individual or household.

Critical Assessment of the SBI Report

- **Limitations in Taxpayer Data:** A substantial portion of income-earners, nearly 80%, do not meet the minimum taxable income threshold, and their earnings are not included in the analysis.
- The SBI report stressing that taxpayer data may not offer a comprehensive view of income distribution across the entire populace.
- **Exclusion of Low-Income Individuals:** Because the SBI analysis relies on taxpayer data, individuals earning below the minimum taxable threshold are left out.
- This exclusion holds significance since a significant segment of the population falls into this category, and their economic circumstances might not be adequately reflected.
- **Sensitivity to Economic Disparities:** Critics suggest that the reduction in the Gini coefficient might be influenced by the economic disparities within the taxpayer group. If a substantial number of low-income individuals are omitted, it could affect the precision of the findings.
- **Absence of Supplementary Data:** To address the constraints of exclusively utilizing taxpayer data, critics propose the inclusion of additional sources, such as data from the Periodic

News Summary: The SBI report suggests a decline in income inequality in India based on taxpayer data, but concerns arise due to the exclusion of non-taxable earners, highlighting conflicting trends.

UPSC Previous Year Practice Question

Q. Most of the unemployment in India is structural in nature. Examine the methodology adopted to compute unemployment in the country and suggest improvements. **(2023)**

Q. What are the challenges and opportunities of food processing sector in the country? How can income of the farmers be substantially increased by encouraging food processing? **(2020)**

Q. What do you mean by Minimum Support Price (MSP)? How will MSP rescue the farmers from the low-income trap? **(2018)**

Q. How can the 'Digital India' programme help farmers to improve farm productivity and income? What steps has the Government taken in this regard? **(2015)**

Q. Livestock rearing has a big potential for providing non-farm employment and income in rural areas. Discuss suggesting suitable measures to promote this sector in India. **(2015)**

MCQs

Q. Consider the following statements: (UPSC 2007)

1. The repo rate is the rate at which other banks borrow from the Reserve Bank of India.

2. A value of 1 for Gini Coefficient in a country implies that there is perfectly equal income for everyone in its population.

Which of the statements given above is/are correct?

- 1 only
- 2 only
- Both 1 and 2
- Neither 1 nor 2

Answer: (a)

Labour Force Survey (PLFS). This would offer a more comprehensive insight into income distribution by considering a wider range of income-earners.

Income Inequality Trends as per PLFS Data

- PLFS data differs from other surveys as it records gross incomes of the self-employed, enabling a more in-depth analysis.
- The **Gini coefficient has decreased from 0.4297 in 2017-18 to 0.4197 in 2022-23** when comparing various employment types.
- While the Gini coefficient has dropped for regular wage and casual wage workers, it has slightly increased for the self-employed, albeit with minimal changes.
- Specifically, the **Gini coefficient for self-employed workers** increased from 0.37 to 0.3765, a 1.5% rise.
- **For regular and casual wage workers**, the Gini coefficients decreased by 1.7% and 4.8%, respectively.
- Inequality has decreased overall, but it appears that the reduction in inequality is more pronounced among the top income earners compared to the entire population.
- The top decile's average income grew at a specific annual rate, such as 7.23%, surpassing the growth rates of the bottom 20% and resembling the third decile.
- In contrast, the bottom decile experienced the slowest income growth, with a lower rate, for instance, 1.67%.
- **The 90/10 ratio**, which measures the income ratio between those at the 90th percentile (top 10%) and the 10th percentile (bottom 10%), **increased from 6.7 in 2017-18 to 6.9 in 2022-23**.
- An important finding is the substantial increase in the 90/10 ratio for the self-employed in 2022-23. For instance, the income of the top 10% of self-employed individuals was 8.3 times that of the bottom 10%.

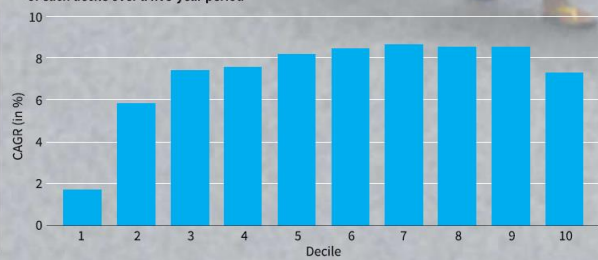
Table 1: Gini coefficients

	2017-18	2022-23
Overall	0.4297	0.4197
Self-employed	0.37077	0.3765
Regular wage workers	0.43947	0.43198
Casual wage workers	0.27619	0.263

Table 2: The 90/10 ratio

	2017-18	2022-23
Overall	6.667	6.94
Self-employed	6	8.33
Regular wage workers	8.75	7.25
Casual wage workers	4	3.56

Figure 1: The rate of growth of average weekly income of each decile over a five-year period



Possible Reasons for Conflicting Trends in Income Polarization

Surge in Women's Labor Force Participation

- The conflicting shifts in income inequality may be linked to the documented increase in women's participation in the labour force.
- This rise is particularly evident in low-paid, part-time self-employed positions.
- The nature of self-employed work taken on by women, often low-paid and part-time, might influence income dynamics in this segment.

Increased Household Earnings

- While households may be earning more due to increased labour force participation, this increase is accompanied by a surge in low-paid self-employed work.
- The combination of higher household earnings and the specific type of work women engage in leads to an increase in the income gap between the top and bottom earners among the self-employed.

Polarization Among Income-Earners

- The overall rise in low-paid self-employed work contributes to polarization among income-earners.
- This polarization is more pronounced within the self-employed category, potentially offering an explanation for the conflicting changes observed in income inequality trends.

Conclusion

While overall inequality has decreased, there is a significant polarization of incomes, especially among the self-employed. The reduction in inequality among top earners is not fully representative of the entire population. More rigorous research is needed to understand these contradictory trends in income inequality and polarization.

States Are Spending. The Economy Is Waiting

SOURCE: INDIAN EXPRESS

PRIORITY: MEDIUM

Why in the news?

- This article discusses the fiscal consolidation trends of the state governments of India in the aftermath of the COVID-19 pandemic.

News Summary: Post-COVID-19, Indian state governments show fiscal consolidation trends, managing deficits below 3% of GDP. Increased capital

- States have been spending more on capital expenditure than on expenses like salaries and pensions.

What have states done to manage their finances in the post-COVID-19 period?

- **Fiscal deficit management:** In 2021-22 and 2022-23, the aggregate fiscal deficit of the state governments was less than 3% of the Gross Domestic Product (GDP).
 - The Union government had provided them with greater borrowing space by capping their deficits at 4.5% and 4% respectively.
- **Reallocation of expenditures:** The state governments had collectively spent more than the Union government, accounting for more than 60% of the total general government expenditure.
 - Although states have been focussing on revenue expenditure, since 2023-24, they have prioritized capital expenditures.
 - For example, capital outlay rose by 45.7% in comparison to 9.3% growth in revenue expenditure between April and November 2023 in the states excluding Arunachal Pradesh, Goa, Manipur, and Meghalaya.
- **Quality of expenditure:** The ratio of capital outlay to total expenditure (quality of expenditure) rose to an eight-year high of 14.1% in the same period.
 - This implies that a greater proportion of funds have been channelled towards productive assets, which is a growth-enhancing trend.
 - A 1% increase in the capital outlay effectively leads to a 0.82-0.84% increase in the states' GDP.

What are the factors influencing increased capital expenditure by the states?

There have been two major factors driving the capital expenditure by the states:

- **Proactive devolution of central funds:** The advance release of the monthly tax devolution and timely disbursements of funds for the special scheme on capital assistance.
 - In 2023-24, the customary advance installments were released in June and December unlike usually at the end of the fiscal year.
 - Additionally, the Union government approved capital expenditure worth ₹973.74 billion and released ₹590.3 billion through the scheme for special assistance to states for capital investment till November 2023.
- **Buoyancy in state revenues:** The state's own tax revenues (SOTR) and own non-tax revenues (SONTR) grew at 11.5% and 19.5% respectively in 2023-24.
 - According to the National Statistical Office's First Advance Estimates, nominal GDP growth is estimated to be around 8.9%.
 - This indicates that the tax capacity has increased due to improved efficiency of the tax administration and formalization of the economy.
 - Mining activity, which is a significant contributor to SONTR collections, has increased due to reforms in the sector, but this was limited to mineral-rich states.

What are the related challenges?

- **Shortfall in grants:** The overall revenue receipts of the states have grown at just 5.5% in this period despite growth in states own revenues.
 - This has been attributed to the drop in grants from the Union government to 29.2%.
- **Market borrowings:** States have had to focus on market borrowings to fund their expenditures on account of the lukewarm growth in overall revenue receipts.
 - The gross borrowings by the states rose to a record high of ₹5.8 trillion in nine months.
 - However, these increased funds have been used generally for capital expenditure.
- **Fiscal deficit:** States could struggle to achieve their aggregate fiscal deficit target of 3.1% of GDP with a potential marginal slippage of 20-30 basis points.
 - This has been attributed to current trends and the NSO's expectation of a rise in net taxes in the second half of the year.

Way forward

- To secure sustained economic growth in the states, they will have to continue to prioritize capital expenditure.
- States should take steps to further improve the efficiency of the tax administration and enhance the formalization of the economy.
- Healthy federal cooperation between the states and the Union is necessary for stable fiscal management.

Conclusion

- In the post-COVID-19 period, state governments have adopted prudent fiscal deficit management policies and reallocated expenditures to focus on capital expenditure. However, challenges like grant shortfalls, market borrowings, and potential fiscal deficit slippage have persisted, requiring careful financial management.

expenditure, driven by devolution and revenue growth, poses challenges and requires sustained focus.

UPSC Mains Practice Questions

Q. 1) Distinguish between Capital Budget and Revenue Budget. Explain the components of both these Budgets. (GS3 2021)

Q. 2) Public expenditure management is a challenge to the government of India in the context of budget-making during the post-liberalization period. Clarify it. (GS3 2019)

Q.3) What is the meaning of the term tax-expenditure? Taking the housing sector as an example, discuss how it influences the budgetary policies of the government. (GS3 2013)

MCQs

Question: Which of the following is/are included in the capital budget of the Government of India? [2016]

1. Expenditure on acquisition of assets like roads, buildings, machinery, etc.
2. Loans received from foreign governments
3. Loans and advances granted to the States and Union Territories

Select the correct answer using the code given below.

- a. 1 only
- b. 2 and 3 only
- c. 1 and 3 only
- d. 1, 2 and 3

Answer: (d)

Question. With reference to the expenditure made by an organization or a company, which of the following statements is/are correct? (2022)

1. Acquiring new technology is capital expenditure.
2. Debt financing is considered capital expenditure, while equity financing is considered revenue expenditure.

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

Answer: (a)

Question: Consider the following statements: (2017)

1. Tax revenue as a percent of GDP of India has steadily increased in the last decade.
2. Fiscal deficit as a percent of GDP of India has steadily increased in the last decade.

Which of the statements given above is/are correct?

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

(d) Neither 1 or 2

Answer: (d)

What Is Boeing's India Engineering And Technology Center, Which PM Modi Inaugurated In Bengaluru?

SOURCE: INDIAN EXPRESS

PRIORITY: LOW

Why in the news?

- Recently, Prime Minister Narendra Modi inaugurated the Boeing India Engineering and Technology Center (BIETC) in Bengaluru.
- BIETC was built with an investment of ₹1,600 crores across a 43-acre campus with a focus on providing opportunities for girls and women in STEM.
- He also launched the Boeing Sukanya programme that aims to encourage the participation of women and girls in the aviation sector.



What is the BIETC?

- The Boeing India Engineering and Technology Center is Boeing's new campus in India that aims to build a strong partnership between the government, private sector, and the startup industry in the country.
- Purpose:** Develop next-generation products and services for the global aerospace and defense sectors.

Significance:

- Research & Development:** It is intended to be a diverse engineering workforce of more than 3000 people who will engage in research and development and leverage new-age technologies such as AI, IoT, Cloud and Model-based engineering, and additive manufacturing.
- Self-reliance:** Boeing and the Indian armed forces will partner to boost the aircraft demand in the defense sector and contribute to Aatmanirbhar Bharat.

Boeing Sukanya programme

- The Prime Minister also launched the Boeing Sukanya Programme to support the entry of more women into the aviation sector.
- It aims to help women and girls learn critical skills in STEM and gain training for jobs in the aviation sector.
- STEM Labs will be created at 150 planned locations to help young girls develop an interest in careers in STEM.
- It will also provide scholarships to women training to be pilots.

Participation of Indian women in STEM and the Aviation sector

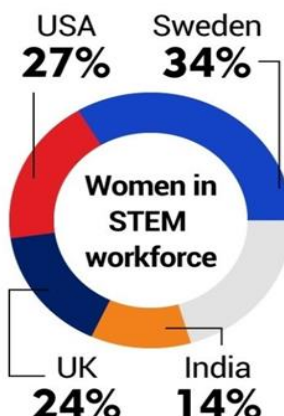
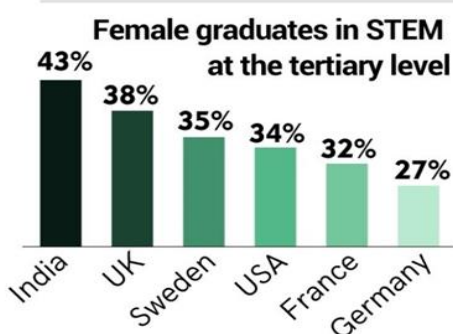
- Aviation sector:** Around 15% of India's pilots are women, more than three times the global average.
- India has one of the highest numbers of commercial pilots in the world, which could further increase with one in every five applicants for a commercial flying lesson in India being a woman.
- STEM:** Around 43% of Indian graduates in STEM are women, which is the highest in the world.
- According to the All-India Survey on Higher Education (AISHE) report, women in STEM courses increased from 10,02,707 (2017-18) to 10,56,095 (2019-2020).

News Summary:

Prime Minister Modi inaugurated Boeing India Engineering and Technology Center in Bengaluru, focusing on aerospace R&D. The Boeing Sukanya Program was launched to promote women's participation in aviation, offering training and scholarships.

Women in STEM

Science, Technology, Engineering and Mathematics (STEM)



Significance of Boeing Sukanya scheme:

- **Boost share of women in STEM jobs:** Although India has a high share of women STEM graduates, only 14% have been able to successfully secure jobs in the field.
- The scheme would help them access opportunities in the sector, build networks, and learn sector-specific skills which would boost their employability.
- **Pursuit of SDGs:** Increasing the share of women in STEM jobs would help achieve the goal of gender equality as mentioned in SDG 5.
- Moreover, it would encourage economic growth and gender equality.
- **Potential for economic growth:** A study conducted by the McKinsey group has highlighted that increasing participation of women in India's workforce has economic benefits.
- If women's share in the workforce could be increased to around 50%, it could lead to a 10% increase in India's GDP.

How will the programme benefit engineers and technicians in India?

- **Employment generation:** The BIETC will create employment opportunities in various domains.
- **Encouraging innovation:** The Boeing University Innovation Leadership Development (BUILD) programme for 2023-24 has invited applications from university students and early-stage startups in India.
- The programme aims to attract young entrepreneurs and provide incubation assistance.
- This will further help in the creation of new market opportunities across the industry.
- **Partnerships:** Boeing will also partner with seven incubators at premier institutes in India to boost the entrepreneurial situation in the country.
- These include the Society for Innovation and Entrepreneurship – IIT Mumbai, Foundation for Innovation and Technology Transfer – IIT Delhi, Innovation and Entrepreneurship Center – IIT Gandhinagar, IIT Madras Incubation Cell, Society for Innovation and Development – IISC Bengaluru, T-Hub Hyderabad, and Technology Business Incubator – KIIT Bhubaneswar, to organize BUILD in India.

Related government initiatives

- **Science, Technology and Innovation (STI) policy of DST:** Targets 30% women's participation in science and technology by 2030.
- **Vigyan Jyoti:** Encourages meritorious girl students of Class 9-12 to pursue education and careers in science and technology
- **GATI scheme:** The Gender Advancement for Transforming Institutions scheme aims to transform institutions in terms of gender sensitivity and inclusiveness to improve gender equity in Science and Technology sectors.
- **KIRAN:** The Knowledge Involvement in Research Advancement through Nurturing scheme aims to encourage women scientists through various programmes like the Women Scientist Scheme that helps women who have taken a break in their careers.
- **CURIE:** Consolidation of University Research through Innovation and Excellence in Women Universities (CURIE) Programme of the DST supports the development of research infrastructure in women's universities to encourage women's participation in R&D.
- **SERB-POWER:** It is a scheme of the Science and Engineering Research Board for women researchers interested in R&D that provides financial assistance through grants and fellowships.

Conclusion

- The Boeing India Engineering and Technology Center (BIETC) inauguration is a significant step towards fostering collaboration between the aerospace industry, government, and startups in

India. The Boeing Sukanya Programme further underscores the commitment to empowering women in STEM, contributing to innovation and self-reliance.

HEALTH

Ministry Notifies Revised Rules to Ensure Quality of Medicines

SOURCE: THE HINDU

PRIORITY: MEDIUM

Why in the news?

- The **Ministry of Health and Family Welfare** announced **revised rules under Schedule M of the Drugs and Cosmetics Rules, 1945**.
- These revisions aim to ensure the production of safe, effective, high-quality drugs, aligning with international quality standards.

Contextual Background

- India faced intense international criticism, especially after the World Health Organization (WHO) alerted about **contamination in certain cough syrups** produced in India.
- These syrups, containing toxic substances like diethylene glycol and ethylene glycol, were linked to fatal incidents in **countries like Gambia and Uzbekistan**.
- This incident highlighted the need for stricter quality control in pharmaceutical manufacturing in India.

What is Schedule M of the Drugs and Cosmetics Rules, 1945?

- Schedule M of the Drugs and Cosmetics Rules, 1945, is a set of guidelines in India that regulate the standards for the manufacturing of drugs and pharmaceutical products.
- It's part of the broader Drugs and Cosmetics Rules, which were established in 1945 to ensure the safety, efficacy, and quality of drugs and cosmetics sold in India.

What are the Revised Rules?

- **Introduction of New Drug Categories:** Introduction of five new drug categories including substances like **sex hormones, steroids, cytotoxic substances, biological products, and radiopharmaceuticals**.
- **Implementation of a Pharmaceutical Quality System (PQS):** Manufacturers are required to implement a comprehensive quality system that ensures consistent production of high-quality drugs.
- **Quality Risk Management (QRM):** This involves assessing, controlling, communicating, and reviewing risks to the quality of the pharmaceutical products throughout their lifecycle.
- **Product Quality Review (PQR):** This ensures that products are continuously evaluated to comply with the required quality standards and specifications.
- **Qualification and Validation of Equipment:** This rule mandates the proper qualification and validation of equipment used in the manufacturing process to ensure consistent production quality.
- **Computerised Storage System for Drug Products:** A digital, computerised system for storing all drug products is now mandatory, facilitating better tracking and quality control.
- **Manufacturer's Responsibility for Quality:** Manufacturers must assume full responsibility for the quality of their products, **ensuring they are fit for use, meet the requirements of their licence**, and do not pose risks to patients due to inadequate safety, quality, or efficacy.
- **Testing and Sample Retention:** Companies must only market a finished product after obtaining **"satisfactory results"** from tests of the ingredients. They must also retain sufficient samples of intermediate and final products to allow for repeated testing or verification of a batch.

What is the Rationale Behind the Revision?

- **Global Compliance and Quality Standards:** The primary rationale is to align India's pharmaceutical sector with international quality standards. This is essential for ensuring that the medicines produced are safe, effective, and of high quality, benefiting both patients and the industry.
- **Response to Recent Incidents and Global Scrutiny:** The move comes in response to significant international scrutiny, particularly following incidents where Indian-made cough syrups were allegedly contaminated with toxic substances.
- **Evolution in the Pharmaceutical Manufacturing Domain:** There has been significant evolution in the pharmaceutical manufacturing and quality domain over the last 15-20 years which necessitates a relook at the current **Good Manufacturing Practices (GMP)** and quality management systems to ensure they remain effective and relevant.
- **Global Competitiveness and Acceptance:** The revision aims to bring India's GMP recommendations in line with global standards, particularly those of the World Health Organization (WHO).

Good Manufacturing Practices (GMP)

News Summary:

India's Ministry of Health revises Schedule M of Drugs and Cosmetics Rules to align pharmaceutical manufacturing with global quality standards, focusing on safety, efficacy, and adherence to Good Manufacturing Practices.

UPSC Mains Practice Question

Q. How is the government of India protecting traditional knowledge of medicine from patenting by pharmaceutical companies? **(2019)**

- Good Manufacturing Practices (GMP) are guidelines that provide a system of procedures and documentation for the manufacturing process to ensure that products are consistently produced and controlled according to quality standards.
- These practices are essential in the pharmaceutical industry to ensure that medicines are safe, effective, and of high quality.
- The GMP (Good Manufacturing Practices) system was initially integrated into India's regulatory framework in **1988** under Schedule M of the Drugs and Cosmetics Rules, 1945.
- The most recent update to this schedule was in **June 2005**. The revised Schedule M now includes the WHO-GMP (World Health Organization - Good Manufacturing Practices) standards.

Key Aspects of GMP:

- **Quality Management:** Ensuring that there is a strong quality management system in place, which includes clear policies, processes, and procedures to maintain quality standards throughout the manufacturing process.
- **Personnel:** Ensuring that staff involved in manufacturing are adequately trained and qualified to perform their tasks.
- **Premises and Equipment:** The manufacturing facilities should be designed and maintained to prevent contamination and errors, and equipment must be properly calibrated and maintained.
- **Documentation and Record Keeping:** Detailed and accurate records of all manufacturing processes and changes must be maintained to ensure traceability and accountability.
- **Production:** Production processes must be clearly defined and controlled, and changes to the process must be evaluated for their impact on quality.
- **Quality Control:** There should be a comprehensive system for testing and verifying the quality of raw materials, in-process materials, and finished products.
- **Handling of Complaints and Product Recalls:** Effective procedures must be in place for dealing with any complaints or problems identified post-market, including product recalls if necessary.

Significance of the Revision

- It marks a significant and beneficial advancement for India's pharmaceutical sector.
- By enhancing and modernizing medicine quality standards, it strengthens the Indian industry's credibility and boosts patient outcomes.
- Aligning with global quality norms, it aids in producing safe, effective, and top-quality drugs, benefiting both patients and the industry.
- Emphasizing risk management, equipment qualification and validation, and self-inspection, this move is crucial.

Conclusion

The revision of GMP is driven by the need to match fast-evolving global manufacturing and quality standards. The focus is on ensuring the safety, quality, and efficacy of pharmaceutical products to protect patients and maintain industry standards.

Global Surgery: Why Access To Essential Surgery Is Important?

SOURCE: THE HINDU

PRIORITY: MEDIUM

Why in the news?

- This article discusses global surgery which has been a neglected field despite a large section of the global population lacking access to essential surgery.
- According to the Lancet Commission on Global Surgery (LCoGS), around five billion people or over 70% of the global population lack timely access to safe and affordable surgical care.



News Summary:

The neglected field of global surgery, addressing essential surgical care disparities, faces challenges in access, disease burden, and economic impact. Urgent policy, funding, and research attention are needed globally.

UPSC Mains Practice Questions

Q.1) In order to enhance the prospects of social development, sound and adequate health care policies are needed particularly in the fields of geriatric and maternal health care. Discuss. (GS2 2020)

Q.2) Public health system has limitations in providing universal health coverage. Do you think that the private sector could help in bridging the gap? What other

What is global surgery?

- Global surgery focuses on equitable access to emergency and essential surgery and predominantly focuses on low and middle-income countries (LMICs).
- At the same time, it prioritizes access disparities and the unserved populations in high-income countries.
- It includes essential and emergency surgeries such as surgeries, obstetrics, trauma, and anaesthesia (SOTA).

How far back does global surgery go?

- 2015 was the miracle year (Annus Mirabilis) for global surgery with the importance of surgical care being recognized on a global scale.
- However, the field of global surgery can be traced back several decades including the sharing of knowledge and trainees under surgical missions in humanitarian settings.

Developments in 2015

- According to the World Bank-sponsored Disease Control Priorities Network (DCPN) report on essential surgery:
 - Emergency and essential surgical care were cost-effective
 - Scaling up of surgical systems was cost-beneficial
 - A large share of the disease burden was surgically avertable.
- The Lancet Commission on Global Surgery (LCoGS) consisting of experts and stakeholders was formed to:
 - Examine the status of surgical care access globally
 - Develop indicators to monitor surgical care preparedness
 - Assess systemic capacity and impact
 - Develop implementable strategies like the national surgical, obstetrics, and anaesthesia plan (NSOAP).
- As a result of the deliberations of the LCoGS, the WHO Resolution 68.15 - Declaration on Safe Surgery was passed.
- The resolution recognized that universal health coverage was impossible in the absence of necessary commitment to emergency and essential surgical systems.

What are the challenges faced?

- Global surgery faces a range of challenges such as inaccessibility, disease burden, and economic burden.
- **Global disparity:** According to the LCoGS, over 70% of the global population (around 5 billion) lacked timely access to safe and affordable surgical care.
 - In low and lower-middle-income countries, 99% and 96% of people faced access gaps as compared to 24% in high-income countries (HICs).
 - Over 1.6 billion of these lived in South Asia which meant that roughly 98% of the population in South Asia lacked access to safe and affordable SOTA care.
- **Disease burden:**
 - In 2010, around 17 million deaths were attributed to surgically treatable conditions.
 - This was more than the combined mortality burden of HIV/AIDS, tuberculosis, and malaria.
 - The Global Surg Collaborative identified peri-operative mortality as the third most common cause of death behind ischemic heart disease and stroke.
- **Reasons:** Lack of timely care, unsafe surgeries, and limited capacity of surgical systems.
 - According to the DCPN, LMICs with over 77 million surgically avertable Disability-Adjusted Life-Years (DALY) formed 3.5% of the total disease burden in these countries.
 - **South Asia's burden:** South Asia had the highest DALY rate among regions of the world and accounted for 50.46% of neonatal and maternal diseases, 32.49% of congenital anomalies, 26.67% of digestive conditions, and 33.35% of injuries.
- **Economic burden:** The disease burden also leads to an economic burden with the absence of scale-up of surgical care leading to a cumulative projected loss to GDP of around \$20.7 trillion (in PPP terms) in around 128 countries by 2030.
 - It also accounted for an annual loss in societal welfare of about \$14.5 trillion in around 175 countries with South Asia contributing about 7% of the global lost welfare.

How is the sector being neglected?

- **In policy formulation:** Despite the disease and economic burden, surgery has been neglected in health planning and policy development at both the international and national level.
- **International level:** According to the LCoGS, surgery contributed to less than 1% of all indicators mentioned in the World Bank, WHO, UNICEF, and other reports.
- **National level:** An analysis of National Health Strategic Plans from 43 African countries found that 19% did not mention surgery or surgical conditions while 63% mentioned surgery only five times or less.
- **In India:** Policy making in India also displayed a neglect of surgery with National Health Policy (2017) containing just two mentions of the partial phrase "surg". Similarly, India's new guidelines on NCDs focuses on cancer but has sparse mentions of surgery despite the LCoGS identifying surgery as critical for national cancer control plans.

viable alternatives would you suggest? (GS2 2015)

MCQs

Question: With reference to the scientific progress of ancient India, which of the statements given below are correct? (2012)

1. Different kinds of specialized surgical instruments were in common use by 1st century AD.
2. Transplant of internal organs in the human body had begun by the beginning of 3rd century AD.
3. The concept of sine of an angle was known in 5th century AD.
4. The concept of cyclic quadrilaterals was known in 7th century AD.

Select the correct answer using the codes given below:

- a. 1 and 2 only
- b. 3 and 4 only
- c. 1, 3 and 4 only
- d. 1, 2, 3 and 4

Answer: (c)

Question: Of the four landmarks in medical history given below, which one was the first to take place? (1996)

- a. Organ transplant
- b. Bypass surgery
- c. Test tube baby
- d. Plastic surgery

Answer: (d)

- **In funding:** The Developmental Assistance for Health (DAH) reveals a neglect in funding for surgery and related areas.
 - DAH contributions to trauma care are less than \$1 per DALY as compared to \$41 per DALY for HIV or \$25 for TB.
 - Strengthening of surgical systems was the responsibility of individual nations with only a small share of the funds from philanthropic organizations going to infrastructure and training of local surgical providers.
- **In research:** Only 1.5% of global health titles in the Pubmed database were related to global surgery.
 - Similarly, only \$22 million of the \$750 million worth of projects funded by the U.S. National Institutes of Health (NIH) were related to surgery and just one project was about global surgery.
- Neglect of global surgery in policy, financing, and research were all interrelated and driving each other.

Surgical care in India

- **Status:**
 - **Fewer surgeries:** In 2019-2020, India recorded more than 14 million minor surgeries which was much less than the actual requirement of surgeries according to the LCoGS.
 - **Low rate of surgeries:** India has a low rate of surgeries per 1 lakh people at 166-3,646 per 1,00,000 people while HICs like New Zealand had a rate of 5,000 surgeries per 1,00,000 people.
- **Challenges:**
 - **Lack of Access:** According to estimates, more than 90% of rural Indians lack access to surgery when required. Location, income, etc are some of the factors affecting access to surgical care.
 - **Neglect in policymaking:** Insufficient attention to surgical care in national healthcare policy has resulted in surgery still remaining outside mainstream public health in India.
 - **No NSOAP:** India presently has no NSOAP despite many other countries initiating such plans following the LCoGS report.
 - **Resource crunch:** Lack of facilities including transport and road infrastructure and insufficient resources including manpower, equipment, etc.
 - **Investments and financial coverage:** Monitoring and evaluation of surgical care indicators has been affected by a lack of investment. Patients have also faced an increased financial burden due to lack of universal health coverage.

Way forward

- **Scaling up at district level:** According to the DCPN, scaling up surgical services at district hospitals could avert the disease burden in LMICs.
- **Implementation of NSOAPs:** Countries should emulate the example of African countries in drafting and implementing NSOAPs and other plans to provide surgical care to the population.
 - For example, India's Pradhan Mantri Jan Arogya Yojana has provided millions of surgeries at zero or negligible cost to the bottom 40% population.
- **Data collection:** Data must be collected to help develop policy and implementable action on surgical care.
 - At least 30 LMICs have accumulated subnational data on surgical care indicators, with India being the largest.
- **Support to research and innovation:** Countries must take steps to boost research and innovation alongside sustained financing and improved focus on policy to help resolve global surgery challenges.

Conclusion

- The global neglect of surgical care, despite its pivotal role in healthcare, poses a significant challenge particularly to LMICs. Policy, funding, and research require urgent addition to handle the large disease and economic burden associated with it. Implementation of national level plans, data collection, and fostering innovation would help ensure equitability in access to surgical care.

How Indian Women Can Rid Themselves Of Cervical Cancer

SOURCE: INDIAN EXPRESS

PRIORITY: MEDIUM

Why in the news?

- The Union government has planned to include cervical cancer vaccine in the Universal Immunization Programme and launch an immunization campaign for girls between the ages of 9 and 14 this year.
- This article discusses the causes of cervical cancer and the steps taken by the government to prevent it and improve cervical cancer care in India.

News Summary:

The Indian government aims to include cervical cancer vaccination in the Universal Immunization Programme, focusing on girls aged 9-14. The article highlights the causes, prevention, and government initiatives to combat cervical cancer.



Occurrence of Cervical Cancer in India

- Cervical cancer is the second-most common cancer among Indian women, particularly middle-aged women.
- In 2022, India accounted for around one-fifth of the global total with around 1,23,907 new cases and 77,348 deaths.

How does cervical cancer occur?

- **Human Papilloma Virus infection:** Persistent high-risk types of Human Papilloma Virus (HPV) infections are the primary causes of the occurrence of cervical cancer.
- **Co-factors:** Poor socio-economic conditions, low immunity status, other genital infections, unhealthy habits like smoking, etc.
- These factors facilitate the initiation and progression of the infection to cancer. That facilitate initiation and progression to cancer.

Detection and prevention of cervical cancer

- Cervical cancer is the only non-communicable disease that can be eliminated.
- It is possible to detect most cervical cancer and precancer cases in the reproductive age group.
- Since cervical cancer has a long pre-invasive phase (10–15 years), it offers an opportunity to detect and treat the neoplasia in the pre-invasive stage through simple outpatient treatment modalities.
- If cervical cancer is detected and managed at an early stage, it has a cure rate of more than 93%.
- Cervical cancer can be prevented through HPV vaccination of girls.
- In 2023, the Serum Institute of India launched an indigenous HPV vaccine known as CERVAVAC.

What are the factors behind the high mortality associated with cervical cancer?

- Late detection
- Lack of awareness
- Fear of cancer
- Lack of evident early symptoms
- Poor screening of women
- Patients dropping out of courses of treatment
- Preference for traditional healers

WHO strategy to prevent and combat cervical cancer

- The WHO's global strategy to tackle cervical cancer incorporated accountability and targets along three strategic pillars:
 - Widespread HPV vaccination,
 - Screening
 - Early diagnosis and treatment of cervical pre-cancer and cancer.
- The WHO has recommended simple, feasible, and scalable interventions that have shown initial successes in many low or middle-income countries (LMICs).
- **Proposed targets:**
 - 90% girls fully vaccinated by 15 years of age with two doses of HPV vaccine;
 - 70% women screened with a high-performance test at 35 and 45 years of age
 - 90% women with cervical pre-cancer and cancer receiving treatment, including palliative care,

UPSC Mains Practice Questions

Q.1) Appropriate local community-level healthcare intervention is a prerequisite to achieve 'Health for All' in India. Explain. (GS2 2018)

MCQs

Question: 'Mission Indradhanush' launched by the Government of India pertains to [2016-I]

- (a) immunization of children and pregnant women
- (b) construction of smart cities across the country
- (c) India's own search for the Earth-like planets in outer space
- (d) New Educational Policy

Answer: (a)

- Less than four cases per 1,00,000 women.

What steps has the government of India taken?

- **Cancer screening:** The GoI has undertaken cancer screening by trained nurses in primary health centers under the National Programme for Prevention and Control of Cancer, Diabetes, Cardiovascular Diseases and Stroke (NPCDCS programme).
- **Screening tools:** Visual screening tests and HPV tests are simple and easily available tools for screening cases of cervical cancer.
- **Management:** Evidence-based management algorithms have also been put in place to guide doctors in managing diseases.

What steps must be taken going forward?

- **Technology:** New developments like a single-dose HPV vaccine and the use of AI technology for easy and accurate diagnosis and treatment can help eliminate cervical cancer soon.
- Other steps that can be taken include the indigenous development of HPV test kits and vaccines which will be beneficial for women in resource-scarce settings.
- Digital technologies must be incorporated to improve linkages, referrals, and communication.
- **Awareness:** The government must take steps to strengthen population-level awareness about the causes and cures of cervical cancer.
- This should include strategies to overcome vaccine hesitancy and encourage screening and testing and capacity building in cancer treatment in the pre-cancer, treatment, and palliative care stages.
- **Financial assistance:** The government must implement mechanisms to reduce the financial burden of care.
- This can be done by improving health insurance coverage.
- **Collaboration:** Strong partnerships must be built with NGOs and civil society organizations at the primary, secondary, and tertiary hospital levels to boost care and outreach.
- Similar partnerships must also be developed in research areas to develop a better understanding of the disease and new cures.
- **Best practices:** Best practices and awareness from around the globe must be adopted by the healthcare sector and the government to achieve the elimination of cervical cancer in India.

Conclusion

- A multifaceted approach is necessary to address the alarming rates of cervical cancer in India which requires prioritization of vaccination, enhancing awareness, leveraging technological advancements, fostering collaboration, and providing financial support. This can collectively contribute to early detection, effective treatment, and ultimately the elimination of cervical cancer, ensuring better health outcomes for women across the nation.

Responding to the New COVID-19 Sub-variants

SOURCE: THE HINDU

PRIORITY: MEDIUM

Why in the news?

- The article discusses the emergence and significance of a **new COVID-19 sub-variant, JN.1**, which is a **sub-variant of the Omicron** variant.
- This sub-variant has been labelled a **Variant of Interest (VoI) by the World Health Organization (WHO)**, indicating that it has genetic changes warranting monitoring, but it has not been classified as a **Variant of Concern (VoC)**.

Background

- **Origin and Spread of COVID-19:** The novel coronavirus (2019-nCoV), later named **Severe Acute Respiratory Syndrome Coronavirus-2 (SARS-CoV-2)**, was first reported in December 2019 from China.
- The virus rapidly spread worldwide, causing a global pandemic.
- Governments worldwide imposed lockdowns, travel restrictions, and other measures to curb the spread.
- **Development of Vaccines and Variants:** In record time, multiple COVID-19 vaccines were developed and distributed globally.
- However, the virus mutated over time, leading to the emergence of various variants, such as Alpha, Beta, Gamma, and Delta.
- These variants often showed differences in transmissibility, severity, and vaccine effectiveness.
- **The Omicron Variant:** By the end of 2021, the Omicron variant (BA.1.1.529) was identified and quickly became dominant in many regions due to its high transmissibility.
- This variant led to a significant surge in cases, but it generally caused less severe disease, particularly in vaccinated individuals.
- **Continued Evolution and Surveillance:** The virus continued to evolve, leading to the emergence of numerous subvariants and recombinant lineages.
- Health organizations and governments-maintained surveillance and genomic sequencing to track these developments.

News Summary: The article highlights the emergence of the JN.1 sub-variant of Omicron, labeled a Variant of Interest by WHO. It emphasizes ongoing protection from existing vaccines and advises measured public health responses.

UPSC Previous Year Practice Question

Q. What is the basic (principle behind vaccine development? How do vaccines work? What approaches were adopted by the Indian vaccine manufacturers to produce COVID-19 vaccines? **(2022)**

Q. Critically examine the role of WHO in providing global health security during the Covid-19 pandemic. **(2020)**

Q. COVID-19 pandemic has caused unprecedented devastation worldwide. However, technological advancements are being availed readily to win over the crisis. Give an account of how technology was sought to aid management to the pandemic. **(2020)**

Q. COVID-19 pandemic accelerated class inequalities and poverty in India. Comment. **(2020)**

MCQs

- In May 2023, the WHO declared the end of the COVID-19 pandemic but emphasized the need for ongoing monitoring of the virus.

What is JN.1 Sub-Variant?

- JN.1 is a newly identified subvariant of the SARS-CoV-2 virus, which has gained attention due to its rapid spread.
- It first emerged in September and was initially classified with **BA.2.86**, a lineage of the **Omicron variant**, due to its descent from that lineage.
- JN.1 has been identified as a **"variant of interest"** by the World Health Organization (WHO) because of its increasing prevalence, particularly in the Northern Hemisphere.
- JN.1 accounts for a significant portion of COVID-19 cases in the United States and is being closely monitored globally.
- India**, along with several other countries including the **US, Singapore, and China**, has reported cases of the JN.1 variant.
- There is no current evidence to suggest that JN.1 causes more severe cases of COVID-19 or poses a greater risk to public health compared to other circulating variants.
- The symptoms of JN.1 are generally similar to those of other COVID-19 variants, with the severity and type of symptoms primarily depending on an individual's immunity and overall health.
- Current vaccines and natural infections continue to offer protection. There is no immediate need for additional COVID-19 vaccine shots.

Variant of Interest (VoI)

- A VoI is a variant with specific genetic markers that are predicted to affect virus characteristics such as transmissibility, disease severity, immune escape, diagnostic or therapeutic escape.
- These variants are monitored because they have the potential to pose a risk to public health. However, the evidence is usually not strong enough yet to determine if they do indeed have a significant impact.
- Examples of Impact:** Changes in transmissibility, more severe disease, or reduced effectiveness of vaccines, treatments, or diagnostic tools.
- Enhanced monitoring and research are conducted to clarify the impact of the variant on public health measures and to determine if it should be reclassified as a VoC.

Variant of Concern (VoC)

- A VoC is a step above VoI in terms of risk. It is a variant for which there is clear evidence that it affects factors like transmissibility, disease severity, immune escape, or the effectiveness of public health measures.
- This classification is given when there's evidence of an increase in transmissibility, more severe disease (e.g., increased hospitalizations or deaths), significant reduction in neutralization by antibodies generated during previous infection or vaccination, reduced effectiveness of treatments or vaccines, or diagnostic detection failures.
- Examples of Impact:** Widespread transmission leading to increased caseload, hospitalizations, and potentially deaths.
- Public health authorities might need to implement or reinforce control measures. There is also a push for intensive research and data collection to guide response strategies.

Analyzing COVID-19 Case Rise

- COVID-19 as an Endemic Virus:** The article emphasizes that SARS-CoV-2 is likely to continue circulating globally, akin to other common viruses. Seasonal changes in case numbers are to be expected, and continuous tracking of the virus and its variants is necessary.
- Genomic Variability and Risk Assessment:** Over 1,000 subvariants and recombinant sub-lineages of COVID-19 have been reported since 2019. Not every genetic change is significant, and international agencies and experts are responsible for assessing the risk associated with these changes.
- Interpreting Data:** The rise in cases in India could be attributed to increased testing. COVID-19 deaths often occur in already sick individuals and are not necessarily caused by the virus.
- Comparative Perspective:** Daily COVID-19 deaths are low compared to deaths from other causes.
- Normalization of COVID-19:** COVID-19 should be treated like any other respiratory illness, as it's no longer a novel virus and should be approached as an individual health concern rather than a public health crisis.

Vaccination and Immunity in India

- Continued Protection Against Sub-variants:** The current vaccines and natural infections continue to provide protection against emerging sub-variants of the virus, including JN.1.
- Hybrid Immunity:** The concept of hybrid immunity is highlighted, which refers to the combined protective effect of both natural infection and vaccination.
- No Immediate Need for Additional Vaccination:** There is no scientific evidence supporting the need for a fourth COVID-19 vaccine shot for any age group.

Q. In the context of vaccines manufactured to prevent COVID-19 pandemic, consider the following statements: (UPSC 2022)

- The Serum Institute of India produced COVID-19 vaccine named Covishield using mRNA platform.
- Sputnik V vaccine is manufactured using a vector based platform.
- COVAXIN is an inactivated pathogen based vaccine.

Which of the statements given above are correct?

- 1 and 2 only
- 2 and 3 only
- 1 and 3 only
- 1, 2 and 3

Answer: (b)

- **Managing Public Perception and Policy:** The vaccine response plays a crucial role in guiding public health policies and managing public perception. It suggests a shift in focus from panic and urgency to a more measured approach, treating COVID-19 as a manageable respiratory illness rather than a public health emergency.
- **Preventive Measures over Vaccine Alarmism:** The standard public health measures (like surveillance and improved clinical management) should be emphasized over undue alarmism about new vaccine doses.

Measures to be taken by Government and Public

By Government:

- **Continuous Monitoring:** Maintain genomic sequencing and scientific work to track new variants, especially the JN.1 sub-variant.
- **Public Health Measures:** Implement standard public health preventive measures like surveillance for Severe Acute Respiratory Infections (SARI) and Influenza-like Illness (ILI), as well as waste water surveillance.
- **Healthcare Services:** Ensure health facilities are prepared and equipped to manage a potential increase in respiratory illnesses.
- **Science Communication:** Provide clear, interactive, and understandable public communication regarding COVID-19 and new sub-variants.
- **Education:** Avoid drastic measures like school closures, as the risk to children is low and should be managed with appropriate hygiene and safety protocols.

By Public:

- **Responsibility and Awareness:** Act responsibly by not spreading unverified information. Stay informed through reliable sources.
- **Vaccination:** Understand that current vaccines and natural immunity continue to offer protection against sub-variants, but remain aware of any new recommendations regarding vaccination.
- **Personal Health Measures:** Maintain good respiratory etiquette, such as wearing masks in public places if experiencing flu-like symptoms, covering the nose and mouth when coughing or sneezing, and frequent hand washing.
- **Rational Perspective:** Recognize that COVID-19 should now be considered similar to other respiratory illnesses and not a cause for undue alarm.

Conclusion

COVID-19 should be treated as a regular respiratory illness, focusing on individual health rather than public health concern. The virus is here to stay but is not a major cause for worry.

Drug War: Antimicrobial Resistance is a Health Issue that will Negate Advances in Medicine

SOURCE: THE HINDU

PRIORITY: MEDIUM

Why in the news?

- The "First Multicentric Point Prevalence Survey of Antibiotic Use at 20 NAC-NET Sites India 2021-22", highlights overuse and misuse of antibiotics in medical practice.
- There is a growing issue of **antimicrobial resistance (AMR)**, which is **negating advances in modern medicine**.

Key Findings of the Survey

- **High Prescription Rate of Antibiotics:** The survey, conducted at 20 NAC-NET sites in India by the National Centre for Disease Control under the Health Ministry, found that **over 70% of patients in tertiary-care hospitals** across 15 States and two Union Territories were prescribed antibiotics.
- **Potential for Antimicrobial Resistance (AMR):** **Over 50%** of the antibiotics prescribed have the potential to cause AMR.
- **Prophylactic Use of Antibiotics:** A significant finding was that **55% of the patients surveyed were prescribed antibiotics for prophylaxis**, i.e., as a preventive measure, rather than to treat actual infections.
- **Only 45% of prescriptions** were for treating infections, and of these, **only 6%** were based on identifying the specific bacteria involved.
- **Concerns Over Medical and Animal Husbandry Practices:** The survey underscores concerns over the misuse and overuse of antimicrobials in medical and animal husbandry practices, which are key factors in the development of drug-resistant pathogens.

What is Antimicrobial Resistance (AMR)?

- Antimicrobial Resistance (AMR) refers to the acquired resistance of microorganisms, such as **bacteria, viruses, fungi, and parasites**, to the drugs designed to treat infections.
- This resistance develops as these microorganisms evolve over time, rendering the medications ineffective.
- This phenomenon not only complicates the treatment of infections but also heightens the risk of disease transmission, severe illness, and mortality.

News Summary: The "First Multicentric Point Prevalence Survey of Antibiotic Use" in India reveals alarming rates of antibiotic overuse, emphasizing the urgent global threat of antimicrobial resistance. Comprehensive strategies are essential.

UPSC Previous Year Practice Question

Q. Can overuse and the availability of antibiotics without doctor's prescription, the contributors to the emergence of drug-resistant diseases in India? What are the available mechanisms for monitoring and control? Critically discuss the various issues involved. **(2014)**

Q. What do you understand by fixed dose drug combinations (FDCs)? Discuss their merits and demerits. **(2013)**

MCQs

Q. Which of the following are the reasons for the occurrence of multi-drug resistance in microbial pathogens in India? **(UPSC 2019)**

1. Genetic predisposition of some people
2. Taking incorrect doses of antibiotics to cure diseases

- The World Health Organization (WHO) has recognized AMR as one of the top ten global health threats.
- WHO estimates that bacterial AMR was directly responsible for **1.27 million deaths globally in 2019** and contributed to **4.95 million deaths**.
- Microorganisms that acquire resistance to antimicrobial drugs are sometimes colloquially referred to as "**superbugs**."
- In India, more than 56,000 newborns succumb to sepsis each year, caused by organisms that no longer respond to first-line antibiotics.

Concerns Regarding AMR

- **Life-threatening Situation:** The proliferation of AMR poses a significant challenge in the treatment of sepsis, a life-threatening condition. Unfortunately, the ineffectiveness of antibiotics is resulting in preventable fatalities.
- **Diminishing Medical Progress:** AMR is also eroding the progress achieved in the field of medicine over decades, particularly in the case of high-burden diseases such as tuberculosis and various types of cancer.
- **Jeopardizing Goal Attainment:** It jeopardizes the achievements made under the Millennium Development Goals and threatens the realization of the Sustainable Development Goals.
- **Rise in Superbugs:** Untreated wastewater discharged from medical facilities contains chemical compounds that foster the development of superbugs.
- **Expansion Over Time:** The combination of self-medication and the availability of over-the-counter (OTC) antibiotics has contributed to one of the highest rates of antibiotic resistance globally.

Causes of AMR

- **Overuse and Misuse of Antibiotics:** A significant cause of AMR is the over-prescription of antibiotics. This excessive use, often in situations where antibiotics are not required (like prophylactic or preventive use), leads to the development of drug-resistant pathogens.
- **Inappropriate Prescription Practices:** Around 55% of the patients surveyed were prescribed antibiotics as a preventive measure rather than to treat actual infections. This kind of prophylactic use contributes to the emergence of resistant strains of bacteria.
- **Pathogen Evolution:** Naturally, pathogens evolve over time, developing resistance to drugs. This natural evolution is accelerated by the unsound medical practices, such as the misuse and overuse of antimicrobials.
- **Use of Antibiotics in Animal Husbandry:** The use of drugs to promote growth in animals and plants acts as a contributing factor to AMR. This practice leads to the development of resistant strains in animals, which can then be transferred to humans.
- **Lack of New Antibiotics Development:** There is a need for urgent measures to develop new drug candidates and provide more equitable access to them. The lack of new antibiotics makes it harder to combat resistant strains that emerge.
- **Patient Expectations:** Patients often expect immediate relief and may pressure doctors for antibiotic prescriptions, even when they are not necessary. This can lead to inappropriate antibiotic use.

Impact/Consequences of AMR

- **Threat to Infection Prevention and Treatment:** Medical procedures like organ transplantation, cancer chemotherapy, diabetes management, and major surgeries (such as caesarean sections or hip replacements) become considerably more perilous due to the rise of antimicrobial resistance.
- Failing to effectively treat infections caused by drug-resistant bacteria also significantly increases the risk of mortality.
- **Escalating Healthcare Costs:** Antimicrobial resistance drives up healthcare expenses, leading to prolonged hospital stays, additional diagnostic tests, and the utilization of costlier medications.
- **Endangering the Achievements of Modern Medicine:** The accomplishments of modern medicine face a grave jeopardy in the absence of effective antibiotics for both preventing and treating infections.
- **A Looming Antibiotic Crisis:** Without prompt intervention, the world is inching closer to an antibiotic apocalypse—an era where bacteria develop complete resistance to treatment.
- This scenario could lead to once manageable common infections and minor injuries posing life-threatening risks once again.
- **Jeopardizing Development Goals:** Antimicrobial resistance not only imperils the progress made under the Millennium Development Goals but also poses a significant threat to achieving the Sustainable Development Goals.

Challenges Related to Preventing AMR

Insufficient Information Systems

3. Using antibiotics in livestock farming
4. Multiple chronic diseases in some people

Select the correct answer using the code given below.

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

Answer: (b)

- The resistance rates documented by hospitals and laboratories don't necessarily reflect the disease burden unless each resistant isolate is linked to clinical outcomes in the patients from whom they were isolated.
- This issue stems from inadequate hospital information systems, especially in publicly-funded healthcare facilities in India and numerous low- to middle-income countries.

Funding Shortages

- The absence of new classes of antibiotics in the market over the past three decades can largely be attributed to the insufficient incentives for their development and production.
- The lack of urgent action is driving us closer to an antibiotic apocalypse—a future in which bacteria become entirely resistant to treatment.

Neglect of Antibiotic Residues

- Current effluent standards in India do not encompass antibiotic residues, and therefore, they are not monitored in the pharmaceutical industry's wastewater.

Inefficiency of Schemes

- The National Action Plan for AMR, endorsed in 2017, is nearing the end of its official duration, with unsatisfactory progress to show for it.
- A multitude of stakeholders, a lack of effective governance mechanisms, and insufficient funding are the primary obstacles to the plan's successful implementation.

Underreporting in GRAM Report

- Only a fraction of India's data, available via the WHO-GLASS portal, has been incorporated into the GRAM report.
- India has been reporting elevated levels of resistance to fluoroquinolones, cephalosporins, and carbapenems among Gram-negative pathogens, responsible for approximately 70% of infections in both communities and healthcare settings.

Government Measures to Prevent AMR

- **National Programme for AMR Control:** Initiated in 2012, this program has strengthened the AMR Surveillance Network by establishing laboratories in State Medical Colleges.
- **National Action Plan on AMR:** Launched in April 2017, it emphasizes a **One Health approach** and aims to engage various ministries and departments as stakeholders.
- **AMR Surveillance and Research Network (AMRSN):** Launched in 2013, its objective is to gather evidence and monitor trends and patterns of drug-resistant infections within the country.
- **AMR Research & International Collaboration:** The Indian Council of Medical Research (ICMR) has taken steps to develop new drugs and medicines through international partnerships to enhance AMR-related medical research.
- ICMR, in collaboration with the **Research Council of Norway (RCN)**, initiated a joint research call on antimicrobial resistance in 2017.
- ICMR, in partnership with the **Federal Ministry of Education and Research (BMBF) in Germany**, engages in joint Indo-German research collaborations on AMR.
- **Antibiotic Stewardship Program:** ICMR has launched a pilot Antibiotic Stewardship Program (AMSP) across India to regulate the misuse and overuse of antibiotics in hospital wards and ICUs.
- **Regulation by DCGI:** The Drug Controller General of India (DCGI) has banned 40 Fixed Dose Combinations (FDCs) deemed inappropriate.

Global Measures

- **World Antimicrobial Awareness Week (WAAW):** Since 2015, WAAW has been an annual global campaign with the objective of enhancing awareness regarding antimicrobial resistance on a global scale.
 - Its mission is to promote best practices among the general public, healthcare professionals, and policymakers, with the aim of slowing down the emergence and spread of drug-resistant infections.
- **The Global Antimicrobial Resistance and Use Surveillance System (GLASS):** In 2015, the World Health Organization (WHO) introduced GLASS to address knowledge gaps and inform strategies at various levels.
 - GLASS is designed to gradually integrate data from the surveillance of AMR in humans, monitoring the use of antimicrobial medications, and tracking AMR in the food chain and the environment.

Way Forward

- **Comprehensive Strategy to Combat Antimicrobial Resistance (AMR):** The urgency to develop new drugs should not deter us from implementing measures to prudently utilize existing antimicrobials.
- Efforts such as enhancing infection control in communities and healthcare facilities, ensuring access to high-quality diagnostics and laboratories, and educating the public about antimicrobials have demonstrated effectiveness in reducing antimicrobial pressure, a key precursor to resistance.

- To achieve these objectives, a comprehensive plan must be devised, led by a designated coordinating agency with appropriate funding support.
- **Adoption of a One Health Approach:** AMR poses the risk of regressing to a time before antibiotics, when even simple infections were untreatable.
- Therefore, containing AMR requires a One Health Approach, involving coherent, integrated, cross-sectoral collaboration and actions, recognizing the interconnectedness of human, animal, and environmental health.
- **Development of Antibiotic Resistance Breakers (ARBs):** Efforts should be directed toward developing antibiotic resistance breakers (ARBs) to restore the effectiveness of older classes of antibiotics.
- **Effective Surveillance and Data Management:** It is imperative to adopt strategies for optimizing antibiotic use across various disciplines and exercise prudence, including in the discharge of pharmaceutical effluents.
- Robust microbiological surveillance in agriculture, livestock, and pharmaceutical manufacturing facilities can inform evidence-based policy actions to mitigate AMR.
- **Promotion of Research:** Promoting research to address data gaps related to AMR is crucial for evidence-based assessment and intervention, further strengthening our efforts in this battle.

Conclusion

Regulating drug use is crucial, with a significant role for the government and medical practitioners. The key challenge is establishing systems to regulate antimicrobial use and funding research for new antibiotics, ultimately impacting the line between life and death.

Red Line Campaign

- The Union health ministry's Anti-Microbial Resistance awareness campaign urges people not to use medicines marked with a red vertical line, including antibiotics, without a doctor's prescription.
- These medicines are called the 'Medicines with the Red Line'.
- To check the irrational use of antibiotics, the 'red line' will help the users to differentiate them from other drugs.
- This campaign is aimed at discouraging unnecessary prescription and over-the-counter sale of antibiotics causing drug resistance for several critical diseases including TB, malaria, urinary tract infection and even HIV.

DEFENSE & INTERNAL SECURITY

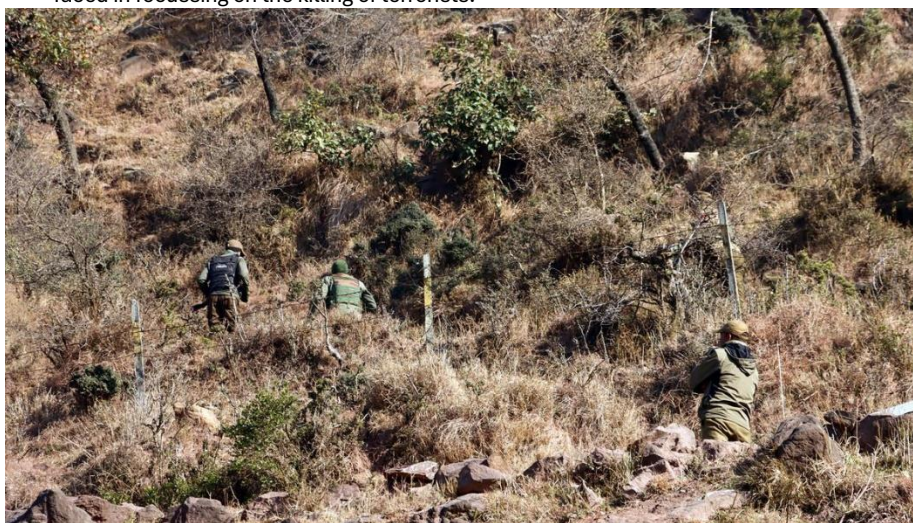
The Delusion Of Eliminating 'the Last Terrorist'

SOURCE: THE HINDU

PRIORITY: MEDIUM

Why in the news?

- Recently, the Director General of Police in Jammu and Kashmir claimed that the number of civilian killings and attacks on forces came down significantly in Jammu and Kashmir in 2023.
- This article discusses the approach toward neutralizing terrorist threats and the challenges faced in focussing on the killing of terrorists.



What is the recent terror situation in Jammu and Kashmir?

- According to the J&K DGP, the number of active terrorists had dropped to 31 with 4 active terrorists in the Jammu region, which is at an all-time low.
- In 2023, 76 terrorists (including 55 foreigners) were killed in anti-militancy operations in J&K.
 - Four policemen were also killed in 2023.
- The number of targeted attacks on civilians dropped to 14 from 31 in 2022.
- Recruitment was also low in 2023 at 20 as compared to 130 in 2022, with an 80% decline in overall terrorist recruitment.

News summary:

The Director General of Police in Jammu and Kashmir noted a significant reduction in terrorist incidents in 2023. This has prompted calls for a people-centric approach and a reevaluation of counter-insurgency strategies.

UPSC Mains Practice Questions

Q.1) The scourge of terrorism is a grave challenge to national security. What solutions do you suggest to curb this growing menace? What are the major sources of terrorist funding? (GS3 2017)

Q.2) The terms 'Hot Pursuit' and 'Surgical Strikes' are often used in connection with armed action against terrorist attacks. Discuss the strategic impact of such actions. (GS3 2016)

Q.3) Human rights activists constantly highlight the view that the Armed Forces (Special Powers) Act, 1958 (AFSPA) is a draconian act leading to cases of human rights abuses by the security forces. What sections of AFSPA are opposed by the activists? Critically evaluate the requirement with reference to the view held by the Apex Court. (GS3 2015)

- However, the DGP also cautioned that the number of terrorists could rise in 2024, posing a threat to the region.
- Shut-down calls and stone-throwing had dropped to zero with public endorsement of separatists dropping.
- According to officials, the administration had identified around 324 people who were responsible for fomenting trouble.
- The government has attached ninety-nine properties of separatists and militants while 201 overground workers were booked under the Public Safety Act.

Challenge

Ineffectiveness of Focus on Killing Approach

Description

Experts argue that prioritizing the elimination of terrorists is ineffective as it's impossible to neutralize the last terrorist. This approach fails to address the root causes of insurgency, leading to temporary reductions in terrorist activities but not sustainable peace.

Misplaced Focus on Counter-terrorism

Focusing solely on counter-terrorism without consolidating gains leads to instability. This was observed in Rajouri-Poonch, where despite a significant drop in insurgency by 2011-2012, a lack of consolidation led to a resurgence in terrorist threats.

Influence of Tangibles

The need for tangible results in anti-insurgency efforts often leads to the disregard of long-term strategies in favor of short-term gains. Factors such as limited tenures, competitive environments, and the pursuit of glory adversely affect counter-insurgency strategies.

Reluctance to Adapt

Despite changes in the dynamics of insurgency, the methodologies and tactics of security forces often remain unchanged. This reluctance to adapt impacts peacebuilding, consolidation, and conflict management efforts.

Need for a People-centric Approach

Counter-insurgency tactics should prioritize the aspirations and well-being of the local population. However, execution levels often sacrifice this focus for operational performance, leading to civilian casualties and undermining the ethics of security forces.

What should the government's future approach be?

- The major goal of the security force was to defend its people and their dignity as people lie at the heart of the democratic system.
- The political leadership must work to compensate for the cost to soldiers and act as a bridge between the interests of people and soldiers.
- Security forces must manage the conflict and hand over a stable situation to the government machinery for due political process, with enhanced participation and stakeholding of the people.
- This should be followed by strong political initiatives which help strengthen the voice of the people.
- Experts have claimed that Jammu and Kashmir, which has not had any assembly representation since 2018 will cease to have grassroots-level representation from January.
- A whole of government approach is necessary for the government to tackle the problem of terrorism in the region instead of eliminating terrorists.

Q.4) Analyse the complexity and intensity of terrorism, its causes, linkages, and obnoxious nexus. Also suggest measures required to be taken to eradicate the menace of terrorism. (GS3 2021)

Q.5) For effective border area management, discuss the steps required to be taken to deny local support to militants and also suggest ways to manage favorable perception among locals. (GS3 2020)

- The people-centric approach will ensure that the root causes of the conflict are addressed while reevaluating the current counter-terrorism strategy to reflect the changes in the situation.

Operation Sadhbhavana

- Under Operation Sadhbhavana, the Indian army adopted Topa Pir village in Poonch, Jammu and Kashmir, as a model village.
- It is a goodwill arrangement of the Indian army to address the needs of the people affected by terrorism in the region.
- Objectives:** Achieve
 - National integration
 - Women empowerment
 - Employment generation
 - National building and associated development activities.
- As part of the Operation, the Army will run Army Goodwill schools to improve the standard of education, implement infrastructure development projects, and conduct educational tours for children in remote areas.
- Collaborative Approach:** Projects are selected considering local aspirations and in coordination with the local civil administration.
- The operation seeks to transform Topa Pir village into a model village, with an emphasis on community development and welfare.
 - An earlier incident in the village had impacted the relationship between the Army and the local Gujjar and Bakarwal communities.

Conclusion

The reduction in terrorist activities in Jammu and Kashmir presents an opportunity for a re-evaluation of counter-insurgency strategies. Focusing solely on eliminating terrorists may prove counterproductive, necessitating a shift towards a people-centric approach that addresses root causes and ensures long-term stability through political initiatives. A comprehensive, whole-of-government approach is crucial for sustainable peace.

Is Pegasus Spyware Targeting Journalists in India?

SOURCE: THE HINDU

PRIORITY: MEDIUM

Why in the news?

- Recently, there have been allegations that the **Pegasus spyware** targeted **Indian journalists**.
- This issue surfaced after **Apple warned certain iPhone users**, including MPs, about potential state-sponsored attacks.

What are the Allegations?

- Targeting of Journalists:** The reports claim that Pegasus spyware was used to target journalists in India. This allegation suggests a breach of journalistic privacy and freedom.
- Intrusion Detected by Apple:** The intrusion was initially detected in October 2023 after Apple warned certain iPhone users, including Members of Parliament, about potential 'state-sponsored attacks'.
- Amnesty International's Findings:** Researchers at **Amnesty International's Security Lab** analyzed the allegedly infected devices and found traces of Pegasus's activity.
- Zero-Click Exploit Method:** The report describes a '**zero-click exploit**' method used to install Pegasus on devices without the owner's consent or action.
- Specific Exploit Used:** The specific exploit used, named **BLASTPAST**, involved two phases: establishing a link with Apple HomeKit and sending malicious content via iMessage.
- Allegations Against NSO Group:** The NSO Group, which makes Pegasus, is alleged to have facilitated these intrusions. However, NSO claims that their technologies are provided only to vetted law enforcement and intelligence agencies for fighting terror and major crime.

What is Pegasus Spyware?

- Pegasus is spyware, a specific type of **malicious software** designed to covertly **infiltrate devices and collect personal data**, sending this information back to the spyware user.
- Developed by the Israeli company NSO Group**, established in 2010, Pegasus initially spread via spear-phishing, which involves deceiving the user into clicking a malicious link in texts or emails.
- However, Pegasus' capabilities have evolved significantly. The software now employs "**zero-click**" attacks, which don't require any action from the device's owner to be successful.
- These attacks exploit "zero-day" vulnerabilities—unknown flaws in the operating system that manufacturers have not yet identified and patched.
- Pegasus has been used to target human rights activists, journalists, lawyers globally, and is reportedly sold to authoritarian regimes by the NSO Group.
- In India, it's alleged that ministers, government officials, and opposition leaders' phones were potentially compromised by this spyware.

What is Zero-Click Exploit Method?

News Summary: Allegations of Pegasus spyware targeting Indian journalists have sparked concerns over privacy and press freedom. Amnesty International calls for government transparency, leading to legal and political repercussions, and renewed cybersecurity efforts.

UPSC Previous Year Practice Question

Q. What are the different elements of cyber security? Keeping in view the challenges in cyber security, examine the extent to which India has successfully developed a comprehensive National Cyber Security Strategy. **(2022)**

Q. Keeping in view India's internal security, analyse the impact of cross-border cyber-attacks. Also discuss defensive measures against these sophisticated attacks. **(2021)**

Q. Discuss different types of cybercrimes and measures required to be taken to fight the menace. **(2020)**

Q. Data security has assumed significant importance in the digitized world due to rising cyber crimes. The Justice B. N. Srikrishna Committee Report addresses issues related to data security. What, in your view, are the strengths and weakness of the Report relating to protection of personal data in cyber space? **(2018)**

Q. Cyber warfare is considered by some defense analysts to be a larger threat than even Al Qaeda or terrorism. What do you understand by Cyber warfare? Outline the

- The "zero-click exploit" method refers to a **highly sophisticated cyber-attack** technique that allows a hacker to gain access to a device, such as a smartphone or computer, **without any interaction from the user**.
- This method is particularly alarming because it **bypasses the traditional need for user error**, like clicking on a malicious link or downloading a compromised file.

Types of Cyber Attacks

- **Malware:** This term, short for malicious software, encompasses any software designed to harm a computer, server, or network. Examples include ransomware, spyware, worms, viruses, and Trojans.
- **Phishing:** This technique involves using deceptive emails and websites to collect personal information.
- **Denial of Service (DoS) Attacks:** These attacks aim to disable a machine or network, denying service to legitimate users. They do this by overwhelming the target with traffic or sending information that causes a crash.
- **Man-in-the-Middle (MitM) Attacks:** Also known as eavesdropping attacks, these occur when attackers intercept a transaction between two parties. They can then siphon off or manipulate the data being exchanged.
- **SQL Injection:** This attack targets servers using SQL (Structured Query Language) for database management. Attackers use malicious code to exploit vulnerabilities and extract data from these databases.
- **Cross-Site Scripting (XSS):** This attack involves injecting malicious code into a website. However, unlike SQL injections, the website itself is not the target. The code attacks the website's visitors by running in their browsers, potentially compromising their personal information.
- **Social Engineering:** This method exploits human interaction. Attackers deceive individuals into circumventing standard security procedures, gaining access to protected, sensitive information.

Legal and Political Repercussions

- **Demand for Transparency and Accountability:** Amnesty International has called for transparency from the Indian government regarding its contracts with surveillance companies, including the Israeli firm NSO Group, the makers of Pegasus spyware.
- **Concerns Over Press Freedom and Civil Liberties:** The targeting of journalists with Pegasus spyware has raised concerns about press freedom and governmental surveillance in India.
- This situation has contributed to India's decline in the World Press Freedom Index since 2014.
- **Public Reaction:** Activists have filed petitions with the Supreme Court, alleging mass surveillance to suppress free speech and democratic dissent.
- **Supreme Court's Involvement:** It has requested a detailed affidavit from the Centre about the use of Pegasus.
- **Lack of Government Response:** The Indian government has not openly acknowledged the use of Pegasus spyware and has not cooperated fully with a Supreme Court-appointed committee investigating these issues, citing national security concerns.

Steps to Enhance Cyber Security

- **National Cyber Security Policy:** This policy focuses on creating a secure and resilient digital environment for citizens, businesses, and the government.
- It sets objectives and strategies to safeguard online information and infrastructure, enhance capabilities to prevent and respond to cyber threats, and reduce impact through the combined efforts of organizational structures, people, processes, and technologies.
- **Cyber Surakshit Bharat Initiative:** Launched to increase awareness of cybercrimes and establish protective measures for Chief Information Security Officers (CISOs) and IT staff in government sectors.
- **Indian Cyber Crime Coordination Centre (I4C):** Set up to offer a structured and cohesive framework for law enforcement to address cyber crimes effectively. It encompasses seven key components:
 - National Cyber Crime Threat Analytics Unit
 - National Cyber Crime Reporting Portal
 - National Cyber Crime Training Centre
 - Cyber Crime Ecosystem Management Unit
 - National Cyber Crime Research and Innovation Centre
 - National Cyber Crime Forensic Laboratory Ecosystem
 - Platform for Joint Cyber Crime Investigation Team
- **Cyber Swachhta Kendra (Botnet Cleaning and Malware Analysis Centre):** Established in 2017, this centre aims to maintain a safe digital space by identifying botnet infections in India and helping users clean and secure their systems to prevent re-infections.

cyber threats which India is vulnerable to and bring out the state of the country's preparedness to deal with the same. (2013)

MCQs

Q. In India, under cyber insurance for individuals, which of the following benefits are generally covered, in addition to payment for the loss of funds and other benefits? (UPSC 2020)

1. Cost of restoration of the computer system in case of malware disrupting access to one's computer.
2. Cost of a new computer if some miscreant wilfully damages it, if proved so.
3. Cost of hiring a specialized consultant to minimize the loss in case of cyber extortion.
4. Cost of defence in the Court of Law if any third party files a suit.

Select the correct answer using the code given below:

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

Answer: (b)

Q. The terms 'WannaCry, Petya and Eternal Blue' sometimes mentioned in the news recently are related to (UPSC 2018)

- (a) Exoplanets
- (b) Cryptocurrency
- (c) Cyber attacks
- (d) Mini satellites

Answer: (c)

Q. In India, it is legally mandatory for which of the following to report on cyber security incidents? (UPSC 2017)

1. Service providers
2. Data centers
3. Body corporate

Select the correct answer using the codes given below:

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

Answer: (d)

- **Computer Emergency Response Team - India (CERT-In):** Part of the Ministry of Electronics and Information Technology (MeitY), CERT-In compiles and analyzes data on cyber incidents, issuing cybersecurity alerts.
- **Critical Information Infrastructure (CII):** Defined as a computer resource whose destruction can significantly impact national security, economy, public health, or safety.
- The National Critical Information Infrastructure Protection Centre (NCIIIPC) is tasked with safeguarding CII in key sectors like power, banking, telecommunications, transportation, government, and strategic industries.
- **Defence Cyber Agency (DCyA):** A tri-service command of the Indian Armed Forces, the DCyA is dedicated to countering cybersecurity threats. Its capabilities include conducting various cyber operations like hacking, surveillance, data recovery, encryption, and deploying countermeasures against cyber threats.

Conclusion

The serious allegations regarding the use of Pegasus spyware against journalists in India, raises concerns about privacy, surveillance, and freedom of the press. The incident underscores the tension between national security and individual rights, sparking debates on surveillance and its impact on democratic processes.

ULFA Faction Signs Peace Agreement

SOURCE: INDIAN EXPRESS

PRIORITY: MEDIUM

Why in the news?

- Recently, the pro-talks faction of the United Liberation Front of Asom (ULFA) signed a peace accord with the Union and state governments.



What was the recent peace accord?

- The **pro-talks faction of the United Liberation Front of Asom (ULFA)** signed a **tripartite memorandum of settlement** with the Union government and the government of Assam in which they committed to shunning violence, disbanding the organization, and joining the democratic process.

Terms of the Settlement

- **Non-violence:** ULFA representatives agreed to **forgo violence** and **lay down all their arms and ammunition**.
- **Vacation of camps:** All camps occupied by ULFA's armed cadres would be vacated.
- **Democratic participation:** They would also **engage in the peaceful democratic process established by law** and work towards **maintaining the integrity of the country**.
- **Development of Assam:** The Union government has agreed to provide a huge package and several big projects for the all-round development of Assam.
 - This will also include an **investment of ₹1.5 lakh crore**.
- **Delimitation:** 97 out of 126 seats were secured for Indigenous people after the recent delimitation process in the state. It was agreed that this would continue.
- **Committee formation:** A committee would be formed under the Union Ministry of Home Affairs to monitor the implementation of the program.
- **Constitutional safeguards:** **Land rights would be protected** and **restrictions on migration** from one constituency to another would be put in place.

What is the ULFA?

News Summary: The pro-talks faction of ULFA signs a peace accord with the Union and Assam governments, committing to non-violence, democratic participation, and development, marking a crucial step for peace in Assam.

UPSC Mains Practice Questions

- Q.1)** Human rights activists constantly highlight the view that the Armed Forces (Special Powers) Act, 1958 (AFSPA) is a draconian act leading to cases of human rights abuses by the security forces. What sections of AFSPA are opposed by the activists? Critically evaluate the requirement with reference to the view held by the Apex Court. (GS3 2015)
- Q.2)** The north-eastern region of India has been infested with insurgency for a very long time. Analyze the major reasons for the survival of armed insurgency in this region. (GS3 2017)

MCQs

Question: The provisions in the Fifth Schedule and Sixth Schedule in the Constitution of India are made in order to [UPSC 2015]

- protect the interests of Scheduled Tribes
- determine the boundaries between States
- determine the powers, authority, and responsibilities of Panchayats
- protect the interests of all the border States

Answer: (a)

Question: Which of the following is correct about the AFSPA?

- It can only be declared by the Chief Minister of the state.



- The **United Liberation Front of Assam (ULFA)** was formed during the **anti-foreigner movement** of 1979 in Assam.
- The Assamese people have their own, unique culture and language, and a strong sense of identity.
- **Since the 19th century, Assam's tea, coal, and oil economy has attracted migrants from all over.**
- This resulted in the formation of insecurities among the indigenous population which was further exacerbated by Partition, and the subsequent exodus of refugees.
- As a result, a six-year-long mass movement was launched until the **Assam Accord was signed in 1985** to find a satisfactory solution.
- However, a group of more radical thinkers led by Bhimakanta Buragohain, Arabinda Rajkhowa, Anup Chetia, Pradip Gogoi, Bhadrashwar Gohain, and Paresh Baruah formed ULFA on April 7, 1979.
- **Objective:** Establish a **sovereign Assamese nation (Swadin Asom)** through armed struggle against the Indian state.
- It has used strategies such as kidnappings, extortions, executions, and bomb blasts to achieve its goals.
- **Factions:**
- **Pro-talks faction led by Arabinda Rajkhowa and**
- **Anti-talks faction led by Paresh Baruah.**
- **Geographical influence:** They generally operated through camps in jungles, hilly areas, and cross-border areas.
- It also has camps in Myanmar, Bangladesh, and Bhutan.
- **Links to other insurgents:** It has been linked with the ISI (Pakistan) and other terror outfits in the Northeast, Myanmar, etc.
- **Censure by the government:** The **Government of India banned the organization and termed it a terrorist organization in 1990 under the Unlawful Activities (Prevention) Act.**
- **Other insurgent groups in Assam:** Bodo Liberation Tigers, National Democratic Front of Bodoland (N.D.F.B.), and the United People's Democratic Solidarity (U.P.D.S.).

Government's strategy against the ULFA

- In 1990, the Centre launched **Operation Bajrang** in which 1,221 ULFA insurgents were arrested.
- Assam was declared a '**disturbed area**' and **President's rule** and the **Armed Forces Special Powers Act (AFSPA)** were invoked.
- The government has also attempted to use **factionalism in the ULFA** to counter the strategies of the ULFA.
- **Peace talks:**
- The pro-talks faction of the ULFA has been proactive in conducting talks with the government and in 2011 signed the suspension of operation (SoO) with the MHA and the Assam government.
- In 2005, the ULFA formed an 11-member '**People's Consultative Group**' (PCG) comprising noted intellectuals and Jnanpith awardee author late Indira Raisom Goswami.
- The committee mediated three rounds of talks before the ULFA walked out.

What were the major factors behind the insurgency in Assam and the growth of ULFA?

- **Ethnicism:** Assam has traditionally witnessed tensions between the indigenous ethnic groups of the state.

- Both Central and armed forces can arrest and search any premises without a warrant.

How many of the above statements is/are correct?

- 1 only
- 2 only
- Both 1 and 2
- None of the above

Answer: (b)

- These include the **Bodo (35%), Mishing (17.52%), Karbi (11.1%), Rabha (7.6%), Sonowal Kachari (6.5%), Lalung (5.2%), Garo (4.2%), and Dimasa (3.2%)**.
- These ethnic groups have been in constant conflict for autonomy over the years.
- **Immigration:** The arrival of **Bengali-speaking Muslims from Bangladesh** has been a major source of tension in the state as the locals see the migrants as a **threat to their unique identity, culture, and economic well-being**.
- **Political:** **Sub-national or regional movements** like the **demand for Bodoland** have also arisen in the state, contributing to the insurgency.
- **Economic:** The Northeast region of India, including Assam, has remained **isolated from mainland India**.
- This has prevented the state's economy from growing as quickly as some of the larger states on the mainland.
- Moreover, insurgents were able to build a **perception of the Delhi-based Union government misusing and exploiting the resources of the Northeast**.

Conclusion

The tripartite settlement with the pro-talks faction of the United Liberation Front of Asom (ULFA) marks a significant step towards peace in Assam. The Agreement which addresses historical grievances also emphasizes non-violence, democratic participation, and development. It therefore provides a framework for the socio-political transformation of Assam.

Free Movement Regime To End At Myanmar Border

SOURCE: THE HINDU

PRIORITY: MEDIUM

Why in the news?

- The Indian government is set to scrap the Free Movement Regime (FMR) along the Myanmar border which allowed residents in border areas to cross freely.
- Visas will be required to cross the border with steps also being taken to complete fencing.



What has the government decided about the Free Movement Regime?

- **Suspension of FMR:** According to senior government officials, the Union Government is expected to scrap the **Free Movement Regime**, which was last revised in 2016.
- **Border security:** A survey of the border areas has been completed using **UAVs**.
 - Around 300 km of the border, which was previously unfenced will be fenced.
 - The 2022-23 annual report of the Ministry of Home Affairs, the government had announced plans to build a 100-kilometer **Smart Fencing System** along the India-Myanmar border.

What is the Free Movement Regime?

- The **Free Movement Regime (FMR)** is a programme initiated in the **1970s** that allows people living within **16 km of the India-Myanmar border** to travel up to **16 km into the other country without a visa**.
- India and Myanmar share a **1,643 km-long border** that passes through **Arunachal Pradesh (520 km), Nagaland (215 km), Manipur (398 km), and Mizoram (510 km)**.
- The residents of the border areas could cross the border by producing a **border pass** issued by the competent authority.
- The border pass had a **one-year validity** and **allowed the visitor to stay in the country for up to two weeks per visit**.
- The **boundary between India and Myanmar** which was demarcated by the British in 1826 divided people of the same ethnicity and culture into two nations without seeking their opinion.
- As a result, the FMR was put in place to enable ethnically similar communities living across the border to move freely without requiring a visa.

News Summary: The Indian government plans to eliminate the Free Movement Regime (FMR) along the Myanmar border, requiring visas and implementing fencing, citing security concerns and the need to address cross-border challenges.

UPSC Mains Practice Questions

Q.1) Analyze the multidimensional challenges posed by external state and non-state actors, to the internal security of India. Also, discuss measures required to be taken to combat these threats. **(GS3 2021)**

Q. 2) Analyze internal security threats and transborder crimes along Myanmar, Bangladesh and Pakistan borders including Line of Control (LoC). Also discuss the role played by various security forces in this regard. **(GS3 2020)**

Q.3) Border management is a complex task due to difficult terrain and hostile relations with some countries. Elucidate the challenges and strategies for effective border management. **(2016)**

MCQs

Question: The Department of Border Management is a Department of which one of the following Union Ministries? (2008)

- Ministry of Defence
- Ministry of Home Affairs
- Ministry of Shipping, Road Transport and Highways
- Ministry of Environment and Forests

Answer: (b)

Question: With reference to Home Guards, consider the following statements:

- It was based on the **deep-rooted familial and ethnic connections between communities living on either side of the unfenced border.**
- It is a reflection of the **physical, ethnic, linguistic, cultural, and fraternal linkages among the trans-border villagers.**
- It was aimed at the **cultural assimilation of the locals in trans-border villages** through weddings, celebration of common festivals together, and cross-border trade.

What are the opinions of the states on the FMR?

- **Nagaland and Mizoram:** These states are likely to oppose the Center's decision to scrap the FMR.
- However, the **Center has stated that it has the final decision on issues of border security** and that it would only consider the opinion of the states.
- **Manipur:** The **FMR has been suspended by the Manipur government since 2020 in the aftermath of the COVID-19 pandemic.**
- The Chief Minister of Manipur had urged the Union Ministry of Home Affairs to cancel the FMR along the India-Myanmar border and complete the fencing of the border.

What are the reasons for the scrapping of the FMR?

- **Refugees:** In the aftermath of Myanmar's military coup, over 40,000 and 4,000 refugees (**Kuki-Chin-Zo ethnic groups**) entered Mizoram and Manipur respectively.
- The Chief Minister of Manipur has claimed that the **free movement of people across the border was a key factor in the ongoing ethnic violence** in the state.
- **Security:** The FMR regime has been accused of abetting illegal cross-border activities such as **illegal immigration, drug and gold trafficking, insurgency, etc.**
- The Indo-Myanmar border is mainly composed of **forested and undulating terrain** that is almost entirely unfenced and therefore difficult to monitor.
- **Myanmar is part of the Golden Triangle (Northern Thailand, Laos and Myanmar)** so free movement has contributed to the drug menace in the country.
- Moreover, **secessionist movements in Northeast India** have grown significantly in the region as a result of free movement.
- As a result of the porous border, **insurgents in India have obtained economic, logistic, and military support and arms supplies from groups in Myanmar.**

Committees to study the FMR

- In 2015, a committee headed by R.N. Ravi suggested that the Union government replace the misnomer related to "free border movement".
- It recommended replicating the model prevalent in areas across the Bangladesh border.
- It also suggested implementing dedicated crossing points in border villages with policemen to regulate the movement of people.
- In 2017, another committee was formed under Rina Mitra, Special Secretary-Internal Security, to examine the rules and regulations adopted by the border States for implementation of a free movement regime.

How could the decision impact the local communities?

- The scrapping of the FMR could have a significant impact on the daily lives of the people residing in the border areas for whom cross-border access is important to meet their various needs.
- If border residents are not permitted to freely move across the border, it could strain the cultural and social fabric of the communities that live across the border.

Way forward

- Strengthen diplomatic relations with Myanmar.
- Improve fencing across the border as patrolling and intelligence alone are not sufficient to tackle challenges.
- Infrastructural development and formalization of trade at dedicated points would help mitigate most negative impacts.
- Enhancing infrastructure and formalizing trade at designated entry points has been suggested as a way to counter the challenge of insurgency.
- Steps must be taken to involve border communities in decision-making for effective and sensitive border management.

Conclusion

- The FMR requires better regulation to handle challenges such as trafficking, insurgency, and the influx of refugees while preserving cross-border relationships.
- Some experts suggest that it would not be desirable to completely remove the FMR or fully fence the border considering its impact on the culture, lives, livelihoods, education, and healthcare of the residents.

1. Home Guards are raised under the Home Guards Act and Rules of the Central Government.
2. The role of the Home Guards is to serve as an auxiliary force to the police in maintenance of the internal security
3. To present infiltration on the international border/coastal areas, the Border Wings Home Guards Battalions have been raised in some states.

How many of the above statements are correct? (UPSC 2023)

- a. Only one
- b. Only two
- c. All three
- d. None

Answer: (b)

Punjab's Drug Crackdown: A Promise to Keep

SOURCE: INDIAN EXPRESS

PRIORITY: MEDIUM

Why in the news?

News Summary: Punjab faces a persistent drug issue, with over 11,000

- The article delves into **Punjab's ongoing struggle with drug issues** and the state's intensified efforts to combat this menace.
- From April 1, 2022, to February 28, 2023, **Punjab Police filed 11,156 FIRs under the Narcotic Drugs and Psychotropic Substances Act**, with **women involved in nearly 10% of cases**.

Extent of the Drug Issue in Punjab

- Between April 1, 2022, and February 28, 2023, there were **11,156 FIRs filed under the Narcotic Drugs and Psychotropic Substances Act** by the Punjab Police.
- **Nearly 10% of these cases involve women**, indicating a gendered dimension to the issue.
- Punjab Health Minister reported that around **10 lakh individuals** are grappling with addiction.
- The state has witnessed a consistent increase in drug-related activities since 2019, except for a brief decline during 2020 due to the COVID-19 pandemic.
- From April 2020 to March 2023, there were **266 reported deaths** due to overdose of narcotic and psychotropic substances.

Drug Trade Trends in Punjab

- There has been a **rise in the popularity of pharmaceutical opioids (nasheeli goliyan)** over heroin (chitta).
- Despite efforts, major drug dealers continue to evade arrest, indicating persistent challenges in controlling the trade.
- Punjab's location as a border state makes it central to the **Golden Crescent** trade route of heroin and cocaine, exacerbating its drug problems.
- **The involvement of women**, particularly from economically weaker sections or rural backgrounds, suggests a **link between the drug trade and poverty**.
- There is a need to dismantle organized drug mafias for a more effective crackdown.

What is a Golden Crescent?

- The "Golden Crescent" is a term used to refer to a region in South Asia known for its significant production of illegal narcotics, particularly opium and its derivative, heroin.
- The Golden Crescent encompasses parts of three countries: **Iran, Afghanistan, and Pakistan**.
- These countries are major players in the global illicit drug trade, with Afghanistan being the largest producer of opium in the world.
- The term "Golden Crescent" is often used in contrast to the **"Golden Triangle,"** another infamous region known for drug production.
- The Golden Triangle, located in Southeast Asia, includes parts of **Myanmar (Burma), Laos, and Thailand**.
- It has historically been a major source of opium production, heroin manufacturing, and drug trafficking.

Causes of the Drug Issue in Punjab

- **Geographic Vulnerability:** Punjab's location as a border state makes it central to the **Golden Crescent (Iran-Afghanistan-Pakistan) trade route** for heroin and cocaine. This has transformed Punjab from a mere transit point into one of the major end consumers of these drugs.
- **Increase in Drug Popularity and Varieties:** There has been a shift in drug preferences in the state, with pharmaceutical opioids (nasheeli goliyan) becoming more popular than traditional substances like heroin (chitta).
- **Socio-Economic Factors:** Poverty and social disenfranchisement act as significant drivers of the drug trade.
- Women, especially from **economically weaker sections, denotified tribes, or rural backgrounds**, are increasingly involved in the drug trade, often pushed into it by family circumstances or the lure of quick wealth.
- This is particularly noted in the **Malwa region of Punjab**, which has low scores on various social indices.
- **Systemic Issues in Law Enforcement:** There are potential loopholes in law enforcement, as evidenced by a uniform pattern of apprehensions in FIRs, which could lead to acquittals.
- **Demand and Supply Dynamics:** The ongoing demand for drugs in the state ensures the persistence of supply chains. Even with crackdowns on suppliers, the demand side of the equation remains a challenge.
- **Challenges in Tackling Organized Crime:** There is a need to dismantle organized drug mafias. While minor drug seizures are important, the larger issue lies with the heads of these networks who continue to evade arrest and prosecution.
- **Lack of Rehabilitation and Awareness:** There's an indication that more efforts are needed in terms of awareness, education, and rehabilitation to provide alternative opportunities and reintegrate individuals into society, moving the focus from prevention to rehabilitation.

Measures Taken by Punjab Government

cases filed, women involved in 10%. The state combats rising opioid use, geographical vulnerabilities, and socio-economic factors, urging comprehensive measures.

UPSC Previous Year Practice Question

Q. The use of unmanned aerial vehicles (UAVs) by our adversaries across the borders to ferry arms/ammunitions, drugs, etc., is a serious threat to the internal security. Comment on the measures being taken to tackle this threat. **(2023)**

Q. India's proximity to two of the world's biggest illicit opium-growing states has enhanced her internal security concerns. Explain the linkages between drug trafficking and other illicit activities such as gunrunning, money laundering and human trafficking. What counter-measures should be taken to prevent the same? **(2018)**

Q. In one of the districts of a frontier state, narcotics menace has been rampant. This has resulted in money laundering, mushrooming of poppy farming, arms smuggling and near stalling of education. The system is on the verge of collapse. The situation has been further worsened by unconfirmed reports that local politicians as well as senior police officers are providing surreptitious patronage to the drug mafia. At that point of time a woman police officer, known for her skills in handling such situations is appointed as Superintendent of Police to bring the situation to normalcy. If you are the same police officer, identify the various dimensions of the crisis.

Based on your understanding, suggest measures to deal with the crisis. **(2019)**

MCQs

Q. Consider the following statements: (UPSC 2019)

1. The United Nations Convention against Corruption (UNCAC) has a "protocol against the smuggling of Migrants by Land, Sea and Air".
2. The UNCAC is the ever-first legally binding global anti-corruption instrument.
3. A highlight of the United Nations Convention against Transnational organized Crime (UNTOC) is the inclusion of a specific chapter aimed at returning assets to their rightful owners from whom they had been taken illicitly.
4. The United Nations office on Drugs and Crime (UNODC) is mandated by its member states to assist in the implementation of both UNCAC and UNTOC.

Which of the following statements given above are correct?

- (a) 1 and 3 only
- (b) 2, 3 and 4 only
- (c) 2 and 4 only

- **Severe Crackdown on Suppliers:** This includes the seizure of properties belonging to drug suppliers as part of a tough stance against those involved in the drug trade.
- **Awareness and Rehabilitation Campaigns:** The government has initiated creative campaigns to raise awareness about the dangers of drug use and to promote rehabilitation.
- These campaigns include activities like cyclothons, street plays, and gully cricket, aiming to engage the community in prevention efforts.
- **Focus on Women's Involvement in Drug Trade:** This includes setting up all-women anti-drug committees in some villages, particularly in the Malwa region.
- **Educational Initiatives and Alternate Vocations:** The government is looking at improving access to education and providing alternate vocational opportunities. This approach is aimed at reintegrating individuals into society and offering them alternatives to involvement in the drug trade.
- **Dismantling Organized Drug Mafia:** The government is focusing on disrupting the operations of the organized drug mafia. This includes targeting those at the top of the drug trade networks to significantly impact the drug supply chains.
- **Investigation and Legal Action:** As indicated by the significant number of FIRs (First Information Reports) filed under the Narcotic Drugs and Psychotropic Substances Act, the government is actively pursuing legal action against those involved in the drug trade.

Measures Implemented to Regulate Drug Trafficking in India

- **National Policy on Narcotic Drugs and Psychotropic Substances (NDPS):** Introduced in 1985, this policy aims to control drug trafficking and the use of narcotic drugs and psychotropic substances within India.
- **Narcotics Control Bureau (NCB):** Established in 1986, the NCB serves as the central agency for enforcing drug laws in India, coordinating anti-drug efforts across the country.
- **National Narcotics Coordination Portal:** Recognizing the need for real-time coordination among various stakeholders in drug law enforcement, the Ministry of Home Affairs has established a four-tier coordination mechanism.
- This includes Apex NCORD, Executive NCORD, State NCORD, and District CORD, all working together to combat the drug menace.
- **Integrated Rehabilitation Centers for Addicts (IRCA):** The Ministry of Social Justice and Empowerment (MoSJE) provides financial support to NGOs and voluntary organizations operating IRCA. These centers offer comprehensive rehabilitation services to individuals with substance abuse disorders.
- **National Action Plan for Drug Demand Reduction (NAPDDR):** Launched for 2018-2025 by the MoSJE, NAPDDR aims to reduce the adverse consequences of drug abuse through a multifaceted strategy.
- Activities under this plan include awareness programs, workshops, community-based interventions, treatment facilities, and capacity building for service providers.
- **Nasha Mukht Bharat Abhiyaan/Drugs-Free India Campaign:** Commenced on August 15, 2020, for 272 districts across 32 States/Union Territories identified as highly vulnerable to drug usage. Over 500 voluntary organizations nationwide are involved, receiving financial support under the NAPDDR scheme.

International Collaborations and Treaties

- **Bilateral Agreements and Conventions:** India has entered into numerous bilateral agreements and conventions with other nations to regulate drug trafficking.
- These include the UN Single Convention on Narcotic Drugs 1961, The Convention on Psychotropic Substances, 1971, and The Convention on Illicit Traffic in Narcotic Drugs and Psychotropic Substances, 1988.
- **Mutual Legal Assistance Treaties (MLATs):** India has signed various MLATs with other countries to enhance cooperation in the investigation, prosecution, and extradition of drug traffickers. These treaties establish a legal framework for the exchange of information and evidence.
- **Participation in International Organizations:** India is a member of the United Nations Office on Drugs and Crime (UNODC) and the International Narcotics Control Board (INCB). These organizations coordinate global efforts to prevent drug trafficking.
- **Joint Operations and Information Sharing:** India collaborates with other nations through joint operations and intelligence sharing to prevent drug trafficking.
- For example, the **Indian Coast Guard (ICG)** works closely with security agencies and coast guards in Sri Lanka, Maldives, and Bangladesh to make significant seizures and combat drug trafficking effectively.

Challenges Encountered in Combating Drug Trafficking in India

- **Dark Net:** Darknet markets, characterized by anonymity and low risks, have supplanted traditional drug markets, making tracking difficult. Studies indicate that 62% of the darknet is involved in illicit drug trafficking.

(d) 1, 2, 3 and 4

Answer: (c)

Q. Which of the following is/are included in the Directive Principles of the State Policy? (UPSC 2008)

1. Prohibition of traffic in human beings and forced labour.
2. Prohibition of consumption except for medicinal purposes of intoxicating drinks and of other drugs which are injurious to health.

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

Answer: (b)

- **Cryptocurrency Transactions:** The use of cryptocurrency payments and doorstep deliveries through courier services has made darknet transactions appealing to traffickers.
- **Tech-Savvy Traffickers:** Drug traffickers are increasingly leveraging technology, utilizing the darknet, untraceable internet-based communication for drug-related activities, and drones for cross-border drug transportation.
- **Safe and Anonymous Methods:** Drug traffickers have increasingly relied on courier, parcel, and postal services, particularly during the COVID-19 pandemic when vehicular, ship, and airline movements were restricted.
- Instances include drug businesses operating through fraudulent e-commerce websites and listings on platforms like Amazon.
- **Nexus with NRIs:** Recent investigations have exposed connections between drug cartels and Non-Resident Indians (NRIs) based in various countries such as Canada, Australia, Singapore, Hong Kong, and several European nations.
- **Local Gang Involvement:** A new trend involves organized gangs, traditionally involved in extortion, being utilized for drug trafficking due to their existing logistics capabilities.
- **Insufficient Law Enforcement Coordination:** Despite efforts to enhance law enforcement, a perceived lack of coordination among different agencies has hindered effective measures against drug trafficking.
- **Lack of Social Awareness:** The stigmatization of drug abuse and addiction within Indian society impedes awareness campaigns and prevention efforts.
- **Inadequate Rehabilitation Facilities:** There is a pressing need to expand rehabilitation facilities for drug addicts in India, as existing resources often fall short of addressing the needs of a large number of individuals struggling with addiction.

Way Forward

- **Enhancing Law Enforcement:** The government should take steps to bolster the capabilities of law enforcement agencies involved in drug control, including Customs, the Narcotics Control Bureau, and state police forces.
- **Promoting Public Awareness:** Initiating public awareness campaigns can help educate people about the perils of drug abuse and the significance of preventing drug trafficking.
- **Addressing Drug Addiction:** The government can offer greater support for drug addiction treatment and rehabilitation, such as establishing additional treatment centers and allocating increased funding to existing facilities.
- **Strengthening International Cooperation:** Collaborating with other nations can facilitate enhanced international cooperation and the sharing of information and intelligence concerning drug trafficking networks.
- **Tackling Socio-Economic Issues:** Socio-economic factors like poverty, unemployment, and limited access to education can contribute to drug abuse and trafficking.
- Consequently, the government can address these challenges by implementing poverty reduction initiatives, promoting employment generation schemes, and expanding educational opportunities.
- **Reinforcing Legal Frameworks:** The government has the potential to fortify laws and regulations related to drug trafficking, imposing more stringent penalties for offenders.
- **Curbing Demand:** Reducing the demand for drugs can be achieved through community-based prevention programs, educational initiatives, and awareness campaigns.
- **Enhancing Border Control:** The government can bolster border control measures by increasing surveillance, deploying advanced technology and equipment, and strengthening border security forces.

Conclusion

Punjab needs to intensify efforts against drug networks and enhance educational and employment opportunities for those most vulnerable. Strengthening the legal system is crucial to closing loopholes that enable drug trafficking to persist. A sustained focus on rehabilitation programs and targeting high-level traffickers will aid in reducing both the supply and demand for narcotics.

DRDO Anti-Drone Tech Ready, Handed Over To BEL, Private Firms

SOURCE: THE HINDU

PRIORITY: MEDIUM

Why in the news?

- Recently, the DRDO announced that its counter-drone system was ready for production and that it had been demonstrated to armed services and other internal security agencies.
- The 42nd report "A review of working of DRDO" of the House Panel which was tabled in the Parliament recently claimed that it could detect, identify, and neutralize a drone.

News Summary: The DRDO has unveiled its Drone Detect, Deter, and Destroy system (D4S), offering indigenous anti-drone capabilities. Challenges in the UAV industry include battery unavailability and insufficient investment.

UPSC Mains Practice Questions

Q.1) Foreign direct investment in the defense sector is now said to be



What is the counter-drone system developed by DRDO?

- The Drone Detect, Deter, and Destroy system (D4S) is an indigenously developed counter-drone system developed by the Defence Research and Development Organization and manufactured by Bharat Electronics Limited (BEL).
- **Aim:** Detect rogue drones that are likely to attack the most vulnerable places.
- According to the House Panel on Defence, it is a comprehensive integrated anti-drone system that comprises the detection, identification, and neutralization of a drone.
- **Features:**
 - **Soft kill and hard kill capabilities:** Soft kill i.e. instantly detects and jams micro drones and hard kill i.e. uses laser-based kill mechanism to terminate all types of drones, including micro drones.
 - It uses DRDO's RF/Global Navigation Satellite System (GNSS) to detect the frequency used by the controller and then jams the signals.
 - It can detect and jam micro-drones at a distance of up to 3 km.
 - It can lase a target 1-1.25 km away depending on the wattage of the laser weapon.
- India's three services have placed 23 orders for the technology which can be used for border management and can be customized for different challenges.

What are the other steps taken by the DRDO?

- The DRDO has now shifted focus on high endurance Unmanned Aerial Vehicles (UAV) with the capability for smaller drones existing in the industry.
- The DRDO is also developing micro drones and conducting R&D operations for anti-drone technology.
- However, the domestic industry already possessed the capacity to build smaller drones that could loiter and attack similar to how they were used in Ukraine, so it is not a focus area for the DRDO.
- Therefore, the DRDO is focussing on high-end drones.

Indigenously developed UAV technology

- **Tapas MALE:** The Tapas Medium Altitude Long Endurance (MALE) UAV developed by DRDO for Intelligence, Surveillance, Target Acquisition, and Reconnaissance (ISTAR) purposes is in an advanced stage of developmental trials.
- **Archer:** It is a short-range armed UAV developed by DRDO for reconnaissance, surveillance, and low-intensity conflict.
 - Its developmental flight trials are in progress.
- **Indrajaal:** It is India's first indigenous drone defense dome that was designed and developed by a Hyderabad-based R&D firm - Grene Robotics to autonomously protect an area of 1000-2000 sq km against aerial threats such as UAVs, loitering munitions, and low-Radar Cross Section (RCS) targets.

Defence - UAV industry in India

- According to a FICCI report, India's defense UAV industry is estimated to grow to ₹38,300 crores by 2025 and further to ₹1,01,000 crores by 2030.
- It also stated that counter-unmanned aircraft systems could grow from ₹20,000 crores by 2025 to ₹49,000 crores by 2030.
- **Classification of drones:**
 - **Nano drone:** less than or equal to 250 grams;
 - **Micro drone:** greater than 250 grams and less than or equal to 2 kilograms
 - **Small drone:** greater than 2 kilograms and less than or equal to 25 kilograms
 - **Medium drone:** greater than 25 kilograms and less than or equal to 150 kilograms.
 - **Large drone:** greater than 150 kilograms
- **Applications of drones in the defense sector:**

liberalized. What influence this is expected to have on Indian defense and economy in the short and long run? (GS3 2014)

Q.2) International civil aviation laws provide all countries complete and exclusive sovereignty over the airspace above their territory. What do you understand by 'airspace'? What are the implications of these laws on the space above this airspace?

Discuss the challenges that this poses and suggest ways to contain the threat. (GS2 2014)

MCQs

Question: Consider the following activities: (2022)

1. Spraying pesticides on a crop field
 2. Inspecting the craters of active volcanoes
 3. Collecting breath samples from spouting whales for DNA analysis
- At the present level of technology, which of the above activities can be successfully carried out by using drones?
- a. 1 and 2 only
 - b. 2 and 4 only
 - c. 1 and 3 only
 - d. 1, 2 and 3

Answer: (d)

Question: Aerial metagenomics best refers to which one of the following situations? (2023)

- a. Collecting DNA samples from air in a habitat at one go
- b. Understanding the genetic makeup of avian species of a habitat
- c. Using air-borne devices to collect blood samples from moving animals
- d. Sending drones to inaccessible areas to collect plant and animal samples from land surfaces and water bodies

Answer: (a)

- Surveillance and Reconnaissance Operations
- Search and Rescue Operations
- Counter-terrorism Operations
- Maritime and Border Security
- Offensive and combat purposes
- **Schemes:**
- **PLI Scheme:** The government launched a production-linked incentive scheme to strengthen the local drone ecosystem by incentivizing indigenous manufacturing.
- **Drone Import Policy:** The Union government has banned the import of drones except for R&D, defense, and security purposes to boost domestic manufacturing of drones.

What are the challenges faced by the defense - UAV industry in India?

- **Unavailability of drone batteries:** One of the major concerns highlighted before the House Panel was the unavailability of batteries for drones.
- According to the Union Defense Ministry, the older generation of drones depend on Nickel-Cadmium and Silver-Zinc batteries as secondary sources of power.
- The basic cells for these batteries are manufactured in India which means there are no issues with their availability.
- In more modern drones like Tapas, lithium Ion-based batteries with indigenous battery management systems have been developed by the DRDO in association with a private vendor. However, the cells used in these batteries are imported.
- DRDO and ISRO are cooperating on lithium-ion cell development to ensure self-reliance.
- Other concerns faced by the industry include insufficient investment and R&D, the absence of relevant technology, and inadequate links between the industry and policymakers.
- This makes domestic manufacture of defence-grade drones difficult.

Way forward

- The Indian drone manufacturing industry claimed that local manufacturing and stakeholder collaboration were necessary to create an ecosystem for the indigenization of defense drones.
- **Policy reform:** According to experts, India should not rely on neighbors for critical systems. Instead, the government must address gaps in technology and improve the flawed Request for Information (RFI) and Request for Proposal (RFP) processes.
- **Local investment:** Some experts highlighted the need for domestic investment in defense-drone manufacturing
- **R&D:** The promotion of research and development was necessary as grants given for academic research did not translate into actual products due to low technology readiness levels.
- The government should also offer incentives linked to design and products, and establish intellectual property rights to protect the differentiation of products and promote faster adoption of the latest technology breakthroughs

Conclusion

DRDO's successful development of counter-drone capabilities is a significant achievement in India's defense capabilities against aerial threats. However, it still faces challenges such as battery unavailability and inadequate investment. Therefore, a comprehensive approach comprising reforms, domestic investment, and robust research and development will foster the country's defense UAV industry.

DRDO

- The Defence Research and Development Organization (DRDO) is the R&D wing of the Ministry of Defence, Govt of India.
- It is India's largest research organization and was formed in 1958 by amalgamating the Technical Development Establishment (TDEs) of the Indian Army and the Directorate of Technical Development & Production (DTDP) with the Defence Science Organisation (DSO).
- **Aim:** Empower India with cutting-edge defense technologies and a mission to achieve self-reliance in critical defense technologies and systems.
- **Headquarters:** New Delhi.
- It comprises of a network of laboratories engaged in developing defense technologies in areas such as aeronautics, armaments, electronics, land combat engineering, life sciences, materials, missiles, and naval systems.

Limits And Borders: On The Territorial Jurisdiction Of The Border Security Force

SOURCE: THE HINDU

PRIORITY: HIGH

Why in the news?

- Recently, the Supreme Court of India agreed to examine if all border States have to be treated alike while demarcating the jurisdiction of the Border Security Force (BSF).
- Punjab had filed a suit against the Union government under Article 131 of the Constitution challenging the decision to increase the operational jurisdiction of the BSF from 15 km to 50 km.

News Summary: The Supreme Court of India has agreed to examine the extension of the Border Security Force's jurisdiction, responding to Punjab's challenge against



increased operational limits from 15 km to 50 km.

UPSC Mains Practice Questions

Q.1) How far are India's internal security challenges linked with border management, particularly in view of the long porous borders with most countries of South Asia and Myanmar? (GS3 2013)

Q.2) Analyze internal security threats and transborder crimes along Myanmar, Bangladesh, and Pakistan borders including the Line of Control (LoC). Also, discuss the role played by various security forces in this regard. (GS3 2020)

Q.3) "Increasing cross-border terrorist attacks in India and growing interference in the internal affairs of several member states by Pakistan are not conducive for the future of SAARC (South Asian Association for Regional Cooperation)." Explain with suitable examples. (GS2 2016)

What has Punjab challenged about the territorial jurisdiction of the BSF?

- The government of Punjab has challenged a notification issued by the Union Government in 2021 that extended the jurisdiction of the BSF under Section 139 of the BSF Act.
 - The distance was raised from 15 km to 50 km in Punjab, West Bengal and Assam, reduced from 80 km to 50 km in Gujarat, and unchanged at 50 km in Rajasthan
- Punjab accused the Centre of stripping the State and its police of its powers.
 - The state is empowered to control the police and maintain public order under the provisions of the Constitution.
- **Punjab's argument:** The state claimed that BSF jurisdiction would depend on factors like topography, population concentration, etc.
 - Unlike Gujarat and Rajasthan, with large stretches of marshland and deserts, Punjab was a smaller state, which meant that 50 km covered cities and towns as well.
 - As a result, the powers of the State police under Entries 1 (public order) and 2 (police) of the State would be taken away by the BSF.
- **Other states:** West Bengal has also criticized the Centre's decision and described it as a breach of federal principles.
 - Both Punjab and West Bengal passed resolutions in their Assemblies against the expansion of the BSF's jurisdiction.

Centre's response

- The Solicitor General of India claimed that the jurisdiction of the BSF was 80 km in Gujarat and 50 km in Rajasthan, while in some cases it was the entirety of the state.
- The Union government justified the extension of the BSF's jurisdiction by claiming that it was necessary to effectively police crimes related to illegal entry and offenses under the Passport Act.
- Section 139 authorizes the Centre to confer powers and duties on members of the BSF force in respect of any Central Acts.
 - It was used to control trans-border crimes in cooperation with the state police.

How has the Supreme Court responded?

- The court agreed to examine whether the 2021 notification was
 - An arbitrary exercise of power by the Union government under Section 139
 - An unconstitutional interference into Punjab's authority.
- **Issues to be considered:** The Court would consider whether the increase of the BSF's jurisdiction was beyond the local limits of the area adjoining the borders of India under Section 139.
 - It would decide the factors to be taken into account when demarcating the area of jurisdiction of the BSF in a border area within a State.

Impact of the move

- The State governments have the constitutional responsibility to maintain public order and exercise police powers.
 - The expansion of the BSF's jurisdiction by the Union government could be an encroachment into the domain of the state governments, which could impact the federal relationship.
- Since the BSF mainly focuses on preventing trans-border crimes and lacks the power to investigate or prosecute offenders, it must work in close cooperation with the local police.
 - It can be argued that the wider jurisdiction would allow the BSF to conduct more searches and seizures, especially when offenders enter deeper into Indian territory.
 - However, steps should be taken to ensure that there is no clash of jurisdiction with the local police.

Border Security Force

- The Border Security Force (BSF) is India's border guarding organization that is responsible for guarding the border with Pakistan and Bangladesh.
- It is one of the seven Central Armed Police Forces of the Union of India and falls under the administrative control of the Ministry of Home Affairs (MHA).

- **Raising:** The BSF was raised in the aftermath of the 1965 war with Pakistan to ensure the security of the country's borders and connected matters.
- **Cadre:** The BSF has its cadre of officers headed by an officer from the Indian Police Service, designated as a Director-General.
- **Area of focus:**
 - Preventing trans-border crimes, especially unauthorized entry or exit from Indian territory.
 - It does not have the power to investigate or prosecute offenders. Instead, the offenders and seized contraband are handed over to the local police.
 - Generally, BSF personnel work in close coordination with the police.
- **Extended jurisdiction:** The BSF's jurisdiction has been extended only in respect of the powers it enjoyed under:
 - Criminal Procedure Code (CrPC)
 - Passport (Entry into India) Act, 1920 and
 - Passport Act, 1967
- **Arrest and search powers:**
 - It has arrest, search, and seizure powers under current laws - NDPS Act, Arms Act, Customs Act, etc.
- **Other activities of the BSF:**
 - It is responsible for guarding India's borders with Pakistan and Bangladesh.
 - It has been defending Sir Creek in the Arabian Sea and the Sundarbans delta in the Bay of Bengal.
 - It also contributes dedicated services to the UN peacekeeping Mission.

Conclusion

- The Supreme Court's decision to examine the extension of the Border Security Force's jurisdiction has raised concerns related to its impact on federal principles and the delicate balance of powers between the Union and the states. Therefore, the SC has a crucial role to play in defining the constitutional boundaries and ensuring the effective securing of the country's borders.

ART AND CULTURE

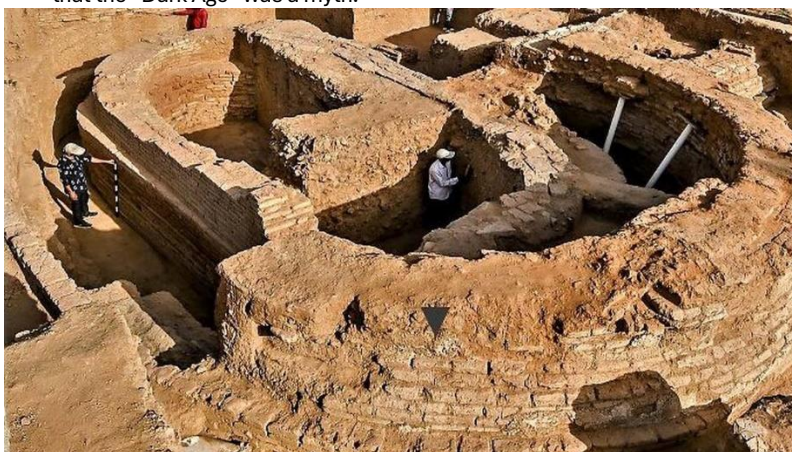
India's Oldest Living City Found In PM Modi's Native Village Vadnagar: Multi-Institution Study

SOURCE: THE HINDU

PRIORITY: MEDIUM

Why in the news?

- Recently, a joint study conducted by IIT Kharagpur discovered evidence of cultural continuity in Vadnagar even after the Harappan collapse.
- The evidence obtained from Vadnagar, the Prime Minister's home village has made it likely that the "Dark Age" was a myth.



What are the findings of the study?

- **Ancient human settlement:** The study found evidence of a human settlement as old as 800 BCE which could have been a contemporary of the late-Vedic/pre-Buddhist Mahajanapadas or oligarchic republics.
- **Influence of climate change:** Severe changes in climate like rainfall and droughts were the major factors in the rise and fall of kingdoms over 3,000 years and the recurrent invasions of Central Asian warriors.
- **Cultural findings:** Vadnagar was a multicultural and multireligious settlement with influence from Buddhist, Hindu, Jain, and Islamic cultures.
 - One of the oldest Buddhist monasteries was discovered.
 - Other objects discovered include characteristic archaeological artifacts, potteries, copper, gold, silver, and iron objects, intricately designed bangles, and coin moulds of the Greek king Apollodatus.

News Summary:

A joint study by IIT Kharagpur and ASI unearthed evidence of cultural continuity in Vadnagar, challenging the notion of a "Dark Age" and filling historical knowledge gaps.

UPSC Mains Practice Questions

- Q.1)** The ancient civilization in the Indian sub-continent differed from those of Egypt, Mesopotamia, and Greece in that its culture and traditions have been preserved without a breakdown to the present day. Comment. (GS1 2015)
- Q.2)** Safeguarding the Indian art heritage is the need of the moment. Discuss. (GS1 2018)

MCQs

Question: Consider the following pairs:

S.N.	Site of Ashoka's major rock edicts	Location in the State of
1.	Dhauili	Odisha
2.	Erragudi	Andhra Pradesh
3.	Jaugada	Madhya Pradesh
4.	Kalsi	Karnataka

How many pairs given above are correctly matched? (2022)

- (a) Only one pair
(b) Only two pairs
(c) Only three pairs

- **Ruling groups:** Radiocarbon dating identified the presence of seven cultural stages and their rulers:
 - Mauryan
 - Indo-Greek
 - Indo-Scythian or Shaka-Kshatriyas aka 'Satraps', descendants of provincial governors of ancient Achaemenid Empires,
 - Hindu-Solankis,
 - Sultanate-Mughal (Islamic)
 - Gaekwad-British colonial rule and the city

Who conducted the study?

- The excavation was led by the ASI and comprised a team of scientists from IIT Kharagpur, Physical Research Laboratory (PRL), Jawaharlal Nehru University (JNU), and Deccan College.
- **Funding:** The study was funded by the Directorate of Archaeology and Museums (Government of Gujarat).
- The Directorate was also entrusted with building India's first experiential digital museum at Vadnagar.
- It has been assisted in funding by Sudha Murthy (former chairperson of Infosys Foundation).

What was the significance of the study?

- **Filling gaps in historical knowledge:** There is very little information available about the period between 1,500 BC and 500 BC.
- The discovery of the settlement at Vadnagar has helped fill this knowledge gap as it suggests a cultural continuity of over 5,500 years.
- **Challenges the idea of a Dark Age:** The period between the decline of the Indus Valley Civilization around 4,000 years ago (early 2nd millennium BCE) and the rise of the Iron Age and Mahajanapada cities like Gandhar, Koshal, and Avanti (6th-5th century BCE) is known as the Dark Age by some archeologists.
- The cultural continuity identified by the study could help suggest that the "Dark Age" was a myth.
- **Oldest living city:** According to the evidence, Vadnagar was the oldest living city within a single fortification that has been discovered in India so far.
- Some studies suggest that the settlement could be as old as 1400 BC which was the very late phase of the post-urban Harappan period.
- Moreover, no evidence of an advanced city-like settlement before 500 BC has been observed.
- **Rarity of archeological records:** Archaeological records are rare with the earliest one so far being Emperor Ashoka's rock inscription at Sudarsana Lake, Girnar Hill, Gujarat.

Sudarsana Lake inscription



- The Junagadh rock inscription of Rudradaman which is also known as the Girnar Rock inscription of Rudradaman is a Sanskrit prose inscribed on a rock by the Western Satraps ruler Rudradaman I.
- It contains one of the fourteen Major Rock Edicts of Ashoka and other inscriptions by rulers like Rudradaman I and Skandagupta.
- The Sudarsana Lake is a water reservoir that was built by Vaishya Pushyagupta during the reign of Mauryan Emperor Chandragupta Maurya.

(d) All four pairs

Answer: (b)

Question: Who of the following had first deciphered the edicts of Emperor Ashoka? [2016-I]

- (a) Georg Buehler
- (b) James Prinsep
- (c) Max Muller
- (d) William Jones

Answer: (b)



From Red Ant Chutney To Black Rice, The 7 Odisha Products That Have Bagged GI Tags

SOURCE: INDIAN EXPRESS

PRIORITY: HIGH

Why in the news?

- Recently, seven products from Odisha - Simlipal Kai chutney, Kapdaganda shawl, Lanjia Saura Painting, Koraput Kala Jeera Rice, Nayagarh Kanteimundi Brinjal, Odisha Khajuri Guda, and Dhenkanal Magji - were awarded Geographical Indication (GI) tags.
- These products were recognized based on their exclusivity to the state of Odisha.

What products from Odisha have received the GI tag?

Product	Description	Image
Kapdaganda shawl	- The Kapdaganda shawl is a distinctive shawl on off-white coarse cloth that is embroidered with red, yellow, and green threads. - It is woven and embroidered by the women of the Dongria Kondh tribe, a PVTG in the Niyamgiri hills in the Rayagad and Kalahandi districts. - It is worn by both men and women. Features: Colors: Green symbolizes the mountains and hills, Yellow stands for peace and happiness, and Red is the symbol of blood. Motifs: Lines and triangles that reflect the importance of the mountains for the community Uses: - Dongrias gift it to their family members as a token of love and affection.	

News Summary: Seven unique products from Odisha, including Kapdaganda shawl and Simlipal Kai chutney, received the Geographical Indication (GI) tags, recognizing their distinctiveness and origin, promoting local preservation and economic growth.

MCQs

Question: Question: In order to comply with the TRIPS Agreement, India enacted the Geographical Indications of Goods (Registration & Protection) Act, 1999. The difference/ differences between a “Trade Mark” and a Geographical Indication is/are [UPSC 2010]

- 1) A Trade Mark is an individual or a company's right whereas a Geographical Indication is a community's right.
- 2) A Trade Mark can be licensed whereas a Geographical Indication cannot be licensed.
- 3) A Trade Mark is assigned to the manufactured goods whereas a Geographical-Indication is assigned to the agricultural goods/products and handicrafts only.

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

Answer: (b)

Question: Question: Which of the following has/have been accorded 'Geographical Indication' status? (UPSC 2015)

- 1) Banaras Brocades and Sarees
- 2) Rajasthani Daal-Bati-Churma
- 3) Tirupathi Laddu

	It is also presented as a sign of formal commitment during courtship	
Lanjia Saura Painting	- Lanjia Saura paintings are exterior murals painted on the mud walls of homes with white paintings on a crimson-maroon background. - This style of painting is an art form of the Lanjia Saura community, a PVTG from Rayagada district. - The Lanjia Saura community paints their walls with Idital artworks to mark their gratitude to their deities and forefathers and for the well-being of their community. - The art form is a representation of the love of the tribals for nature with common subjects including tribals, animals, birds, the Sun and Moon, etc.	
Koraput Kala Jeera Rice	- The Koraput Kala Jeera Rice is a black-colored variety of rice that is recognized for its aroma, taste, texture, and nutritional value. Naming: - It is also known as the 'Prince of Rice'. - It is also known as Kala Jeera due to its similarities with cumin seeds. - The variety of rice has been preserved by tribal farmers in the Koraput region for more than 1,000 years following traditional practices and knowledge. Benefits: - Consumption of Koraput Kala Jeera Rice helps increase hemoglobin levels and improve body metabolism. - According to ancient lore, Kala jeera rice also results in	

Select the correct answer using the code given below.

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

Answer: (c)

	physical, mental, and spiritual benefits.	
Simlipal Kai chutney	• Simlipal Kai chutney is a traditional delicacy made by tribal in Odisha's Mayurbhanj district. • Preparation: It is made with red weaver ants (kai pimpudi) found in the forests of Mayurbhanj including Simlipal, which is Asia's second-largest biosphere reserve. ○ It is generally prepared by grinding ants manually on the grinding stone (Sil Batta). • Health benefits: The dish is considered to be significant for the food and nutritional security of the tribals as it is rich in medicinal and nutritional value. ○ It is rich in proteins, calcium, zinc, vitamin B-12, iron, magnesium, potassium, sodium, copper, amino acids, etc. ○ It also helps boost immunity and prevent diseases. • Source of income: It is also a source of income for the tribals who sell the ants and the chutney. • Other benefits of kai pimpudi: The tribals also consume the drink soup made with these ants as a cure for various health problems like stomach ache, dysentery, cold, and fever. • It is also known to improve appetite, enhance eyesight naturally, contribute to a healthy brain and nervous system, counter depression, fatigue, and memory loss. • A medicinal oil in which the ants are dipped is used by the tribals to cure rheumatism, gout,	

	ringworm, etc, and as a body oil for babies.	
Nayagarh Kanteimundi Brinjal	- It is a widely cultivated variety of Brinjal in Nayagarh district that was acquired from the hilly areas. Characteristics: - Prickly thorns on the stems and the whole plant. - Green and round in shape - More seeds compared to other genotypes - Unique taste and relatively short quick cooking time. - Resistant to major insects and can be grown with minimal use of pesticides.	
Odisha Khajuri Guda	“Khajuri Guda” or jaggery is a natural sweetener extracted from date palm trees in Gajapati district. - It is traditionally prepared in a trapezoidal form called ‘Patali Gur’ - It is organic by nature with a dark brown color and a unique taste.	
Dhenkanal Magji	- Dhenkanal Magji is a type of sweet made using cheese from buffalo milk. - It has a distinct appearance, taste, flavor, shape, and size with unique nutritional values. - It is prepared by draining moisture from the cheese and then frying it in the form of balls. - The Gondia region was famous for animal husbandry, especially buffalo rearing, during the British era. - Cheese was the third largest produce, after milk and curd with Mandar-Sadangi area being the centre of origin of the sweet.	

What are GI tags?

- Geographical Indications (GI) of goods refer to the place of origin of a product and are accorded to indicate assurance of its quality and distinctiveness due to its origin in a specific geographical locality, region, or country.

- In India, GI Tags are awarded by the Department for Promotion of Industry and Internal Trade, Union Ministry of Commerce and Industry.
- It is valid for 10 years and can be renewed following this.
- **5 Major categories of GI-tagged goods:**
- Handicrafts, Agriculture, Foodstuffs, Manufactured products, Natural goods
- The GI registration is provided to the area not to traders, but once it is received traders can apply to sell the product with the GI logo.
- Authorized traders are then assigned a unique GI number while unauthorized traders can be prosecuted under The Geographical Indications of Goods (Registration and Protection) Act, 1999.
- In India, Tamil Nadu (61) has the most number of GI-tagged products followed by Andhra Pradesh.
- **Benefits:**
- Encourage the preservation of biodiversity
- Promote entrepreneurship and monetization of goods
- Employment generation and limit migration
- Conservation of cultural heritage
- Tackle structural challenges like access to credit, market access, competition, innovation, and capacity building.
- **Significance:**
- The GI tags act as a marker of the product's originality.
- It helps protect the interests of the local growers and artisans by preventing duplicity and unauthorized sale.
- It helps raise confidence and awareness among consumers.

Nagara Architecture, 392 Pillars, 5 Mandaps: The Key Features of Ram Mandir

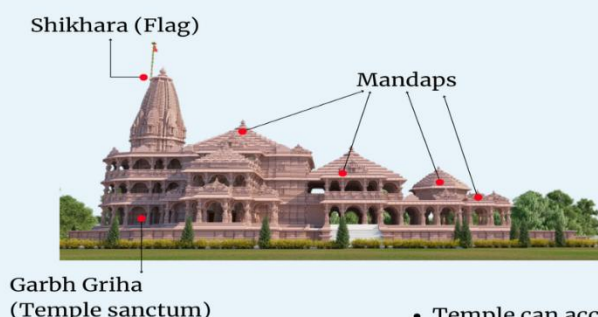
SOURCE: HINDUSTAN TIMES

PRIORITY: HIGH

Why in the news?

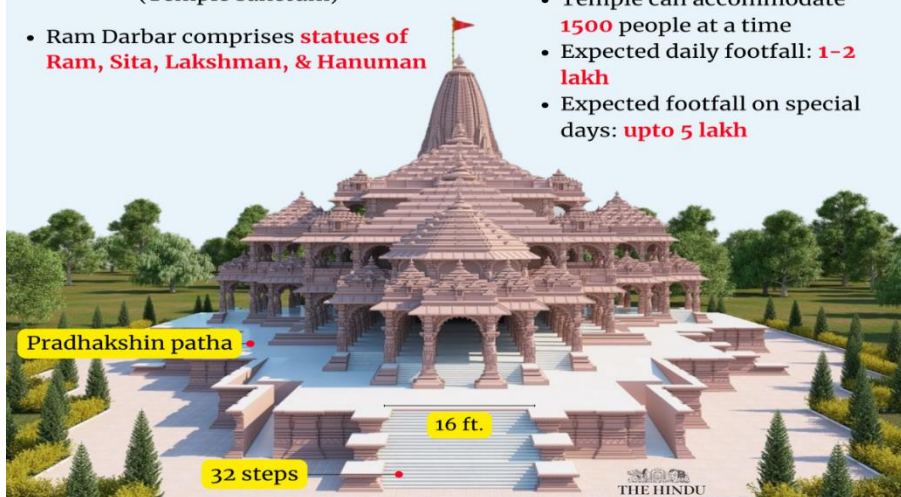
- The **Ayodhya Ram Mandir** is a three-story temple constructed in the **Nagara architectural style**, which is recognized as one of the two prominent classical forms of Indian temple architecture.
- This unique style originated during the late Gupta period in northern India, dating back to the fifth century CE.
- **On January 22, 2024**, the **Pran Pratishtha (consecration) ceremony** for the Ram Lalla idol was held at the Ram Temple in Ayodhya, Uttar Pradesh.

Ram temple at Ayodhya



- Ram Darbar comprises **statues of Ram, Sita, Lakshman, & Hanuman**

- Temple can accommodate **1500** people at a time
- Expected daily footfall: **1-2 lakh**
- Expected footfall on special days: **upto 5 lakh**



News Summary: The Ram Mandir in Ayodhya, constructed in the Nagara architectural style, features 392 pillars, 5 mandaps, and unique elements, blending traditional design with modern sustainability.

UPSC Previous Year Practice Question

Q. Discuss the significance of the lion and bull figures in Indian mythology, art and architecture. **(2022)**

Q. How will you explain that medieval Indian temple sculptures represent the social life of those days? **(2022)**

Q. The rock-cut architecture represents one of the most important sources of our knowledge of early Indian art and history. Discuss. **(2020)**

Q. Chola architecture represents a high watermark in the evolution of temple architecture. Discuss. **(2013)**

MCQs

Q. The Prime Minister recently inaugurated the new Circuit House near Somnath Temple Veraval. Which of the following statements are correct regarding Somnath Temple? **(UPSC 2022)**

1. Somnath Temple is one of the Jyotirlinga shrines.
2. A description of Somnath Temple was given by Al-Biruni.
3. Pran Pratishtha of Somnath Temple (installation of the present-day temple) was done by President S. Radhakrishnan.

Select the correct answer using the code given below:

(a) 1 and 2 only

Key Features of Ram Mandir

Feature	Description
Architecture Style	Traditional Nagara style
Dimensions	Length: 380 feet, Width: 250 feet, Height: 161 feet
Pillars and Doors	392 pillars, 44 doors; three-storied structure
Sanctum Sanctorum	Idol of Shri Ram Lalla in the main sanctum; Shri Ram Darbar on the first floor
Mandaps	Five mandaps: Nritya, Rang, Sabha, Prathana, Kirtan
Main Entrance	Eastern side; accessed by 32 stairs through Singh Dwar
Corner Temples	Four corner temples dedicated to various deities; additional temples for Maa Annapurna and Hanuman ji
Column Support	160 columns on ground floor, 132 on first floor, 74 on second floor
Accessibility	Ramps and lifts for differently-abled and elderly
Parkota	Compound wall: 732 meters long, 14 feet wide
Historic Well and Other Structures	Sita koop, restored Mandir of Bhagwan Shiv, installation of Jatayu
Construction Materials	Bansi Paharpur Pink Sandstone, granite, white Makrana marble, colored marble; no steel or iron
Foundation	14-meter-thick layer of roller-compacted concrete (RCC)
Special Bricks	"Ram Shilas" bricks inscribed with "Shri Ram"
Proposed Mandirs	Dedicated to various Hindu sages and deities
Plinth for Moisture Protection	21-foot-high granite plinth
Modern Amenities	Sewage and water treatment plants, fire safety water supply, independent power station
Pilgrims Facility Centre (PFC)	Capacity for 25,000 people with medical and locker facilities
Bathing and Washroom Facilities	Separate block with necessary facilities
Environmental Considerations	70% of the 70-acre area remains green; emphasis on water conservation
Budget	Estimated ₹1,800 crore; ₹900 crore spent as of March 2023

About Nagara Style of Architecture

- This style of architecture, initially developed in **North India** during the **5th century AD**, is predominantly popular in Northern, Western, and Eastern India, excluding the Bengal region.
- It is particularly prominent in regions such as Malwa, Rajputana, and Kalinga.

Characteristics of this style include:

- Temple Structure:** These temples are built on a simple stone platform with staircases leading to the main temple structure.
- Sikhara:** The garbhagriha (inner sanctum) is always positioned directly beneath the tallest Sikhara. Additionally, a Kalash (Amalaka) is typically placed atop the Shikhara.
- Variations in Shikaras:** Different types of Shikaras are found in this style, including Rekha-Prasad or Latina (as seen in the Sri Jagannath Temple of Odisha), Shekari (exemplified by the Khajuraho Kandariya Mahadev Temple), Valabhi (as in the Teli ka Mandir), and Phamsana (such as the Jagmohan of the Konark Temple).
- Absence of Boundary Walls:** These temples typically lack surrounding boundary walls or gateways.
- Notable schools associated with this style include the **Orissa school, Chandel school, and Solanki school.**

Difference Between Dravidian and Nagara Styles

Features	Dravidian	Nagara
Boundary walls and Gateways	Temples are enclosed by tall boundary walls. The main entrance features a towering gateway called a gopuram.	Lacks elaborate boundary walls or gateways.
Crowning Element	The crown is octagonal and called the shikhara.	The crown takes on a spherical shape and is known as the Kalash.
Spire/Vimanas	Spire resembles a stepped pyramid that ascends linearly.	Vimana rises in a curved fashion.
Number of Vimanas	Typically, there is only one vimana atop the main temple. Subsidiary shrines lack vimanas.	In addition to the main temple, subsidiary shrines also possess vimanas.

(b) 2 and 3 only

(c) 1 and 3 only

(d) 1, 2 and 3

Answer: (a)

Q. With reference to Chausath Yogini Temple situated near Morena, consider the following statements: (UPSC 2021)

- 1) It is a circular temple built during the reign of the Kachchhapaghata Dynasty.
 - 2) It is the only circular temple built in India.
 - 3) It was meant to promote the Vaishnava cult in the region.
 - 4) Its design has given rise to a popular belief that it was the inspiration behind the Indian Parliament building.
- Which of the statements given above are correct?

(a) 1 and 2

(b) 2 and 3 only

(c) 1 and 4

(d) 2, 3 and 4

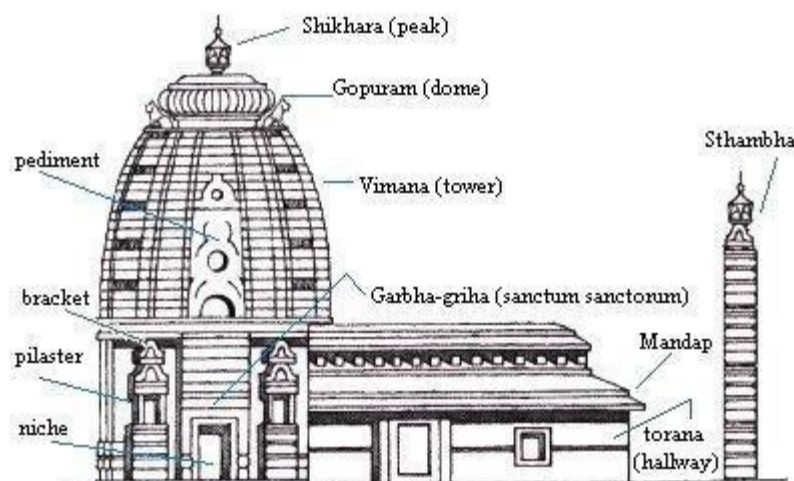
Answer: (c)

Q. The Nagara, the Dravida and the Vesara are the: (UPSC 1995, 2012)

- (a) three main racial groups of the Indian subcontinent
- (b) three main linguistic divisions into which the languages of India can be classified
- (c) three main styles of Indian temple architecture
- (d) three main musical Gharanas prevalent in India

Answer: (c)

Water Features	Notably, there is a water tank within the temple enclosure.	Generally, temple premises lack water tanks or reservoirs.
-----------------------	---	--



Conclusion

The Ram Mandir is an architectural marvel that symbolizes cultural and religious importance. It combines traditional design with modern sustainability and represents a unifying structure for various Indian communities.

HISTORY

Modi to Honour Valour, Martyrdom of Sahibzades

SOURCE: THE HINDU

PRIORITY: LOW

Why in the news?

Recently, Prime Minister participated in a programme to **honour the courage and martyrdom of the Sahibzades, sons of Guru Gobind Singh**, the 10th Sikh Guru.

The Union government has named the day "**Veer Baal Divas**" and organized various participative programmes nationwide.

What is Veer Baal Diwas?

- On the occasion of Sri Guru Gobind Singh Ji's Prakash Purab on January 9, 2022, the Prime Minister declared **December 26th as "Veer Bal Diwas."**
- Veer Bal Diwas is an annual observance within the Sikh community that **commemorates the martyrdom of Guru's sons** with great solemnity and deep sorrow.
- This day serves as an opportunity to educate people, especially young children, about the heroic bravery of the Sahibzades (Guru's sons).
- Various events, including essay writing contests and quizzes, will be organized in schools and colleges across the nation.

Historical Context of Chaar Sahibzaade

- Chaar Sahibzaade refers to the **four sons of Guru Gobind Singh Ji**, who were martyred during clashes with the Mughal Empire.
- The martyrdom occurred on two separate days, **December 21st and December 26th, in the year 1704.**
- On December 21st, two of the Guru's sons were martyred, followed by the other two on December 26th.
- Guru Gobind Singh Ji, the tenth Sikh Guru, was residing with his family and devotees in Anandpur Sahib.
- His establishment of the Khalsa, a Sikh warrior community, was perceived as a direct challenge to the Mughal Empire.
- After several failed attempts to dislodge the Sikhs from Anandpur Sahib, the Mughals imposed a stringent siege on the town, cutting off supplies and making life there untenable.

Parivar Vichhora

- On the frigid night of December 20th, Guru Gobind Singh Ji, his four Sahibzade, Mata Gujari Kaur, Mata Jeeto, the Panj Piaras (Five Beloved Ones), and hundreds of Sikhs left Anandpur Sahib for Ropar.
- During the journey, the Mughals violated their promise of safe passage and attacked the Guru's group near the Sarsa rivulet, approximately 25 kilometers from Anandpur Sahib.
- This event led to the separation of the Guru's family, known as "Pariwar Vichhora."
- Guru Gobind Singh Ji, accompanied by his two elder sons, the Panj Piaras, and 40 Sikhs, continued toward Chamkaur and arrived on December 21st.

The Battle of Chamkaur Sahib

News Summary: The Union government declares December 26th as "Veer Baal Diwas" to commemorate the martyrdom of Guru Gobind Singh's sons, the Sahibzades, fostering awareness and national observance.

- At Chamkaur Sahib, the Guru and his companions faced a formidable Mughal army of 10 lakhs (one million).
- Negotiations failed, prompting the Sikh army to engage in combat. During the negotiations, the Guru was allowed to escape to safety.
- The Sikhs valiantly fought against the Mughals, with the Vaada Sahibzaade, Ajit Singh and Jujhar Singh, attaining martyrdom at the tender ages of 18 and 14, respectively.

Captivity

- During the battle, Mata Gujari and Guru's two youngest sons, **Zorawar Singh and Fateh Singh**, became separated from the other Sikhs.
- They sought refuge with a former servant, who, driven by greed, betrayed them to the Mughals, revealing their whereabouts.

Imprisonment and Martyrdom

- The three captives were incarcerated in the Open Tower (Thanda Burj) in **Sirhind**, enduring harsh winter conditions with minimal bedding.
- Despite being offered clemency in exchange for converting to Islam, they steadfastly refused.
- In response, **Wazir Khan**, the Governor of the province, ordered them to be bricked alive, resulting in their martyrdom.
- Mata Gujari, upon hearing of the fate of her Chhote Sahibzaade, also passed away due to the shock.

About Guru Gobind Singh Ji

- Guru Gobind Singh Ji was the tenth and final human Guru of the Sikhs, born on December 22, 1666, in Patna.
- He became Guru at the age of nine following the execution of Guru Tegh Bahadur Ji, the ninth Sikh Guru.
- Guru Gobind Singh Ji is credited with establishing the Khalsa, a Sikh warrior community that bestowed a warrior identity upon Sikhs.
- He introduced the five articles of the Khalsa faith: **kesh (uncut hair)**, **kanga (wooden comb)**, **kara (iron or steel bracelet)**, **kirpan (dagger)**, and **kachera (short breeches)**.
- He also established a code of discipline for Khalsa warriors, prohibiting tobacco use, consumption of 'halal' meat, fornication, and adultery.
- Guru Ji introduced the **Dasam Granth**, which contains hymns that hold a sacred place in Sikh prayers and Khalsa rituals.
- He introduced a new method of baptizing individuals into the Khalsa sect, granting them the title 'Singh.'
- Guru Gobind Singh Ji vehemently opposed illegal taxes imposed on non-Muslims by Aurangzeb, including jizya (poll tax), pilgrim tax, and bhattar tax.

Conclusion

Veer Baal Divas is intended to inspire the nation and reinforce the understanding of India's identity and history. It is important to recognize the strength of the youth and the significance of their sacrifices.

ENVIRONMENT

Denmark's Green Fuels Alliance To Boost Sustainable Energy Solutions Sector

SOURCE: THE HINDU

PRIORITY: MEDIUM

Why in the news?

- Recently, India and Denmark announced a Green Fuels Alliance India (GFAI) initiative to boost collaboration in the sustainable energy solutions sector and achieve carbon neutrality.
- India and Denmark signed the Green Strategic Partnership (GSP) in 2020 which underpins the GFAI.

What is the Green Fuels Alliance India?

- The Green Fuels Alliance India (GFAI) is a strategic initiative between India and Denmark to collaborate in the sustainable energy sector and to achieve carbon neutrality.
- It is being led by the Consulate General of Denmark and the Embassy of Denmark.
- **Aim:** Foster innovation, collaboration, and partnership between Danish industries and their Indian counterparts to advance the green fuels sector including green hydrogen.
- **Objectives:**
 - Promote sustainable energy growth in India by establishing an ecosystem encouraging collaboration among businesses, government entities, research institutions, and financial stakeholders.
- **Members:**
 - **Founding members:** Maersk, Topsoe, Umwelt Energy, Mash Makes, European Sustainable Solutions, Novozymes, Danfoss, Brdr. Christensen and Hydrogen Denmark
 - **Advisory Board members:** India Hydrogen Alliance, Energy Consortium at the Indian Institute of Technology-Madras, the Danish Energy Agency, and State of Green
- **Key features:**

News Summary:

India and Denmark's Green Fuels Alliance aims to foster collaboration in sustainable energy, including green hydrogen. It builds on their Green Strategic Partnership to achieve carbon neutrality.

UPSC Mains Practice Questions

Q.1) Clean energy is the order of the day. Describe briefly India's changing policy towards climate change in various international fora in the context of geopolitics. (GS2 2022)

Q.2). Do you think India will meet 50 percent of its energy needs from renewable energy by 2030? Justify your answer. How will the shift of subsidies from fossil fuels to renewables help achieve the above objective? Explain. (GS3 2022)

Q.3) Explain the purpose of the Green Grid Initiative launched at the World

- **Steering Committee:** It is comprised of Danish businesses and coordinated by the Secretariat at the Danish Consulate, Bangalore.
- **Advisory Board:** It comprises industry experts and thought leaders who will ensure that initiatives are innovative and aligned with industry requirements and trends.
- **Collaborative Initiatives:** It will take inspiration from other initiatives such as the India-Denmark Energy Partnership, the Nation Green Hydrogen Mission, and joint R&D efforts on Green Fuels like Green Hydrogen.



Green Strategic Partnership

- The Green Strategic Partnership is a mutually beneficial arrangement between India and Denmark to advance political cooperation, expand economic relations and green growth, create jobs, and strengthen cooperation in addressing global challenges and opportunities.
- It was launched during the Virtual Summit in September 2020 between the Prime Ministers of India and Denmark.
- **Focus:** Promoting green and sustainable development
- Implementing the Paris Agreement and the UN SDGs.
- India and Denmark both have ambitious goals within the climate agenda and aim to demonstrate that it is possible to achieve ambitious climate and sustainable energy goals.
- **India's ambitions:** Achieve net zero emissions by 2070.
- **Denmark's ambitions:** Reduce CO₂ emissions by 70% by 2030 and establish international leadership on SDG 7 - affordable and clean energy.
- It will involve the exchange of ideas, best practices, knowledge, technology, and capacity building for promoting sustainable lifestyles and building on an existing Joint Commission for Cooperation and existing joint working groups.

Significance

- The international collaboration between India and Denmark could assist in implementing the global green transition.
- Danish companies contribute skills to the green transition which could help India green its development.
- India has excellent conditions for the production of renewable energy and aims to occupy a leading position in the green energy value chain.
- Denmark is a leader in renewable energy production and usage with 75% of its electricity generation in 2022 coming from renewable sources.
- Denmark has set a target of achieving 100% of national electric power production from renewable energy sources by 2030.
- Therefore, Denmark could share its learning, experiences and capacities with India to ensure a quick and efficient green transition.

Conclusion

- The Green Fuels Alliance India between India and Denmark is a pioneering collaboration in advancing sustainable energy with its ambitious goals and shared expertise. The initiative aims to foster innovation and propel India towards achieving carbon neutrality with Denmark's invaluable support.

Key terms

- **Carbon neutrality:** Carbon neutrality means that the CO₂ released into the atmosphere is balanced by the removal of an equivalent amount.
- It aims to go beyond ensuring net zero to ensure additional reduction of emissions from the atmosphere.
- **Green transition:** The green transition represents a shift towards economically sustainable growth and an economy that is not based on fossil fuels or excessive natural resource consumption.

Leaders Summit of the COP26 UN Climate Change Conference in Glasgow in November, 2021. When was this idea first floated in the International Solar Alliance (ISA)? (GS3 2021)

Q.4) Examine the potential of wind energy in India and explain the reasons for their limited spatial spread. (GS1 2022)

Q.5) With growing scarcity of fossil fuels, atomic energy is gaining more and more significance in India. Discuss the availability of raw materials required for the generation of atomic energy in India and in the world. (GS1 2013)

Q.6) Access to affordable, reliable, sustainable, and modern energy is the sine qua non to achieve Sustainable Development Goals (SDGs). Comment on the progress made in India in this regard. (GS3 2018)

MCQs

Question: With reference to the Agreement at the UNFCCC Meeting in Paris in 2015, which of the following statements is/are correct? [2016]

1. The Agreement was signed by all the member countries of the UN and it will go into effect in 2017.
2. The Agreement aims to limit the greenhouse gas emissions so that the rise in average global temperature by the end of this century does not exceed 2°C or even 1.5°C above pre-industrial levels.
3. Developed countries acknowledged their historical responsibility in global warming and committed to donate \$1000 billion a year from 2020 to help developing countries to cope with climate change.

Select the correct answer using the code given below:

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

Answer: (b)

Question: With reference to green hydrogen, consider the following statements

1. It can be used directly as a fuel for internal combustion.
2. It can be blended with natural gas and used as fuel for heat or power generation.
3. It can be used in the hydrogen fuel cell to run vehicles.

How many of the above statements are correct? [2023]

- (a) Only one
- (b) Only two
- (c) All three
- (d) None

Answer: (c)

- It could involve investments in clean energy production, circular economy solutions, hydrogen technology, and new business operating models to ensure low-carbon use and sustainability.
- **Key elements:** Renewable energy, energy efficiency, sustainable transportation, sustainable agriculture and forestry, circular economy, and green infrastructure.
- **Green energy:** Energy from renewable sources and is also referred to as clean, sustainable, or renewable energy.
- It has little to no environmental impact as it does not release toxic greenhouse gases during production.

The First-Ever IUCN Assessment Of The Himalayan Wolf Is Out

SOURCE: DOWN TO EARTH

PRIORITY: MEDIUM

Why in the news?

- Recently, the IUCN completed the first taxonomic assessment of the Himalayan Wolf which has been classified as vulnerable on the IUCN Red List.

Himalayan Wolf

- The Himalayan Wolf is a subspecies of the gray wolf found in the Himalayan region.
- **Scientific name:** Canis lupus chanco
- **Areas:** It is found across areas such as Nepal, India, and the Tibetan Plateau.
 - It is found in the Gansu, Qinghai, Tibet, and western Sichuan provinces of China.
 - In India, it is found in Ladakh and the Lahaul-Spiti region.
- **Population:** India has 227-378 mature individuals in its section of the Himalayas.
- **Features:**
 - Smaller and more compact than other subspecies
 - Shorter legs and snouts.
 - Strong limbs and a stout body to navigate challenging environments in the Himalayas
- **Conservation status:**
 - **IUCN:** Vulnerable
 - **CITES:** Appendix I
 - **Wildlife Protection Act, 1972:** Schedule I



What are the major threats raised by the assessment?

- **Habitat deterioration:** The report has highlighted the decline in area, extent, and quality of its habitat as a major threat to the species.
 - Encroachment by humans and climate change are some of the factors driving habitat deterioration.
- **Hunting:** It is illegally hunted for its fur and parts such as paws, tongues, heads, etc which are traded illicitly.
- **Depletion of prey populations:** The drop in prey populations in its habitat has impacted the growth of the wolf population.
- **Depredation conflict:** Its habitat coincides with the summer pastureland used by herders for livestock grazing, leading to man-animal conflict when the wolves attack the abundant livestock.
- **Hybridization of wild dogs:** The wolf population in areas like Spiti and Ladakh was facing the rising threat posed by the growing population of feral dogs in these areas.

What steps have been recommended by the IUCN?

- Wild prey populations and landscapes must be secured and restored while setting aside wildlife habitat refuges.

News Summary:

The IUCN completed the first taxonomic assessment of the Himalayan Wolf, classifying it as vulnerable. Major threats include habitat deterioration, hunting, prey depletion, and depredation conflict were identified and conservation measures were recommended.

UPSC Mains Practice Questions

Q.1) How does biodiversity vary in India? How is the Biological Diversity Act, 2002 helpful in the conservation of flora and fauna? (GS3 2018)

MCQs

Question: Invasive Species Specialist Group' (that develops Global Invasive Species Database) belongs to which one of the following organizations? (2023)

- The International Union for Conservation of Nature
 - The United Nations Environment Programme
 - The United Nations World Commission for Environment and Development
 - The World Wide Fund for Nature
- Answer:** (a)

Question: With reference to the International Union for Conservation of Nature and Natural Resources (IUCN) and the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) (UPSC 2015) Which of the following statements is/are correct?

- IUCN is an organ of the United Nations and CITES is an international agreement between governments
- IUCN runs thousands of field projects around the world to better manage natural environments.
- CITES is legally binding on the States that have joined it, but this Convention does not take the place of national laws.

Select the correct answer using the code given below.

- 1 only
- 2 and 3 only
- 1 and 3 only
- 1, 2, and 3

Answer: (b)

- Measures must be implemented to improve livestock guarding methods such as predator-proof corral pens.
- Sustainable livestock herding practices such as reduced livestock loads, adapted herding, and developing novel tradition-based holistic management practices must be adopted.
- Local and regional authorities should adopt measures to manage the feral dog populations and avoid conflict with wild wolf populations.
- Transboundary cooperation is necessary to conserve the species in range countries with enhanced research and monitoring cooperation.
- Steps must be taken to restore healthy wild prey populations and improve herding or pasture management practices for Himalayan Wolf populations dependent on livestock.
- The Himalayan Wolf must be incorporated in conservation programmes to promote public acceptance of the species and reduce human persecution.

IUCN

- The International Union for the Conservation of Nature is an international organization that works in the field of conservation of the world's flora and fauna.
- It is a global union composed of both governments as well as civil society organizations.
- **Members:** 1400 organizations

Working:

- It works to conserve the various species of flora and fauna. It established the IUCN Red List of Threatened Species in 1964.
- It also played a huge role in the formation of major international conventions such as the Ramsar Convention on Wetlands, the Convention on International Trade in Endangered Species, the World Heritage Convention and the Convention on Biological Diversity.

To know more about the IUCN, click the [link](#).

Question: The “Red Data Book” published by the International Union for Conservation of Nature and Natural Resources (IUCN) contains lists of (UPSC 2011)

1. Endemic plant and animal species are present in the biodiversity hotspots
2. Threatened plant and animal species.
3. Protected sites for the conservation of nature & natural resources in various countries.

Which of the statements given above is/are correct?

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

Answer: (b)

Achievements of National Tiger Conservation Authority (NTCA) During the Year 2023

SOURCE: PIB

PRIORITY: MEDIUM

Why in the news?

- The article discusses several **conservation milestones achieved** during the **year 2023 by the National Tiger Conservation Authority (NTCA)**, under the Ministry of Environment, Forest & Climate Change.
- The centrally sponsored scheme, **Project Tiger, completed 50 years**, and was marked by a commemorative event in Mysuru, Karnataka.

What is National Tiger Conservation Authority (NTCA)?

The **National Tiger Conservation Authority (NTCA)** is a statutory body in India that was **established in December 2005** following a recommendation by the **Tiger Task Force**. It was constituted under the **Wildlife (Protection) Act, 1972** with the amendment of 2006, for strengthening tiger conservation, as per powers and functions assigned to it under the said Act.

Key Aspects of NTCA:

- **Purpose and Role:** The primary purpose of the NTCA is to ensure the protection and conservation of tigers in India. The authority is responsible for implementing the Project Tiger plan to promote the conservation of tiger habitats and to ensure the survival and well-being of the tiger population in the wild.
- **Governance and Structure:** The NTCA is chaired by the Minister for Environment and Forests and has eight experts or professionals having qualifications and experience in wildlife conservation and welfare of people including tribals, apart from three Members of Parliament.

Achievements of National Tiger Conservation Authority (NTCA)

- **50 Years of Project Tiger:** It celebrated the completion of 50 years of Project Tiger, a scheme instrumental in the recovery of endangered wild tigers in India.
- **Significant Increase in Tiger Population:** India now hosts over **70% of the world's wild tigers**. The 5th cycle of All India Tiger Estimation revealed a **minimum of 3,167** tigers in India, indicating a substantial growth rate in the tiger population.
- **Launch of International Big Cats Alliance (IBCA):** This initiative aims to conserve seven big cat species – **Tiger, Lion, Leopard, Snow Leopard, Cheetah, Jaguar, and Puma**, across their natural habitats globally, enhancing international cooperation in big cat conservation.
- **Amrit Kaal Ka Vision For Tiger Conservation:** A vision plan released to sustain tiger populations and leverage benefits from tiger reserves through landscape-level planning and sectoral integration.
- **Successful Reintroduction of Cheetahs:** Undertook a landmark project to reintroduce cheetahs in India, including the successful translocation of cheetahs from Namibia and South Africa to **Kuno National Park**.
- **Management Effectiveness Evaluation (MEE) of Tiger Reserves:** The 5th cycle of MEE was conducted for 51 tiger reserves, assessing their management effectiveness based on IUCN frameworks.
- **Reintroduction of Tigers in Various Reserves:** Actively managed and reintroduced tigers in reserves where they had become locally extinct, including Rajaji Tiger Reserve and others.

News Summary: In 2023, the National Tiger Conservation Authority (NTCA) celebrated 50 years of Project Tiger, achieving significant milestones such as a substantial increase in the tiger population and international conservation initiatives.

MCQs

Q. Among the following Tiger Reserves, which one has the largest area under “Critical Tiger Habitat” (UPSC 2020)

- (a) Corbett
- (b) Ranthambore
- (c) Nagarjunsagar-Srisailem
- (d) Sunderbans

Answer: (c)

Q. Which of the following are in Agasthyamala Biosphere Reserve? (UPSC 2019)

- (a) Neyyar, Idl Peppara and Shendurney Wildlife Sanctuaries; and Kalakad Mundanthurai Tiger Reserve
- (b) Mudumalai, Sathyamangalam and Wayanad Wildlife Sanctuaries; and Silent Valley National Park
- (c) Kaundinya, Gundla Brahmeswaram and Papikonda Wildlife Sanctuaries; and Mukurthi National Park
- (d) Kawal and Sri Venkateswara Wildlife Sanctuaries; and Nagarjunasagar-Srisailem Tiger Reserve

Answer: (a)

Q. The term ‘M-STRIPES’ is sometimes seen in the news in the context of: (UPSC 2017)

- (a) Captive breeding of Wild Fauna
- (b) Maintenance of Tiger Reserves
- (c) Indigenous Satellite Navigation System

- **Declaration of New Tiger Reserves:** Increased the total number of tiger reserves to 54 with the declaration of the **Rani Durgavati Tiger Reserve in Madhya Pradesh**.
- **CAJTS Accreditation:** Six tiger reserves received the Conservation Assured Tiger Standards (CAJTS) accreditation, recognizing their management's effectiveness in tiger conservation.
- **Bilateral Cooperation with Tiger Range Countries:** Engaged in transboundary tiger conservation efforts and signed MoUs for wildlife management and tiger conservation strategies with countries like **Cambodia and Bangladesh**.
- **International Recognition:** **Pench and Satpura Tiger Reserves** received the **Tx2 award** for effective management and conservation practices.
- **Transparent Reporting on Tiger Mortality:** Maintained strict protocols for determining causes of tiger deaths, ensuring transparency and accuracy in reporting tiger mortality statistics.

Functions and Responsibilities:

- **Oversight of Project Tiger:** One of the main functions of the NTCA is to oversee the implementation of Project Tiger, a conservation program launched in 1973 to save the endangered tigers in India.
- **Ensuring Anti-poaching Measures:** The NTCA is involved in formulating policies and strategies for tiger conservation and taking measures to combat poaching and illegal trade in tiger parts.
- **Assessment of Tiger Habitats:** It conducts assessments of various tiger reserves for habitat management and improvement of wildlife protection measures.
- **Collaboration and Research:** The NTCA works in collaboration with various international and national organizations engaged in conservation science, sustainable management of ecosystems, and biodiversity conservation. It also promotes research and monitoring of tiger populations and habitats.
- **Financial Support:** The NTCA provides financial support to tiger range states for in-situ conservation efforts mainly through Project Tiger.
- **Advisory Role:** It advises the Government of India on various policies and measures related to tiger conservation.

Conclusion

The NTCA has provided context and clarification on reports of tiger deaths, emphasizing natural causes and the robust population growth rate, but the continued challenges like poaching and habitat fragmentation are still there. NTCA's ongoing efforts with state forest departments to protect tiger habitats and corridors, ensure the longevity and health of tiger populations and ecosystems.

(d) Security of National Highways

Answer: (b)

Q. From the ecological point of view, which one of the following assumes importance in being a good link between the Eastern Ghats and the Western Ghats? (UPSC 2017)

- Sathyamangalam Tiger Reserve
- Nallamala Forest
- Nagarhole National Park
- Seshachalam Biosphere Reserve

Answer: (a)

Q. Consider the following statements: (UPSC 2014)

- Animal Welfare Board of India is established under the Environment (Protection) Act, 1986.
- National Tiger Conservation Authority is a statutory body.
- National Ganga River Basin Authority is chaired by the Prime Minister.

Which of the statements given above is/are correct?

- 1 only
- 2 and 3 only
- 2 only
- 1, 2 and 3

Answer: (b)

Q. Consider the following pairs: (UPSC 2014)

- Dampa Tiger Reserve : Mizoram
- Gumti Wildlife Sanctuary : Sikkim
- Saramati Park : Nagaland

Which of the above pairs is/are correctly matched?

- 1 only
- 2 and 3 only
- 1 and 3 only
- 1, 2 and 3

Answer: (c)

Q. Consider the following protected areas (UPSC 2012)

- Bandipur
- Bhitarkanika
- Manas
- Sunderbans

Which of the above are declared Tiger Reserves?

- 1 and 2 only
- 1, 3 and 4 only
- 2, 3 and 4 only
- 1, 2, 3 and 4

Answer: (b)

Birders' Network Finds Rare Pelagic Birds on Karnataka's Coast

SOURCE: DOWN TO EARTH

PRIORITY: MEDIUM

Why in the news?

- Recently, a network of 180 birdwatchers documented **rare 'pelagic' birds**, which are typically oceanic, along the **Karnataka coast**.
- Significant sightings included **Sooty Shearwater, Brown Skua, Brown Booby, Streaked Shearwater, and Masked Booby**.
- The birders found that the **density of pelagic birds had come down from last year**, pointing to declining fish stocks near the coast.

News Summary: Birdwatchers along the Karnataka coast report rare pelagic bird sightings, revealing a decline in fish stocks. Conservation efforts at ports and community involvement aim to protect avian diversity.

UPSC Previous Year Practice Question

What are Pelagic Birds?

- Pelagic birds are bird species that spend a significant portion of their lives on the **open ocean, far from land**.
- These birds are specially adapted to life in the marine environment.
- The term "pelagic" is derived from the Greek word "pelagos," meaning "open sea."
- 180 birdwatchers from across India documented rare pelagic birds off the Karnataka coast in 2023.

Characteristics of pelagic birds:

- **Seafaring Adaptations:** They have adaptations for long-distance flying and swimming. Many have long wings for efficient gliding over the ocean waters.
- **Feeding Habits:** They primarily feed on marine life, such as fish and squid, often diving from the air or surface to catch their prey.
- **Nesting Habits:** Pelagic birds usually come to land only to breed and nest. Some, like the albatross, may spend years at sea before returning to land to reproduce.
- **Wide-ranging Migration:** Many species undertake long migrations across oceans, covering thousands of miles.
- **Physical Adaptations:** Adaptations like salt glands to excrete the excess salt they ingest from ocean water and webbed feet for swimming.
- **Lifespan:** Seabirds generally have a longer life expectancy compared to other wild birds, with many living an average of 50 years.
- **Social Behaviour:** Most seabirds form colonies, migrate annually, and are monogamous, mating for life.
- **Threats:** It includes a range of human-induced activities such as oil spills, interactions with fishing operations, exposure to pollutants, disturbances from human presence or activities, and the destruction of natural habitats.
- **Examples:** Some of the rare pelagic birds sighted included **Sooty Shearwater, Brown Skua, Brown Booby, Streaked Shearwater, and Masked Booby**.
- Other birds documented during the year included Pomarine Skua, Arctic skua, Long-tailed skua, Swinhoe's storm-petrel, Wilson's storm-petrel, Flesh-footed shearwater, Persian shearwater, greater crested tern, lesser crested tern, common tern, and Bridled tern.

Relation Between Declining Fish Stocks and Pelagic Birds

- The density of pelagic birds had decreased from 2022, pointing to **declining fish stocks near the coast**.
- The decline in fish populations has a direct effect on the density of birds in sea waters.
- Fish are a primary food source for these birds, and their scarcity means the birds may struggle to find enough food, impacting their survival and breeding success.
- The presence and **behaviour of pelagic birds serve as indicators of the health of the marine ecosystem**.
- Changes in their patterns can reflect underlying issues like overfishing, climate change, and marine pollution, which affect fish stocks and, consequently, bird populations.
- The birders found that the density of pelagic birds had come down from last year, which could be attributed to many reasons, **especially rains over the sea, which send fish to deeper waters**.

Conservation Efforts in Karnataka

- **Green Initiatives at New Mangalore Port (NMP):** The transformation of NMP into a green port, with **33% of its area under a green canopy**, has been a significant step.
- The selection of tree species conducive to avian and entomological life has led to an increase in bird diversity.
- The port has documented sightings of at least 40 different species, including birds that usually come when they get shelter and food.
- This initiative shows the importance of habitat creation and restoration in urban and semi-urban areas.
- **Community Involvement:** Many residents have started keeping bird feeders and water pots on their rooftops and building birdbaths in their gardens, which encourages avian visits and supports local bird populations.
- **Bird Diversity around Kaiga Nuclear Power Generating Station (KGS):** The annual 42-kilometer bird-watching marathon organized by the Nuclear Power Corporation of India around KGS in Uttara Kannada district indicates an interest in avian diversity. The stable and growing avian population in this area is an indicator of a healthy environment.
- **Publication and Awareness:** The publication of works like "Birds of the Southern Coastal Karnataka" by K Prabhakar Acharya and Shivashankar of Karkala, which documents various bird species in the Dakshina Kannada district, plays a role in raising awareness and understanding of the region's avian diversity.

Conclusion

Q. Define the concept of carrying capacity of an ecosystem as relevant to an environment. Explain how understanding this concept is vital while planning for sustainable development of a region. **(2019)**

Q. How does biodiversity vary in India? How is the Biological Diversity Act, 2002 helpful in conservation of flora and fauna? **(2018)**

The birdwatching expeditions along the Karnataka coast have helped document rare pelagic birds and raise awareness about the declining fish stocks and their impact on bird populations. Initiatives like greening the New Mangalore Port and organizing bird-watching marathons around the Kaiga Generating Station contribute to the conservation of bird species and their habitats in Karnataka.

Bees are Fewer, Flowers Evolving to Self-Pollinate, New Study Says

SOURCE: INDIAN EXPRESS

PRIORITY: MEDIUM

Why in the news?

- The article highlights a **concerning decline in pollinators such as bees and butterflies** and discusses the consequences for plant reproduction.
- Flowers are adapting by self-pollinating** more frequently, a response that may hinder their ability to cope with future environmental changes.

Key Findings

- Decline of Pollinators:** The study observes a continuing decline in the population of pollinators like bees and butterflies.
- Evolution of Self-Pollination:** In response to the dwindling number of pollinators, some flowers, like field pansies, are evolving to self-pollinate more often.
- Reduced Flower Size and Nectar:** Field pansies near Paris were found to be 10% smaller and produced 20% less nectar than those observed 20 to 30 years prior.
- Reduced Genetic Diversity:** The shift to self-pollination reduces the opportunity for plants to mix their DNA with others, potentially making future generations more vulnerable to environmental stressors like diseases and droughts.
- Vicious Cycle:** A vicious cycle is emerging where reduced nectar production leads to less food for insects, which could further accelerate the decline of pollinators.
- Rapid Evolutionary Changes:** The plants are evolving quickly, altering ancient interactions with pollinators that have developed over millions of years.
- No Other Significant Changes:** Apart from changes to the flowers, no other differences (like leaf size or total size of the plant) were found between the current and ancestral pansy populations.
- Increase in Self-Pollination:** Research has indicated that the percentage of field pansies relying on self-pollination has increased by 25% over the past 20 years.
- Global Phenomenon:** The decline of pollinators and the subsequent changes in plant pollination strategies are not confined to Europe and North America but are a global phenomenon.
- Invasive Species Adaptation:** Similar changes in pollination strategies are observed in invasive species like foxglove, which adapted to new pollinators in new ecological niches.
- Differential Reproductive Strategies:** Plants that cannot self-pollinate may increase pollen production to attract the decreasing numbers of pollinators, as they cannot resort to self-pollination.

Research Methodology

The methodology used in the research is referred to as "**resurrection ecology**." The unique approach of the study involved **reviving ancestral pansy plants from seeds stored in botanical conservatories** to compare historical and contemporary populations. This method involves following steps:

- Seed Collection and Storage:** The scientists collected seeds of the field pansy plants (*Viola arvensis*) in the 1990s and 2000s and stored them in national botanical conservatories. This storage served to preserve the genetic material of the plants from that time period.
- Germination of Ancestral Plants:** The stored seeds were then germinated to grow ancestral pansy plants. This allowed the researchers to have living specimens of the plants as they were in the past, providing a direct comparison to current populations.
- Comparison of Plant Populations:** The research team compared four populations of field pansies to see how they have changed over the past 20 to 30 years. They looked for changes in the size of the flowers, nectar production, and other morphological traits, such as leaf size and the total size of the plant.
- Assessment of Self-Pollination Rates:** They assessed the changes in the pansies' pollination strategies, particularly the increase in the rate of self-pollination over the past two decades. They noted a 25% increase in self-pollination reliance.
- Analysis of Evolutionary Trends:** The research sought to understand the broader implications of these changes in plant traits, considering the context of decreasing pollinator populations and the plants' responses to this environmental pressure.
- Evaluation of Ecological and Evolutionary Implications:** The scientists also discussed the ecological and evolutionary implications of the findings, especially regarding the plants' ability to adapt to future environmental changes and the potential impacts on plant-pollinator interactions.

What are the Implications of the Study?

News Summary: A study reveals the ongoing decline of pollinators, prompting some flowers to evolve self-pollination. This adaptation, seen in field pansies, may hinder plant resilience to future environmental changes.

MCQs

Q. Due to some reasons, if there is a huge fall in the population of species of butterflies, what could be its likely consequence/consequences? (UPSC 2017)

- Pollination of some plants could be adversely affected.
- There could be a drastic increase in the fungal infections of some cultivated plants.
- It could lead to a fall in the population of some species of wasps, spiders and birds.

Select the correct answer using the code given below:

- 1 only
- 2 and 3 only
- 1 and 3 only
- 1, 2 and 3

Answer: (c)

Q. The Millennium Ecosystem Assessment describes the following major categories of ecosystem services-provisioning, supporting, regulating, preserving and cultural. Which one of the following is supporting service? (UPSC 2012)

- Production of food and water
- Control of climate and disease
- Nutrient cycling and crop pollination
- Maintenance of diversity

Answer: (c)

Q. Biodiversity forms the basis for human existence in the following ways: (UPSC 2011)

- Soil formation
- Prevention of soil erosion
- Recycling of waste
- Pollination of crops

Select the correct answer from the codes given below:

- 1, 2 and 3 only
- 2, 3 and 4 only
- 2 and 3 only
- 1, 2, 3 and 4

Answer: (d)

- **Reduction in Genetic Diversity:** The shift to self-pollination means plants are less likely to exchange genetic material with other plants, leading to a decrease in genetic diversity.
- This can make plant populations more vulnerable to diseases, pests, and changes in the environment since they may lack the genetic variability to adapt.
- **Ecosystem Impacts:** The decline in pollinators can have a ripple effect throughout the food chain, potentially leading to declines in the populations of animals that feed on insects and the predators of those animals.
- **Agricultural Concerns:** The loss of pollination services could lead to reduced yields and could necessitate changes in agricultural practices, possibly increasing the reliance on manual pollination or genetically modified crops that don't require insect pollination.
- **Evolutionary Changes:** The research highlights a rapid evolutionary response to environmental pressures, showcasing the dynamic nature of evolution but also the fragility of long-standing ecological relationships.
- **Conservation Urgency:** It indicates that the effects of pollinator declines are not easily reversible, as plants may quickly evolve in response to these declines, reinforcing the need for immediate action to prevent further losses.
- **Scientific Insight:** The use of "resurrection ecology" demonstrates a novel method of understanding evolutionary changes by comparing current populations with ancestral ones.
- This could provide a new tool for scientists to study evolutionary processes in real-time and could be applied to other species and ecological challenges.
- **Global Phenomenon:** Since pollinator declines are a global issue, similar changes in plant-pollinator relationships may be occurring worldwide, especially in regions with high plant diversity.
- **Adaptive Strategies in Other Species:** The study mentions that similar adaptive strategies are observed in invasive species and in species that cannot self-pollinate, indicating a broader spectrum of biological responses to environmental changes and the loss of pollinators.
- **Variability in Plant Responses:** Some plants unable to self-pollinate are increasing pollen production to attract fewer pollinators, while others are evolving towards self-pollination.
- **Implications for Conservation Strategies:** Efforts to conserve pollinators may need to be coupled with strategies to maintain genetic diversity in plants, especially those that have already begun to evolve towards self-pollination.

Significance of Bees

- **Pollination:** Bees play a crucial role in plant and animal survival, pollinating approximately one-third of global crops and 90% of wild flowering plants.
- They yield valuable products like honey, wax, and propolis, offering nutritional, medicinal, and economic benefits.
- **Mitigating Climate Change:** Bees promote faster, healthier plant growth, enhancing carbon uptake and storage.
- They reduce reliance on harmful fertilizers and pesticides, curbing emissions.
- They serve as ecosystem health indicators, reacting to environmental changes like climate shifts, pollution, habitat loss, and pesticides.
- **Boosting Crop Yield:** Bees enhance crop quality and productivity by providing pollination services to fruits, vegetables, oilseeds, and pulses.
- Bee pollination can boost crop yields by an estimated 20-30% on average.
- **Creating Job Opportunities:** Beekeeping generates income and jobs for rural households, producing honey, wax, propolis, etc.
- Honey, a high-value product, enjoys substantial domestic and international demand, offering nutrition and health benefits.
- It also empowers women and youth, involving them in beekeeping as entrepreneurs or self-help groups.

Conclusion

The study underscores the rapid adaptation of certain plant species to the decline of their traditional pollinator partners, highlighting the urgency for conservation measures to address pollinator declines.

Loss & Damage: 85% of Costliest Climate-linked Disasters in 2023 were Floods & Storms; Mostly Affected Poor

SOURCE: THE HINDU

PRIORITY: MEDIUM

Why in the news?

- In 2023, **85 percent of the world's top 20 most expensive disasters related to climate change** were accounted for by **floods and storms** (hydrological and meteorological disasters), as indicated in the report "**Counting the Cost 2023: a year of climate breakdown**" by non-profit Christian Aid.

Key Highlights of the Report

News Summary: The 2023 Report by Christian Aid revealed that 85% of the world's most expensive climate-related disasters were floods and storms, emphasizing the urgency for global adaptation and financial support.

UPSC Previous Year Practice Question

- **Dominance of Floods and Storms:** Floods and storms accounted for 85% of the top 20 most expensive disasters related to climate change, occurring in 14 countries across six continents.
- **Impact of Climate Change on Disasters:** The disasters, ranging from wildfires and droughts to floods and storms, were intensified by climate change.
- **Economic Costs and Inequality:** The researchers calculated the economic costs of disasters per capita, noting a stark inequality in how these disasters impacted rich and poor countries.
- Wealthier countries typically faced greater per capita costs due to stronger infrastructure and more comprehensive insurance coverage.
- **Insurance Gaps:** There's a significant disparity in insurance coverage for climate-related disasters between regions.
- For instance, **74% of economic losses** in the United States were **insured**, compared to just **13% in the Asia-Pacific region**.
- **Unequal Recovery:** Recovery from disasters is much slower and more unequal in poorer countries. This disparity pushes many people in these regions further into poverty.
- **Geographical Inequality:** The report highlights a "global postcode lottery" where poorer countries, less prepared for climate-related disasters, suffer more. This is seen as a **double injustice** since these communities contribute least to global warming.
- **Rising Threat from Storms:** The report points out the increasing prevalence of major storms due to climate change, as noted by the Intergovernmental Panel on Climate Change (IPCC).
- **Importance of Adaptation and Preparedness:** The need for investment in adaptation measures like early warning systems is emphasized to mitigate the impacts of such disasters.
- **Call for Global Solidarity:** The report stresses the need for mobilizing funds for adaptation and addressing loss and damage, especially as the **Loss and Damage Fund** becomes operational in 2024.

Loss and Damage Fund

- Loss and damage fund (L&D) is a proposed fund to provide financial assistance to developing countries that have been affected by the impacts of climate change.
- The Intergovernmental Panel on Climate Change (IPCC) has stated that some of the impacts of climate change are irreversible and will require **adaptation and loss and damage measures** to address.
- The IPCC has also emphasized that developed countries have a moral and financial responsibility to support developing countries in addressing climate change impacts, including through the L&D fund.
- The L&D fund is a crucial element of international climate policy because it recognizes the need to address the irreversible and devastating impacts of climate change on vulnerable communities and developing countries.
- The fund also has the potential to strengthen global cooperation on climate change by addressing the concerns of developing countries.

Country	Event	Cost per person \$
Hawaii/ USA	Wildfire	4,161
Guam	Storm	1,455
Vanuatu	Storm	947
New Zealand	Storm	498
New Zealand	Flood	371
Italy	Flood	164
Libya	Flood	105
Peru	Flood	66
Spain	Drought	50
Myanmar	Storm	41
Chile	Flood	39
Haiti	Flood	36
Mexico	Storm	35
Chile	Wildfire	30
USA	Storm	25
China	Flood	23
Peru	Storm	20
Malawi	Storm	17
USA	Storm	16
Peru	Flood	9

Source: Report "Counting the Cost 2023: A year of climate breakdown", Christian Aid, December 2023 • Get the data • Created with Datawrapper

Specific Cases Studies of Disasters

1. Malawi

- Malawi, a low-income country, was severely affected by **Cyclone Freddy** in 2023, which impacted over two million people (10% of its population).
- This cyclone was the second-deadliest in Africa this century and the longest-lasting tropical cyclone ever recorded, lasting 34 days.
- The **economic cost per person** in Malawi due to Cyclone Freddy was about **\$17**, with a full recovery estimated to cost \$680 million. This expense represents around **5.2% of the nation's economy**.
- The average annual income in Malawi is less than \$500 million, making the recovery costs a significant burden, amounting to more than five percent of very low incomes.

Q. Discuss the meaning of colour-coded weather warnings for cyclone prone areas given by India Meteorological Department. **(2022)**

Q. Discuss the recent measures initiated in disaster management by the Government of India departing from the earlier reactive approach. **(2020)**

Q. Account for the huge flooding of million cities in India including the smart ones like Hyderabad and Pune. Suggest lasting remedial measures. **(2020)**

Q. Vulnerability is an essential element for defining disaster impacts and its threat to people. How and in what ways can vulnerability to disasters be characterized? Discuss different types of vulnerability with reference to disasters. **(2019)**

Q. Describe various measures taken in India for Disaster Risk Reduction (DRR) before and after signing 'Sendai Framework for DRR (2015-30)'. How is this framework different from 'Hyogo Framework for Action, 2005'? **(2018)**

Q. The frequency of urban floods due to high intensity rainfall is increasing over the years. Discussing the reasons for urban floods, highlight the mechanisms for preparedness to reduce the risk during such events. **(2016)**

Q. Major cities of India are becoming more vulnerable to flood conditions. Discuss. **(2016)**

Q. The recent cyclone on the east coast of India was called "Phailin". How are the tropical cyclones named across the world? **(2013)**

MCQs

Q. Consider the following statements: (UPSC 2020)

1. Jet streams occur in the Northern Hemisphere only.
 2. Only some cyclones develop an eye.
 3. The temperature inside the eye of a cyclone is nearly 10°C lesser than that of the surroundings.
- Which of the statements given above is/are correct?

- (a) 1 only
(b) 2 and 3 only
(c) 2 only
(d) 1 and 3 only
- Answer: (c)**

Q. In the South Atlantic and South-Eastern Pacific regions in tropical latitudes, cyclone does not originate. What is the reason? (UPSC 2015)

- (a) Sea surface temperatures are low
(b) Inter-Tropical Convergence Zone seldom occurs
(c) Coriolis force is too weak
(d) Absence of land in those regions
- Answer: (b)**

- Despite international aid, the people of Malawi bear a large financial burden for reconstruction and recovery. This is particularly notable given that Malawi accounts for only 0.04% of global greenhouse gas emissions.

2. Libya

- Libya experienced floods due to **Storm Daniel**, which resulted in the deaths of at least 11,000 people and affected at least a million.
- The economic cost per person has been hard to quantify but is estimated at **about \$105**, ranking it as the seventh-most expensive disaster.
- The analysis suggests that the average recovery cost of just over \$80 per person directly affected is less than the actual cost needed for recovery in Libya, an upper higher-income nation.

3. Hawaii (USA)

- Wildfires in the US state of Hawaii were reported as 2023's most expensive disaster. The estimated losses and damages were around **\$4,000 per person**.

Initiatives for Disaster Risk Reduction

Global Initiatives

- **Sendai Framework:** Adopted during the Third United Nations World Conference on Disaster Risk Reduction in 2015 in Sendai, Miyagi, **Japan**, the Sendai Framework serves as the **successor instrument** to the **Hyogo Framework for Action (HFA)**.
- This framework applies to a wide range of risks, encompassing both small-scale and large-scale, frequent and infrequent, sudden and slow-onset disasters stemming from natural or man-made hazards.
- It also includes related environmental, technological, and biological hazards and risks.
- Its objective is to provide guidance for managing the multi-hazard aspects of disaster risk within development at all levels and across all sectors.
- **Climate Risk and Early Warning Systems (CREWS):** The specialized initiative under the World Meteorological Organization, known as Climate Risk and Early Warning Systems (CREWS), plays a critical role in saving lives, protecting assets, and securing livelihoods by enhancing access to early weather warnings and risk information for people in **Least Developed Countries (LDCs) and Small Island Developing States (SIDS)**.
- **Green Climate Fund's Sectoral Guide on Climate Information & Early Warning Systems:** This guide offers an overview of country-specific needs and evidence-based programming experiences in the relevant sector.
- Its goal is to identify opportunities for impactful investments in each sector to guide proposal development for the **Green Climate Fund (GCF)**, aligning with its investment criteria during its first replenishment period from 2020 to 2023.

India's Initiatives

- **Coalition for Disaster Resilient Infrastructure Society (CDRIS):** CDRIS represents a global partnership comprising national governments, United Nations agencies and programs, multilateral development banks and financing mechanisms, the private sector, academic and research institutions.
- Its objective is to enhance the resilience of infrastructure systems to climate and disaster risks, thereby promoting sustainable development.
- **National Disaster Management Plan (NDMP):** The primary focus of the NDMP is to coordinate responses to natural or man-made disasters and to build capacity in disaster resiliency and crisis response.
- It establishes policies, plans, and guidelines for Disaster Management to ensure timely and effective responses to disasters.
- **Establishment of the National Disaster Reaction Force (NDRF):** India has taken significant steps to mitigate and respond to various types of disasters. One noteworthy achievement is the establishment of the **National Disaster Reaction Force (NDRF)**, which stands as the world's largest rapid reaction force exclusively dedicated to disaster response.
- **Managing Disasters Linked to Climate Change:** India has embraced several international agreements and frameworks to effectively manage disasters associated with climate change.
- These include the adoption of the Sendai Framework for Disaster Risk Reduction, the pursuit of the Sustainable Development Goals (2015-2030), and the commitment to the Paris Agreement on Climate Change.
- These agreements collectively underscore the interconnections between Disaster Risk Reduction (DRR), Climate Change Adaptation (CCA), and sustainable development.

Way Forward

- **Global Solidarity and Financial Support:** Wealthier nations, which historically have contributed more to greenhouse gas emissions, should provide financial support to poorer countries. This can be done through mechanisms like the Loss and Damage Fund, which have operationalized in 2024.
- **Insurance and Risk Management:** Expanding insurance and risk management solutions in vulnerable countries can be a way to mitigate the financial impact of disasters.

- **Adaptation and Preparedness:** Investing in adaptation measures, such as early warning systems and resilient infrastructure, is vital.
- **Awareness and Education:** Increasing awareness about the risks of climate change and educating communities on how to prepare for and respond to disasters is essential.
- **Policy and Governance:** Nations need to implement and enforce policies that address climate change and its impacts.
- **Research and Data Collection:** Continued research into the effects of climate change on different regions and the cost of disasters is necessary.
- **International Collaboration:** Collaboration in terms of technology transfer, knowledge sharing, and financial resources is necessary to help vulnerable countries cope with the impacts of climate change.
- **Sustainable Development:** Long-term strategies should focus on sustainable development that does not exacerbate climate change.

Conclusion

The article highlights the disproportionate burden of climate disasters on poorer countries. It calls for global efforts to mobilize funds for adaptation and addressing loss and damage and at the same time stress should be on the need for better preparedness and adaptation strategies to mitigate future disasters.

A Look At Project Tiger, 50 Years On

SOURCE: THE HINDU

PRIORITY: HIGH

Why in the news?

- This article discusses Project Tiger and the steps taken by the government for the conservation of tigers in India as well as the various challenges faced in its implementation.
- At present, India has 54 Tiger Reserves in 18 States occupying 78,135.956 sq. km, or 2.38% of India's total land area.



What is Project Tiger?

- **Project Tiger** is a Centrally Sponsored Scheme of the Government of India that was launched in 1973 under the provisions of the Wildlife (Protection) Act (WLPA), 1972.
- It introduced Tiger Reserves to help implement and promote the in-situ conservation of tigers in the country.
- Project Tiger aims to provide central assistance to the tiger states for tiger conservation in designated tiger reserves.
- It focuses on the conservation of the big cats while also ensuring the preservation of their natural habitat and other areas of ecological significance that are crucial for wildlife conservation.

Progress made under Project Tiger

- **Tiger reserves in India:** The number of tiger reserves increased from nine covering over 9,115 sq. km to 54 (covering 78,135.956 sq km in 18 states).
- **Critical Tiger Habitats (CTH):** CTH covers 42,913.37 sq. km or 26% of the area under National Parks and Wildlife Sanctuaries.
- **Tiger population:** As of 2022, there were 3,167-3,925 tigers in India (camera-trap method) while the first tiger census in 1972 recorded 1,827 tigers (pug-mark method).
 - According to estimates, India's tiger population, home to three-quarters of the world's tigers, is growing at 6.1% per annum.

What were the steps taken by the government to improve the functioning of Project Tiger?

Critical Tiger Habitats: '

News Summary: The article delves into India's Project Tiger, examining its progress, government initiatives, and challenges. It emphasizes the importance of balancing tiger conservation with the rights of forest dwellers.

UPSC Mains Practice Questions

Q.1) Rehabilitation of human settlements is one of the important environmental impacts that always attracts controversy while planning major projects. Discuss the measures suggested for mitigation of this impact while proposing major developmental projects. (GS3 2016)

Q.2) Suppose the Government of India is thinking of constructing a dam in a mountain valley bond by forests and inhabited by ethnic communities. What rational policy should it resort to in dealing with unforeseen contingencies? (GS4 2018)

Q.3) Examine the status of forest resources of India and its resultant impact on climate change. (GS1 2020)

MCQs

Question: The term 'M-STRIPE' is sometimes seen in the news in the context of (UPSC 2017)

- (a) Captive breeding of Wild Fauna
- (b) Maintenance of Tiger Reserves
- (c) Indigenous Satellite Navigation System
- (d) Security of National Highways

Answer: (b)

Question: Consider the following statements: [2014]

1. Animal Welfare Board of India was established under the Environment (Protection) Act, 1986.
2. The National Tiger Conservation Authority is a statutory body.
3. The National Ganga River Basin Authority is chaired by the Prime Minister.

- Critical Tiger Habitats' were created by the government to reserve and protect a part of India's forests for tiger-centric activities.
- It adopted a fortress conservation approach towards tiger protection with a Buffer Area - a mix of forest and non-forest land - beyond each CTH.
- Despite the people-oriented and inclusive approach, it led to conflict as it displaced people who had coexisted with tigers for generations.

Tiger Task Force:

- In 2005, the government of India established a five-member 'Tiger Task Force' following public outcry over deficiencies in the conservation of tigers.
- According to allegations, tigers existed only on paper in Sariska despite the government spending ₹2 crores for upkeep and safety per tiger versus ₹24 lakh per tiger in other areas.
 - **Findings:**
- The approach towards conservation that involved the use of guns, guards, and fences was not appropriate for protecting tigers.
- There was an increase in the conflict between forest bureaucracy and the traditional dwellers
- The protection of the tiger was inseparable from the protection of the forests, which in turn was inseparable from the lives of the inhabitants of these areas.

Amendment of WLPA:

- In 2006, Parliament amended WLPA in September 2006 to establish the National Tiger Conservation Authority (NTCA) and a tiger conservation plan.
- Although it protected the CTH, it modified the use of the forest by forest dwellers and permitted their relocation if necessary.
- It did not prohibit the diversion of a "tiger's forest" for development projects and allowed wildlife to be killed as a last resort.

Forest Rights Act:

- The government also enacted the Scheduled Tribes and Other Traditional Forest Dwellers (Recognition of Forest Rights) Act 2006 (FRA).
- The FRA recognized all customary and traditional forest rights on all forest land (individual and community).
- It gave the Gram Sabhas the authority to protect, conserve, and manage forests, wildlife, and biodiversity within customary and traditional boundaries.
- It permitted the Gram Sabha to democratically determine and demarcate forest rights vested in them by the FRA.
- It led to securing the livelihoods of at least 20 crore Indians in 1.79 lakh villages, with half of them being tribals.
- It also introduced the concept of 'Critical Wildlife Habitat' (similar to the CTH) which could not be diverted for non-forestry purposes.

Critical Tiger Habitats	Critical Wildlife Habitats
• Core areas in tiger reserves with the strictest level of protection • Under the purview of the Wildlife Protection Act, 1972 • Considers the interests of forest-dwelling tribal communities and their livelihoods in mind.	• Areas of national parks and sanctuaries that are specifically established on a scientific and objective basis for wildlife conservation. • They are to be kept inviolate. • They fall under the Scheduled Tribes and Other Traditional Forest Dwellers (Recognition of Forest Rights) Act, 2006.

Challenges in implementing CTHs

- As of 2018, there were 2,808 villages in CTHs housing 57,386 families (as of 2019) of which 42,398 remained inside 50 Tiger Reserves.
- Originally, Tiger Reserves were to be created in a non-arbitrary democratic process based on scientific and objective criteria.
- **Basis:** Scientific evidence of the irreversible damage to wildlife that human activities wreak
- Tiger conservation was also required to ensure the agricultural, livelihood, development, and other interests of the people living in tiger-bearing forests or a tiger reserve.
- In 2007, the government in a rushed decision notified 26 Tiger Reserves in 12 States without complying with WLPA provisions.
- 91.77% of this area encompassed CTHs while the CTHs except for Simlipal had no Buffer Area.
- They were added in 2012 after the Supreme Court rapped the NTCA and set a three-month deadline.
- However, the government has a responsibility to assess whether the coexistence of forest dwellers and tigers is possible, and if necessary relocate the forest dwellers to establish a CTH.
- The Buffer Area was developed to promote human-animal coexistence while recognizing the livelihood, developmental, social, and cultural rights of locals.

Which of the statements given above is/are correct?

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

Answer: (b)

Question: Among the following Tiger Reserves, which one has the largest area under "Critical Tiger Habitat" [2020]

- a. Corbett
b. Ranthambore
c. Nagarjunsagar-Srisailem
d. Sunderbans.

Answer: (c)

Question: Consider the following protected areas [2012]

1. Bandipur
2. Bhitarkanika
3. Manas
4. Sunderbans

Which of the above are declared Tiger Reserves?

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

Answer: (b)

- Tiger Reserves in India have been notified without meeting these requirements and obtaining informed consent from forest dwellers.
- As a result of this, tigers have been forced to inhabit a landscape that suffered from illegalities.

Relocation and rehabilitation

- WLPFA prohibits all relocation except voluntary relocation on mutually agreed terms and conditions.
- Once FRA recognizes people's rights, the State acquires those rights as per the terms of the Right to Fair Compensation and Transparency in Land Acquisition, Rehabilitation and Resettlement (LARR) Act 2013.
- LARR also requires the rehabilitation package to provide financial compensation as well as secure livelihoods to those relocated.
- It entitles forest dwellers to a wide range of benefits such as access to socio-economic benefits but they have been limited to just a compensation package which was not a suitable compensation.
- Some people have claimed that consent has been obtained through coercion.

Tiger conservation versus rights of forest dwellers

- **Resistance of rights:** In 2017, the NTCA barred the recognition of rights under FRA in the CTHs due to the absence of appropriate guidelines.
- Both WLPFA and FRA require forest-dwellers rights to be recognized even inside CTHs.
- The ban was withdrawn once the guidelines were issued by the Union government.
- **Environmental clearances:** The FRA provides for the establishment of 13 basic government public utilities which may require tree felling on a large scale.
- Although, such diversion of land required the consent of the Gram Sabha, the Union Environment Ministry insisted in 2020 that the National Board for Wildlife issue a wildlife clearance if these diversions are from National Parks and Wildlife Sanctuaries.
- As per law, wildlife clearance is required only for projects that require environmental clearance under the Environment (Protection) Act 1986, but these public utilities do not fall under the listed infrastructure.

Conclusion

- India's journey with Project Tiger highlights the need to balance tiger conservation with the rights and livelihoods of traditional inhabitants and the possibilities of increasing human-wildlife conflict. Therefore, laws and policies must dynamically evolve to reflect ecological, social, and legal complexities.

*To learn more about the achievements of NTCA, click the [link](#).

A 'Vulture Restaurant' In Jharkhand To Conserve The 'Critically Endangered' Species

SOURCE: FINANCIAL EXPRESS

PRIORITY: MEDIUM

Why in the news?

- Recently, a vulture restaurant was established in Koderma district of Jharkhand to raise awareness about the impact of livestock drugs.
- The restaurant aims to help in the conservation efforts of the diminishing vulture population.



What is the "vulture restaurant" launched recently?

- The "Vulture Restaurant" has been established in Gumo under Tilaiya Nagar Parishad in Koderma district to raise awareness about the declining vulture population and the threats faced by the species.
- The vultures have a crucial ecological role in rapidly consuming animal carcasses.
- It spans one hectare in area and has been designated as a feeding site for the vultures.

News Summary: The "Vulture Restaurant"

The "Vulture Restaurant" in Koderma is a crucial step in the conservation of vultures, addressing challenges like diclofenac poisoning and habitat loss. Coupled with governmental bans and the Vulture Action Plan, these initiatives signify a collaborative effort to safeguard vultures and highlight the importance of preserving these ecologically vital birds.

Question: Vultures which used to be very common in Indian countryside some years ago are rarely seen nowadays. This is attributed to (UPSC CSE 2012)

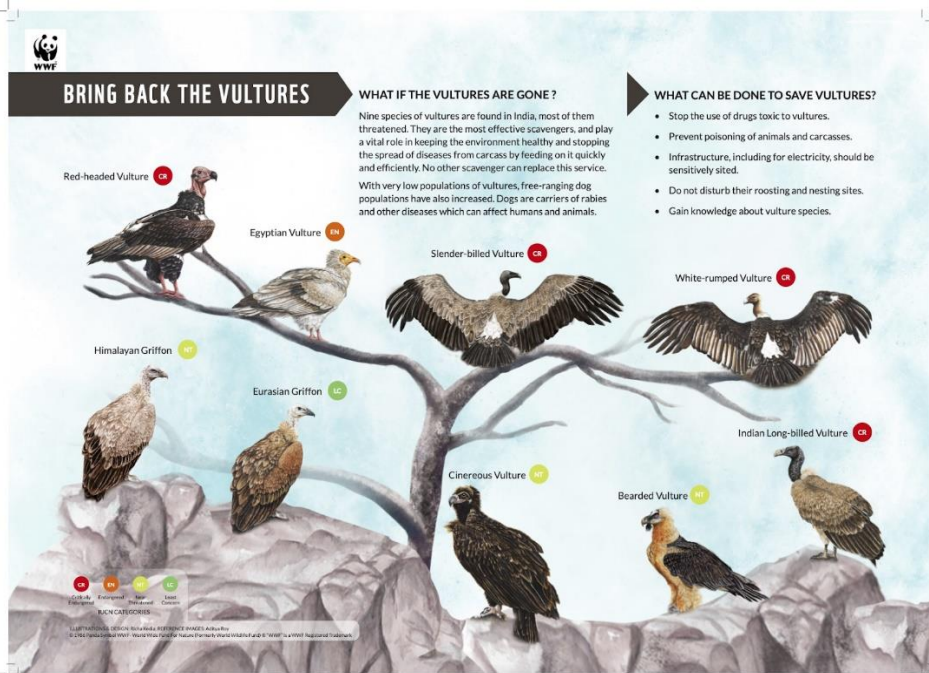
- (a) the destruction of their nesting sites by new invasive species
- (b) a drug used by cattle owners for treating their diseased cattle
- (c) scarcity of food available to them
- (d) a widespread, persistent, and fatal disease among them

Answer: (b)

- **Aim:** Provide vultures with carcasses free of diclofenac, a livestock antibiotic that leads to kidney failure in vultures.
- However, it was still awaiting the completion of protocols for diclofenac-free carcasses from goshalas and municipalities.
- The “restaurant” will also have bamboo fencing to prevent other species from interfering.

Vultures in Jharkhand

- Vulture sightings have increased in Koderma district since 2019 following two decades of their absence.
- A survey conducted in 2023 observed 145 vultures, rising from 38 in 2022.
- The Jharkhand coordinator of the Indian Bird Conservation Network claimed that there was a recent increase in vulture populations in the state of around 450-500 birds across six varieties.
- Egyptian vultures have been sighted in the Hazaribag Wildlife Sanctuary, Jharkhand.



Vultures

- Vultures are a medium- large-sized scavenging bird that primarily inhabits tropical and sub-tropical regions.
- **Characteristics:**
 - Heavy and dull brown or black colored bodies, hunched-over stances, and shaggier feathers
 - Bald heads and throats which help regulate body temperature
 - Broad wings to soar the skies in search of prey.
- **Food preferences:** They consume carrion, garbage, and even excrement but rarely prey upon live animals.
- **Ecological role:** They consume carrion which reduces the spread of diseases, including fatal ones among humans.
- **Vulture species in India:** Out of the 23 known species of vultures, 9 have been observed in India.
 - These include the Oriental white-backed, Long-billed, Slender-billed, Himalayan, Red-headed, Egyptian, Bearded, Cinereous, and the Eurasian Griffon.
- **Conservation status:**
 - **IUCN Red List:** Critically endangered
 - **CITES:** Appendix II
 - **Schedule I of Wildlife Protection Act, 1972:** Bearded, Long-billed, Slender-billed, and Oriental white-backed vultures
 - **Schedule IV of Wildlife Protection Act, 1972:** Himalayan, Red-headed, Egyptian, Cinereous, Eurasian Griffon.
- **Threats faced:**
 - **Poisoning:** Kidney failure induced by diclofenac and other toxic non-steroidal anti-inflammatory drugs is a major cause of the death of vulture species
 - **Electrocution and collisions:** Vulture deaths have been reported due to contact with high-tension power distribution lines. Vehicle collisions are another significant cause of vulture deaths.
 - **Persecution:** They have been persecuted by many communities as they are natural scavengers. This has led to their deaths due to deliberate poisoning or hunting.

- **Forest Fires:** Forest fires have destroyed the traditional nesting sites of these vultures leading to a reduction in vulture populations.
- **Starvation:** Lack of preferred food sources has resulted in numerous deaths of vultures due to starvation.

Steps taken to help conserve vultures

- **Ban on certain drugs fatal to vultures:** In 2023, the Union Ministry of Health and Family Welfare banned the manufacture, sale, and distribution of ketoprofen and aceclofenac and their formulations for animal use under section 26A of the Drugs and Cosmetics Act, 1940 (23 of 40) in July 2023.
- Aceclofenac immediately converts into diclofenac in animals and remains in the body for longer periods.
- Ketoprofen, which is an anti-inflammatory drug (NSAID) used to treat pain, inflammation, swelling, stiffness, and joint pain, was poisonous to the Himalayan vulture.
- **Vulture Action Plan:**
 - The Vulture Action Plan 2020-25 was launched by the Ministry of Environment, Forests and Climate Change (MoEFCC) to help conserve vultures in India.
 - It aims to ensure minimal use of Diclofenac and prevent the poisoning of cattle carcasses with veterinary NSAIDs
 - Safety testing of available NSAIDs on vultures and develop new ones that do not affect vultures.
 - Develop a system to automatically remove a drug from veterinary use if it is found to be toxic to vultures with the help of the Drugs Controller General of India.
 - Upscaling conservation and establishment of breeding and conservation centres. Additional Conservation Breeding Centres and Vulture Conservation Centres
 - Implement the Vulture Safe Zone programme, conduct regular census of vulture populations, and create a database on threats faced by vultures.
- **Jharkhand Forest Department:** Jharkhand Forest Department has stated that it will establish a vulture interpretation and rescue center and institute geo-tagging of vultures.
 - A 100-km radius from Hazaribag has been declared as a safe zone for vultures.

Conclusion

The establishment of a "Vulture Restaurant" in Koderma is a commendable effort to raise awareness about the challenges faced by the vulture population along with governmental bans and the Vulture Action Plan.

Paramyrothecium Indicum – Scientists Discover New Species Of Fungus In Kerala

SOURCE: CAREERS360

PRIORITY: MEDIUM

Why in the news?

- Recently, scientists from KFRI, BHU, and BSI discovered a new species of fungus in Kerala called *Paramyrothecium indicum*.



What is Paramyrothecium Indicum?

- *Paramyrothecium Indicum* is a new species of phytopathogenic fungus that has been discovered in Kerala by researchers from the Kerala Forest Research Institute (KFRI), Benares Hindu University (BHU), and the Botanical Survey of India (BSI).
- Phytopathogens are parasites surviving on a plant host.
- The fungus was associated with emerging leaf spots on the wild hibiscus plants near Peechi-Vazhani Wildlife Sanctuary in Thrissur, Kerala.

News Summary: The discovery of *Paramyrothecium Indicum* in Kerala underscores the rich biodiversity of the Western Ghats and the importance of ongoing research in the region. Understanding and managing such phytopathogenic fungi are crucial for agricultural sustainability and environmental conservation. This finding emphasizes the need for continuous exploration and vigilance in preserving the unique flora and fauna of the Western Ghats.

MCQs

Question: Which of the following have species that can establish a symbiotic relationship with other organisms? (2021)

1. Cnidarians
2. Fungi
3. Protozoa

Select the correct answer using the codes given below:

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

Answer: (d)

- **Impact of the fungi:** Most Paramyrothecium species are considered phytopathogens, which are responsible for serious plant diseases that could impact crop productivity.
- If climatic conditions are favorable, the fungi will impact all plant leaves within a short time.
- **Treatment options:** According to researchers, some biological preventive solutions are available in the market to control the disease, including the use of fungicides in severe cases.
- **Weed control:** Some Paramyrothecium species produce secondary metabolites with bio-herbicidal potentials.
- Therefore, it can also be used in controlling weeds.

What is the significance of the discovered fungi?

- **Disease control:** Surveillance and early detection of causal agents are essential to controlling and managing leaf spot diseases caused by these fungi.
- **Need for exploration and research in the region:** The Western Ghats are abundant in fungi, including several endemic species.
- The climatic conditions, rainfall, and vegetation of the region are ideal for the growth of pathogenic and non-pathogenic fungi.
- The discovery highlights the need for further exploration and research into the flora and fauna of the region.

Fungi

- Fungi are one of the six kingdoms of biology comprising a diverse variety of organisms such as mushrooms, molds, yeast, rust, smuts, and mildews.
- The other Kingdoms are Animalia (animals), Plantae (plants), Protista, Archaea/Archaeobacteria, and Bacteria or Eubacteria.
- Fungi are eukaryotic organisms, which means they have clearly defined nuclei and membrane-bound organelles.
- They can be observed as either terrestrial or aquatic, and in temperate and tropical regions with sufficient moisture.
- They are heterotrophs.
- They are primarily decomposers and grow in soil or on decaying plant matter.
- **Reproduction:** Both sexual and asexual modes of reproduction involve spore formation.
- **Diseases:** Some fungi cause diseases in animals and humans (athlete's foot, ringworm, thrush).
- **Significance:**
 - They are critical to decomposition and forest regeneration, mammalian digestion, carbon sequestration, the global nutrient cycle, and antibiotic medication.
 - Used in the production of bread, wine, beer, and cheese, while some fungi, like mushrooms and truffles, are edible.
 - They can produce toxic compounds known as mycotoxins, which can contaminate food and lead to health problems when consumed
 - Exposure can also lead to allergic reactions
 - Secondary metabolites of fungi like antibiotics are used in the production of medicines
 - Fungi can break down materials such as textiles, leather, and paper.

Question: Certain species of which one of the following organisms are well-known as cultivators of fungi? [2022]

- Ant
- Cockroach
- Crab
- Spider

Answer: (a)

Question: Consider the following:

- Bacteria
- Fungi
- Virus

Which of the above can be cultured in an artificial/ synthetic medium? (2021)

- 1 and 2 only
- 2 and 3 only
- 1 and 3 only
- 1, 2 and 3

Answer: (a)

Question: Which of the following statements is/are correct? (2016)

Viruses can infect:

- bacteria
- fungi
- plants

Select the correct answer using the code given below:

- 1 and 2 only
- 3 only
- 1 and 3 only
- 1, 2 and 3

Answer: (d)

SCIENCE AND TECHNOLOGY

Quantum Gates: Devices That Translate Quantum Effects To Computing Awesomeness

SOURCE: THE HINDU

PRIORITY: MEDIUM

Why in the news?

- This article discusses quantum gates, their working, and their applications.

What are quantum gates?

- A quantum gate is a physical process or circuit that changes the state of a qubit or a collection of qubits.
- If particles or superconducting qubits are the physical qubits, the gate is often an electromagnetic pulse.
- They perform operations on qubits, allowing the creation of quantum circuits that execute complex calculations.
- Quantum algorithms can be implemented by performing operations such as the application of quantum logic gates like Hadamard gates, CNOT gates, etc.
- Unlike classical bits in traditional computing, which can only be in a state of 0 or 1, qubits can exist in superpositions of both states simultaneously.
- The controlled-NOT, or CNOT, gate acts on two qubits: a control qubit and a target qubit.
- The control qubit is unaffected by the CNOT gate while the target qubit flips from 0 to 1 or 1 to 0 if the control qubit state is 1.
- Modern computers use semiconductor transistors to build circuits that function as bits with each semiconductor chip hosting more than 100 million transistors on 1 sq. mm.
- However, transistors become more susceptible to quantum effects as they become smaller making them unreliable for computational tasks.

News Summary:

Quantum gates, fundamental to quantum computing, enable complex operations on qubits. Despite promising applications, the sector faces challenges, including engineering limitations and a shortage of expertise in India.

UPSC Mains Practice Questions

Q.1) Why is nanotechnology one of the key technologies of the 21st century? Describe the salient features of the Indian Government's Mission on Nanoscience and Technology and the scope of its application in the development process of the country. (GS3 2016)

MCQs

Question: Which one of the following is the context in which the term "qubit" is mentioned? (2022)

- Cloud Services

- Although superposition is one of the main factors responsible for speeding up a quantum computer, it is a fragile effect that deteriorates when qubits interact with their environment.
- A bit (a portmanteau of binary digit) is the smallest piece of information storage.
- In computers, a bit is a physical system with two easily discernible configurations, or states.
 - These physical bits can be used to represent and process expressions involving 0s and 1s.
 - For example, high voltage (1) and low voltage (0).
- A gate is a circuit that changes the states of bits in a predictable manner. However, their speed depends on the speed of the computer's functioning.

What are the applications of quantum gates in quantum computing?

- **Quantum Circuits:** They are used to construct quantum circuits analogous to classical circuits in traditional computers.
- **Quantum Algorithms:** They help implement quantum algorithms like Shor's algorithm for integer factorization and Grover's algorithm for unstructured search problems.
- **Quantum Machine Learning:** They help implement quantum machine learning algorithms.

CABINET DECISIONS
19 April 2023

National Quantum Mission

Cabinet approves National Quantum Mission

- Total cost of **Rs.6003.65 crore** from 2023-24 to 2030-31
- Mission to develop magnetometers with high sensitivity in atomic systems and Atomic Clocks for precision timing, communications and navigation
- Support design and synthesis of quantum materials such as superconductors, novel semiconductor structures and topological materials for fabrication of quantum devices
- Single photon sources/detectors, entangled photon sources to be developed for quantum communications, sensing and metrological applications
- To be implemented by Department of Science & Technology in partnership with other departments

1/4

What are some of the challenges faced by the quantum computing sector?

- There is an engineering-related challenge as reliable Quantum computers require at least 1,000 qubits but presently available quantum processors are much smaller in terms of qubits.
- Qubits exist in superposition in specific conditions such as very low temperature (~ 0.01 K), with radiation-shielding and protection against physical shock.
 - However, their states could be corrupted and results become biased by material or electromagnetic defects in the circuitry.
 - Researchers have not yet succeeded in building Quantum Computers that completely eliminate such disturbances.
- Error correction is another challenge as the no-cloning theorem states that it is impossible to perfectly clone the states of a qubit.
 - Researchers have not yet built quantum computers that don't amplify errors when more qubits are added.
- India faces a shortage of candidates with doctorates in quantum physics, engineering, and statistics.
- The country lacks domestic manufacturing capabilities for the necessary hardware for quantum computing.
- India also lacks a comprehensive multi-stakeholder network and clarity on whether the country will focus on short or long-term quantum applications.

To know more about India's National Quantum Mission, click the [link](#).

Conclusion

The exploration of quantum gates marks a pivotal stride in the realm of quantum computing, promising transformative applications in algorithms and machine learning. However, the field faces formidable challenges, from engineering limitations to the scarcity of expertise and manufacturing

- (b) Quantum Computing
 - (c) Visible Light Communication Technologies
 - (d) Wireless Communication Technologies
- Answer: (b)**

capabilities in India, emphasizing the need for concerted efforts and strategic planning in advancing quantum technologies.

Will SLIM Revolutionise Lunar Landings?

SOURCE: THE HINDU

PRIORITY: MEDIUM

Why in the news?

- Recently, **Japan's Smart Lander for Investigating Moon (SLIM) spacecraft**, after a months-long journey, was brought into lunar orbit, preceding its scheduled moon landing attempt on January 19.
- If proved successful, **Japan will have joined the ranks of just four other countries** to achieve a soft landing of a robotic craft on the natural satellite, following **India's Chandrayaan-3 mission** success in August.



What is SLIM Mission?

The SLIM (Smart Lander for Investigating Moon) mission is a significant endeavor in **lunar exploration** initiated by the **Japan Aerospace Exploration Agency (JAXA)**.

- Launch and Journey:** SLIM was **launched on September 7, 2023**, from the Tanegashima spaceport in Japan. It **entered lunar orbit on December 25** after a months-long journey.
- Co-passenger:** Alongside SLIM, the **XRISM (a next-generation X-ray space telescope)** was also launched.
- Weight and Design:** The spacecraft weighed **590 kg at launch**, considerably lighter than similar missions like India's Chandrayaan-3 which weighed 3,900 kg.
- Orbital Parameters:** In this orbit, the **apogee** (farthest point from the Moon) is 4,000 km, and the **perigee** (closest point to the Moon) is 600 km above the lunar surface.
- Trajectory:** SLIM followed a **fuel-efficient trajectory** based on weak stability boundary theory, taking a longer but more economical route to the Moon. This involved **multiple swings** around Earth to build up kinetic energy.
- Precision Landing:** A standout feature of SLIM is its goal to land **within 100 meters** of its chosen site near the **Shioli Crater**.
- Scientific Objectives:** Once on the Moon, SLIM, along with **two small rovers (Lunar Excursion Vehicle 1 and 2)**, will study the lunar surface, collecting data on **temperature, radiation, and potentially the Moon's mantle**.



Objectives of the Mission

- Precision Landing:** It has a key mission objective to demonstrate a high-precision landing on the Moon. Its standout feature, earning it the nickname **"moon sniper,"** is its goal to land **within 100 meters** of its chosen landing site near the **Shioli Crater**.
- Technological Demonstration and Testing:** The mission will test new technologies, such as a **feature matching algorithm and advanced navigation systems**. These technologies are crucial for future missions, especially those targeting difficult terrains like the lunar poles.
- Lunar Surface Study:** After landing, SLIM, along with **two deployed small rovers (Lunar Excursion Vehicle 1 and 2)**, will study the lunar surface near the landing point. This study includes **collecting temperature and radiation readings**, and attempting to investigate the **moon's mantle**.
- Resource Exploration:** Part of SLIM's investigation may involve **exploring for resources such as water-ice**, especially relevant in the context of the moon's South Pole region where parts of some craters are permanently shadowed, preserving water-ice.

News Summary: Japan's SLIM spacecraft entered lunar orbit, aiming for a precise moon landing on January 19. If successful, Japan will join the elite nations achieving a soft lunar landing. The mission explores lunar precision, advanced tech, and supports future lunar endeavors, including Chandrayaan-4.

UPSC Previous Year Practice Question

Q. What is the main task of India's third moon mission which could not be achieved in its earlier mission? List the countries that have achieved this task. Introduce the subsystems in the spacecraft launched and explain the role of the Virtual Launch Control Centre' at the Vikram Sarabhai Space Centre which contributed to the successful launch from Sriharikota. **(2023)**

Q. What is India's plan to have its own space station and how will it benefit our space programme? **(2019)**

Q. India has achieved remarkable successes in unmanned space missions including the Chandrayaan and Mars Orbiter Mission, but has not ventured into manned space mission, both in terms of technology and logistics? Explain critically. **(2017)**

Q. Discuss India's achievements in the field of Space Science and Technology. How the application of this technology has helped India in its socio-economic development? **(2016)**

MCQs

Q. With reference to India's satellite launch vehicles, consider the following statements: **(UPSC 2018)**

- PSLVs launch the satellites useful for Earth resources monitoring whereas GSLVs are designed mainly to launch communication satellites.
- Satellites launched by PSLV appear to remain permanently fixed in the same position in the sky, as viewed from a particular location on Earth.
- GSLV Mk III is a four-staged launch vehicle with the first and third stages using solid rocket motors; and the second and fourth stages using liquid rocket engines.

Which of the statements given above is/are correct?

- 1 only
- 2 and 3 only
- 1 and 2 only
- 3 only

Answer: (a)

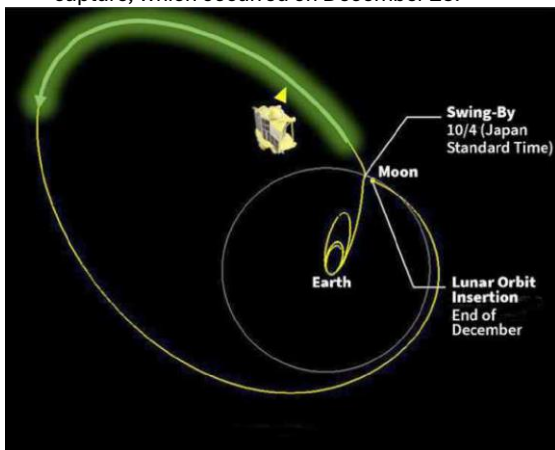
Q. With reference to the Indian Regional Navigation Satellite System (IRNSS),

- **Supporting Future Missions:** The success of SLIM's mission is also seen as critical for future lunar missions, such as the **Lunar Polar Exploration (LUPEX) mission**, a joint endeavor by India and Japan.

SLIM's Journey to the Moon

SLIM, or the Smart Lander for Investigating Moon, reached the moon using a unique and **fuel-efficient trajectory** based on the weak stability boundary theory. Unlike conventional methods that require more fuel, SLIM's journey to the moon was designed to be more economical in terms of fuel consumption.

- **Launch and Earth Orbit:** SLIM was launched on September 7, 2023, aboard an **H2A rocket** from the **Tanegashima spaceport** in Japan. After launch, it was first placed into an orbit around Earth.
- **Multiple Earth Orbits for Kinetic Energy:** SLIM utilized Earth's gravity to build up kinetic energy. It swung around the Earth multiple times, gaining speed with each orbit.
- **Trajectory to the Moon:** Once it had accumulated sufficient speed, SLIM maneuvered towards the Moon's orbit. This path is different from the more direct **Hohmann transfer orbit**, which is quicker but requires more fuel.
- **Approaching the Moon:** As SLIM neared the Moon, instead of applying brakes to slow down and be captured by the Moon's gravity (as is typical with other missions like Chandrayaan-3), it used a different approach.
- SLIM was deflected towards the Moon as it passed close to lunar orbit, continuing deeper into space. This deflection utilized the gravitational forces of both the Earth and the Moon, a technique developed for a previous JAXA mission called '**Hiten**'.
- **Larger, Loopy Path:** After this deflection, SLIM was on a larger, loopier path that eventually brought it back near the Moon. By December, it had slowed down sufficiently for orbital capture, which occurred on December 25.



Impact on Chandrayaan-4

- **Technological Demonstrations:** For Chandrayaan-4, which aims to explore the challenging terrain near the Moon's south pole, such precision landing technology would be crucial. The ability to land accurately in a specific spot is essential in rugged lunar regions with craters and steep slopes.
- **Navigation and Algorithm Development:** Since Chandrayaan-4 will need to navigate and land in a complex lunar environment, the insights from SLIM's advanced feature-matching algorithms and navigation systems will be invaluable.
- **Fuel Efficiency and Trajectory Insights:** While Chandrayaan-4 might not use the exact trajectory as SLIM, understanding the trade-offs between time, fuel efficiency, and mission design could influence future missions' planning.
- **Collaborative Experience:** The expertise gained from SLIM can directly contribute to the success of Chandrayaan-4 mission, a collaboration between JAXA and the Indian Space Research Organisation (ISRO).
- **Setting New Standards for Lunar Exploration:** The success of SLIM in achieving its objectives would raise the bar for lunar exploration missions. This, in turn, would set higher expectations and goals for Chandrayaan-4, possibly leading to more ambitious objectives or refined mission parameters.
- **Confidence in International Collaborations:** A successful SLIM mission would also reinforce the value of international collaboration in space exploration. The lessons learned and technologies developed through such collaborations could significantly benefit Chandrayaan-4, showcasing the potential of combined expertise and resources.

Conclusion

SLIM's success could revolutionize precision in lunar landings. SLIM's technologies will significantly influence upcoming lunar missions, particularly the Chandrayaan-4 mission.

consider the following statements: (UPSC 2018)

1. IRNSS has three satellites in geostationary and four satellites in geosynchronous orbits.
 2. IRNSS covers the entire India and about 5500 sq. km beyond its borders.
 3. India will have its own satellite navigation system with full global coverage by the middle of 2019.
- Which of the statements given above is/are correct?
- (a) 1 only
(b) 1 and 2 only
(c) 2 and 3 only
(d) None

Answer: (a)

Q. Consider the following statements: (UPSC 2016)

- The Mangalyaan launched by ISRO
- 1) is also called the Mars Orbiter Mission
 - 2) made India the second country to have a spacecraft orbit the Mars after USA
 - 3) made India the only country to be successful in making its spacecraft orbit the Mars in its very first attempt
- Which of the statements given above is/are correct?

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

Answer: (c)

Q. Selene-1, the lunar orbiter mission belongs to which one of the followings? (UPSC 2008)

- (a) China
(b) European Union
(c) Japan
(d) USA

Answer: (c)

Successful missions like SLIM and Chandrayaan-3 and 4 will pave the way for more advanced and precise exploration of the moon and potentially, other celestial bodies.

Researchers Develop 'Electronic Soil' to Enhance Crop Growth

SOURCE: INDIAN EXPRESS

PRIORITY: MEDIUM

Why in the news?

- Recently, researchers have developed 'electronic soil' (eSoil), which has shown promising results in **enhancing crop growth**, particularly in **hydroponic systems**.
- This eSoil is an innovative bioelectronic scaffolding that stimulates plant roots, leading to a **significant increase in the growth rate of barley seedlings**.

What is Electronic Soil (eSoil)?

Feature	Description
Composition	eSoil is made from cellulose, a natural biopolymer, mixed with a conductive polymer called PEDOT.
Traditional Substrates Comparison	Traditional hydroponic substrates like mineral wool are often non-biodegradable and require energy-intensive production processes, unlike eSoil.
Biodegradability and Energy Use	eSoil is biodegradable and uses very low energy, offering an environmentally friendly alternative.
Safety	Avoids the dangers associated with high-voltage electrical stimulation, making it safer for plant cultivation.
Growth Efficiency	In hydroponic setups, barley seedlings grown with eSoil showed a 50% average growth increase, demonstrating its efficiency.
Biological Mechanism	While not fully understood, initial findings suggest improved nitrogen processing in seedlings under electrical stimulation with eSoil.
Resource Use	eSoil enables the growth of seedlings faster using fewer resources, contributing to sustainable agriculture practices.
Applicability	Valuable in urban environments and areas with limited arable land or harsh conditions, due to its low energy needs and biodegradability.
Technology Type	Classified as low-power bioelectronic scaffolding, stimulating plant root systems for better growth.
Environmental Impact	Designed as an alternative to non-biodegradable and energy-intensive substrates, eSoil stands out for its lower environmental impact.

What is Hydroponics?

- Hydroponics is a method of growing plants without soil, using a water-based nutrient solution.
- In this system, plants can be grown using various aggregate substrates or growing media such as coconut coir or perlite.
- Hydroponics is characterized by its closed systems that recirculate water, ensuring that each seedling receives precisely the nutrients it needs.
- This approach results in minimal water usage and retains all nutrients within the system, making it an efficient and resource-conserving method of cultivation.
- In traditional hydroponic systems, mineral wool is often used as a cultivation substrate. However, this material is typically non-biodegradable and produced through energy-intensive processes.
- eSoil stands out for its low energy consumption and absence of high-voltage dangers, offering a safer and more sustainable alternative for hydroponic cultivation.

Benefits of eSoil

- Increased Growth Rate:** The most notable benefit of eSoil is its ability to stimulate the root systems of plants, leading to enhanced growth.
- The study found that barley seedlings grown with eSoil showed an **average increase of 50% more growth** compared to traditional methods.
- Low Energy Consumption:** Unlike previous research that used high voltage to stimulate plant roots, eSoil operates with very low energy consumption.

News Summary: Researchers develop 'electronic soil' (eSoil) for hydroponics, stimulating plant roots and enhancing barley seedling growth by 50%. Promising for urban agriculture but poses biological and environmental questions.

UPSC Previous Year Practice Question

- Q.** How does e-Technology help farmers in production and marketing of agricultural produce? Explain it. **(2023)**
- Q.** What is the present challenges before crop diversification? How do emerging technologies provide an opportunity for crop diversification? **(2021)**
- Q.** How is science interwoven deeply with our lives? What are the striking changes in agriculture triggered off by the science-based technologies? **(2020)**
- Q.** How can biotechnology improve the living standards of farmers? **(2019)**

MCQs

Q. How is permaculture farming different from conventional chemical farming? (UPSC 2021)

1. Permaculture farming discourages monocultural practices but in conventional chemical farming, monoculture practices are predominant.
2. Conventional chemical farming can cause increase in soil salinity but the occurrence of such phenomenon is not observed in permaculture farming.
3. Conventional chemical farming is easily possible in such regions.
4. Practice of mulching is very important in permaculture farming but not necessarily so in conventional chemical farming.

Select the correct answer using the code given below.

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

Answer: (b)

Q. In the context of India, which of the following is/are considered to be of practice(s) of eco-friendly agriculture? (UPSC 2020)

1. Crop diversification
2. Legume intensification
3. Tensiometer use
4. Vertical farming

Select the correct answer using the code given below:

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

Answer: (d)

- **Biodegradable and Sustainable Material:** eSoil is made from cellulose, a biopolymer, mixed with a conductive polymer called PEDOT. This combination is not only innovative but also biodegradable, contrasting with non-biodegradable materials like mineral wool commonly used in hydroponics.
- **Efficient Nutrient Processing:** The research suggests that seedlings grown in eSoil process nitrogen more effectively. This could imply more efficient use of nutrients, potentially reducing the need for fertilizer input.
- **Suitable for Urban and Controlled Environments:** Hydroponics, combined with eSoil, can enable food cultivation in urban settings and controlled environments. This is particularly relevant for areas with limited arable land or harsh growing conditions.
- **Water and Nutrient Efficiency:** Since hydroponic systems recirculate water, the combination with eSoil ensures that each seedling gets precisely the nutrients it needs with minimal water usage.
- **Potential in Addressing Food Security:** While eSoil alone may not solve the global food security problem, it presents a promising tool to augment food production in challenging environments and contribute to meeting the demands of a growing world population.

Concerns Regarding eSoil

- **Unknown Biological Mechanisms:** Although eSoil has been shown to enhance the growth of barley seedlings, the exact biological processes involved in how the electrical stimulation improves seedlings' ability to process nitrogen are not yet clear.
- **Impact on Microbial Ecosystem:** The introduction of eSoil, especially in large-scale agricultural applications, could affect the natural soil microbial ecosystem. Any disruption to this balance could have unforeseen ecological impacts.
- **Long-Term Effects on Plant Health:** While the short-term benefits of eSoil in enhancing growth rates are evident, the long-term effects on plant health and productivity are unknown.
- **Environmental Impact of Production and Disposal:** Although eSoil is made from biodegradable materials like cellulose and conductive polymers, the environmental impact of its production and disposal should be considered.
- **Scalability and Economic Viability:** Scaling up the use of eSoil for widespread agricultural applications might face challenges in terms of cost, infrastructure requirements, and practicality.
- **Dependence on Technological Solutions:** While it can aid in areas with limited arable land, an overemphasis on such technologies might divert attention from other sustainable agricultural practices and the importance of preserving natural soil health.
- **Regulatory and Ethical Considerations:** The introduction of a novel agricultural technology like eSoil may also prompt regulatory and ethical considerations.

Conclusion

Hydroponics with eSoil can enable efficient food production in urban settings with controlled environments. While eSoil is not a complete solution to food security, it presents a promising method for growing food in areas with limited arable land or harsh environmental conditions.

Q. What are the advantages of fertigation in agriculture? (UPSC 2020)

1. Controlling the alkalinity of irrigation water is possible.
2. Efficient application of Rock Phosphate and all other phosphatic fertilizers is possible.
3. Increased availability of nutrients to plants is possible.
4. Reduction in the leaching of chemical nutrients is possible.

Select the correct answer using the code given below:

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

Answer: (c)

XPoSat Launch: What Is India's First Mission Of This Year?

SOURCE: INDIAN EXPRESS

PRIORITY: MEDIUM

Why in the news?

- Recently, ISRO launched the X-ray Polarimeter Satellite (XPoSat), the first mission of 2024 from the Satish Dhawan Space Center, Sriharikota.
- XPoSat is India's first space observatory to study the polarization of cosmic X-rays.
- It is the second mission of its kind after NASA's Imaging X-ray Polarimetry Explorer (IXPE).

What is XPoSat?

- The X-ray Polarimeter Satellite or XPoSat is a space exploratory mission launched by ISRO to study the nature of X-ray emissions by bright celestial bodies in the medium range.
- It will observe sources emitting polarised X-rays.
- The observations will be performed when the neutron stars are in transit through the Earth's shadow.
- **Mission life:** About 5 years.
- **Launch:** it was launched into the low earth orbit (650 km) by the PSLV-C58.
- The solar panel of the satellite was also deployed successfully.

Payloads:

- **Indian X-ray Polarimeter (POLIX)**
 - It is the world's first instrument that has been designed to operate in the **medium X-ray energy band (8-30 KeV)**.
 - It comprises a **collimator** that filters light from bright sources in its field of view, a **scatterer**, and **four X-ray proportional counter detectors**.
- **X-ray Spectroscopy and Timing (XSPECT)**

News Summary: ISRO launched the X-ray Polarimeter Satellite (XPoSat), India's first space observatory for studying X-ray polarization. It aims to observe various celestial sources, providing crucial insights into the universe's nature.

UPSC Mains Practice Questions

Q.1) Discuss India's achievements in the field of Space Science and Technology. How the application of this technology has helped India in its socio-economic development? (GS3 2016)

MCQs

Question: With reference to 'Astrosat', the astronomical observatory launched by India, which of the following statements is/are correct?

1. Other than the USA and Russia, India is the only country to have launched a similar observatory into space.

- **Objective:** Conduct fast and high spectroscopic resolution in **soft X-ray energy bands (0.8-15KeV)**.
- Observe various sources such as **X-ray pulsars, black hole binaries, low-magnetic field neutron stars, active galactic nuclei, and magnetars**.
- Both payloads have been built by Raman Research Institute and UR Rao Satellite Centre, Bengaluru.

What is the significance of XPoSat?

- **X-ray polarisation measurement:** XPoSat will facilitate X-ray polarisation measurement from bright sources in the medium range.
- Previously, only timing and broadband spectroscopy was performed by satellites like India's AstroSat while polarisation of celestial sources was done either in the optical or radio bands.
- **Observe two different kinds of sources:** Out of the tens of x-ray radiating sources identified, XPoSat will observe
 - **persistent sources** including both targeted and known sources
 - Transient sources such as pulsars and magnetars.
- **Better understanding of the universe:** POLIX will measure the **degree and angle of polarization of X-ray photons** surrounding cosmic entities like **black holes and neutron stars**.
- Researchers can use this information alongside spectrographic, timing, and imaging data to improve their understanding of the universe.



What is the polarisation of X-rays?

- X-rays comprise electric and magnetic waves that are constantly in motion.
- **They do not follow a patterned direction of motion as they are sinusoidal waves.**
- On the other hand, **polarized X-rays are organized and have two waves vibrating in the same direction.**
- X-rays emitted by magnetars or black holes encounter a variety of materials in the universe.
- **When the X-ray passes through this thick cloud of material, its electric component emits a photon in a changed direction since it has undergone scattering.**
- As a result, the new photon has been polarized in a direction perpendicular to the plane between the original and scattered photon.

Similar missions

- There have been very few missions on X-ray polarization measurements.
- **HX-POL and XL-CALIBUR:** Balloon-based short-duration experiments by NASA and its collaborators.
- **AstroSat:** It was India's first astronomy-based space mission.
- **IXPE:** The **Imaging X-ray Polarimetry Explorer** is a joint initiative by NASA and the Italian Space Agency.
- **Objective:** Study the most extreme and mysterious objects in the universe.

Key terms

- **Neutron stars:** Neutron stars are the collapsed cores of previously massive stars that have been crushed to a high density by supernova explosions. It is denser than any other type of star but less dense than a black hole.
- **X-ray pulsars:** It consists of a magnetized neutron star in orbit with a normal stellar companion with a magnetic field strength at the surface of the neutron star over a trillion times stronger than the strength of the magnetic field measured at the surface of the Earth (60 μ T).

2. Astrosat is a 2000 kg satellite placed in an orbit at 1650 km above the surface of the Earth.

Select the correct answer using the code given below. (UPSC 2016)

- 1 only
- 2 only
- Both 1 and 2
- None of the above

Answer: (d)

Question: Consider the following pairs:

Object in space	Description
Cepheids	1. Giant clouds of dust and gas in space
Nebulae	• 2. Stars that brighten and dim periodically
Pulsars	• 3. Neutron stars are formed when massive stars run out of fuel and collapse

How many of the above pairs are correctly matched? (UPSC 2023)

- Only one
- Only two
- All three
- None

Answer: (a)

- **Magnetars:** A magnetar is an exotic type of neutron star with an ultrahigh magnetic field about 1,000 times stronger than a normal neutron star and about 1 trillion times stronger than that of the Earth.
- **Black hole binaries:** A binary black hole is a supermassive black hole system that consists of two black holes in a close orbit and moving around each other.
- **Active galactic nuclei:** An active galactic nucleus (AGN) is an extremely bright central region of a galaxy that is dominated by the light emitted by dust and gas as it falls into a black hole.

It is a compact region at the galaxy's center that emits a significant amount of energy across the electromagnetic spectrum.

Conclusion

- Polarization measurements of X-rays are critical to gaining a better understanding of the universe.
- However, it is a challenging undertaking due to the need for highly sensitive and precise instruments.

China Develops Groundbreaking Nuclear Battery That Can Last 50 Years Without Charging

SOURCE: ECONOMIC TIMES

PRIORITY: HIGH

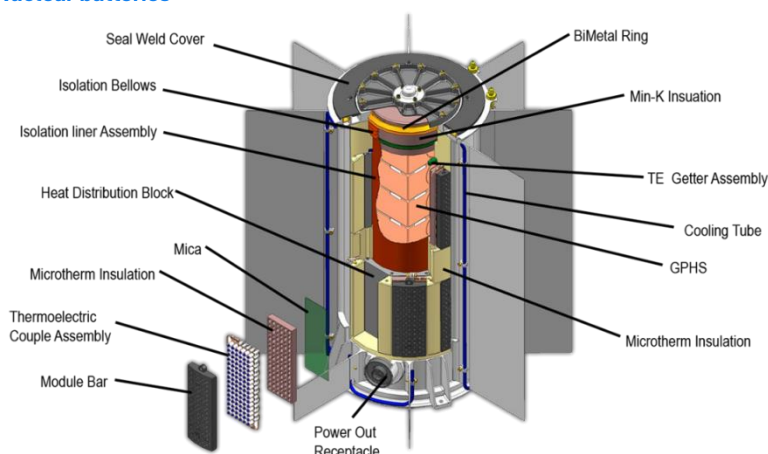
Why in the news?

- Recently, Betavolt, a Chinese startup developed a revolutionary battery that was capable of powering smartphones for 50 years without having to be charged.
- The company aims to produce batteries capable of generating 1 watt of power by 2025.

What is the new battery developed by Betavolt?

- Chinese company Betavolt has described the new nuclear battery developed by them as the world's first miniaturized atomic energy system.
- **Structure:**
 - The battery was around the same size as a coin with dimensions of 15x15x5 cubic millimeters.
 - It consists of 63 nuclear isotopes that have been arranged compactly in the module.
 - It has a layered structure and consists of 10 microns thick diamond semiconductors, with a layer of nickel-63 in between.
- **Capacity:** It was capable of delivering 100 microwatts of power and has a voltage of 3V.
- **Features:**
 - The batteries produce electricity by harnessing energy from the decay of a radioactive isotope (nickel-63).
 - It is fire-resistant, jerk-proof, and operational in temperatures from -60°C to 120°C.
 - Its small size means multiple units can be connected to increase the power output.
- **Applications:** Provide enduring power for equipment in sectors such as aerospace, medical care, UAVs and micro-robots, microprocessors, advanced sensors, drones, and AI.

Nuclear batteries



- A nuclear battery is a device that is capable of harnessing energy from the decay of a radioactive element isotope to generate electricity.
- Unlike traditional batteries that use electrochemical reactions as their power supply, nuclear batteries use the decay of radioactive alpha, beta, and gamma particles for a constant energy source.
- They can be thermal conversion and non-thermal conversion in nature.
- They are more expensive than traditional batteries of the same size.

What is the significance of the battery?

News Summary: Chinese startup Betavolt has developed a miniaturized nuclear battery, the world's first of its kind, capable of powering devices for 50 years without charging. It challenges conventional science with safety, eco-friendliness, and potential geopolitical advantages.

UPSC Mains Practice Questions

Q.1) Give an account of the growth and development of nuclear science and technology in India. What is the advantage of fast breeder reactor programme in India? (GS3 2017)

Q.2) With growing energy needs should India keep on expanding its nuclear energy programme? Discuss the facts and fears associated with nuclear energy. (GS3 2018)

MCQs

Question: With which one of the following is BRIT (Government of India) engaged? (2008)

- Railway Wagons
- Information Technology
- Isotope Technology
- Road Transport

Answer: (c)

- **Challenges conventional science:** The battery developed by Betavolt is the world's first to miniaturize atomic energy production. As a result, this could drive further development and dispel conventional notions about non-miniaturized nuclear technology.
- **Better energy density:** It has an elevated energy density giving it an advantage over its competitors.
- **Longer use:** According to the company, the battery could allow devices like mobiles and UAVs to be used indefinitely without the need for recharging or battery replacement.
- **Safety:** The battery's layered structure will prevent it from catching fire or exploding when subjected to force.
- The battery does not emit any external radiation making it suitable for use in medical devices placed inside the human body - pacemakers, cochlear implants, etc.
- **Greener than other batteries:** Since the 63 isotopes transform into a stable and non-reactive isotope of copper after the decay period, they do not pose a threat of pollution or environmental damage.
- **Geopolitical advantage:** It could provide China an advantage in the geopolitical competition amid development in emerging and critical sectors like AI, semiconductors, etc.
- Competitors like Russia, USA, and the EU have been exploring the development of this technology for use in sectors like aerospace, underwater crafts, remote sensing stations, etc.
- **Revolutionize electronics:** The battery could eliminate the need for chargers or portable power banks, thereby allowing devices to operate continuously without degradation in capacity or lifespan like conventional Li-ion batteries.

Conclusion

The new nuclear battery developed by Betavolt challenges conventional science and holds significant implications for various industries. Its safety features, eco-friendliness, and potential geopolitical advantage could revolutionize electronic devices could herald a future that is more sustainable.

AGRICULTURE

Kachchhi Kharek, Indigenous Dates Of Kutch, Become Gujarat's 2nd Fruit To Get GI Tag

SOURCE: INDIAN EXPRESS

PRIORITY: MEDIUM

Why in the news?

- Recently, Kachchhi Kharek an indigenous date from the Kutch region of Gujarat received the Geographical Indication (GI) tag.
- This has made it the second fruit from the state to receive the GI tag.



What is the Kachchhi Kharek?

- Kachchhi Kharek is an indigenous variety of dates from Gujarat that is believed to be around 400-500 years old.
- **Origin:**
 - According to the locals, the dates developed from seeds thrown by settlers along the north-western border of India who used to visit the Middle East for Haj and trade.
 - Some others also attribute these plants to shoots and seeds imported from Arab countries by gardeners working in the royal palaces.
- **Features:**
 - As they are seedling-propagated palms, they are unique and represent diverse characteristics.
 - These dates have diverse colors, sizes, shapes, and tastes.
 - Dates in Kutch are harvested in the Khalal stage when fruits have matured, accumulated sucrose, and turned red or yellow but are still crisp.

News Summary:

Kachchhi Kharek, an indigenous date from Gujarat's Kutch region, received the Geographical Indication (GI) tag, marking its distinctiveness. This recognition will enhance market opportunities for local farmers.

MCQs

Question: In order to comply with the TRIPS Agreement, India enacted the Geographical Indications of Goods (Registration & Protection) Act, 1999. The difference/ differences between a "Trade Mark" and a Geographical Indication is/are [UPSC 2010]

1. A Trade Mark is an individual or a company's right whereas a Geographical Indication is a community's right.
2. A Trade Mark can be licensed whereas a Geographical Indication cannot be licensed.
3. A Trade Mark is assigned to the manufactured goods whereas a Geographical-Indication is assigned to the agricultural goods/products and handicrafts only.

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

Answer: (b)

- Kutch is the only place where fresh dates are economically cultivated, marketed, and consumed.
- **Cultivation:**
- These date palms are grown in the arid region of Kutch which has a hot and dry climate and sandy soil.
- The Kutch region accounts for more than 85 % of total date palm cultivation in India and 94% of the total date palm cultivation in Gujarat.
- At present, around two million date palms are cultivated in the Kutch of which 1.7 million are seedling-origin palms of indigenous varieties.
- Date palms flower in January-February and kharek or fresh dates are harvested in June-July in Kutch as they cannot withstand moist weather (onset of the southwest monsoon).
- In other countries, they are allowed to ripen further till they become soft and dark brown or black.
- **Nutritional value:** Source of vitamins, minerals, potassium and fiber.

What was the other fruit from Gujarat that received the GI tag?

- The Kesar Gir Mango was the first fruit from the state to receive the GI Tag (2011).
- It was the second variant of mango to get the GI tag in India following the Dussheri variant from Uttar Pradesh.
- Kesar mango cultivation in Gir originated about 100 years ago and has emerged as a hub for the mango, which is one of the most expensive varieties of mango available in India.
- It is grown in present-day Junagadh, Gir Somnath, and Amreli districts of Saurashtra.

GI Tag

- Geographical Indications (GI) of goods refer to the place of origin of a product and are accorded to indicate assurance of its quality and distinctiveness due to its origin in a specific geographical locality, region, or country.
- In India, GI Tags are awarded by the Department for Promotion of Industry and Internal Trade, Union Ministry of Commerce and Industry.
- It is valid for 10 years and can be renewed following this.
- **5 Major categories of GI-tagged goods:**
- Handicrafts, Agriculture, Foodstuffs, Manufactured products, Natural goods
- The GI registration is provided to the area not to traders, but once it is received traders can apply to sell the product with the GI logo.
- Authorized traders are then assigned a unique GI number while unauthorized traders can be prosecuted under The Geographical Indications of Goods (Registration and Protection) Act, 1999.
- In India, Tamil Nadu (61) has the most number of GI-tagged products followed by Andhra Pradesh.
- **Benefits:**
- Encourage the preservation of biodiversity
- Promote entrepreneurship and monetization of goods
- Employment generation and limit migration
- Conservation of cultural heritage
- Tackle structural challenges like access to credit, market access, competition, innovation, and capacity building.
- **Significance:**
- The GI tags act as a marker of the product's originality.
- It helps protect the interests of the local growers and artisans by preventing duplicity and unauthorized sale.
- It helps raise confidence and awareness among consumers.

How will the GI tag benefit Kutch date palm farmers?

- The unique identity obtained by the fruit as a result of the GI tag will allow cultivators to access new avenues of marketing and processing.
- They can launch new branding strategies that will increase consumer confidence in the product, raising prices and boosting sales and returns.

Question: Question: Which of the following has/have been accorded 'Geographical Indication' status? (UPSC 2015)

1. Banaras Brocades and Sarees
2. Rajasthani Daal-Bati-Churma
3. Tirupathi Laddu

Select the correct answer using the code given below.

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

Answer: (c)

India's Great Grain Mystery: Cereal Gap

SOURCE: THE HINDU

PRIORITY: HIGH

Why in the news?

- According to the official Foodgrains Bulletin, cereal production in India reached 304 million tonnes in 2022-23.
- However, aggregate household consumption of cereals by India's 140 crore population is less than 200 million tonnes, indicating a huge gap between production and consumption of cereals.

News Summary: The cereal gap in India reveals a substantial difference between production and consumption, indicating challenges in food security. Addressing data gaps, recalculating allowances, and promoting crop diversification are essential.

- This article also discusses the need to implement measures to ensure demand and for alternate measures like crop diversification.



What is the cereal gap?

- The cereal gap refers to the disparity between production and consumption of cereals (rice and wheat) in India.
- **Production:** As per the Foodgrain Bulletin, production of cereals rose to 304 million tonnes in 2022-23 (exceeding 300 million tonnes for the first time).
- The average production for 2020-21 to 2022-23 was around 292 million tonnes.
- **Consumption:** Aggregate household consumption of cereals by the Indian population was estimated to be less than 180-200 million tonnes.
- Per capita cereal consumption (PCCC) of Indian households was 11.6 kg/month - India Human Development Survey (IHDS-2) and 10.7 kg/month - National Sample Survey.
- In 2011-12, these values were 11.8 kg and 11.6 kg per month respectively.

Has the PCCC been declining?

- According to experts, the PCCC has been declining steadily since the late 1970s.
- As per NSS data, monthly PCCC declined from 15.3 kg (1977-78) to 11.3 kg in 2011-12 in rural areas.
- However, survey data on cereal consumption beyond 2011-12 at the national level is not available.
- According to a state-level report for Maharashtra, PCCC in the state continued to decline between 2011-12 and 2017-18.

Factors

- **Poverty:** The decline in the PCCC is generally attributed to the rise in poverty.
- However, this is considered to be a misunderstanding for the following reasons.
- There is clear evidence of slow and steady poverty decline in India from the 1970s until 2011-12.
- The decline in PCCC was mainly among the better-off sections of society, who were not affected by poverty.
- **Other factors:** Experts claim that the decline in PCCC was driven by urbanization, rising education levels, diversification of food intake, and poor physical activity.
- Increased industrial use of cereals, for products like beer and biscuits could be a reason for them not being properly accounted for in consumption estimates.
- Cereal exports have reached record levels in recent years (23 million tonnes in 2020-21 and 32 million tonnes in 2021-22).

UPSC Mains Practice Questions

Q.1) From being a net food importer in the 1960s, India has emerged as a net food exporter to the world. Provide reasons. (GS1 2023)

MCQs

Question: Consider the following statements (2020)

1. In the case of all cereals, pulses and oil seeds, the procurement at Minimum Support Price (MSP) is unlimited in any State/UT of India.
 2. In the case of cereals and pulses, the MSP is fixed in any State/UT at a level to which the market price will never rise.
- 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

Answer: (d)

Question: India has experienced persistent and high food inflation in the recent past. What could be the reasons? (2011)

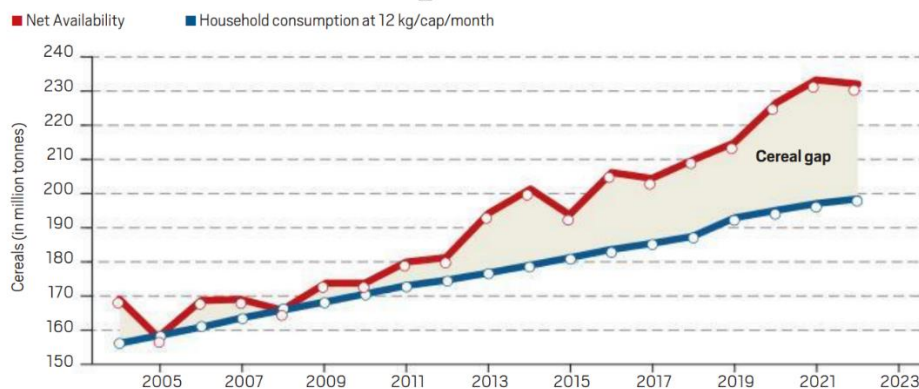
1. Due to a gradual switchover to the cultivation of commercial crops, the area under the cultivation of food grains has steadily decreased in the last five years by about 30%.
2. As a consequence of increasing incomes, the consumption patterns of the people have undergone a significant change.
3. The food supply chain has structural constraints.

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

Answer: (d)

Production vs Consumption



Source: Calculated from Economic Survey data on net availability and population

How was the cereal gap accounted for?

- In the Government of India's annual Economic Survey, the calculation of net production from gross production involves the deduction of 12.5% for seed, feed, and wastage (SFW).
- "Net availability" is then calculated by adding net imports and deducting changes in public stocks.
- While net availability per capita more or less matched the IHDS and NSS consumption estimates in 2004-05 and 2011-12, a large gap has emerged between net availability and household consumption in recent years.
- If 12 kg is assumed to be the upper bound for monthly PCCC from 2011-12 onwards, and this is combined with population estimates, a gap is evident in net availability and household consumption in the last 12 years.
- 36 million tonnes (2020-2021) and 33 million tonnes (2021-2022) respectively.
- However, if the 12 kg assumption was replaced with the 10.7 kg (as per NSS estimate), then the cereal gap was more than 50 million tonnes since 2019-20.

Challenges

- **Insufficient data:** The lack of official data on the consumption of cereals makes it harder for stakeholders to assess and counter the disparity between consumption and production of cereals.
- **Inaccurate calculation:** Over the last few years, the SFW allowance in the Economic Survey has dropped from 12.5% to 10%, when it should have been increased.
- **Traditional calculation:** Seed (5%), feed (5%), and wastage (2.5%).
- According to experts, the feed allowance must be increased from 5% to 10% of gross production which would help reduce the cereal gap by 15 million tonnes or so.

Implications

- **Price stability:** The gap between demand and availability could impact the prices of these commodities in the market.
- **Household expenses:** The gap could affect household expenses as a large portion of it is spent on food.
- If people transition to other food products from cereals, the higher prices could affect household expenses.
- **Nutrition:** Cereals and grains form a significant part of the diet of a common Indian.
- The cereal gap could lead to poor nutrition and subsequently health concerns affecting productivity and public welfare.
- **Policy dilemma:** The government will have to develop a delicate balance between supporting production (farmers' incomes) and consumption (prices) as the surplus availability could be an indicator of overinvestment.

Way forward

- Cereal production has grown by nearly 3% every year over the last 10 years. It may be necessary to diversify agricultural production from traditional crops like rice and wheat.
- Cereals are not traded in a competitive market that clears through price adjustment, so market reforms are necessary.
- Since there is a clear policy to ensure remunerative prices for Indian farmers, policies should be implemented to ensure demand at appropriate prices.

Conclusion

India's cereal gap highlights a significant disparity between production and consumption, necessitating urgent measures for accurate data collection and policy adjustments. Addressing challenges such as insufficient data, inaccurate calculations, and the need for crop diversification is crucial to ensure food security, poverty reduction, and effective agricultural policies.

To learn more about cereals, click the [link](#).

INTERNATIONAL RELATIONS

India, UAE Ink Key Deals To Strengthen I2U2 Bloc

SOURCE: THE HINDU

PRIORITY: HIGH

Why in the news?

- Recently, India and the United Arab Emirates (UAE) finalized four agreements to advance cooperation within the I2U2 grouping.
- The agreements include those in critical sectors such as food processing and renewable energy.
- It also coincided with the visit of UAE President Mohamed bin Zayed Al Nahyan to the Vibrant Gujarat Global Summit in Gandhinagar.

What were the MoUs finalized between India and the UAE?

India and the UAE signed four Memoranda of Understanding:

- Renewable energy:** UAE's Investment Ministry and India's Renewable Energy Ministry on investment cooperation in renewable energy in line with the I2U2's plans.
 - I2U2 had proposed to create a hybrid renewable energy project in Gujarat with 300MW of wind and solar capacity.
- Food parks:** UAE Investment Ministry and India's Food Processing Ministry on investment cooperation to develop food parks.
 - Following the 2022 summit of the I2U2, members claimed that the UAE would invest \$2 billion to develop a series of integrated food parks to tackle food insecurity in South Asia and West Asia.
- Healthcare:** UAE Investment Ministry and India's Health Ministry to facilitate investment cooperation for innovative healthcare projects
- Logistics:** DP World, a Dubai-based multinational logistics company and the Gujarat government on developing green and sustainable ports.



Vibrant Gujarat Summit

- The Vibrant Gujarat Global Summit was initiated by Prime Minister Modi during his tenure as chief minister in 2003 with the 10th edition held between 10th-12th January 2024.
- Objective:** Position the state as a global leader in trade and industry.
- Theme for 2024:** Gateway to the Future
- Areas covered:** Technology and innovation, Sustainable manufacturing, Green hydrogen, Electric mobility, and Renewable energy.
- Participants:** Over 100 nations will be participating in the event, including 30 nations as partners (Australia, Bangladesh, Czech Republic, Egypt, Germany, Indonesia, Japan, Malaysia, Morocco, Nepal, Poland, South Korea, Singapore, UAE, and the UK)
- A dozen international organizations have collaborated to promote cooperation across various sectors.

What is I2U2?

- I2U2 is a multilateral grouping of four countries - India, Israel, UAE, USA - that was established in October 2021 during a virtual meeting of the foreign ministers of the four countries.
- It was established after the Abraham Accords between Israel and the UAE and was initially known as the International Forum for Economic Cooperation.
- It is a global forum for economic cooperation that has been referred to as the "Middle-Eastern Quad" or the "New Quad," by some.
- Objective:** Develop cooperation and synergy among the countries.
 - Promote economic development, scientific innovation, and regional stability.

News summary:

India and the UAE finalized four agreements within the I2U2 framework, enhancing cooperation in sectors like renewable energy and food processing. The ties signify India's strategic, geopolitical, and economic interests.

UPSC Mains Practice Question:

Q.1) How will I2U2 (India, Israel, UAE and USA) grouping transform India's position in global politics? (GS2 2022).

Q.2) China is using its economic relations and positive trade surplus as tools to develop potential military power status in Asia', In the light of this statement, discuss its impact on India as her neighbor. (GS2 2017)

Q.3) The question of India's Energy Security constitutes the most important part of India's economic progress. Analyze India's energy policy cooperation with West Asian Countries. (GS2 2017)

MCQs

Question: Zayed bin Sultan-al-Nahyan was a long serving President of which of the following? [2006]

- Oman
- Kuwait
- United Arab Emirates
- Saudi Arabia

Answer: (c)

- **Areas of cooperation:**
 - **Identified sectors:** Water, Energy, Transportation, Space, Health, Food security, Commerce, Climate change
- **Significance for India:**
 - It will help attract West Asian businesses and investors to India's large consumer market as it aims to mobilize private sector capital.
 - It will help India strengthen its strategic, geopolitical, and economic position in West Asia.
 - It will boost cooperation with the Indian diaspora in West Asia and impact remittances.

Important projects:

- **Energy:** I2U2 has proposed to establish a 300 MW hybrid renewable energy facility in Gujarat with advanced battery storage technology developed through Israeli expertise and Emirati and American investments.
- **Food security:** The I2U2's Food Security Project aims to address the global hunger crisis by leveraging the strengths of member countries in finance, technology, agriculture, and knowledge.
 - It also aims to guarantee environmentally sustainable food security by creating alternate supply chains.

To know more, click the [link](#).

India-UAE ties

- **Origin:** India and the UAE established diplomatic relations in 1972 following the establishment of the Federation of the UAE in 1971.
 - The relationship grew significantly after the accession of H.H. Sheikh Zayed Bin Sultan Al Nahyan as the Ruler of Abu Dhabi in 1966.
- **Status of relationship:** In 2017, the relationship between India and the UAE was upgraded to the level of a **Comprehensive Strategic Partnership**.
- **Political cooperation:** The UAE has adopted a favorable position on sensitive issues in India such as the abrogation of Article 370.
 - UAE has expressed support for India's bid for a permanent seat at the UNSC and has collaborated with India at multilateral forums like the ISA and the UNFCCC.
- **Military cooperation:**
 - Desert Cyclone (Military), Zayed Talwar (Naval), and Desert Eagle (Air Force)
- **Trade:**
 - In FY 2021-22, the United Arab Emirates (UAE) was India's third largest trade partner, with total non-oil bilateral trade valued at US\$72.87 billion.
 - India's major exports: Petroleum products; precious metals, stones, gems and jewellery; minerals; food items; textiles; engineering & machinery products and chemicals.
 - India's major imports: Petroleum and petroleum products; precious metals, stones, gems & jewelry; minerals; chemicals; wood & wood products.
- **Energy:** UAE firms have expressed interest in cooperating with India in the renewable energy sector to help India achieve its goal of 500 GW of non-fossil fuel capacity by 2030.
- **Investment:** The UAE is one of the top ten investors in India.
 - In 2022, both countries agreed to establish a UAE-India Infrastructure Fund which has set a target of \$75 billion to support investments in Indian infrastructure.
- **Cultural ties:** The Bochasanwasi Akshar Purushottam Sansthan (BAPS) Swaminarayan Sanstha has constructed a temple in Abu Mureikah, Abu Dhabi which will be inaugurated by Prime Narendra Modi in February 2024.
- **Diaspora:** UAE hosts around 3 million Indians who make up a significant share of the workforce.
 - According to a survey conducted by the RBI, the UAE accounted for 18% of the total remittances to India for 2020-21, making it the second-largest source of remittances behind the USA (23.4%)
- **Important initiatives:**
 - **India-UAE CEPA:** The Comprehensive Economic Partnership Agreement which has been in effect from May 1, 2022, aims to accelerate growth of annual bilateral non-oil trade to US\$100 billion in five years. Tariffs have been cut on more than 80% of goods and zero-duty access to 90% of India's exports to the UAE.
 - **India-Middle East-Europe Economic Corridor (IMEC):** India and the UAE alongside the USA, Saudi Arabia, Germany, Italy and the EU established the IMEC as an alternative to the China-led Belt and Road Initiative. It aims to provide transport connectivity to accelerate the development and integration of Asia, Arabia, and Europe.

- **Rupee-Dirham agreement:** In order to lower reliance on the dollar, the RBI and the UAE have agreed to establish a framework for the use of their local currencies in cross-border transactions. This is also expected to help promote the internationalization of the Indian Rupee.

Significance of ties

- India views West Asia as a part of its extended neighborhood, so improved ties with it are a critical part of its foreign policy.
- The meeting on the sidelines of the Vibrant Gujarat Summit was the fourth meeting of the leaders of India and the UAE in the last seven months.
- **Geostrategic:**
 - **Security:** West Asia has become a hotbed of conflict due to the violence in Gaza-Israel, Syria, Yemen, etc. Therefore, strong India-UAE ties assumed importance on account of the threat posed to internal and external security due to the radicalization of Indians.
 - **Piracy:** The Arabian Sea and the Indian Ocean region are one of the major piracy-affected zones of the world. India-UAE ties will help improve maritime security in the region and provide assurance to vessels, thereby improving trade between the countries.
 - **Energy security:** UAE is the sixth largest exporter of crude oil to India and the first international investor in India's Strategic Petroleum Reserves Programme.
 - **Soft power:** Good relations with the UAE will help India enhance its soft power in the Middle East region.
- **Geopolitical:**
 - **Counterweight to China:** China attempted to boost its influence in West Asia through initiatives such as the Belt and Road initiative and mediating peace between Iran and Saudi Arabia. India has recognized that strong ties with the UAE and through it the rest of West Asia will help it counter Chinese influence in the region.
 - **Build global influence:** The UAE is involved in groupings like OIC (Organization of Islamic Cooperation) and GCC (Gulf Cooperation Council) which have adopted an anti-India position in the past. India believes that a healthy India-UAE relationship will open up opportunities for it to cooperate with these forums.
- **Geo-Economic Significance:**
 - UAE is India's third-largest trading partner (around \$60 billion) and the ninth-biggest investor in India. It is also a significant source of remittances.
 - India expects to use the UAE's proximity and access to the African economy to become a critical element in African trade.

Challenges in ties

- **Trade:** Indian exports particularly meat, poultry, and processed foods have been impacted by non-tariff trade barriers such as Sanitary and Phytosanitary regulations and other technical barriers to trade.
- **China:** As mentioned above, China's aggressive outreach to West Asia is a concern for India. Low-interest loans and the increase in Chinese firms in the country have had a crowding-out effect on Indian interests.
- **Regional conflict:** The widespread conflicts in the region are a concern for India as it has to balance its interests and relations with countries in the region.
- Similarly, India has expressed concern with UAE's financial assistance for Pakistan, which it has alleged could be used to endanger India's national security.
- **Diaspora:** The conditions of the diaspora are another challenge to ties especially due to the inhumane nature of the Kafala system and the excessive control of employers over the immigration and employment status of workers, leading to concerns about abuse of power.

Way forward

- India should make attempts to deepen and diversify ties with the UAE away from the oil trade while attempting to ensure that current trade regulations are not discriminatory or unfair to either.
- The two countries should build on the regular interactions between their leaders in the recent past to establish a framework for consistent bilateral cooperation not just at the head of government level but between ministers and other officials as well.
- India can also cooperate with the UAE in its vision to tackle climate change and promote the use of renewable energy.
- India must attempt to position itself as a viable alternative to China in the region through closer ties and economic cooperation, which will help boost its strategic and economic position.

Conclusion

The recent agreements between India and the UAE within the I2U2 framework mark a significant stride in strengthening economic cooperation and addressing shared challenges. The burgeoning

relationship underscores India's strategic, geopolitical, and economic interests in the West Asian region, presenting opportunities and avenues for continued collaboration and mutual growth.

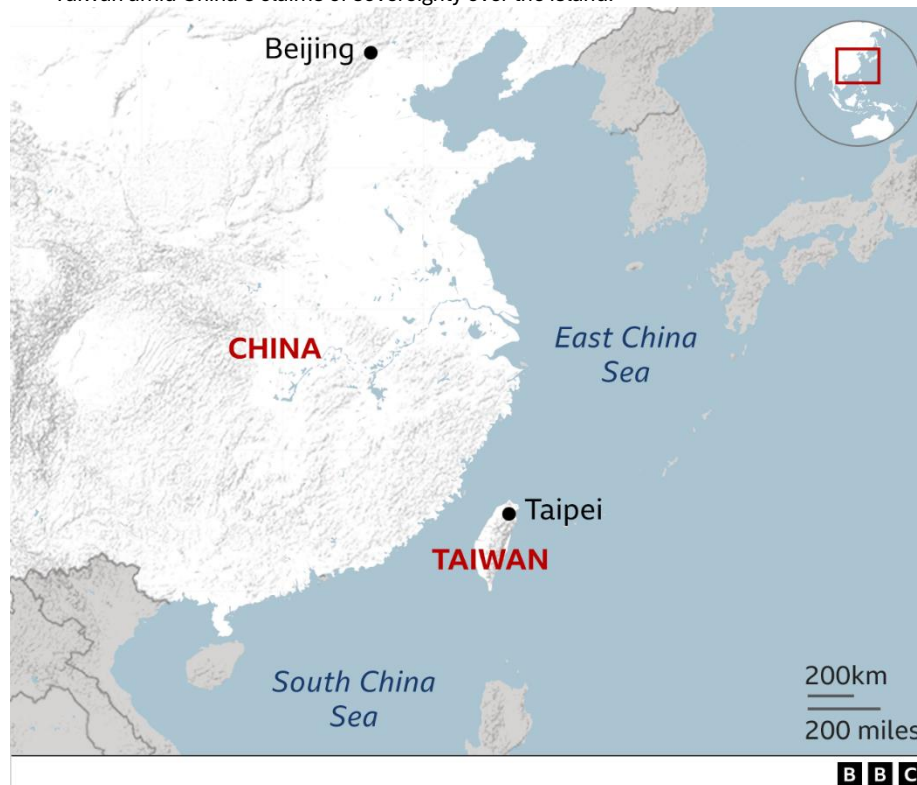
Taiwan's Elections And The Indo-Pacific

SOURCE: BUSINESS STANDARD

PRIORITY: MEDIUM

Why in the news?

- Recently, the ruling Democratic Progressive Party's candidate Lai Ching-te won the elections in Taiwan amid China's claims of sovereignty over the island.



News Summary:

Taiwan's election reflects a rejection of Chinese claims, prompting global responses. India's evolving stance aligns with regional dynamics, emphasizing peace, stability, and increased ties with Taiwan.

UPSC Mains Practice Questions

Q.1) 'China is using its economic relations and positive trade surplus as tools to develop potential military power status in Asia'. In the light of this statement, discuss its impact on India as her Neighbor. (GS2 2017)

Q.2) Indian Diaspora has an important role to play in South-East Asian countries' economy and society. Appraise the role of the Indian Diaspora in South-East Asia in this context. (GS2 2017)

Q.3) Evaluate the economic and strategic dimensions of India's Look East Policy in the context of the post-Cold War international scenario. (GS2 2016)

What was the significance of the results of the Taiwan election?

- Rejection of China's assertions:** The Democratic Progressive Party (DPP) has won 3 consecutive presidential elections over its independence-based campaign.
 - The electoral victories indicate the Taiwanese public's rejection of Chinese sovereignty and unification.
 - This also includes the 1992 consensus according to which, both entities accept that there is only one China but referred to as the PRC and the other as the Republic of China.
- Setback to Chinese intimidation:** The results can also be considered a reaction to the Chinese strategy of intimidation including military attacks across the Taiwanese air defense identification zone and cyber-attacks.

How have the major countries responded to the election?

- China:** The Chinese Foreign Ministry has reiterated its claim that there is only China which Taiwan was a part of, and that the election results could not change that.
- USA:** It claimed that the election results were a demonstration of Taiwan's vibrant democracy.
 - However, it reiterated that it did not support Taiwan's independence and emphasized the need for peace and security in the Taiwan Strait.
- Japan:** It expressed its congratulations to Taiwan and emphasized the shared values of the two countries and the importance of its democratic polity.
- India:** India has not sent official congratulatory messages to Taipei.
 - This could mean that India is revisiting its position on the One China policy in response to Chinese aggression along its borders.

How is Taiwan a significant player in global geopolitics?

- Economy:** Taiwan is the world's 16th largest economy and a major trading power.
 - The Taiwan Strait and the South China Sea account for around 60% of the global maritime trade.
 - Any military action in the region would significantly impact India's maritime trade and investments in the region.
- Strategic position:** Taiwan is strategically situated in the western Pacific Ocean near China, Japan, and the Philippines which leads to a natural gateway with Southeast Asia and the South China Sea.

- Its location is critical for global trade and security with any conflict in the Taiwan Strait affecting critical digital supply chains and trade through the South China Sea.
- **Dominance of semiconductor market:** Taiwan accounts for 92% of the world's most advanced logic chips and fabricates 55% of semiconductors globally.
- These semiconductors are used in vehicles, laptops, tablets, and smartphones, underlining their importance.
- **Military strength:** Taiwan is equipped with a modern and capable military that is focused on defending its sovereignty and territorial integrity.
- These factors make Taiwan a crucial part of regional and global geopolitics with any events related to the island having the potential to influence power relations in the Asia-Pacific region and the world.

How has India's stance regarding Taiwan evolved?

- India has maintained non-official relations with Taiwan based on mutual respect underpinned by shared values of openness, and democracy.
- As the largest democracy and one with close ties with most countries of the Asia-Pacific, India has a strong interest in maintaining peace and stability in the region.
- To maintain peace and stability in the region, India has advocated restraint, avoiding any unilateral attempts to change the status quo, and de-escalation of tensions.
- India has increased its trade and investment relations with Taiwan as a consequence of the Look East and Act East policies.
- **On China:** In 2022, India criticized China's militarization of the Taiwan Strait for the first time.
- India has also lately stopped reaffirming the one-China principle and aligned its policy with that of its QUAD partners.
- The armed forces of both countries have enhanced bilateral contacts for semiconductor manufacturing initiatives.

Conclusion

The Taiwan elections highlighted the island's rejection of Chinese influence and reaffirmed its commitment to democracy. India's stance on Taiwan has evolved in accordance with its strategic interests and regional dynamics.

Iran, Also Ran: India's Interests In West Asia Don't Now Include Tehran

SOURCE: TIMES OF INDIA

PRIORITY: MEDIUM

Why in the news?

- Recently, Indian External Affairs Minister S Jaishankar visited Iran amid the backdrop of Houthi attacks on vessels in the Red Sea.
- The visit reflected India's intent to revive ties with Iran following numerous challenges that have emerged over the years.

What are the major challenges in the India-Iran relationship?

- **Indian compliance with U.S. sanctions:** India lowered its imports of Iranian oil following the imposition of U.S. sanctions on Iran's oil industry after the US withdrew from the Joint Comprehensive Plan Of Action (nuclear deal).
- As a result of the sanctions, India also struggled with its Chabahar port project, despite the port being exempt from sanctions.
- **China's expanding presence:** China recently signed a 25-year comprehensive agreement with Iran.
- China has aggressively pursued strong ties with Iran by buying Iranian oil despite the US sanctions.
- India has expressed concern with these ties on account of its tensions with China along its borders.
- **Situation in Afghanistan:** India was reliant on the Iran-US partnership in Afghanistan to protect its strategic interests in the conflict-ridden country.
- However, the US withdrawal from Afghanistan and its worsening relationship with Iran has adversely impacted India.
- **Arab-Israel-India:** India has simultaneously bolstered ties with Israel and the Arab states.
- The normalization of ties between the Arab states and Israel has also helped.
- Amid this, initiatives like the I2U2 have helped India reassert its strategic position in the West Asian region.
- **Geopolitical conflict:** Iran is a Shia-majority state whose ties with Sunni-Arab states are tense. For example, Iran's 'Axis of Resistance' and the US-Israel-Arab partnership.
- The conflict in Israel and the crisis in the Red Sea due to the actions of the Israel-sponsored Houthi rebels in Yemen indicate the precarious position faced by India.

News Summary:

India faces challenges in its relationship with Iran, including U.S. sanctions compliance, China's influence, and regional conflicts. India should prioritize connectivity projects and balance strategic interests.

UPSC Mains Practice Question

Q.1) In what ways would the ongoing US-Iran Nuclear Pact Controversy affect the national interest of India? How should India respond to this situation? (GS2 2018)

MCQs

Question: Which of the following is not a member of 'Gulf Cooperation Council'? (2016)

- (a) Iran
- (b) Saudi Arabia
- (c) Oman
- (d) Kuwait

Answer: (a)



What steps can India take going forward?

- **Multilateral cooperation:** India must take advantage of the modernization drives in the Gulf, the improving India-U.S. partnership, and the opportunities provided by Israel's economy.
- **Bilateral cooperation with Iran:** India must ensure that it does not completely isolate Iran despite divergences such as close ties with China and Russia and the continued sanctions.
 - Iran is significant for India as a geopolitical asset to balance China's interests in the West Asian region and its economic requirements such as oil.
- **Connectivity projects:** India should prioritize the completion of projects such as the Chabahar port and the International North-South Transport Corridor which will help improve connectivity.
 - This will boost the economy of both regions by improving trade and people-to-people ties.

Chabahar Port

- It is a seaport in Chabahar in southeastern Iran.
- It is located along the Gulf of Oman and is Iran's only oceanic port.
- It consists of two separate ports - Shahid Kalantari and Shahid Beheshti.
- It is expected to become a key commerce hub connecting South Asia, Central Asia, and the Middle East and an opportunity for India, Iran, and Afghanistan to trade with Central Asian countries.
- It is easily accessible from India's western coast and is an alternative to Pakistan's Gwadar Port.

International North-South Transport Corridor (NSTC)

- The NSTC is a multi-modal transportation route that links the Indian Ocean and the Persian Gulf to the Caspian Sea via Iran and onward to northern Europe via St. Petersburg in Russia.
- It includes seaports, roads, and rail routes.
- **Aim:** Reduce carriage costs and transit time
- The multimodal route begins in Mumbai, India, and goes to Bandar Abbas and Bandar-e-Anzali in Iran, then crosses the Caspian Sea to reach Astrakhan, Moscow, and St. Petersburg in Russia.

Conclusion

India's relationship with Iran faces challenges, including U.S. sanctions compliance, China's growing presence, and regional geopolitical conflicts. To navigate these complexities, India should engage in multilateral cooperation, maintain bilateral ties with Iran, and prioritize connectivity projects. Balancing strategic interests will be crucial for India's stability and influence in the West Asian region.

Red Sea Attacks, Panama Canal Drought: How Trouble At Two Shipping Choke Points Could Impact Global Trade

SOURCE: INDIAN EXPRESS

PRIORITY: HIGH

Why in the news?

- Recently, global trade has been disrupted at two major choke points - the Red Sea and the Panama Canal - amid slowing demand in the West and a property crisis in China.
- The World Trade Organization (WTO) has lowered its forecast for global trade by 50%, indicating the emerging challenges in global trade in 2024.



What are the crises in the Red Sea and the Panama Canal?

Red Sea

- Yemen-based Houthi rebels** have been attacking vessels associated with Israel in the Red Sea to protest against Israel's military offensive in Gaza.
- The recent drone attacks on the **m.v. Sai Baba** and **m.v. Chem Pluto** in the region are believed to be an extension of the conflict.
- The attacks have forced major shipping companies such as Maersk and Hapag-Lloyd to stop using the Red Sea route.
- The US has formed **Operation Prosperity Guardian** - a multinational task force whose naval ships will conduct joint patrols and provide protection to merchant vessels.
- UK, Bahrain, Canada, Netherlands, Norway, and Seychelles are part of the task force.

Panama Canal

- Panama, which has been hit by drought, is facing its driest rainy season in decades with sparse rainfall compared to the eight months of rainfall in normal conditions.**
- As a result, the Panama Canal which relies on water from **Lake Gatun (an artificial lake)** has had to cut down the number of ships permitted to transit the 51-meter-long canal.
- According to S&P Global, the number of Very Large Gas Carriers transiting the Canal could halve by February 2014 and even drop to zero by January.
- In order to avoid the potential bottlenecks, **some vessels have switched to the Suez Canal route which was six days longer while others participated in auctions to expedite their transit.**

What do the crises mean for world trade?

- Impact on global economy:** Over 80% of the global goods trade is carried by the sea route, therefore any disruption in maritime transport could significantly impact the world economy.
- Interest rates have been raised in most countries of the West to fight inflation, so **higher prices could impact demand.**
- Impact on developing countries:** This is particularly concerning for developing countries like India which conduct a majority of their trade via the sea.
- About **95% of India's international trade by volume and 77% by value moves by sea transport.**
- Strategic locations:** The two regions are among the busiest maritime trade corridors globally.
- The **Red Sea connects Asia and Europe via the Strait of Bab-el-Mandeb and the Suez Canal.**
- The **Panama Canal connects the Atlantic and Pacific Oceans.**
- Impact on freight rates:** Freight rates have risen on account of shipping lines being forced to take longer alternate routes.
- For example, the **price of Indian agricultural goods could rise by 10-20% when ships have to use the Cape of Good Hope instead of the Red Sea.**

Why are oil flows to India immune to attack in the Red Sea?

- India has not faced a disruption in its Russian oil imports through the Red Sea despite global oil and petroleum product flows through the channel declining by over 50% in December from their regular levels.
- This has been mainly due to **Russia being perceived as an ally of Iran, who are the sponsors of the Houthis.**
- Therefore, the Houthis have been letting Russian vessels pass through unimpeded.
- Since the attacks, the price of benchmark Brent crude has risen by around 5% to about \$80 per barrel.
- According to Goldman Sachs, the **disruptions in the Red Sea are not likely to impact international oil prices significantly as it is not likely to directly affect global oil production.**

How have the Red Sea attacks impacted freight rates?

News Summary: Global trade faced disruptions at critical chokepoints - the Red Sea and Panama Canal. The World Trade Organization lowers its 2024 forecast by 50%, signalling challenges for global trade.

UPSC Mains Practice Questions

Q.1) 'Sea is an important Component of the Cosmos' Discuss in the light of the above statement the role of the IMO (International Maritime Organisation) in protecting environment and enhancing maritime safety and security. (GS2 2023)

MCQs

Question: Match List-I with List-II and select the correct answer using the codes given below: (UPSC 2004)

List-I (Sea)	List-II (Country)
A. Black Sea	1. Bulgaria
B. Red Sea	2. China
C. Yellow Sea	3. Eritrea
D. Caspian Sea	4. Kazakhstan

Codes:

- (a) A-1; B-4; C-2; D-3
- (b) A-2; B-3; C-1; D-4
- (c) A-1; B-3; C-2; D-4
- (d) A-2; B-4; C-1; D-3

Answer: (c)

Question: Which one of the following does not border Panama? (UPSC 2004)

- (a) Costa Rica
- (b) Pacific Ocean
- (c) Colombia
- (d) Venezuela

Answer: (d)

Question: Which one of the following countries is planning to construct a rival to the Panama Canal to link the Pacific and Atlantic Oceans? (UPSC 2007)

- (a) Colombia
- (b) Costa Rica
- (c) Guatemala
- (d) Nicaragua

Answer: (a)

- Shipping firms have been levying **war risk surcharges** over and above the normal freight rates since the attacks began.
- According to Indian exporters, there could be a **25-30% rise in the freight rates for Indian shipments to Europe and Africa** if the current security concerns along the Red Sea continued.
- This could be a major concern for India since the European Union is one of its largest export destinations.
- India's labor-intensive sectors such as textiles, gems, and jewelry exports have been impacted by slowing demand from the EU.
- Maersk announced that it would resume shipping in the Red Sea following the deployment of Operation Prosperity Guardian but cautioned that it could divert traffic if the safety conditions worsened.

Other naval operations in the region

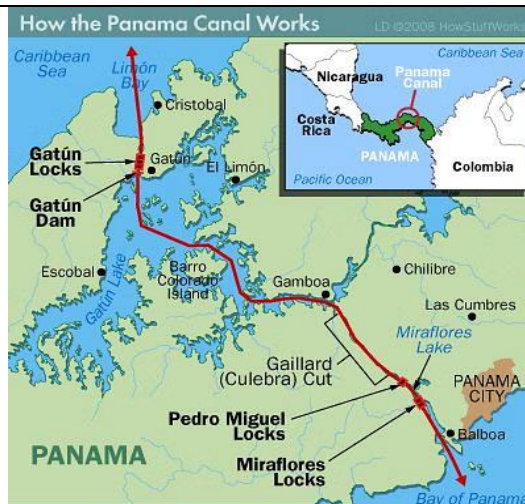
- **Operation Atalanta:** It was established by the **European Union Naval Force Somalia (EUNAVFOR)** to support the UN in **protecting the seas from piracy** in the Western Indian Ocean and off the **Horn of Africa**.
- **Operation Agenor:** It is a **European-led operation** that aims to guarantee freedom of navigation in the **Strait of Hormuz**.
- **Combined Maritime Forces (CMF):** It is a multinational maritime partnership led by the U.S. with 39 members including India to uphold the rules-based international order.

Red Sea



- The Red Sea is an inlet of the Indian Ocean that is located between Africa and Asia.
- **Bordering Countries:** Egypt, Saudi Arabia, Yemen, Sudan, Eritrea and Djibouti.
 - Indian Ocean through the Bab el Mandeb strait and the Gulf of Aden in the south
 - The Sinai Peninsula, the Gulf of Aqaba, and the Gulf of Suez in the north.
- **Formation:**
 - It acquired its present shape over the past 4 to 5 million years by slow **seafloor spreading**.
 - Therefore, it is one of the youngest oceanic zones on Earth.
- **Naming:**
 - It could be a reference to the seasonal blooms of **Trichodesmium erythraeum**, a **red-colored algae**.
 - Asiatic languages have used colors to refer to cardinal directions such as **“red” to “south”** and **“black” to the north**.
- It is one of the most saline bodies in the world and occupies a part of the **Great Rift Valley** (Afro-Arabian Rift Valley).
- It is surrounded by desert or semi-desert areas, with no major freshwater inflow.
- **Biodiversity:**
 - Marine life such as sea turtles, dugongs, dolphins, and endemic fish species.
 - **Coral reefs are abundant along the northern and central coasts while less abundant in the south where coastal waters are more turbid.**

Panama Canal



- The Panama Canal is a **constructed waterway connecting the Atlantic and Pacific oceans** across the **Isthmus of Panama**.
 - It is approximately 51 miles long.
 - It was built by the USA between 1904 and 1914 and was officially opened on August 15, 1914.
 - It is owned and administered by the Republic of Panama since oversight of the Canal was transferred to Panama in 1999.
 - **Working:** It consists of a series of locks that raise and lower the water level to facilitate the passage of ships.
 - The water required for this is acquired from **Lake Gutun**, an artificial lake nearby.
- To know more, click the [link](#).

Why Many US Allies Have Not Joined Its Op Prosperity Guardian

SOURCE: INDIAN EXPRESS

PRIORITY: HIGH

Why in the news?

- Recently, the US formed a multinational task force - Operation Prosperity Guardian - to combat the crisis in the Red Sea and provide protection for vessels passing through the critical maritime trade route.
- However, many US allies such as Italy and Spain have declined to be associated with the new task force.



What is Operation Prosperity Guardian?

- **Operation Prosperity Guardian** is a multinational task force launched by the U.S.A. to conduct joint patrols in the Red Sea and the Gulf of Aden.
- The naval protection force will be under the leadership of the **Combined Task Force 153 (CTF 153)** and will function as a "highway patrol" in the sea.
- It aims to **counter Houthi-led attacks on commercial vessels** passing through the region and ensure billions of dollars worth of commerce can flow freely through the Red Sea.
- **Member countries:**
 - According to the USA, 20 countries have joined the coalition. However, only ten countries have been officially mentioned.

News Summary: The reluctance of key allies like Italy and Spain to join Operation Prosperity Guardian has complicated international cooperation, driven by differing views on the Israel-Hamas conflict, potentially impacting the task force's effectiveness in the Red Sea region.

UPSC Mains Practice Questions

Q.1) In 2012, the longitudinal marking of the high-risk areas for piracy was moved from 65° East to 78° east in the Arabian Sea by the International Maritime Organisation. What impact does this have on India's maritime security concerns? (GS2 2014)

Q.2) 'Sea is an important Component of the Cosmos' Discuss in light of the above statement the role of the IMO (International Maritime Organisation) in protecting the environment and enhancing maritime safety and security. (GS2 2023)

MCQs

Question: With reference to 'Indian Ocean Rim Association for Regional Cooperation (IOR-ARC)', consider the following statements: (UPSC 2015)

1. It was established very recently in response to incidents of piracy and accidents of oil spills.
2. It is an alliance meant for maritime security only.

Which of the statements given above is/are correct?

- They include Australia, Bahrain, Canada, France, Greece, Italy, the Netherlands, Norway, Seychelles and Spain.
- Their contributions include the dispatch of warships or even just the deployment of a staff officer.
- The coalition was necessary since the **mixed nature of the threat (drone, missile, and small boat attacks)** makes it more challenging to respond to since all countries do not have the same naval capabilities as the U.S.A.
- The USS Gravelly destroyer recently shot down two anti-ship ballistic missiles fired at a Maersk ship in the southern Red Sea.

Which countries have been reluctant to join?

- **Italy:** It stated that it would deploy a ship (Virginio Fasan) to the Red Sea following requests from Italian ship owners.
- However, it would not be part of Operation Prosperity Guardian.
- **France:** It expressed support for efforts to ensure freedom of navigation in the Red Sea but stated that its ships would remain under French command.
- **Spain:** It refused to join Operation Prosperity Guardian.
- It also rejected the proposal to use the E.U.-led anti-piracy mission Atlanta to protect ships in the Red Sea.
- Spain agreed to consider creating a different mission to meet the challenges in the Red Sea.
- **Other European states:** The Netherlands, Norway, and Denmark have claimed that they would contribute by sending officers.
- **Arab states:** Saudi Arabia and the United Arab Emirates (UAE) have claimed that they were not interested in participating in the venture.
- **Bahrain which houses the 5th Fleet of the US Navy is the only Middle Eastern nation to have joined the operation** despite most states sustaining losses due to the re-routing of ships.
- **Australia:** Australia has agreed to triple its contribution to the Combined Maritime Forces but will not deploy a ship or a plane.
- Its strategic focus was the **north-east Indian Ocean, the South China Sea, the East China Sea, the Pacific.**

Why have they been reluctant to join?

- Around half of the countries mentioned by the US have been reluctant to acknowledge their contributions to the coalition.
- **Gaza conflict:** The major reason for the reluctance was the differences in opinion about the ongoing conflict in Gaza.
- The **U.S. has firmly reaffirmed its support for Israel** despite international criticism of Israel's actions which have resulted in the deaths of around 21,000 Palestinians.
- On the other hand, many **European countries have been concerned with a loss of public support** as the European public has been critical of Israel's actions and expressed wariness about being drawn into an extended conflict in West Asia.
- Western Europeans - particularly Spain and Italy - believe that Israel should cease military action in Gaza.
- **Arab countries have consistently presented a principled opposition to Israel and supported the Palestinian cause even though they have sought to normalize relations with Israel in recent years.**
- In October 2023 UAE, Jordan, Bahrain, Saudi Arabia, Oman, Qatar, Kuwait, Egypt, and Morocco condemned the flagrant violations of international law by Israel in response to the Hamas attacks.
- **Houthi retaliation:** Another reason countries have been reluctant to join was the **risk of Houthi retaliation.**
- The **Houthi attacks on m.v. Chem Pluto and m.v. Sai Baba** has served as a deterrent.
- **Saudi Arabia's interests:** Saudi Arabia has transitioned towards a peace talks approach with the Houthis with whom it has been in conflict with since the Saudi-led alliance launched a military intervention (Operation Decisive Storm) in Yemen in 2015.
- It has also pushed for closer ties with Iran and therefore believes that joining the alliance could be counter-productive for its goals.

What could this mean for the task force?

- Many **European and Gulf countries are already participants in several U.S.-led military groups in the Middle East.**
- For example, the 39-nation Combined Maritime Forces (CMF) with Spain, France, Saudi Arabia, the UAE, and Yemen as members.
- Additionally, **Operation Atlanta** operates reciprocally with the CMF.
- Therefore, **countries that do not formally join Operation Prosperity Guardian could still coordinate patrols with the U.S. Navy.**
- The reluctance of **France and the Gulf countries** could impact the effectiveness of the task force since they are major players in the region.
- **France has a considerable influence in the Western Indian Ocean through its overseas territories.**

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

Answer: (d)

Question: With reference to the United Nations Convention on the Law of Sea, consider the following statements:

1. A coastal state has the right to establish the breadth of its territorial sea up to a limit not exceeding 12 nautical miles, measured from baseline determined in accordance with the convention.
2. Ships of all states, whether coastal or land-locked, enjoy the right of innocent passage through the territorial sea.
3. The Exclusive Economic Zone shall not extend beyond 200 nautical miles from the baseline from which the breadth of the territorial sea is measured.

Which of the statements given above are correct? (UPSC 2022)

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

Answer: (d)

Question: Consider the following pairs : (UPSC 2019)

Sea:

Bordering country

- | | |
|-----------------------|------------|
| 1. Adriatic Sea: | Albania |
| 2. Black Sea: | Croatia |
| 3. Caspian Sea: | Kazakhstan |
| 4. Mediterranean Sea: | Morocco |
| 5. Red Sea: | Syria |

Which of the pairs given above are correctly matched? (UPSC 2019)

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

Answer: (b)

- It also has **overseas military facilities in the region at Reunion Island, Djibouti, and the United Arab Emirates.**
- The U.S. has attempted to encourage international support for the task force due to the **threat it faces on multiple fronts from Iranian proxies.**
- U.S. troops in Syria and Iraq have been attacked by Iran-backed militia.
- Although the US, has responded to the attacks in the form of retaliatory air strikes in Iraq and Syria, it has not attempted such strikes in Yemen.
- The formation of the new maritime coalition aims to **make future Houthi attacks an international issue so that it can be divorced from Israel's actions in Gaza.**
- Further, attacks on vessels under the protection of the coalition would be **treated not just as an attack on the US but on the member countries as well.**
- In this light, the **reluctance of countries to join the task force is a stumbling block for the U.S.'s strategy regarding the Israel-Hamas conflict and for the protection of commercial vessels passing through the Red Sea.**

What is India's position on the task force?

- According to government officials, **India was unlikely to join Operation Prosperity Guardian.**
- The government has expressed concern that its participation and alliance with the USA could make it a target for retaliation.

Other operations in the region

- **Operation Atalanta:** It was established by the **European Union Naval Force Somalia (EUNAVFOR)** to support the UN in **protecting the seas from piracy** in the Western Indian Ocean and off the **Horn of Africa.**
- **Operation Agenor:** It is a **European-led operation** that aims to guarantee freedom of navigation in the **Strait of Hormuz.**
- **Combined Maritime Forces (CMF):** It is a multinational maritime partnership led by the U.S. with 39 members including India to uphold the rules-based international order.
- The **Combined Task Force 153 (CTF 153)** is one of five task forces operated by the Combined Maritime Forces (CMF).
- It was established in 2022 and focuses on maritime security in the Red Sea.

Conclusion

The reluctance of key allies to join Operation Prosperity Guardian highlights the complexities of international cooperation particularly due to the divergent views on Israel's actions in Gaza. The reluctance of members to join could affect the effectiveness of the task force and raise questions about the broader strategy in the Red Sea region.

Not Zero-Sum: Indian-Russia Ties

SOURCE: INDIAN EXPRESS

PRIORITY: MEDIUM

Why in the news?

- Recently, Union External Affairs Minister Dr. S. Jaishankar visited Russia as part of the ongoing high-level exchanges between India and Russia.
- The Indo-Russian relationship has remained steady while relations between other major powers have oscillated over the years.



Trends in India-Russia ties

- **Steady ties:** Bilateral ties between India and Russia have been steady without any serious disputes and a convergence of geopolitical interests.
- As a result, a **stable balance of power has been achieved in Asia** in the 20th century.

News Summary: Indian Foreign Minister Dr. S. Jaishankar's visit to Russia highlights the steady India-Russia relationship amid global geopolitical shifts. Economic engagement, defense ties, and geopolitical considerations contribute to this enduring partnership.

UPSC Mains Practice Questions

Q.1) What is the significance of Indo-US defence deals over Indo-Russian defence deals? Discuss with reference to stability in the Indo-Pacific region. (GS2 2020)

Q.2) 'China is using its economic relations and positive trade surplus as tools to develop potential military power status in Asia', In the light of this statement, discuss its impact on India as her neighbor. (GS2 2017)

Q.3) 'Quadrilateral Security Dialogue (QUAD)' is the transforming itself into a trade bloc from a military alliance, in present times – Discuss. (GS2 2020)

MCQs

Question: Recently, India signed a deal known as 'Action Plan for Prioritization and Implementation of Cooperation Areas in the Nuclear Field' with which of the following countries? (UPSC 2019)

- Therefore, experts have begun to assess the India-Russian relationship in terms of a **zero-sum game**.
- Lack of high-level political engagement:** Annual summits of the Russian President and the Indian Prime Minister have not been held over the past two years due to the war in Ukraine.
- The Union Minister of External Affairs' visit to Russia is intended to build engagement and solidify the relationship.
- Economic engagement:** In the last year, **bilateral trade between India and Russia has grown by \$50 billion driven by increased trade in Russian oil**.
- Russia could not sell its oil in its traditional markets due to the sanctions imposed on it in the aftermath of the war in Ukraine.
- Despite the widespread criticism, **India reaffirmed its support since a productive bilateral relationship with Russia is a critical element of India's national security strategy**.
- Transition away from the US:** Some experts have claimed that the visit to Russia was part of India's efforts to embrace Russia in light of complications in the India-U.S. relationship.
- The allegations over India's involvement in the assassination attempt against a Khalistani activist in the USA have soured ties.
- However, this cannot be seen as a break in the India-US strategic partnership as both countries are attempting to manage the fallout.**
- U.S.-China contest:** While **India's ties with China have been frosty over national security and economic concerns, the Russia-China partnership has rapidly expanded**.
- The **Russia-China partnership that is "without limits" and with no "forbidden areas"** was unveiled earlier this year.
- Although Russia and India are aware that they are not on the same side in the geopolitical contest between the USA and China, they have attempted to cooperate.

Zero Sum Game

- It is a situation in **game theory** in which one person's benefits are another person's loss.
- In a zero-sum game, **the sum of benefits of all the players for any outcome is equal to zero is called a zero-sum game**.
- They can include just two players or millions of players.
- An example of a zero-sum game is futures and options in financial markets.
- They are considered zero-sum games because if one investor loses, then the wealth is transferred to another investor

How have ties evolved?

- It cannot be stated that India and Russia are attempting to return to their old relationship as the context of the bilateral relationship has evolved.
- Financial support:** **India is no longer a deferential junior partner** seeking Russian assistance with the relationship continuing to grow in India's favor.
- In 1991, India's GDP (\$270 million) was around half of the Russian GDP (\$518 million).
- However, today, **India's GDP (\$3.6 trillion) has grown significantly larger than the Russian GDP (\$2.2 trillion)**.
- Military assistance:** Traditionally, India has been dependent on Russia for military equipment and assistance.
- However, today **India's military acquisitions have diversified to a larger array of countries including France and the U.S.A.**
- Commercial ties:** India's commercial and technological relationships are now closely linked with the US, Europe, and the UK.
- In terms of total trade in 2022-23, ASEAN, European Union, USA, China, UAE, and Saudi Arabia account for a larger share than Russia.**
- Diaspora:** A large section of the Indian diaspora resides in the English-speaking world helping build better ties with the West than with Russia.

India-Russia ties

- Historical:** Some sections of participants in the **Indian National Movement** were heavily inspired by the **1917 Russian Revolution**.
- The movement also received strong support from Vladimir Lenin.
- Political:**
- The **Treaty of friendship, peace, and cooperation**, which lasted for 20 years, was signed in 1971 to build Indo-Russian relations.
- During the **Cold War era**, India and the erstwhile Soviet Union shared a close strategic, military, economic, and diplomatic relationship which it shared with Russia after the dissolution of the Soviet Union.
- Following the signing of the **"Declaration on the India-Russia Strategic Partnership"** in 2000, India-Russia ties expanded across the political, security, defense, trade and economy, science and technology, and culture sectors.
- There has been a lull in the bilateral ties in the post-pandemic period on account of Russia's growing closeness with China and Pakistan.
- Multilateral cooperation:**

- (a) Japan
- (b) Russia
- (c) The United Kingdom
- (d) The United States of America

Answer: (b)

- Russia has supported India's claim for a seat at the **United Nations Security Council** and the **Nuclear Suppliers Group (NSG)**.
 - Russia has already shown interest in joining **SAARC** as an observer.
 - **Trade:**
 - India and Russia have been working towards **increasing bilateral investment to \$50 billion and bilateral trade to \$30 billion by 2025**.
 - **Defence and security:**
 - The India-Russia military framework has expanded from a **buyer-seller relationship to joint development, production and research** in advanced defense technologies.
 - This includes joint military programmes such as the BrahMos cruise missile programme, 5th generation fighter jet programme, submarine development, aircraft carriers, etc.
 - **INDRA AND AVI-INDRA are joint military exercises** conducted by India and Russia.
 - **Nuclear relations:** Russia is one of India's major partners in the peaceful use of nuclear energy.
 - Russia has recognized India as a country with advanced nuclear technology with an impeccable non-proliferation record.
 - Both India and Russia are cooperating in the implementation of the **Kudankulam Nuclear Power Plant (Tamil Nadu) and Rooppur Nuclear Power Project in Bangladesh**.
 - **Space:** India and Russia have been allies in peaceful uses of outer space such as satellites, navigation, remote sensing, and other applications of space technology.
 - **Science and Technology:**
 - **The two countries, in 1962, agreed to begin a programme of military-technical cooperation.**
 - As part of bilateral ties, India and Russia have cooperated in the Science and Technology such as the India-Russia Bridge to Innovation, Traditional Knowledge Digital Library (TKDL), and the Russia India Network (RIN) of universities.
 - **Cultural Relations:** Russian Institutions have been teaching Indian languages such as Hindi, Tamil, Marathi, Gujarati, Bengali, Urdu, Sanskrit and Pali.
 - Indian dance, music, yoga, and Ayurveda have also become popular in Russia.
- Programmes like "Namaste Russia" have also been launched to improve people-people ties.**

Challenges in India-Russia ties

- **Military cooperation:** Although Russia is the dominant supplier of arms to India, strains have emerged in relations due to **India's attempts for import diversification and indigenization**.
- India has criticized the unreliability of Russian sources which has been evidenced by delays in delivery, damaged parts, and pricing disputes.
- **India-US ties:** India's expanding relationship and defense cooperation with the USA are another major irritant in India's ties with Russia.
- **Russia has opposed India's membership in the QUAD group and the signing of security-related agreements with the USA.**
- **Trade:** India-Russia trade was mainly in the defense sector with **connectivity issues, distance, insufficient banking links, and onerous regulations** prohibiting the expansion of commerce.
- **Foreign policy:** There is a stark **contrast in the foreign policy positions** of both Russia and India.
- Russia has shifted towards Pakistan, and China despite India's disputes with its neighbors.
- **Indo-Pacific:** Russia has opposed the phrase **Indo-Pacific because it refers to a US-led endeavor aimed at containing China and Russia** and has propagated the **Asia-Pacific paradigm** as an alternative.

Conclusion

Delhi will not abandon its relations of consequence with the West simply to please Moscow since India now sees Russia as an equal, rather than a senior partner. Therefore, a sensible bilateral relationship between India and Russia will allow both countries to maneuver better in an increasingly bipolar world.

Is India 'losing' South Asia?

SOURCE: INDIAN EXPRESS

PRIORITY: MEDIUM

Why in the news?

- The article addresses the concern **whether India is "losing" its influence in South Asia**, particularly in light of recent developments perceived as negative from Delhi's perspective, such as the **Maldives demanding the withdrawal of Indian military presence**.

Historical Context

- **Legacy of British Raj:** During the period of India's nostalgia for the era of the British Raj, the Subcontinent was a single, powerful geopolitical entity. The British established regional hegemony and turned neighboring territories into protectorates and buffers.
- **Partition and Its Aftermath:** The Partition of India in 1947, based on religious lines, created new sovereign states (notably Pakistan) and left unresolved boundary and territorial disputes. These

News Summary: This article discusses concerns related to India's diminishing influence in South Asia, citing historical legacies, economic choices, external competition, and regional challenges, while proposing strategies for constructive engagement and adaptation.

UPSC Previous Year Practice Question Q. India is an age-old friend of Sri Lanka.' Discuss India's role in the recent crisis in

disputes continue to affect regional relations, particularly the Kashmir issue between India and Pakistan.

- **Economic and Political Shifts:** Post-independence, India and its neighbors made developmental choices leading to economic partition, reinforcing the political divide. Securitization of borders further complicated regional integration. However, since the 1990s, regional economic cooperation has grown, albeit not as extensively as it could have.

Factors Diminishing India's influence in South Asia

- **Historical Legacy and Partition:** The impact of the British Raj and the Partition of the Subcontinent has left a lasting influence on the region's geopolitics.
- This history created unresolved boundary and territorial disputes, particularly evident in the ongoing Kashmir conflict with Pakistan.
- These historical events have fragmented the unity of the region and continue to affect regional dynamics.
- **Economic Choices and Developmental Paths:** The political partition was accompanied by an economic division, with India and its neighbors choosing **paths of autarky and later, uneven globalization**.
- This has resulted in securitized and commercially restrictive borders, hampering regional economic cooperation.
- **Changing Regional Dynamics and National Sovereignities:** The smaller countries in the region have increasingly asserted their sovereignty and agency, challenging India's presumed primacy.
- **Perception of Indian Hegemony:** India's regional visions are often viewed with suspicion by neighboring countries. Both the nationalist and liberal visions of India are seen as covers for pursuing regional dominance, creating a fundamental contradiction with the national sovereignities of these countries.
- **Domestic Political Manipulations:** The domestic politics of neighboring countries often involve India, either as a partner to be engaged with or as a hegemonic force to be resisted.
- **External Influence and Competition:** The increasing influence of external powers, notably China, in South Asia poses a significant challenge to India. China's economic and military expansion in the region, coupled with the rising influence of Middle Eastern countries, reduces India's ability to act as the predominant regional power.
- **Border Conflicts and Instability:** Ongoing conflicts and instability along India's external frontiers, particularly in the west with Pakistan and in the east with Myanmar, add to the complexity of the regional dynamics.

External Influences and Challenges Affecting India

- **Pakistan's Stance on Kashmir:** The unresolved Kashmir issue remains a central point of contention with Pakistan, impeding broader regional integration efforts within South Asia, particularly under the South Asian Association for Regional Cooperation (SAARC).
- **China's Growing Influence:** The expansion of China's economic, military, and technological presence in South Asia poses a significant challenge to India.
- **Influence of Middle Eastern Countries:** The increasing economic and military capabilities of Middle Eastern countries like Qatar, Saudi Arabia, Turkey, and the UAE are also altering the geopolitical landscape of South Asia, adding another layer of external influence.
- **Regional Conflicts and Instability:** The conflict between the Taliban and the Pakistan army in the west, and the challenges to the Burmese army's control in the east due to ethnic armed groups and pro-democracy forces add to the regional instability, impacting India's strategic environment.

What Should be India's Strategy?

- **Acknowledge and Respect Sovereignty:** Recognizing the sovereignty and agency of neighbouring countries is crucial. This means respecting their right to make independent foreign and domestic policy decisions, even when they diverge from India's interests.
- **Constructive Engagement:** India should engage constructively with its neighbours, focusing on building mutual trust and cooperation. This includes not just government-to-government relations but also people-to-people contact, cultural exchanges, and economic ties.
- **Economic Integration and Cooperation:** Promoting regional economic cooperation can be a win-win for all involved. This includes investing in regional connectivity projects, trade agreements, and facilitating easier cross-border movement for business and tourism.
- **Balance Hard and Soft Power:** India should find a balance between using hard power (military and economic strength) and soft power (cultural influence, diplomacy).
- **Addressing Historical and Political Issues:** India needs to work towards resolving long-standing disputes and issues that have historically impacted its relationships with neighbouring countries.
- **Multi-Alignment in Foreign Policy:** Given the presence of major powers like China and the United States in the region, India should adopt a multi-aligned foreign policy that allows it to maintain strategic autonomy while engaging beneficially with all major global players.

Sri Lanka the light of the preceding statement. (2022)

Q. Indian Diaspora has an important role to play in South-East Asian countries' economy and society. Appraise the role of Indian Diaspora in South-East Asia in this context. (2017)

Q. "Increasing cross-border terrorist attacks in India and growing interference in the internal affairs of several member-states by Pakistan are not conducive for the future of SAARC (South Asian Association for Regional Cooperation)." Explain with suitable examples. (2016)

Q. Terrorist activities and mutual distrust have clouded India-Pakistan relations. To what extent the use of soft power like sports and cultural exchanges could help generate goodwill between the two countries? Discuss with suitable examples. (2015)

Q. In respect of India — Sri Lanka relations, discuss how domestic factors influence foreign policy. (2013)

MCQs

Q. Consider the following statements: (UPSC 2020)

1. The value of Indo-Sri Lanka trade has consistently increased in the last decade.
2. "Textile and textile articles" constitute an important item of the trade between India and Bangladesh.
3. In the last five years, Nepal has been the largest trading partner of India in South Asia.

Which of the statements given above is/are correct?

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

Answer: (b)

Q. Consider the following in respect of Indian Ocean Naval Symposium (IONS): (UPSC 2017)

1. Inaugural IONS was held in India in 2015 under the chairmanship of the Indian Navy.
2. IONS is a voluntary initiative that seeks to increase maritime cooperation among navies of the littoral states of the Indian Ocean Region.

Which of the above statements is/are correct?

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

Answer: (b)

Q. Consider the following pairs: (UPSC 2016)

Community sometimes mentioned in the news - In the affairs of

1. Kurd - Bangladesh
2. Madhesi - Nepal
3. Rohingya - Myanmar

- **Enhancing Regional Institutions:** Strengthening regional institutions like SAARC can help in addressing common challenges collectively and foster a sense of regional identity and cooperation.
- **Tech and Development Partnership:** India can leverage its strengths in technology, space, and pharmaceuticals to offer development assistance and partnership in these sectors, which are less politically sensitive and can build long-term goodwill.
- **Environmental and Humanitarian Cooperation:** Collaborating on shared environmental challenges and humanitarian issues can also help build trust and a sense of shared destiny in the region.
- **Active Diplomacy and Narrative Building:** Engaging actively in diplomacy to build and promote a narrative of India as a responsible and constructive regional power is vital.
- **Strategic Patience and Long-term Vision:** India needs to exercise strategic patience, acknowledging that building influence and trust in the region is a long-term process and cannot be achieved through coercive or impulsive actions.

Conclusion

The focus should not be on whether India is "losing" South Asia, but on how it can adapt and enhance its influence in a dynamically changing region. India must move away from its fixation on the traditional concept of South Asia and develop strategies to effectively engage with the evolving geopolitical landscape.

Maldives Suspends Three Ministers After Row

SOURCE: INDIAN EXPRESS

PRIORITY: HIGH

Why in the news?

- Recently, the government of Maldives suspended three ministers for derogatory comments about PM Narendra Modi and the Indian people.
- The government in the Maldives under President Mohamed Muizzu had come to power through an "India Out Campaign".



Why have the ministers in the Maldives been suspended?

- Ministers Mariyam Shuina, Maisha Shareef, and Mahzoom Majid were suspended by the Government of Maldives with immediate effect.
- The Indian High Commission had raised concerns with the Maldives Foreign Office about some derogatory statements made about the Indian Prime Minister and Indians related to sanitation, tourism, and infrastructure.
- The government of Maldives also stated that freedom of expression must be democratic and responsible to not affect the relationships between the country and its partners.
- The comments led to Maldivian social media users accusing India of trying to compete with the Maldives as a tropical vacation destination and many racist comments against Indians.
- Politicians (especially from the Opposition) and diplomats have criticized the derogatory comments.

India-Maldives ties

- India was one of the first countries to recognize and establish diplomatic relations with the Maldives following its independence from the British in 1965.
- The two countries share ethnic, linguistic, cultural, religious, and commercial ties which have existed since ancient times.
- Rajaraja Chola invaded and conquered the northern atolls in the Maldives during his reign
- Although relations between the two countries have traditionally been warm, bilateral relations have been affected by the party in government in the Maldives.
- **Defense:**

Which of the pairs given above is/are correctly matched?

- 1 and 2
- 2 only
- 2 and 3
- 3 only

Answer: (c)

Q. Consider the following countries of South Asia: (UPSC 2002)

- Bangladesh
- India
- Pakistan
- Sri Lanka

The descending order of literacy status of these countries is:

- 4, 2, 1, 3
- 2, 4, 3, 1
- 4, 2, 3, 1
- 2, 4, 1, 3

Answer: (c)

News Summary: Three ministers of the Maldives government were recently suspended for making derogatory comments about India. India-Maldives ties have recently hit a low following the India Out campaign and public outcry about India's influence.

UPSC Mains Practice Questions

Q.1) Discuss the political developments in Maldives in the last two years. Should they be of any cause of concern to India? (GS2 2013)

MCQs

Question: As per the Human Development Index given by UNDP, which one of the following sequences of South Asian countries is correct, in the order of higher to lower development? (UPSC CSE 2003)

- India–Sri Lanka–Pakistan–Maldives
- Maldives–Sri Lanka–India–Pakistan
- Sri Lanka–Maldives–India–Pakistan
- Maldives–India–Pakistan–Sri Lanka

Answer: (b)

- Indian naval and airforce personnel have been stationed in the Addu and Lammu islands since 2013 to maintain and operate two helicopters and Dornier aircraft loaned to the Maldives by India.
- According to the Maldives National Defence Force, 75 Indian military personnel were stationed in the Maldives as of 2021.
- More than 70% of the Maldivian Defence Forces' training requirements are provided by India.
- **Military exercises:** Ekuverin, Ekatha, Dost, Operation Shield
- **Humanitarian assistance:** India has repeatedly indicated its commitment to being the First Provider of humanitarian assistance and disaster relief (HADR) in the Indian Ocean region.
- **India's bilateral assistance to the Maldives:** India has actively assisted in the development of Maldives through projects such as the:
 - India established a 200-bed hospital, the Indira Gandhi Memorial Hospital, in the Maldives to promote healthcare in the country.
 - India has also supported the establishment of the Maldives Institute of Technical Education which has provided technical training and employability to Maldivian youth.

What were the recent problems in India-Maldives ties?

- **India-Out campaign:** India Out is a political slogan introduced by former Maldives President Abdulla Yameen Abdul Gayoom.
 - The campaign claims that the India First policy followed by previous governments would jeopardize Maldives' autonomy.
 - In December, newly-elected President Mohamed Muizzu claimed that India had agreed to withdraw its military personnel from the Maldives.
- **Deprioritization of India:** President Muizzu had vowed to change the Maldives's 'India First' policy adopted under his predecessor Solih.
 - Unlike his predecessors who visited India after coming to power, Muizzu visited Turkey, UAE, and China.
 - The **Maldives did not participate** in a meeting of the **NSA-level Colombo Security Conclave** in which it is a **member-state**, along with **India**, Sri Lanka, and Mauritius.
 - The Maldives has **decided not to renew** the hydrography cooperation agreement with India after its expiry on 7 June 2024.
- **Radicalization:** India has expressed concern over the increasing radicalization of the Maldives by extremist groups like ISIS.
 - The political upheaval and socioeconomic crisis in the Maldives is a major security concern for the Maldives and the Indo-Pacific region as a whole, including India.
- **China's influence:** China's geopolitical aggressiveness in the South Asian region has seen it attempt to expand its strategic footprint in South Asia in the Maldives.
 - This includes initiatives like the String of Pearls and the Maritime Silk Route.

What is the significance of the India-Maldives relationship and how could the recent problems affect it?

- **Security:** India and the Maldives are both located in the Indo-Pacific region.
 - Stability in the Maldives is crucial for regional security and for the protection of India's regional interests.
 - The two countries have actively engaged in counterterrorism efforts in the region.
 - India's withdrawal from the island could negatively impact search and rescue and humanitarian relief operations in a significant maritime region.
- **Trade and Tourism:** In 2021, India-Maldives bilateral trade exceeded \$300 million.
 - India is a significant source of tourism for the Maldives, which is a major contributor to the island nation's economic growth.
 - Maldives also contributes a significant part of India's revenues from medical tourism.
 - Indians may become reluctant to visit the Maldives on account of the derogatory feeling, which could potentially disrupt the island's tourism-dependent economy.
- **Economic:** Maldives' location places it between important international shipping lanes that handle vital commodities including energy.
 - Additionally, its proximity to India makes it significant to the success of India's blue economy policy.
 - The Maldives has been dependent on India for economic relations, social relations, trade, health, and education.
 - India is also one of the top three trading partners of the Maldives, so tensions in bilateral relations could significantly affect the economy.
- **Multilateralism:** India and Maldives are aligned on various global issues including issues faced by countries of the Global South.
 - The two countries are also members of multilateral forums like the Commonwealth and NAM.
 - Lack of cooperation between India and the Maldives could impact areas where they share common interests and impact diplomatic cooperation in multilateral fora.

Conclusion

- The incidents have surprised many observers in India and the Maldives given the history of diplomatic support and cooperation between the two countries.

- However, analysts have claimed that the incident is not likely to impact broader bilateral ties but reiterated the need to maintain respectful and diplomatic communication between the countries.

Maldives



- The Maldives is an Indian Ocean archipelago of around 1,192 islands that are strewn across the Equator.
- It is a popular tourist destination and is close to major international sea lanes.
- It is the smallest country in Asia and is categorized as a Small Island Developing State (SIDS).
- It is also the lowest-lying country on the planet and is thus in significant danger from the rise in sea level and other oceanic threats such as tsunamis.

Why International Law Matters

SOURCE: THE HINDU

PRIORITY: MEDIUM

Why in the news?

- The article discusses the **importance of international law** in the context of the Gaza war and Russia's invasion of Ukraine.
- Both conflicts have led to discussions on the **effectiveness and relevance of international law**, particularly the **United Nations Charter's** prohibition of the use of force.

What is International Law?

- International law refers to a **set of rules, norms, and standards** that are accepted as **binding between nations**.
- It governs the relationships between states and other international actors, such as international organizations and, in some instances, individuals.
- The primary sources of international law include **treaties, customs, and general principles of law** recognized by civilized nations.
- It also includes rulings and decisions from international courts and tribunals.
- It encompasses a broad range of globally significant subjects such as human rights, disarmament, international criminal activities, issues pertaining to refugees and migration, nationality matters, the treatment of prisoners, the use of force, and behaviour during wartime.

- Moreover, international law regulates resources shared internationally, tackling matters related to the environment and sustainable development, international maritime zones, outer space, global communication networks, and international commerce.

Article 2(4) of UN Charter

Article 2(4) states:

"All Members shall refrain in their international relations from the threat or use of force against the territorial integrity or political independence of any state, or in any other manner inconsistent with the Purposes of the United Nations."

- This article is considered a **cornerstone of international law** and is crucial for **maintaining international peace and security**.
- It essentially prohibits the use of force or the threat of force in international relations, except under very specific circumstances such as self-defense or when authorized by the UN Security Council.
- The principle enshrined in Article 2(4) reflects a commitment by UN member states to settle their disputes through peaceful means and not through war or aggression.

Importance/Need of International Law

- Normative Influence Beyond Compliance:** The efficacy of international law shouldn't be judged solely by compliance. International law plays a normative role, influencing both state and non-state actors.
- National courts, for instance, often interpret domestic laws in light of international norms, even if those norms aren't formally implemented in domestic legislation.
- Transnational Legal Process:** **Harold Hongju Koh's concept** of a transnational legal process suggests that engagement with international law triggers complex institutional interactions.
- This process leads to the debate, interpretation, and internalization of global norms within national legal systems.
- Such engagement is crucial for addressing global challenges like climate change and terrorism.
- Accountability and Legitimacy:** **Monica Hakimi's perspective** underscores that international law helps differentiate between mere public power and legitimate authority.
- Through its argumentative practices, international law holds those who wield power accountable.
- This accountability may not always involve punishment but involves questioning and scrutinizing the actions of powerful entities, thus pushing them to justify their conduct in terms of international law.
- Instrument of Restraint Against Power:** International law should be used as a tool to hold powerful actors accountable in international relations. It argues for the moulding and strengthening of international law to curb expansionist, imperial, and illiberal tendencies.
- Universal Aspiration Towards Compliance:** Despite the lack of universal compliance, there is a global aspiration to adhere to international law, especially international humanitarian law.

Criticism of International Law

- Ineffectiveness in Preventing Wars:** There has been failure of the international community in preventing or stopping wars like those in Gaza and Ukraine.
- Structural Deficiencies and Imperial Roots:** The international law suffers from structural deficiencies. Its origin, which is laced with imperial and colonial characteristics, is seen as a contributing factor to ongoing and past military conflicts.
- Lack of Enforcement Mechanism:** Unlike domestic law, international law lacks a global police force to enforce its rules effectively. This absence of a strong enforcement mechanism is a significant weakness.
- Poor Compliance Record:** Critics argue that this lack of compliance undermines the efficacy and relevance of international law.
- Narrow Focus on Rule Compliance:** Focusing solely on compliance overlooks the normative effects of international law on different actors, including both state and non-state entities.
- Accountability Issues:** The ability of international law to differentiate between public power and legitimate authority is questioned, as is its effectiveness in holding decision-makers accountable.
- Need for More Robust International Legal Framework:** There is a need to mould and strengthen international law to make it a more effective tool for holding powerful actors accountable in international relations.

Way Forward

- Recognizing the Value of International Law:** Despite its perceived failures in preventing wars and conflicts, international law remains essential. It should not be dismissed but rather strengthened and upheld.
- Moving Beyond Compliance:** The effectiveness of international law shouldn't be judged solely on compliance. Instead, its broader normative impacts, including how it influences state and non-state actors and is integrated into domestic legal systems, are also crucial.

- **Focusing on Accountability:** The accountability is not just about legal repercussions but also involves the ability to question and scrutinize the actions of those in power, as seen in the case of Israel's actions in Gaza being brought before the International Court of Justice (ICJ).
- **Improving and Reinforcing International Legal Structures:** There is a need for continuous improvement and reinforcement of these structures to hold powerful actors accountable and to provide a platform for addressing grievances and disputes.
- **Aspiring Towards Universal Compliance:** The goal should be to work towards universal compliance with international law, especially in areas like international humanitarian law.
- **Using International Law as a Tool for Global Justice:** The international law should be used proactively to challenge and constrain those in power who act irresponsibly or aggressively.

Conclusion

Despite its imperfections, international law is essential for a stable and fair global order. It forces powerful entities to justify their actions and provides a platform for accountability.

UPSC Previous Year Practice Question

Q. Sea is an important Component of the Cosmos' Discuss in the light of the above statement the role of the IMO (International Maritime Organisation) in protecting environment and enhancing maritime safety and security. (2023)

Q. The newly tri-nation partnership AUKUS is aimed at countering China's ambitions in the Indo-Pacific region. Is it going to supersede the existing partnerships in the region? Discuss the strength and impact of AUKUS in the present scenario. (2021)

Q. 'Too little cash, too much politics, leaves UNESCO fighting for life.' Discuss the statement in the light of US' withdrawal and its accusation of the cultural body as being 'anti-Israel bias'. (2019)

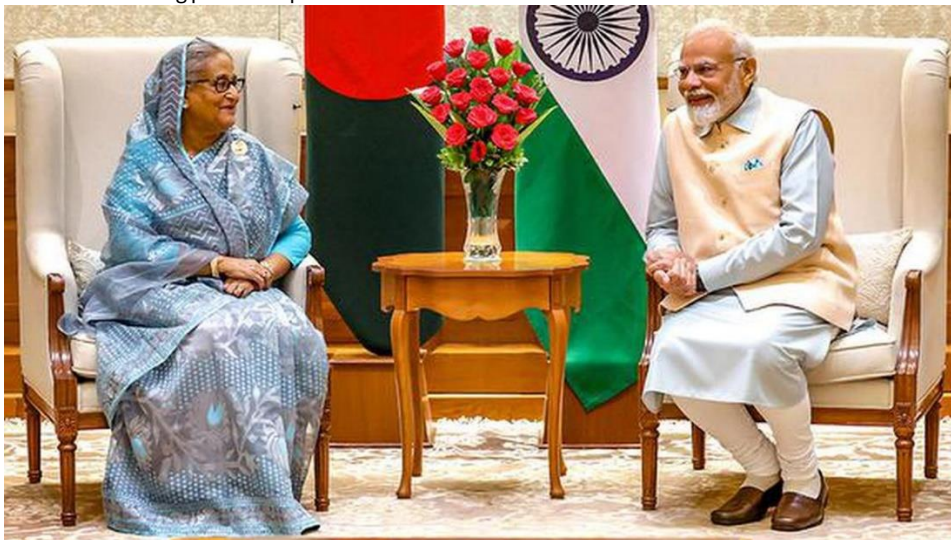
Sheikh Hasina's Re-Election And The Growth Of India-Bangladesh Relations

SOURCE: THE HINDU

PRIORITY: HIGH

Why in the news?

- Recently, Sheikh Hasina, the leader of the Awami Party won a fourth consecutive election in Bangladesh despite criticism such as a low voter turnout, boycott of the elections by the opposition, and instances of violence.
- India and Bangladesh are close allies in the region in line with India's Act East Policy and a robust trading partnership.



How have ties between India and Bangladesh flourished over the years?

- **Foundation of ties:** India supplied critical military and support assistance to Bangladesh in the 1971 Bangladesh Liberation War, resulting in the establishment of a robust India-Bangladesh partnership.
 - Subsequently, 'Bangabandhu' Sheikh Mujibur Rahman acknowledged India's importance to his country by stating that "friendship with India" was a cornerstone of Bangladesh's foreign policy.
- **Souring of ties:** However, challenges emerged in ties in the mid-1970s after military regimes assumed control in Bangladesh.
 - Other challenges to the relationship included boundary disputes, insurgency, and water-sharing disputes.
- **Revival of ties:** Sheikh Hasina came to power in 1996, following which ties between the two countries stabilized.
 - In the 21st century, India and Bangladesh have consolidated their relationship through robust cooperation in sectors such as trade, energy, infrastructure, connectivity, and defense.

News Summary:

Sheikh Hasina's fourth consecutive election win in Bangladesh signifies continuity in India-Bangladesh ties. While facing challenges, their robust relationship focuses on economic cooperation, infrastructure development, and regional connectivity.

UPSC Mains Practice Questions

Q.) The protests in Shahbag Square in Dhaka in Bangladesh reveal a fundamental split in society between the nationalists and Islamic forces. What is its significance for India? (UPSC GS2 20213)

Q.) Critically examine the compulsions that prompted India to play a decisive role in the emergence of Bangladesh. (UPSC GS2 2013)

MCQs

Question: Consider the following statements: (UPSC CSE 2020)

1. The value of Indo-Sri Lanka trade has consistently increased in the last decade.
2. "Textile and textile articles" constitute an important item of the trade between India and Bangladesh.
3. In the last five years, Nepal has been the largest trading partner of India in South Asia.

Which of the statements given above is/are correct?

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

Answer: (b)

- Bangladesh's approach to foreign policy under Sheikh Hasina has reflected that of the Bangabandhu in terms of its closeness to India.
- **Highlights of the relationship under Sheikh Hasina:**
- Following her election in 1996, India and Bangladesh agreed on a treaty for the sharing of the Ganga River's waters.
- During a visit to Bangladesh in 2011 by then-PM Manmohan Singh, India announced duty-free access to Bangladesh products and set up a Framework for Cooperation pact.
- Under Hasina, Bangladesh has cracked down on anti-India groups, terror outfits, and other criminals based in the country while also enforcing strict border controls to tackle illegal migration.
- Since 2014, the partnership has expanded with wider cooperation in trade, development, and water-sharing.
- During this period, the two countries have successfully resolved issues like the land boundary agreement (LBA) in 2015 and a maritime dispute over territorial waters.
- In 2022, India and Bangladesh signed an agreement on the sharing of waters of the Kushiya River, which was the first such pact since the Ganga Waters Treaty (1996).
- This era in India-Bangladesh relations has been described as a 'Shonali Adhyaya' or golden chapter in diplomacy by Indian Prime Minister Narendra Modi.

Economic cooperation between India and Bangladesh

- Trade between India and Bangladesh has improved markedly over the years, with India having a crucial role in helping Bangladesh achieve its goal of attaining upper middle-income status by 2030.
- **Bilateral trade:** Bangladesh has become India's largest trading partner in South Asia with bilateral trade rising from \$10.8 billion in 2020-21 to \$18 billion in 2021-22.
- India was Bangladesh's second-largest trading partner, with exports worth \$2 billion in Indian markets.
- The rise in trade was despite challenges such as COVID-19 and the impact of the Russia-Ukraine crisis.
- **Use of regional currency:** Bangladesh has begun to use the Indian rupee in trade transactions with India since 2023.
- This has helped reduce the reliance on the U.S. dollar and strengthen regional currencies.
- **CEPA:** In 2022, India and Bangladesh concluded a joint feasibility study on a Comprehensive Economic Partnership Agreement (CEPA).
- The CEPA aimed to simplify trade norms and reduce/eliminate customs duties on traded goods which would raise living standards in both countries over the long term.
- **Significance:** Bangladesh is expected to lose its Least Developed Country (LDC) status by 2026 as a result of which it would lose duty-free and quota-free market access in India.
- However, a major challenge to the CEPA is Bangladesh's desire to join the China-led Regional Comprehensive Economic Partnership (RCEP) about which India has significant concerns.
- **Regional agreements:**
- India and Bangladesh are members of regional trade agreements governing trade tariff regimes like the Asia Pacific Trade Agreement (APTA), SAARC Preferential Trade Agreement (SAPTA), and the Agreement on South Asian Free Trade Area (SAFTA)/
- The Bay of Bengal Initiative for Multi-Sectoral Technical and Economic Cooperation (BIMSTEC) - a multilateral regional organization for improved cooperation between littoral and adjacent countries of the Bay of Bengal - is headquartered in Dhaka.
- **Informal trade:** Both countries have emphasized the importance of weekly border markets or haats in boosting trade and people-to-people ties.
- They have announced plans to set up around 15 new haats along the border.

Infrastructure and regional connectivity

- India and Bangladesh share a 4,096 km long border, the longest of its land boundaries with its neighbors, and 54 rivers.
- **Railways:** Both countries have revived old railway links and launched new projects to expand bilateral and sub-regional connectivity.
- India envisions the development of the Northeast by fostering integration across South and Southeast Asia.
- The Akhaura-Agartala rail link, launched recently, connects Bangladesh and the northeast through Tripura which will help in the movement of cargo and boost small-scale industries and development in northeast India.
- India has also financially assisted with the development of the Khulna-Mongla Port rail link.
- There are three operational passenger routes between India and Bangladesh - the Maitree Express (Kolkata with Dhaka), Bandhan Express (Kolkata-Khulna) and Mitali Express (New Jalpaiguri-Dhaka)
- **Road transport:** A cross-border bus service operates from Shillong, Agartala, and Kolkata to Dhaka.
- Bangladesh has expressed its interest in participating in the India-Myanmar-Thailand trilateral project which is a 1,400-km highway linking India and Southeast Asia.

Question: With reference to India's projects on connectivity, consider the following statements:

1. The East-West Corridor under the Golden Quadrilateral Project connects Dibrugarh and Surat.
2. The Trilateral Highway connects Moreh in Manipur and Chiang Mai in Thailand via Myanmar.
3. Bangladesh - China - India - Myanmar Economic Corridor connects Varanasi in Uttar Pradesh with Kunming in China.

How many of the above statements are correct? (UPSC CSE 2023)

- a. Only one
- b. Only two
- c. All three
- d. None

Answer: (d)

- **Waterways:** India and Bangladesh are working together to upgrade the India-Bangladesh Protocol (IBP) route and the Protocol on Inland Water Transit and Trade (PIWT&T) for the transport of cargo.
- The BIMSTEC Master Plan for Transport Connectivity aims to establish a shipping network connecting major transport projects in India, Bangladesh, Myanmar, and Thailand.
- The Matarbari Port in Bangladesh which is being built with Japanese assistance could help establish an industrial corridor connecting Dhaka and northeast India, as Tripura is just 100 km away.
- **Funding for infrastructure projects:** India is funding several infrastructure and connectivity projects and has extended \$7 billion worth of Lines of Credit to Bangladesh since 2010.
- **Energy:** Bangladesh imports nearly 2,000MW of electricity from India.
- The Maitree Super Thermal Power Project in Rampal began, a joint venture began commercial production in 2023.
- India has also provided Bangladesh with financial assistance to construct the India-Bangladesh Friendship Pipeline which will supply diesel from Siliguri (India) to Parbatipur (Bangladesh).

What are the unresolved disputes in the relationship?

- **Teesta dispute:** One of the major challenges faced by the two countries is related to the sharing of the waters of the Teesta River.
- Bangladesh has sought an equitable distribution of water from the river but this has been opposed by West Bengal.
- The lack of agreement between India and Bangladesh encouraged China to agree on a river management proposal.
- **Rohingyas:** While Bangladesh aims to perform peaceful repatriation of Rohingya refugees from Myanmar, but has not been able to complete an agreement with Myanmar on it.
- On the other hand, India has stated that it will deport Rohingyas from its mainland, despite Bangladesh's requests for Indian cooperation to influence the Myanmar military junta.
- **Security:** India has raised concerns about threats to its internal security originating in Bangladesh.
- These include cross-border terrorism, infiltration, and human trafficking.
- One of the major reasons for this is that borders are across difficult terrains and affected by poor connectivity making it easier for illegal groups to take advantage of them.
- **Majoritarianism:** The Prime Minister of Bangladesh has criticized attacks on minority communities by violent majoritarian outfits.

Way forward

- Political stability in Bangladesh holds significant interest for India due to the potential ripple effects across the border.
- Political unrest, allegations of electoral malpractices, and increasing international pressure on Bangladesh are some of India's concerns.
- The US has adopted a stance that is critical of the Bangladesh government's policies, leading to strained relations, especially following the 2021 sanctions on a Bangladeshi anti-crime and anti-terrorism task force.
- India will have to work hard to balance its interests in the region, especially since the US has rejected the results of the election in Bangladesh.
- This has been accompanied by a widening of China's influence in the region.
- China has invested substantially in Bangladesh including in energy, connectivity, and infrastructure projects.
- China views Bangladesh as its best option to improve its reach in the Bay of Bengal region and boost its Belt and Road Initiative since Sri Lanka is in a debt crisis, Myanmar is facing political instability, and a tense relationship with India.
- Bangladesh has reasserted India's strategic importance despite its partnership with China.

Conclusion

- India and Bangladesh have built a robust and multifaceted relationship marked by economic cooperation, infrastructure development, and improved connectivity. While certain disputes persist, the overall trajectory has been positive. The challenge lies in addressing unresolved issues, ensuring political stability, and navigating geopolitical dynamics to sustain the fruitful ties between the two nations.

India, France, UAE Conduct Mega Air Exercise over Arabian Sea

SOURCE: THE HINDU

PRIORITY: MEDIUM

Why in the news?

- Recently, a mega **trilateral air exercise 'Desert Knight'** was conducted by **India, France, and UAE over the Arabian Sea**.
- The exercise was held amidst rising **global concerns over Houthi militants** targeting commercial vessels in strategic waterways.

About Exercise 'Desert Knight'

News Summary: Trilateral air exercise 'Desert Knight' by India, France, and UAE over the Arabian Sea enhances military collaboration, showcases capabilities, and addresses rising concerns over regional security threats.

- This exercise is a significant trilateral air exercise conducted by **India, France, and the United Arab Emirates (UAE)** over the Arabian Sea.
- The main focus of Exercise 'Desert Knight' was on **enhancing synergy and interoperability between the three air forces**.
- It involved several frontline aerial assets and combat jets from the participating countries.
- The exercise took place in the Indian **Flight Information Regions (FIRs)**, with Indian aircraft operating from several bases in India.
- The exercise was set against the backdrop of **rising global concerns over Houthi militants** targeting commercial vessels in the strategic waterways of the **Arabian Sea and the Red Sea**.
- It aimed at the **exchange of operational knowledge, experiences, and best practices** among the participants, thereby showcasing the prowess of the participating air forces.
- This particular exercise also coincided with **India's Republic Day celebrations**, underscoring the importance of the exercise in the context of international relations and military diplomacy.

ISRAEL-GAZA WAR

Red Sea patrol force to counter Houthi attacks

The United States has announced a 10-nation force to protect trade in the Red Sea after attacks by Yemen's Houthi rebels forced shipping companies to halt operations.



Aircrafts Involved

India	France	UAE
• Su-30 MKI • MiG-29 • Jaguar fighter jets • AWACS (airborne early warning and control aircraft) • C-130-J transport plane • Air-to-air refuelling aircraft	• Rafale fighter aircraft • Multi-role tanker transport	• F-16 fighter jets

Significance of the Exercise

- **Strategic Importance:** Conducted against the backdrop of rising global concerns about Houthi militants targeting commercial vessels in the strategic waterways of the region, this exercise underscores the collective resolve of India, France, and the UAE to ensure maritime security and safeguard strategic waterways.
- **Military Collaboration and Interoperability:** The exercise aimed to enhance synergy and interoperability among the air forces of the three nations. Such multinational drills are critical for developing a coordinated approach to common security threats.
- **Diverse Participation:** The exercise featured a range of frontline aerial assets and combat jets from all three countries, showcasing their military capabilities and commitment to regional stability.
- **Diplomatic Significance:** This trilateral exercise reflects growing diplomatic and military interactions in the region. It is also indicative of the strengthening ties between India, France, and the UAE.
- Additionally, the timing of the exercise just before India's Republic Day celebrations, where France's President Emmanuel Macron will be the chief guest, adds a layer of diplomatic significance, highlighting the strong ties between India and France.
- **Experience and Knowledge Exchange:** Such exercises facilitate the exchange of operational knowledge, experiences, and best practices among the participants, contributing to the overall enhancement of each nation's military capabilities.

Conclusion

MCQs

Q. 'Hand-in-Hand 2007', a joint anti-terrorism military training was held by the officers of the Indian Army and officers of Army of which one of the following countries? (UPSC 2008)

- China
- Japan
- Russia
- USA

Answer: (a)

The exercise represents a strengthening of diplomatic and military ties among the participating nations and underscores the importance of combined military capabilities in addressing regional security challenges.

A Revival of the IMEC Idea Amid Choppy Geopolitics

DISASTER MANAGEMENT

NGT Takes Suo Motu Cognisance Of Ennore Ammonia Gas Leak

SOURCE: THE HINDU

PRIORITY: MEDIUM

Why in the news?

- Recently, ammonia gas leaked from an underwater supply pipeline to an industrial unit, near Periyakuppam in Ennore, Tamil Nadu.
- The southern bench of the NGT has taken suo moto cognizance of the incident.
- People from Periyakuppam and neighboring areas reported breathlessness, and eye and skin irritation.



How did the Ennore ammonia gas leak occur?

- Coromandel International Limited, an industrial unit in Ennore receives and unloads around 3000 to 8000 tonnes of ammonia from Iran or Saudi Arabia once a month.
- The ammonia is received in liquid form at -33°C , stored in a storage tank, and then transferred through an eight-inch flexible High-Density Polyethylene pipeline laid underneath the sea bed.
- The pipelines are generally maintained at 2 kg/cm² vapor pressure when no transfer of ammonia occurs.
- Around 36 hours before the transfer of ammonia from the ships, a pre-cooling process of the pipeline is carried out to pump ammonia in its liquid condition.
- On 26th December 2023, a pressure drop and gas bubbles were observed in the pipeline during the pre-cooling process.
- As a result, the pipeline began to depressurize and the ammonia vapor was diverted.

Impact of the leak

- The level of ammonia in the air was five times the standard level.**
 - According to the TNPCB's inspection, the ammonia level in the air was 3 ppm about 3 hours after the leak.
 - This was equal to 2090 microgram/m³ in comparison to 400 microgram/m³ on a 24-hour average.
- The level of ammonia in the sea was 10 times the standard level.**
 - Ammonia level in the seawater at the point of leakage was found to be 49 mg/liter as against the standard of 5 mg/liter.
- According to the US National Institute of Occupational Safety and Health, the **short-term exposure limit (concentration at which exposure for more than 15 minutes is dangerous) is 35 ppm.**
 - Ammonia gas is immediately harmful to life or health at concentrations of 300 ppm.**
- According to the TNPCB, locals in Ennore were exposed to extremely high levels of ammonia for four hours.
 - Initially, residents began to notice a **pungent odor** in areas through which the pipelines passed.
 - People also reported experiencing **eye and skin irritation**, and **breathlessness**.
 - 52 individuals were admitted to the hospital due to health issues.
- Fish were found dead in the water near the site of the leak as **ammonia concentration of more than 1 ppm in water is toxic to fish.**

Ammonia

News Summary: Ammonia gas leakage in Ennore, Tamil Nadu, from a Coromandel International unit prompted NGT intervention. Residents experienced health issues, and the unit faces shutdown pending investigations and corrective measures.

MCQs

Question: How is the National Green Tribunal (NGT) different from the Central Pollution Control Board (UPSC 2018)

- The NGT has been established by an Act whereas the CPCB has been created by an executive order of the Government.
- The NGT provides environmental justice and helps reduce the burden of litigation in the higher courts whereas the CPCB promotes the 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:

- 1 only
- 2 only
- Both 1 and 2
- Neither 1 nor 2

Answer: (b)

Question: With reference to the role of biofilters in Recirculating Aquaculture System, consider the following statements:

- Biofilters provide waste treatment by removing uneaten fish feed.
- Biofilters convert ammonia present in fish waste to nitrate.
- Biofilters increase phosphorus as a nutrient for fish in water.

How many of the statements given above are correct? (UPSC 2023)

- Only one
- Only two
- All three
- None

Answer: (a)

- **Ammonia (NH₃) is a colorless gas** that is used as an industrial chemical in the production of fertilizers, plastics, synthetic fibers, dyes, and other products.
- **Production:**
 - **Haber process:** It is the primary method of commercial production of ammonia. **Nitrogen and hydrogen are combined directly under high pressure in the presence of a catalyst.**
 - In the lab, an **ammonium salt (ammonium chloride NH₄Cl)** is heated with a strong **alkali (sodium hydroxide or calcium hydroxide).**
- **Properties:**
 - Pungent smell
 - Dangerous and caustic in its concentrated form
 - Weak base
 - Lighter than air
- **Applications:**
 - As a fertilizer since it increases crop yield
 - To clean stainless steel and glass
 - As an antimicrobial agent in food products
 - As a pH adjuster in the fermentation process
 - As a refrigerant
 - To neutralize pollutants emitted from diesel engines like nitrogen oxides
 - As a fuel for rocket engines
 - In the textile industry to manufacture synthetic fibers
- **Environmental impact:** Ammonia reduces the amount of oxygen in water by converting it to oxidized forms of nitrogen.
 - As a result, **Biochemical oxygen demand (BOD)** increases.
 - Excessive agricultural field runoff could lead to **eutrophication**
 - **Soil acidification.**
- **Health impacts:**
 - **Common symptoms:** immediate burning of the throat, nose, and respiratory tract.
 - Respiratory distress, respiratory failure
 - Long-term ingestion of **water with ammonia levels > 1 ppm could cause damage to internal organs.**

How have the various stakeholders responded?

- **State government:** The government of Tamil Nadu ordered the unit to temporarily shut down till further orders.
- A technical committee — comprising members from TNPCB, experts from IIT Madras, officials from the regional office of Central Pollution Control Board (CPCB), National Environmental Engineering Research Institute (NEERI), Central Leather Research Institute (CLRI), and Industrial Safety and Health Directorate (ISHD) — has been formed to carry out an assessment report to the government
- **NGT:** The Southern bench of the **National Green Tribunal** took suo moto cognisance of the incident and directed the TNPCB to file a report.
- **Coromandel International Limited:** It stated that the unloading and operation of work at the port would be suspended until rectification of the abnormalities that led to the leak.
- **Community leaders:** They demanded that Ennore be declared as an area affected by industrial accidents.
 - They recommended action against companies responsible for polluting their areas and suggested that the victims affected by the leak be compensated.
- **Relief efforts:** Hundreds of residents were moved to safer locations as part of evacuation operations.

When can the NGT take suo moto action?

- In October 2021, a three-judge Bench of the Supreme Court in the **Municipal Corporation of Bombay v Ankita Sinha case** unanimously held that the **NGT is vested with suo moto powers under the NGT Act 2010.**
- Although the National Green Tribunal Act, 2010 did not have any provisions explicitly providing for suo moto powers for the NGT, its special jurisdiction for the enforcement of environmental rights and various functions and duties has necessitated a wider interpretation.
- The suo moto powers of the NGT have been limited to the environmental domain.

NGT

- The National Green Tribunal (NGT) is a specialist body that is empowered to resolve environmental disputes including multidisciplinary difficulties.
- It was constituted on October 18, 2010, by the **National Green Tribunal Act of 2010** to replace the **National Environment Appellate Authority.**
- **Benches:** The NGT has five places of sitting - New Delhi (Principal place of sitting), Chennai, Kolkata, Pune, and Bhopal.
- **Composition:**
 - The Tribunal comprises the Chairperson, the Judicial Members and Expert Members.

- Must have at least 10 and no more than 20 full-time judicial and expert members.
 - **Eligibility:**
 - **Chairperson:** Retired Supreme Court Judge
 - **Other Judicial members:** Retired High Court Judges.
 - **Tenure:** They are appointed for a **five-year term** and are not eligible for re-appointment.
 - **Functions:**
 - The NGT has jurisdiction over all civil cases involving substantial questions relating to the environment
 - It has suo motu powers to take up environmental issues across the country.
 - It has appellate jurisdiction to hear appeals as a Court
 - Provide relief and compensation to the victims of pollution and other environmental damage
 - The NGT has control over the government's environmental clearances, forest, and other natural resource conservation.
 - **Jurisdiction:** The NGT deals with civil cases under the seven laws related to the environment, these include:
 - The Water (Prevention and Control of Pollution) Act, 1974,
 - The Water (Prevention and Control of Pollution) Cess Act, 1977,
 - The Forest (Conservation) Act, 1980,
 - The Air (Prevention and Control of Pollution) Act, 1981,
 - The Environment (Protection) Act, 1986,
 - The Public Liability Insurance Act, 1991 and
 - The Biological Diversity Act, 2002.
 - Any violation pertaining to these laws or any decision taken by the Government under these laws can be challenged before the NGT.
 - **The Tribunal's decisions are binding and enforceable.**
- To know more about the NGT click the [link](#).

INFRASTRUCTURE AND INDUSTRY

India's Stationary Course in the Shipping Value Chain as Compared to China

SOURCE: THE HINDU

PRIORITY: MEDIUM

Why in the news?

- The article discusses **India's position in the global shipping industry compared to China**. It highlights how India, once ahead of China in merchant shipping until the late 1980s, has not significantly progressed in the fields of ship owning, chartering, financing, and building.

India vs. China in Shipping – Historical Perspective

- **Early Tradition and Modern Beginnings:** India has a long tradition of seafaring and maritime activities, evident from its historical trade routes and cultural exchanges with other civilizations. In the modern era, India started to develop its shipping industry, establishing a foundation in shipowning and maritime operations.
- **Post-Independence Growth:** The Indian government played a significant role in supporting the industry through public sector enterprises, and India became recognized for its capabilities in shipping.
- **Shipowning and Seafaring:** The country produced **skilled seafarers** and began to gain a reputation in the global maritime industry for its proficient workforce. India's participation in the **International Maritime Organization** further bolstered its standing.
- **Expansion and Diversification:** The shipping sector in India saw diversification with private players entering the field, previously dominated by large public sector entities.
- Shipyards in India started showing the potential to build ships competitively for the global market, leveraging labour arbitrage much earlier than in other sectors like IT.
- **Focus on Seafarer Training:** Training centers in Mumbai and Kolkata, and later across the country, churned out seafarers of various grades, enhancing India's presence in global shipping.
- **Ship Management and Foreign Exchange Earnings:** Indians ventured into ship management, bringing their negotiation skills and operational efficiency into this arena. Indian seafarers and management companies contributed significantly to the country's foreign exchange earnings.
- **Lack of Advancement in Shipbuilding and Owning:** Despite these strengths, India has not significantly advanced in shipbuilding or owning. The state-owned Shipping Corporation of India and other shipyards have seen declining orders, and Indian shipowners often rely on purchasing second-hand ships.

What is International Maritime Organization?

- The International Maritime Organization (IMO) is a specialized agency of the United Nations responsible for regulating shipping.
- **Established in 1948** as the **Inter-Governmental Maritime Consultative Organization (IMCO)** and coming into force in 1959, **its name was changed to the International Maritime Organization in 1982.**

News Summary: In comparison to China, India's position in global shipping has stagnated. Despite historical strengths, India lacks progress in shipbuilding and ownership, missing economic and strategic opportunities.

UPSC Previous Year Practice Question

Q. Sea is an important Component of the Cosmos' Discuss in the light of the above statement the role of the IMO (International Maritime Organisation) in protecting environment and enhancing maritime safety and security. **(2023)**

Q. With respect to the South China sea, maritime territorial disputes and rising tension affirm the need for safeguarding maritime security to ensure freedom of navigation and over flight throughout the region. In this context, discuss the bilateral issues between India and China. **(2014)**

MCQs

Q. Recently, which of the following States has explored the possibility of constructing an artificial inland port to be connected to sea by a long navigational channel? **(UPSC 2016)**

- (a) Andhra Pradesh
- (b) Chhattisgarh
- (c) Karnataka
- (d) Rajasthan

Answer: (d)

- **Headquartered in London, United Kingdom**, the IMO plays a fundamental role in shaping the maritime industry, making it safer and more environmentally friendly, and ensuring that international trade can be conducted efficiently and sustainably across the world's oceans.

India vs. China in Shipping – Shift in Dynamics

- **Yangtze River's Role:** The Yangtze River is a central artery for China's shipping industry. It's not just a historic and cultural symbol but also a hub of modern shipping and engineering marvels.
- **Rapid Development in Shipbuilding:** **By 2020, it was reported that China was responsible for making half of all ships globally.** This growth is largely attributed to a focused government strategy to enhance shipbuilding capabilities, with Chinese shipowners primarily building their vessels at state-owned yards.
- **Global Presence in Shipping:** Chinese ships are involved in global trade, bringing in raw materials from across the world, including from Chinese-owned mines in distant locations like Peru and Africa, and exporting finished products globally.
- **Contrast with India's Shipping Industry:** Despite a strong start and a history of modern ship ownership, India has not significantly advanced in shipbuilding or ownership. The Indian government's focus has been more on expanding the seafarer population and ship management rather than on owning and building ships.

Yangtze River – China



About Yangtze River

- The Yangtze River, the **longest river in China and Asia** and the third-longest globally, spans 3,915 miles (6,300 km).
- Originating from the **Tibetan Plateau** and emptying into the East China Sea, the river passes through or **borders ten provinces or regions**.
- It is fed by eight major tributaries: the Yalung, Min, Jialing, and Han rivers on its left bank, and the Wu, Yuan, Xiang, and Gan rivers on its right.
- In Western contexts, the river is often referred to as the Yangtze, a name derived from the ancient Yang fiefdom.
- In China, it is commonly known as Chang Jiang ("Long River"), but also referred to as Da Jiang ("Great River") or simply, Jiang ("[The] River").
- The Yangtze holds immense significance in China as the nation's main waterway, its primary agricultural region, and home to nearly one-third of China's population.

Significance of Yangtze River

- **Economic and Commercial Lifeline:** In modern times, the Yangtze has transformed into a crucial economic artery for China. It is a hub of commerce and industry, playing a vital role in China's economic development.
- **The Three Gorges Project:** The construction of the Three Gorges Dam on the Yangtze River is highlighted as a significant achievement, adding to the river's importance and utility.
- **Maritime Activity and Shipbuilding:** There is bustling maritime activity on the Yangtze, with merchant ships and barges using the river extensively for transportation. The river is also a site for shipbuilding and repair, contributing significantly to China's maritime industry.
- **Strategic Importance:** The Yangtze's role in shipbuilding and maritime activities also underscores its strategic importance, both economically and in terms of China's presence in international trade and maritime affairs.

Significance of Shipping in India

- **Economic Growth and Foreign Exchange Earnings:** Indian seafarers and their management companies bring in significant foreign exchange earnings, estimated at around **\$6 billion annually**.

Q. Which one of the following is the best description of 'INS Astradharini', that was in the news recently? (UPSC 2016)

- (a) Amphibious warfare ship
- (b) Nuclear-powered submarine
- (c) Torpedo launch and recovery vessel
- (d) Nuclear-powered aircraft carrier

Answer: (c)

Q. Between India and East Asia, the navigation-time and distance can be greatly reduced by which of the following? (UPSC 2011)

1. Deepening the Malacca straits between Malaysia and Indonesia.
2. Opening a new canal across the Kra Isthmus between the Gulf of Siam and Andaman Sea.

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

Answer: (b)

Q. Which one among the following has the largest shipyard in India? (UPSC 2003)

- (a) Kolkata
- (b) Kochi
- (c) Mumbai
- (d) Visakhapatnam

Answer: (b)

- **Global Maritime Influence:** Shipbuilding and owning would not only enhance India's presence in the international trade scene but also give it a seat at the table in the global maritime industry.
- **National Security and Defense:** A strong shipbuilding industry is integral to a robust naval base, contributing to national defense and security.
- **Employment and Skill Development:** The expansion of the shipping industry, including shipbuilding, can create jobs and contribute to skill development.
- **Competitive Advantage in Global Shipping:** India, with its history in modern shipowning and potential in shipbuilding, can gain a competitive edge in the global shipping market.
- **Diversification of Economic Activities:** Developing the shipbuilding sector could diversify India's economic activities, reducing dependence on certain sectors and promoting a more balanced economic growth.
- **Infrastructure and Technological Development:** Investing in shipbuilding will necessitate the development of infrastructure and technology, which can have spillover benefits for other industries and the economy as a whole.

India's Missed Opportunities

- **Lack of Strategic Growth in Indian Shipbuilding:** India's share in global shipbuilding has remained minimal, failing to reach even modest targets set by the government. Successive Indian governments have not prioritized shipbuilding and ownership, leading to a stagnation in these areas.
- **Ineffective Policies and Plans:** The Indian government's **Maritime Agenda 2020** aimed to increase India's global shipbuilding share but failed to achieve its targets.
- **The Maritime India Vision 2030** doesn't focus on shipbuilding and owning, despite outlining key themes for maritime development.
- **Strategic and Economic Implications:** The lack of focus on shipbuilding and owning is a missed opportunity for India, given its long coastline and strategic location. Shipbuilding is essential not only for economic reasons but also for enhancing India's strategic and military capabilities.

Government Initiatives for Enhancing Shipping Industry

- **Sagarmala Project:** Launched in 2015, the Sagarmala Project is a national initiative to modernize India's Ports so that port-led development can be augmented and coastlines can be developed to contribute to India's growth.
- It aims to reduce logistics costs for both domestic and EXIM (Export-Import) cargo with minimal infrastructure investment.
- **Maritime India Vision 2030:** This is a comprehensive initiative aimed at transforming the Indian maritime sector. It focuses on several key areas including modernizing and enhancing port infrastructure, improving efficiency in logistics, increasing the use of inland waterways for transportation, and developing coastal shipping.
- **National Shipbuilding Policy:** The Indian government has proposed a National Shipbuilding Policy to promote the development of the shipbuilding industry in India. This includes financial support and incentives for shipyards and aims to boost domestic shipbuilding and repair facilities.
- **Make in India in Defence Shipbuilding:** Under the 'Make in India' initiative, the government is encouraging the production of defense ships in India. This initiative aims to reduce reliance on imports and to make India a global shipbuilding hub.
- **Coastal Berth Scheme:** Part of the Sagarmala program, this scheme is designed to develop coastal shipping in India. It involves setting up new berths and modernizing existing berths at various ports for coastal cargo and passenger movement.
- **Direct Port Delivery (DPD) and Direct Port Entry (DPE):** These initiatives are aimed at reducing congestion, dwell time and cost of handling containers at Indian ports.
- **GST Exemption on Bunker Fuel:** The Indian government has exempted bunker fuel for use in vessels in foreign-bound voyages from the Goods and Services Tax (GST), which is expected to reduce costs for Indian shipping companies.
- **Relaxation of Cabotage Law:** The Indian government relaxed its cabotage law, allowing foreign-flagged vessels to engage in coastal shipping of certain commodities, with the aim of reducing the cost of transporting goods and boosting the efficiency of ports.

Maritime India Vision 2030

- The Prime Minister of India will unveil a **decade-long strategy** for the maritime sector at the Maritime India Summit in November 2020.
- This strategy, which will replace the existing Sagarmala initiative, is designed to enhance India's waterways, bolster the shipbuilding industry, and promote cruise tourism.

Key Initiatives and Development Projects:

- **Maritime Development Fund:** This Rs. 25,000-crore fund will offer cost-effective, long-duration financing for the sector, with a Rs. 2,500 crore contribution from the Central Government spread over seven years.
- **Port Regulatory Authority:** Under the proposed Indian Ports Act, which will supersede the 1908 Act, a nationwide port authority will be established. This move aims to oversee major

and minor ports across India, fostering structured development in the port sector to attract investment.

- **Eastern Waterways Connectivity Transport Grid Project:** Focused on improving regional connectivity with neighboring countries like Bangladesh, Nepal, Bhutan, and Myanmar.
- **Riverine Development Fund:** This initiative proposes affordable, long-term financing for inland vessels through the Riverine Development Fund (RDF). Additionally, it suggests expanding the tonnage tax scheme, currently applicable to ocean-going ships and dredgers, to include inland vessels, thereby increasing their availability.
- **Rationalization of Port Charges:** The plan involves making port charges more competitive by eliminating hidden fees imposed by ship liners, thereby introducing greater transparency.
- **Promotion of Water Transport:** The strategy emphasizes using waterways to alleviate congestion in urban areas and developing them as an alternate means of urban transport.

Way Forward

- **Investment in Shipbuilding Infrastructure:** India should focus on upgrading and expanding its shipbuilding facilities.
- **Government Support and Policy Reforms:** The government could implement policies that encourage investment in the shipping industry. This includes financial incentives for building new ships, tax breaks, and subsidies for shipyards.
- **Focus on Innovation and Technology:** Embracing modern shipbuilding technologies and practices could be pivotal which might involve investing in research and development to innovate in areas like eco-friendly ships, digitalization, and automation.
- **Enhancing Maritime Education and Training:** Strengthening maritime education and training can ensure a skilled workforce for the industry.
- **Strategic Collaborations and Partnerships:** Forming partnerships with leading global players in shipbuilding and maritime services could provide the necessary expertise and market access.
- **Fostering a Competitive Environment:** Encouraging competition among domestic players and reducing bureaucratic hurdles can foster a more dynamic and efficient maritime industry.
- **Expanding into Niche Markets:** India might look into specializing in certain types of vessels where it could develop a competitive advantage, like small to medium-sized ships or specific types of specialized vessels.
- **Leveraging Geographic Advantage:** Utilizing India's strategic geographic location for developing ports and shipping routes can help in strengthening its position in the global shipping network.
- **Sustainability and Green Initiatives:** Investing in sustainable and environmentally friendly shipbuilding practices could position India as a leader in green shipping.

Conclusion

Shipbuilding has strategic and economic importance for India, given its long coastline and pivotal geographic location. Advancing in shipbuilding and owning would not only bolster India's position in the global maritime industry but also strengthen its overall industrial and military capabilities.

India Closing in on Lithium Deal with Argentina, tapping Australia, Chile

SOURCE: THE HINDU

PRIORITY: MEDIUM

Why in the news?

- The article discusses **India's efforts to secure lithium**, a critical mineral for green energy, by **exploring deals with Argentina, Australia, and Chile**.
- **Latin American nations**, especially Chile and Argentina, are **significant contributors to the world's lithium supply**, along with Australia.

India's Lithium Acquisition Strategy

- **Agreement with Argentina:** The Indian Mines Ministry, through **Khanij Bidesh India Ltd (KABIL)**, is in the process of finalizing an exploration and development agreement with the **Argentinian miner CAMYEN**.
- This agreement is focused on the acquisition and development of approximately five lithium blocks in Argentina.
- The cost of this acquisition could be in the range of a few hundred crore, and it's awaiting Cabinet approval.
- The KABIL board has already approved a 'Draft Exploration and Development Agreement'.
- Additionally, there's a proposal to open a branch office in **Catamarca, Argentina**.
- **Engagement with Chile:** India has entered into a **non-disclosure agreement with the Chilean miner ENAMI**.
- This agreement covers potential exploration, extraction, processing, and commercialization of lithium in Chile.
- Chile is a major player in the lithium market, holding **11% of the world's reserves and supplying 26% of global requirements**.

News Summary: India has strategically secured lithium deals with Argentina, Chile, and Australia to meet growing demand for green energy. The move aims to reduce dependence on imports and enhance global competitiveness.

UPSC Previous Year Practice Question

Q. Discuss the multi-dimensional implications of uneven distribution of mineral oil in the world. (2021)

Q. Despite India being one of the countries of Gondwanaland, its mining industry contributes much less to its Gross Domestic Product (GDP) in percentage. Discuss. (2021)

Q. "In spite of adverse environmental impact, coal mining is still inevitable for development". Discuss. (2017)

MCQs

Q. With reference to India, consider the following statements: (UPSC 2022)

1. Monazite is a source of rare earths.
2. Monazite contains thorium.

- **Exploration in Australia:** The Indian government has appointed PwC, a major consultancy firm, to **identify investable lithium projects in Australia**. Australia is one of the largest lithium producers globally.
- **Domestic Development:** In India, there are efforts to auction lithium blocks domestically, with one each in **Jammu & Kashmir and Chhattisgarh**.
- Currently, India meets most of its domestic lithium needs through imports, with an **import bill of about ₹24,000 crore**.

What is Khanij Bidesh India Limited (KABIL)?

- The joint venture company, Khanij Bidesh India Limited (KABIL), has been established with the **collaboration of three Central Public Sector Enterprises (CPSEs)** to guarantee the provision of critical minerals to the Indian domestic market.
- The Central Public Sector Enterprises (CPSEs) involved are **National Aluminium Company Ltd. (NALCO), Hindustan Copper Ltd. (HCL), and Mineral Exploration Company Ltd. (MECL)**, with their equity shares distributed in a **40:30:30 ratio**.
- This new company is established to secure the supply of **Lithium and Cobalt**, which are scarce in India, thereby ensuring the country's mineral security.
- The mandate for KABIL includes the identification, acquisition, exploration, development, mining, and processing of strategic minerals overseas for commercial purposes and to fulfill India's needs for these minerals.

About Lithium

Characteristics:

- Lithium is represented by the symbol **Li** and is a chemical element.
- This element is **soft** and has a **silvery-white appearance**.
- In standard conditions, it is both the **lightest solid element and the lightest metal**.
- It is characterized by its **high reactivity and flammability**, requiring storage in mineral oil.
- Lithium falls into the categories of an **alkali metal and a rare metal**.
- Different methods are used to extract lithium, depending on the deposit type. This includes solar evaporation from large brine pools or hard-rock mining of the ore.

Grouping in the Periodic Table:

- Lithium belongs to the alkali metal group, which includes sodium, potassium, rubidium, caesium, and francium, along with hydrogen. These elements make up group 1 and are situated in the s-block of the periodic table.
- Rare Metals (RM) feature elements like Niobium (Nb), Tantalum (Ta), Lithium (Li), Beryllium (Be), Cesium (Cs), etc., while Rare Earths (RE) encompass elements from Lanthanum (La) to Lutetium (Lu), as well as Scandium (Sc) and Yttrium (Y).
- These metals are strategically important, finding extensive applications in sectors like nuclear, electronics, telecommunications, information technology, space, and defense.

Applications:

- Lithium is a crucial element in the electrochemical cells of batteries used in **Electric Vehicles (EVs), laptops, mobile phones**, and similar devices.
- It plays a role in thermonuclear reactions.
- Lithium is combined with aluminum and magnesium to create alloys that are stronger and lighter.
- For instance, magnesium-lithium alloys are used for armor plating, and aluminum-lithium alloys find applications in aircraft, bicycle frames, and high-speed trains.
- **Pharmaceutical:** It serves as a mood stabilizer in treating conditions like bipolar disorder, depression, and various mental health issues.
- **Glass and Ceramics Industry:** In the production of specialized glass and ceramics, it is utilized to lower the melting temperature of these materials.
- **Aerospace and Military Uses:** In aerospace and military sectors, it helps cool temperature-sensitive components in space vehicles and military gear, including radar systems and missile guidance systems.
- **Lubricant Role:** It is a component in high-temperature lubricating greases, valued for its capacity to endure high temperatures and offer sustained lubrication.

Lithium Resources in India:

- The newly found lithium deposit, estimated at **5.9 million tonnes**, is located in the **Salal-Haimana region of the Reasi District in Jammu & Kashmir**. This discovery ranks it among the world's largest lithium deposits.
- Initial surveys have identified approximately 14,100 tonnes of lithium reserves in a small area in **Mandya district of Southern Karnataka**.
- Other potential locations for lithium include the mica belts in **Rajasthan, Bihar, and Andhra Pradesh**, pegmatite belts in **Odisha and Chhattisgarh**, and the **Rann of Kutch in Gujarat**.

3. Monazite occurs naturally in the entire Indian coastal sands in India.

4. In India, Government bodies only can process or export monazite.

Which of the statements given above are correct?

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

Answer: (b)

Q. Consider the following minerals: (UPSC 2020)

1. Bentonite
2. Chromite
3. Kyanite
4. Sillimanite

In India, which of the above is/are officially designated as major minerals?

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

Answer: (d)

Q. With reference to the management of minor minerals in India, consider the following statements: (UPSC 2019)

1. Sand is a 'minor mineral' according to the prevailing law in the country.
2. State Governments have the power to grant mining leases of minor minerals, but the powers regarding the formation of rules related to the grant of minor minerals lie with the Centre Government.
3. State Governments have the power to frame rules to prevent illegal mining of minor minerals.

Which of the statements given above is/are correct?

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

Answer: (a)

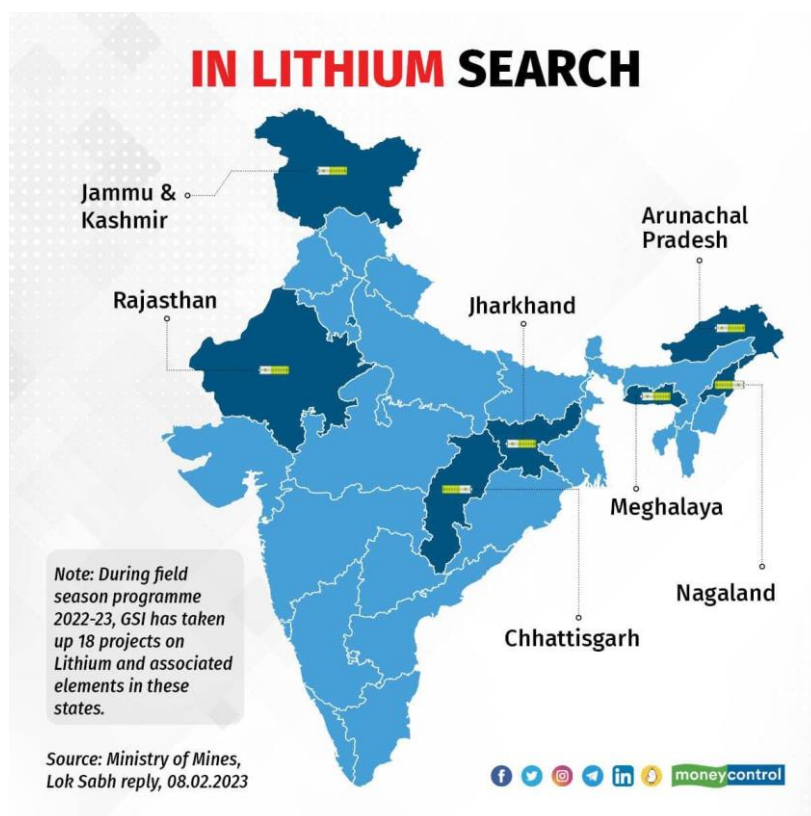
Q. Recently, there has been a concern over the short supply of a group of elements called 'rare earth metals'. Why? (UPSC 2012)

1. China, which is the largest producer of these elements, has imposed some restrictions on their export.
2. Other than China, Australia, Canada and Chile, these elements are not found in any country.
3. Rare earth metals are essential for the manufacture of various kinds of electronic items and there is a growing demand for these elements.

Which of the statements given above is/are correct?

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

Answer: (c)



Q. Which one of the following pairs of metals constitutes the lightest metal and the heaviest metal, respectively? (UPSC 2008)

- (a) Lithium and mercury
- (b) Lithium and osmium
- (c) Aluminium and osmium
- (d) Aluminium and mercury

Answer: (b)

Global Reserves of Lithium

- **Chile, Australia, Argentina, China, and the US** are among the top countries with the most significant lithium reserves globally, regardless of their development stage.
- The "**lithium triangle**" of **Argentina, Bolivia, and Chile**, along with Peru, holds approximately **67% of the world's confirmed lithium reserves**, contributing about half of the global supply, as per the U.S. Geological Survey.
- Bolivia, part of South America's "lithium triangle" which also includes Argentina and Chile, possesses the largest lithium reserves globally.
- With an estimated 21 million tonnes, Bolivia accounts for around a quarter of the world's lithium, including the largest deposit, the **Salar de Uyuni salt flat**, which is so vast it can be seen from space.
- **Argentina**, with the world's second-largest lithium reserves of about **17 million tonnes**, extracts lithium from its extensive salt flats through solar evaporation of brine pools, similar to its neighbors Bolivia and Chile.
- A significant lithium source in Argentina is the **Salar del Hombre Muerto salt flat**.
- **Chile** has about **nine million tonnes of lithium reserves**. It has developed a thriving mining industry for lithium, holding the largest mine reserves in the world in 2019, with **8.6 million tonnes**.
- **The US**, despite having the **fourth-largest lithium reserves at 6.8 million tonnes**, has minimal production activity.
- **Australia ranks fifth** for the largest overall reserves with **6.3 million tonnes** but was the top lithium producer in 2019.
- **China, in sixth place**, has lithium reserves estimated at **4.5 million tonnes** and produced 7,500 tonnes of the metal in 2019, the third-highest production level globally.



Significance of Lithium Deposits in India

- India's reliance on foreign nations for Li-Ion batteries and other EV components has been partly due to the scarcity of lithium resources domestically.
- The recent discovery of lithium reserves in J&K is a significant boost, advancing India's goal of self-reliance in energy storage.
- Lithium, a crucial element in Li-Ion batteries, makes this find particularly noteworthy given the cost implications of sourcing lithium.
- This sizeable lithium deposit in India could help meet the growing domestic demand for this metal, spurred by the rising popularity of electronic devices and electric vehicles.
- Furthermore, it positions India to potentially become an influential player in the global lithium market.
- **Support in Meeting Emission Goals:** India has committed to achieving **net zero emissions by 2070**, necessitating lithium for electric vehicle (EV) batteries.
- **Addressing Worldwide Lithium Scarcity:** The World Economic Forum (WEF) cautions about a global lithium shortage, driven by the escalating demand for EVs and rechargeable batteries, projected to reach 2 billion by 2050.
- The world's lithium supply is under pressure, with 54% located in Argentina, Bolivia, and Chile. The International Energy Agency (IEA) also foresees potential lithium shortages by 2025.
- **Minimizing Import Costs:** India currently relies on lithium imports, with over 165 crore lithium batteries imported between 2016-17 and 2019-20, incurring an import bill exceeding USD 3.3 billion.
- **Reducing Reliance on China:** China is a primary supplier of lithium-ion energy storage products for India, indicating a significant dependency on Chinese imports.
- India's lithium reserves, if effectively utilized and refined, could enable it to compete with China.

Challenges with Lithium Deposits in India

- The recent lithium discovery is classified as an **'inferred' resource**. This category signifies that the estimates of its quantity, grade, and mineral content are made with a low degree of confidence, based on information from sources like outcrops, trenches, pits, workings, and drill holes, which might be limited or uncertain in quality and reliability.
- In comparison to the established reserves in countries like Bolivia, Argentina, Australia, and China, this **lithium find in India is relatively small**.
- **India's entry** into the lithium value chain is **perceived as delayed**, especially at a time when the Electric Vehicle sector is expected to undergo significant changes.

Conclusion

Lithium, also known as 'white gold', is crucial for India's transition to green energy and reducing its carbon footprint. By tapping into lithium resources in Argentina, Chile, and Australia, India aims to decrease its reliance on imports and strengthen its position in the global green energy market.

Angola Quits OPEC Amid Dispute Over Oil Production Quotas

SOURCE: LIVE MINT

PRIORITY: MEDIUM

Why in the news?

- Recently, **Angola decided to leave the Organization of Petroleum Exporting Countries (OPEC) after 16 years** due to a dispute over oil production quotas.
- Angola **disagreed with a reduced output limit set by OPEC**, which aimed to adjust for the country's decreasing oil production capacity.

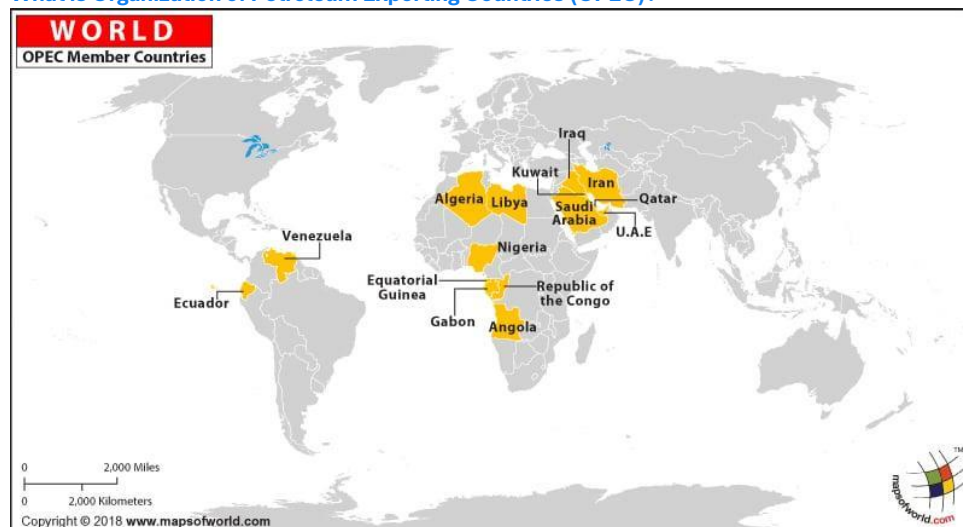
Why did Angola Leave OPEC?

- Dispute Over Production Quotas:** Angola had issues with the reduced output limit imposed by OPEC's leaders. This limit was a response to Angola's dwindling oil production capacity, but Luanda (the capital of Angola) rejected it.
- Diminished Production Capacity:** Over the past eight years, Angola's oil output **collapsed by about 40% to around 1.14 million barrels a day**. This decline was attributed to inadequate investment in aging, deepwater oil fields.
- Unfavorable Deal Outcomes:** In June, following a deal that increased the production target for the United Arab Emirates, Angola was forced to accept an even lower limit for 2024.
- Further Reductions in Quotas:** A review by external consultants led to OPEC imposing an even lower quota on Angola (**1.1 million barrels a day**), which was below its current output.
- Angola rejected this new quota and expressed its intention to continue pumping as much oil as possible.
- Perceived Lack of Relevance and Benefit:** Angola's Mineral Resources Minister stated that the country's role in OPEC was not deemed relevant and their participation was not yielding results aligning with their interests.

Impact of Angola's Departure

- Impact on Global Oil Supply and Prices:** Angola's departure won't have a significant impact on global oil supply forecasts because Angola is already producing at its full capacity, which aligns with the current OPEC quotas.
- OPEC's Cohesion and Membership Dynamics:** Angola's exit might raise concerns about OPEC's cohesion. The departure signals potential challenges within OPEC regarding the balancing of member countries' interests and capacities.
- Wider Geopolitical and Economic Implications:** Non-OPEC countries, like the United States, have increased their oil production, potentially reducing OPEC's market influence.
- The move might also reflect a growing trend where countries reassess their participation in international organizations based on national interests and benefits.
- Future of OPEC:** Several other members have left OPEC in recent years for various reasons, including **Qatar, Indonesia, and Ecuador**. This trend might prompt a reassessment of OPEC's strategies and policies to retain its relevance and effectiveness in the global oil market.

What is Organization of Petroleum Exporting Countries (OPEC)?



- The Organization of the Petroleum Exporting Countries (OPEC), an enduring, intergovernmental entity, was **established at the Baghdad Conference in 1960** by **Iran, Iraq, Kuwait, Saudi Arabia, and Venezuela**.
- Its primary goal is to regulate the supply of oil to stabilize oil prices in the global market, thereby preventing economic disruptions for both oil-producing and oil-purchasing nations.

News Summary: Angola exits OPEC after 16 years due to disagreements over reduced oil production quotas. While it won't heavily impact global supply, it reflects challenges within OPEC's cohesion and influence.

MCQs

Q. Other than Venezuela, which one among the following from South America is a member of OPEC? (UPSC 2009)

- (a) Argentina
- (b) Brazil
- (c) Ecuador
- (d) Bolivia

Answer: (c)

- **OPEC's headquarters is located in Vienna, Austria.**
- Membership in OPEC is available to any country significantly exporting oil and aligning with the organization's objectives.
- Gabon, which left the organization in January 1995, rejoined in July 2016.
- **As of 2019, OPEC consists of 14 member countries: Iran, Iraq, Kuwait, the United Arab Emirates (UAE), Saudi Arabia, Algeria, Libya, Nigeria, Gabon, Equatorial Guinea, the Republic of Congo, Angola, Ecuador, and Venezuela.**

OPEC+

- OPEC+ is a group of **24 oil-producing nations**, made up of the 14 members of the Organization of Petroleum Exporting Countries (OPEC), and **10 other non-OPEC members, including Russia.**
- These 10 other non-OPEC members include **Azerbaijan, Bahrain, Brunei, Kazakhstan, Malaysia, Mexico, Oman, Russia, South Sudan and Sudan.**
- The OPEC bloc is nominally **led by Saudi Arabia**, the group's largest oil producer, while Russia is the biggest player among the non-OPEC countries.
- The format was **born in 2017** with a deal to coordinate oil production among the countries in a bid to stabilize prices.
- Since then, the group has reached deals for members to voluntarily cut and ramp-up production in response to changes in global oil prices.

About Angola



- Angola is a nation situated along the **western coastline of Southern Africa.**
- It shares its **southern border with Namibia, its northern boundary with the Democratic Republic of the Congo, Zambia to its east**, and is flanked by the **Atlantic Ocean** on its western side.

Conclusion

The decision to leave OPEC marks a significant turn in Angola's oil strategy, emphasizing self-interest over collective action. Angola's departure highlights the challenges faced by OPEC in maintaining cohesion and influence in the global oil market.

ETHICS

Mulya Pravah 2.0 - An Ambitious Push For Values, Ethics In Higher Education

SOURCE: THE HINDU

PRIORITY: MEDIUM

Why in the news?

- Recently, the University Grants Commission (UGC) introduced Mulya Pravah 2.0 to inculcate human values and professional ethics in higher education institutions.

What is Mulya Pravah 2.0?

Mulya Pravah 2.0 is an updated set of guidelines issued by the University Grants Commission to inculcate human values and ethics in higher education.

Aim: Build value-based institutions by developing a deep respect for fundamental duties and constitutional values and bonding among individuals and institutions.

News Summary: University Grants Commission introduces Mulya Pravah 2.0, aiming to instill values and ethics in higher education to address issues like bias and discrimination, emphasizing transparency and accountability.

UPSC Mains Practice Questions

Reason for its being issued:

A survey of human resource managers highlighted the prevalence of unethical practices such as:

Bias in hiring, training, pay, and promotion

Sexual harassment

- Gender discrimination in recruitment, compensation, and promotion
- Inconsistencies in discipline
- Lack of confidentiality
- Overlooking non-performance-related factors in appraisals
- Arrangements with vendors for personal gain
- These vices could be rampant among the higher education institutions of the country.

**What are the key aspects of Mulya Pravah 2.0?**

- **Transparency:** Transparency in administration and decision-making in higher education institutions (HEIs) must be guided by public interest and not biased interests.
- **Accountability:** Discriminatory privileges must be abolished and corruption rooted out through strict action.
 - It directs authorities in HEIs to ensure accountability, transparency, fairness, honesty, and the highest degree of ethics.
- **Inclusivity:** It directs authorities in HEIs to promote inclusiveness, commitment, respectfulness, belongingness, sustainability, constitutional values, and global citizenship.
 - Scholars in these institutions must be treated as equals and allowed to proactively participate to protect and promote institutional culture and standards.
 - Higher education institutions are communities of scholars where no one should be more equal than the other.
- **Good work culture:** It recommends the creation of a conducive culture and work environment where officials can work impartially and with the best interests of the institution in mind.
 - Teachers must be role models to the students and abide by all provisions and procedures of the universities.
 - The staff and student unions should support the administration in its activities and raise issues in a dignified manner.
- **Free thought and integrity:** It encourages higher education institutions to foster the spirit of thinking and giving advice freely, ensuring integrity and trusteeship.

What are the concerns related to Mulya Pravah 2.0?

- **Confidentiality:** It emphasizes the importance of maintaining confidentiality of information which is in contrast to the right to information which help ensure accountability.
 - The lack of transparency could encourage malpractices and adversely impact public confidence.
- **Policing of staff:** It suggests that staff and student unions support the administration in development activities and raise issues in a dignified manner.
 - This can be seen as forcing them to support the administration and discourage them from raising legitimate concerns.
 - However, it does not mention staff associations and unions which act as pressure groups that exert collective influence to protect the rights and interests of their members.
- **Use of vague terms:** The guidelines mention “dignified manner” but does not define or explain it.
 - As a result, it could be used to undermine the collective voices of the stakeholders.
- **Suspending associations:** Associations and unions have been banned and suspended for various reasons and their representatives have been accused of acting against the interests of the institutions.

Q.1) “Education is not an injunction, it is an effective and pervasive tool for all-round development of an individual and social transformation”. Examine the New Education Policy, 2020 (NEP, 2020) in light of the above statement. **(GS4 2020)**

Q.2) Examine the relevance of the following in the context of civil service:

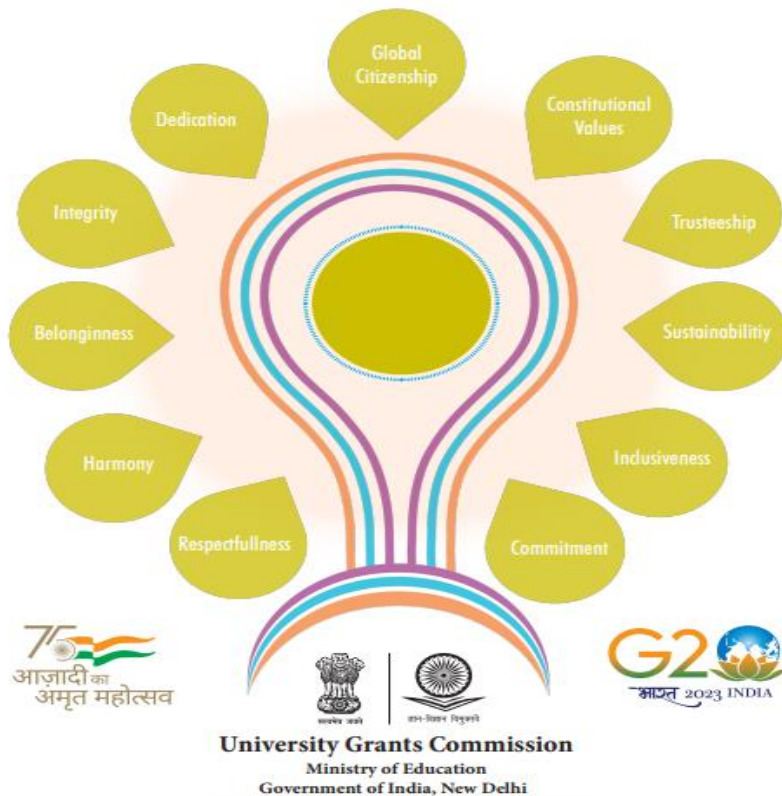
- a. Transparency
- b. Accountability
- c. Fairness and justice
- d. Courage of conviction
- e. Spirit of service. **(GS4 2017)**

Q.3) Online methodology is being used for day-to-day meetings, institutional approvals in the administration, and teaching and learning in the education sector to the extent telemedicine in the health sector is getting popular with the approvals of the competent authority. No doubt, it has advantages and disadvantages for both the beneficiaries and the system at large. Describe and discuss the ethical issues involved in the use of online methods particularly to the vulnerable section of society. **(GS4 2022)**

Q.4) “The Right to Information Act is not all about citizens’ empowerment alone, it essentially redefines the concept of accountability. Discuss. **(GS4 2018)**

Q.5) Discipline generally implies following the order and subordination. However, it may be counterproductive for the organization. Discuss. **(GS4 2017)**

MULYA PRAVAH 2.0 INCULCATION OF HUMAN VALUES AND PROFESSIONAL ETHICS IN HIGHER EDUCATION INSTITUTIONS



Similar policies or best practices from across the world

- **Japan:** The moral education curriculum focuses on cultivating moral responsibility and social conscience and emphasizes values like honesty, kindness, and respect.
- **Finland:** Value education is seen as a critical part of the holistic education system especially character education and ethical development.
- **Australia:** Its Values Education program aims to develop social and emotional intelligence and promote respect, responsibility, fairness, and compassion.
- **Singapore:** The country's National Education program aims to develop a national identity, social responsibility, and civic consciousness while stressing values like loyalty, resilience, and social harmony.
- **Canada:** Development of moral reasoning and ethical decision-making skills and the promotion of empathy, justice, and inclusivity are crucial parts of the curriculum.

Way forward

- Higher education institutions should voluntarily disclose all critical information and subject themselves to public scrutiny.
- They must be directed to upload agendas, proceedings, and minutes of the meetings of their decision-making bodies as well as annual reports and audited accounts in the public domain.
- Provisions and guidelines must exclude any vague and undefined terms so that they cannot be misused.
- Regulators in the higher education sector must demonstrate zero tolerance and act promptly to eliminate corruption and biases.

Conclusion

Mulya Pravah 2.0 aims to instill values and ethics in higher education to address prevalent issues such as bias and discrimination. While the guidelines emphasize transparency and accountability, they also raise concerns about confidentiality and the stifling of dissent.

Case Study: Ethical Dilemma in Migration and Human Trafficking

Mr. Arjun, an officer in the Ministry of External Affairs (MEA), has been closely monitoring international migration trends, especially concerning Indian nationals. Recently, an incident where French authorities detained a plane destined for Nicaragua, carrying mostly Indian passengers, has come under scrutiny. The plane, chartered by Romania's Legend Airlines, was suspected of being involved in human trafficking. Among the passengers were 11 unaccompanied minors, and following the detention, more than a dozen people sought asylum in France. The airline has denied any involvement in human trafficking.

The situation poses a significant challenge for the MEA, drawing attention to the thin line between human trafficking and migration. As the officer responsible for handling such cases, Mr. Arjun is tasked with addressing this complex issue, which has garnered international attention. His role involves liaising with international bodies, including the United Nations Office on Drugs and Crime (UNODC), to address and combat human trafficking while also safeguarding the rights and dignities of migrants.

Questions:

- Identify the ethical issues Mr. Arjun must navigate in handling the case of the detained plane and its passengers.
- Analyze the options available to Mr. Arjun in addressing both the immediate situation and broader issues of human trafficking and migration.
- Propose the most appropriate course of action for Mr. Arjun, considering the ethical implications, the welfare of the passengers, and India's international obligations. Justify your recommendation with reasons.

Answer:

Mr. Arjun, an MEA officer, confronts a challenging scenario where a plane bound for Nicaragua, carrying mostly Indian passengers including 11 unaccompanied minors, was detained in France under suspicions of human trafficking. With the detaining authority and the involved airline presenting conflicting narratives, Arjun must navigate through the ethical, legal, and diplomatic maze to address the issue effectively, balancing between combating human trafficking and protecting legitimate migrants' rights.

Stakeholders Involved:

Detained Indian Passengers: Seeking better life opportunities or potentially victims of trafficking.

Unaccompanied Minors: Particularly vulnerable, deserving special protection.

Romania's Legend Airlines: Denies trafficking involvement, facing reputation and operational risks.

French Authorities: Responsible for law enforcement and protection within their jurisdiction.

Ministry of External Affairs (India): Must protect nationals abroad while upholding international obligations.

UNODC and International Community: Interested in global efforts to combat human trafficking and protect migrants.

a) Ethical Issues Mr. Arjun Must Navigate

Protection vs. Autonomy: This ethical dilemma revolves around the government's responsibility to protect its citizens from the dangers of human trafficking while also respecting their autonomy and freedom to migrate in search of better opportunities. The challenge lies in identifying and distinguishing between those who are being exploited and those who are voluntarily migrating, often risking their lives in the hope of a better future.

Striking this balance requires sensitive judgment to avoid infringing on individuals' rights to freedom of movement and their pursuit of happiness, while also implementing measures to prevent exploitation and protect the most vulnerable.

Transparency vs. Confidentiality: The issue of transparency in handling cases of suspected human trafficking against the need for confidentiality is crucial.

On one hand, there is a public interest in understanding how such situations are managed, the steps taken to combat human trafficking, and the outcomes of such interventions.

This transparency is important for public trust and accountability. On the other hand, there's a paramount need to protect the identities and personal information of those involved, especially the potential victims, to safeguard their dignity, privacy, and safety.

The ethical challenge is to navigate these conflicting requirements, ensuring that investigations and interventions are conducted openly where appropriate, but with the utmost discretion to protect those at risk.

Justice vs. Diplomacy: Pursuing justice for potential victims of trafficking often requires navigating complex international relations and diplomatic sensitivities.

Actions taken to investigate and prosecute suspects involved in human trafficking, especially when such activities cross international borders, can strain diplomatic ties.

There is an ethical imperative to ensure that justice is served for victims of trafficking, which may include extraterritorial investigations and prosecutions.

However, these actions must be balanced against the broader implications for international relations, cooperation, and diplomacy.

The challenge lies in advocating for justice and human rights without undermining diplomatic relationships that are crucial for a range of bilateral and multilateral issues.

b) Options Available to Mr. Arjun

Collaborate with International Agencies:

Merits: Leverages global expertise and resources in combating human trafficking, ensuring a well-coordinated response.

Demerits: May lead to jurisdictional conflicts and delays due to bureaucratic processes.

Enhance Surveillance and Screening:

Merits: Prevents trafficking by identifying and intercepting potential victims and traffickers at borders.

Demerits: Could restrict legitimate migration and trade, and may be viewed as intrusive.

Public Awareness Campaigns:

Merits: Educates potential migrants about the risks of trafficking, empowering them to make informed decisions.

Demerits: May not reach or persuade the most vulnerable populations due to access and influence limitations.

Strengthen Legal Frameworks and Enforcement:

Merits: Deters trafficking through stringent penalties and demonstrates a serious commitment to addressing the issue.

Demerits: Requires extensive resources for implementation and enforcement; risk of non-compliance or evasion by traffickers.

c) Most Appropriate Course of Action for Mr. Arjun

Mr. Arjun should adopt a multifaceted approach:

Initiate Diplomatic Dialogue: Engage with French authorities to ensure a fair and transparent investigation, respecting the rights of the detained individuals. This balances the need for justice and diplomatic relations.

Collaborate with UNODC: Partner with international bodies to gain insights and support, ensuring actions are aligned with global standards and practices.

Implement Awareness Programs: Target potential migrants with information on safe migration practices and the risks of trafficking, empowering them without restricting their autonomy.

Push for Legal and Policy Reforms: Advocate for stronger laws against human trafficking and better protection for migrants, ensuring robust mechanisms for justice and support.

Justification: This approach addresses the immediate needs of the detained individuals while tackling broader issues of human trafficking and migration. It respects individual autonomy, ensures justice, and fosters international cooperation, aligning with ethical principles and international obligations. By focusing on prevention, protection, and prosecution, Mr. Arjun can contribute to a sustainable solution that respects human rights and upholds the dignity of all individuals involved.

Conclusion

In addressing the complex issue of detained Indian passengers under suspicions of human trafficking, a balanced approach that prioritizes both combating trafficking and protecting migrant rights through international collaboration emerges as the most ethically sound and practical solution. This approach aligns with global standards and values, ensuring justice and dignity for all involved while fostering international goodwill and cooperation in addressing migration and trafficking challenges.

Places in News – World

Place in News	Description
Palace of Aigai, Greece	- An ancient Greek site dating back to the 4th century BC. Served as the spiritual and political center of Macedonian rulers. Location where Alexander the Great was crowned king. Includes a royal palace and tombs of King Philip II and other royals. Reopened after a €20 million renovation.
Essequibo Region, Guyana	- The subject of a long-standing border dispute between Guyana and Venezuela. Rich in oil and gas reserves, significantly impacting Guyana's economy. Dispute resolution agreed upon peacefully in December 2022.
Notre Dame Cathedral, Paris	- Suffered damage from a fire in April 2019. Controversy over replacing some stained-glass windows with modern designs. Renowned for its French Gothic architecture and receives about 12 million visitors annually. Restoration focuses on maintaining historical authenticity.
Salton Sea, Southern California	- Site of a significant lithium discovery worth \$540 billion. Potential to supply batteries for over 382 million electric vehicles. Challenges in extraction due to environmental concerns. Marks the United States as a potential leader in lithium production.

Lake Retba, Senegal	- Known as Lac Rose, famous for its distinct pink color caused by the <i>Dunaliella salina</i> bacteria. Under threat of extinction due to increased nitrate levels and pollution. High salinity content, comparable to the Dead Sea. Considered for UNESCO World Heritage Site status.
Chancay Port, Peru	- A mega deep-water port primarily owned by the Chinese state-owned company Cosco Shipping. Aims to transform Peru into a key commercial and port hub connecting South America and Asia. Part of China's Belt and Road Initiative investments in Latin America. Set to commence operations in late 2024.

Places in News - India

Place in News	Description
Swarved Mahamandir, Varanasi	- A seven-floor meditation center with a capacity for 20,000 individuals. Inaugurated during the centenary celebration of Vihangam Yoga. Features 125-petal lotus domes and covers an area of 3,00,000 square feet. Named after the Swarved, a spiritual text emphasizing Brahm Vidya.
Kalaram Temple, Nashik	- Iconic temple associated with Hindu mythology, part of the Ramayana's Panchavati area. Site of a historical anti-caste struggle led by Dr. B.R. Ambedkar in 1930. Houses unique dark statues of Lord Ram, Sita, Lakshman, and Hanuman. Built in 1792, its premises resonate with social and religious connotations.
Chandaka-Dampara Wildlife Sanctuary	- Located in Odisha's Khurda district, designated as a sanctuary in 1982. Plans to introduce Sambar and Gaur (bison) to enhance biodiversity. Features a blend of evergreen and deciduous vegetation, providing habitat for elephants, barking deer, and other fauna.
Zaskar River, Ladakh	- A tributary of the Indus River, flowing entirely within Ladakh, India. The site of the Indian Navy's Chadar Trek expedition, showcasing the adventurous spirit of the Indian Navy. Originates in the Great Himalayan range, with significant tributaries like Doda and Tsrup Lingti Chu.