VISIONIAS
INSPIRING INNOVATION

SECURITY

Classroom Study Material 2024

August 2023-May 2024

MAINS 365

VISIONIAS
INSPIRING INNOVATION

Building Mental Resilience for UPSC CSE with VisionIAS Student Wellness Cell

The UPSC Civil Services Examination is one of the most prestigious exams in the country, bringing immense professional and personal satisfaction. However, the journey often involves overcoming loneliness, intense competition pressure, anxiety, and other psychological challenges. These issues can impact both your preparation and overall well-being.

At **VisionIAS**, we recognize the multifaceted nature of this journey. To support our students comprehensively, we have established a dedicated Student Wellness Cell. Since April 2024, our highly professional psychologists and experienced professionals have provided confidential and mindful support as per student needs.

From Stress Management to Academic Excellence

Enhancing Academic Performance: Effective stress management contributes to better academic outcomes.

Professional Mental Health Support: Seeking professional help is crucial for success in UPSC preparation.

Well-Supported Mind for Excellence: Mental well-being is essential for achieving success in UPSC exams.

Comprehensive Wellness Cell: Addressing various issues impacting mental health and academic performance.

Safe and Non-Judgmental Environment: A space for students to discuss issues and receive personalized support.

Confidential and Structured Support: Multiple, structured sessions based on the severity of the issues.

Common Issues and Our Approach

Our counseling services have addressed a variety of issues, including:

Anxiety and Hopelessness: Using Cognitive Behavioural Therapy (CBT) to promote positive thinking.

Lack of Motivation and Focus: Introducing time management strategies and SMART goal-setting.

Emotional Struggles: Providing a safe space for expression and techniques such as journaling and progressive muscle relaxation.

Social Isolation and Loneliness: Encouraging healthy social interactions and setting personal boundaries.

Family and Personal Issues: Offering advice on coping with family dynamics, personal loss, and significant life stressors.

Scan the QR code for more details

To support the larger student community, **VisionIAS** is now extending our counseling and wellness support to all students preparing for UPSC CSE, regardless of their coaching institute affiliation. Schedule a session by visiting our office at Apsara Arcade near Karol Bagh Metro Station or emailing *student.wellness@visionias.in.*

Remember, seeking help is a sign of strength, not weakness.

AHMEDABAD | BENGALURU | BHOPAL | CHANDIGARH | DELHI | GUWAHATI | HYDERABAD | JAIPUR | JODHPUR | LUCKNOW | PRAYAGRAJ | PUNE | RANCHI

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A NOTE TO THE STUDENTS

Dear Students,

Understanding current affairs can add depth to your knowledge of intricate issues and help you form nuanced perspectives, especially in the context of the Mains examination.

In light of this, Mains 365 Security document attempts to simplify and exemplify your mains preparation.

Security Mains 365 Key Features:

Concise and Objective: Brief, objective presentations of each topic, incorporating relevant examples and figures to ensure clarity and precision in your answers.

Enhanced Infographics: Designed for effective understanding of topics and usage of maps in topic such as Drug Trafficking in India, financial cybercrimes, etc.

Topic at a Glance: Summarizes recurring important themes with latest data, examples and developments for quick revision.

Weekly Focus: QR code-linked list of relevant weekly focus documents, keeping you updated with latest trends in Security.

Previous Years Questions (PYQs): Segregated list of previous years' questions from 2013- 2023 for efficient revision.

Appendix: Includes key data and facts which can be used to enrich your answers.

We sincerely hope that the Mains 365 Security documents will guide you effectively in your preparation and aid you in scoring better in your Mains examination.

"Learn everything you can, anytime you can, from anyone you can. There will always come a time when you will be grateful you did."

All the Best! Team VisionIAS

MAINS 365 – SECURITY

1. STATE AND NON-STATE ACTORS

1.1. LEFT WING EXTREMISM AT A GLANCE

LEFT WING EXTREMISM (LWE) AT A GLANCE

ℹ️ About LWE in India

- The region affected by LWEs is referred to as **Red Corridor** in India.
- **Incidents of LWE violence** have **reduced by 73%** from **2010**.

🌍 Factors responsible for emergence of LWE

- **Jal, Jungle, Jameen (Water, Forest and Land):** Expropriation of resources by outsiders, evasion of land ceiling laws, etc.
- **Socio-Economic Inequalities:**
  - **Lack of employment:** Jharkhand's Youth Unemployment Rate (15-29 years) was 4.7% (PLFS-2022-23).
  - **Absence of healthcare amenities:** No blood banks in nine district hospitals in Bihar (CAG report 2021).
- **Inadequate implementation of government policies:**
  - Jharkhand is yet to implement PESA.
  - In 2024, SC issues notice to authorities in Bihar over non-implementation of RTE Act, 2009.

🖐️ Reasons for decline in LWE in India/ Initiatives taken to tackle LWE

- **Strategic**
  - **SAMADHAN** initiative. (refer image)
  - **Special Taskforce:** CRPF special unit 'Bastariya Battalion' includes local representation.
  - **Offensive strategy:** Operation Octopus, Operation Double Bull, and Operation Chakrabandha.
- **Developmental**
  - Developmental Funding via Special Infrastructure Scheme.
  - **Rehabilitation:** Industrial Training Institutes and Skill Development Centres.

8 Pillars of fighting Left Wing Extremism		
	S	Smart Leadership
	A	Aggressive strategy
	M	Motivation and training
	A	Actionable intelligence
	D	Dashboard based KPIs
	H	Harness technology
	A	Action plan for each theatre
	N	No access to financing

⚙️ Challenges persist to control LWE

- **Geographical Location:** Dense forests provide Maoists/Naxals space for training, hiding, and guerrilla warfare.
- **Security Challenges:** Unhindered inflow of arms through illicit manufacturers. **E.g. Munger district (Bihar).**
- **Ideological Appeal:** LWE groups' narrative attracts tribal communities to join Naxalites.
- **Misuse of technology:** E.g. Maoists use social media platforms and internet to reach urban areas.

🚶 Way Forward

- **Bridging trust deficit:** E.g. Peace March in 2021 where tribals from Chhattisgarh, Odisha and Telangana participated under slogan of **'Bastar maange hinsa se azadi'.**
- **Technology Use by Security Forces: GIS** and **GPS** help in **identifying camp locations** and planning attacks to eradicate threats.
- **Centre-state coordination:** Both should make synchronised efforts in **eliminating radicalization and clear delineation of roles and responsibilities** to tackle LWE.
- **Learning from best practices and success stories:** E.g. Greyhounds in Andhra Pradesh.

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1.2. INSURGENCY IN NORTHEAST AT A GLANCE

INSURGENCY IN NORTHEAST AT A GLANCE

Reasons Behind Insurgency in Northeast

- Large scale migration/**ethnic rivalries** with neighboring tribes. E.g. Meitei and Naga
- **Porous international borders** with difficult topography. E.g. Manipur-Myanmar
- **Poor connectivity and limited infrastructure.** Eg. Shortage of medical professionals in Manipur
- **Lack of effective governance** and **economic activities.**
- **Sense of alienation from mainstream**.

Significance of maintaining Peace in Northeast for country

- **National security:** Large section of border of northeastern states is international in nature, marked by unstable neighbours.
- **Strengthen cross border relationship:** To act as a bridge to Southeast Asia.
- **Economic Significance:** Rich natural resources like oil and gas, hydro-power potential, tourism and export potential.

Initiatives taken by India to restore Peace and bring Prosperity in Northeast

- **Peace deal/Settlement agreements:** National Liberation Front of Tripura Agreement, Bodo Peace Accord, Karbi Anglong Peace Agreement.
- **Fencing of borders with regional cooperation:** E.g., 95% of 856 km Indo-Bangladesh border in Tripura is fenced.
- **Local and regional connectivity initiatives** like-
  - Priority to Northeast routes under **UDAN 4.0.**
  - **Maitri Setu,** over Feni River to connect Tripura and Bangladesh.
  - **Bogibeel Bridge** connecting Assam and Arunachal Pradesh.
- **Development of Northeast** under **'Act East Policy'** via, **India-Myanmar-Thailand Trilateral Highway.**
  - **Agartala- Akhaura rail link** connecting Tripura with Bangladesh.
- **Aspirational District programme.**

Challenges to Peace and Prosperity Initiatives

- **Presence of disputed borders.** E.g. McMahon Line
- **Limited FDI inflows and predominance of Informal Economy** in Northeast. E.g. Approximately 0.018% of overall foreign investment (October 2019 to March 2022)
- **Territorial Conflicts: Assam-Mizoram Border Dispute.**
- **Ethnic Conflicts e.g.** Manipur violence over Meiti community addition in ST list.

Way ahead

- **Socio-cultural Level: Cultural Exchange Programs** to increase awareness of Northeast among rest of Indians.
- **Economic Level:** Working on light industries like food processing, floriculture, sericulture etc.
- **National Security Level:** Continue with **peace efforts with continued counter insurgency** operations while respecting human rights.
- **Political Level: North Eastern Council Act, 1971** to be suitably amended to restore the original 'Conflict resolution provision' recommended by 2rd ARC

1.3. MANIPUR VIOLENCE

Why in the news?

A year has passed since violent clashes erupted between the Meitei majority and the Kuki tribal community.

Ethnic composition of Manipur

- There are **33 recognized tribes of Manipur that either falls** under Nagas or Kukis.
  - Kukis are an **ethnic group inhabiting India's north-eastern states** Manipur, Mizoram, Meghalaya, Assam, Tripura, and Nagaland.
  - Kuki is **one of the several hill tribes** in **India, Bangladesh, and Myanmar**.
- Despite the socio-political and linguistic differences among them, all **ethnic tribes originate from same Mongoloid group.**
- Tribals make up **40 % of Manipur's population** and **live largely in hills**.
- Meitei's make up **53 % of population** and **live in Imphal valley.**

Reasons for outbreak of violence in Manipur

- **Demand of Meitei community for Scheduled Tribe (ST) Status:** Nagas and Kukis fear that granting ST status to Meiteis would give them land monopoly, further strengthening their dominance over political and economic resources.
  - Meitei community feels confined to 10% of valley land (Nagas and Kukis in 90% of land).
- **Instability in Myanmar:** After military coup in Myanmar in 2021, around 4,000 refugees are said to have entered Manipur.
- **Rise in Poppy cultivation:** This is due to illegal immigration of Chins from Myanmar, leading to rise of the drug trade in state, often linked to the Kukis of Manipur.
- **Demands for separate homeland:** Kukis demand separate state or Union Territory, while Kuki Zo community seek separate administration, believing Meitei-dominated governments neglected their areas and political representation.
- **Asymmetric representation:** Nagas, Kukis, and other tribal populations living in hills have 19 seats in Manipur state legislative assembly, whereas Meiteis have 40 seats.
- **Uneven development:** Infrastructure development has been recorded largely in the Valley rather than hills (40% population).
  - Between 2017-20, total budget allocation for Imphal valley was INR 21,481 crores whereas for hills, it was far INR 419 crores only.

Measures taken

- **Inner Line Permit (ILP):** In 2022, State cabinet adopted **1961 as base year for identifying illegal immigration** for implementation of ILP (introduced in State in December 2019, and came into effect in January 2020).
  - Manipur ILP is an **official travel document issued by state government to allow inward travel** of an Indian citizen for specific time period.
- **Suspension of Operations (SoS) agreement**: Signed between Government of India, Manipur government and Kuki National Organisation in 2008 to cease hostilities.
- **Peace Agreements**: Government of India and Government of Manipur signed a Peace Agreement with **United National Liberation Front (UNLF)** to bring stability in Northeastern Region in general and in Manipur particular.

Way ahead

- **Examine five criteria laid down by Lokur Committee:** For **identification to be ST namely**, primitive traits, distinct culture, geographical isolation, shyness of contact with community at large, and backwardness.

- **Implementing National Register for Citizens (NRC)**: Government should go ahead with implementing NRC taking 1951 as base year to protect the indigenous people and check infiltration across Myanmar.
- **Better management of borders:** Border guards like BSF, and ITBP should be strengthened and a second line of defense can be created by State government through state police force.
- **Streamline Representation**: State must streamline legislative assembly constituencies to **bridge gap between hills and valley**, allowing for focused governance without being influenced by ethnic sentiments.

1.4. SEPARATISM

Why in the news?

Recently, the External Affairs Minister of India suggested focusing on the nexus between separatism and organized crime.

What is Separatism?

- It is the **demand for a separate statehood**. It may take the form of a region demanding creation of a separate independent state or re-negotiation of relationship with State.
- There are demands in various regions for reorganization of relations between different regions**,** which may take following forms:

Insurgency	• **Example**: Ideological or Maoist insurgency in central and eastern India.
Statehood movement	• Seeking **separate state consisting of a region** from one or more existing states. For eg: demand for Bhil State.
Autonomy movement	• These are **collective mobilization of people in a region or across regions** with aim of getting autonomy for managing their economic, social-cultural, and political affairs. • For example, Bodoland and Karbis and Dimasa Kacharis accepted autonomy within Assam.
Secessionist movement	• One region in a country wants to **secede and become a sovereign state**. • For example, demand for greater Nagalim.

Concerns regarding the secessionist movement

International and financial support: International community support in the form of ideological and financial support, for example **support for the Nagalim movement.**
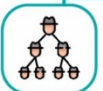
Link with organized crime: The secessionist movement often involved organized crime groups like the drug trade to finance themselves **as seen in Kashmir.**

Effect on international relations: It can become a hurdle in international diplomacy, **as seen in issues with Canada.**

Instability in the region: These movements often involve use of violence against the state and the people of the region.

India's approach to separatist movements and other regional aspirations

- **Democratic negotiations:** E.g. signing Mizo accord to bring peace in Mizoram.

- **Power sharing:** Groups and parties from region are given a share in power so that they have a say in their development.
- **Backward areas development:** Special planning through programs like the Aspirational District Programmes.
- **Flexibility of Constitution:** Sixth Schedule allows different tribes complete autonomy of preserving their practices and customary laws.
- **Use of force:** Force is used against groups such as **United Liberation Front of Assam** for maintaining peace in region.

1.5. ILLEGAL MIGRATION

Why in the news?

Gujarat Crime Investigation Department is probing the case of possible illegal immigration related to Nicaragua-bound plane carrying Indians, which was grounded in France.

Reasons for illegal migration

- **Economic Factors:** Poverty, lack of economic opportunities in homeland and perception of better opportunities in foreign countries (E.g., promise of 'The American Dream').
- **Human Trafficking networks:** As of October 2023, 2925 illegal agents have been notified in India through e-Migrate portal.
- **Political and religious persecution**: This has led to **illegal immigrants from Tibet, Afghanistan, Sri Lanka, Myanmar, Pakistan, and Bangladesh** finding shelter in India.
- **Overpopulation leads to crisis of living space**: E.g. In countries like Bangladesh where high population density has led to illegal migration in North eastern States of India.
- **Natural Disasters:** E.g., **Frequent floods and cyclone** (e.g. Amphan in 2020) in **Bangladesh** force migration of people to India.
- **Other Reasons:** Lack of data on illegal migrants, porous borders, poor regulation of travel agencies and lack of effective national and international coordination, etc.

Impacts of Illegal Migration

- **Economic Exploitation: Undocumented migrants lack legal safeguard** and thus are prone to informal, temporary or unprotected jobs and even forced labour. E.g. Construction Sector.
- **Violation of Human Rights:** Illegal Migrants are vulnerable to **crimes like** assault, rape or extortion **during their journeys** (e.g. via Central Mediterranean route) or at destination region.
- **Fear of being deported and mistreated**: E.g. poor living conditions in **Detention centers of US** for illegal migrants impacting physical, mental, social health of detainees including children.
- **Social Tensions:** E.g. **Threat to Assamese identity** due to illegal migration from Bangladesh has given rise to various socio-political tensions in Assam.
- **Facilitates Organized Crimes:** like smuggling migrants across borders (e.g. US-Mexico Border).

India's Initiatives to counter illegal migration

- **'Surakshit Jayen Prashikshit Jayen' campaign:** Initiative of Ministry of External Affairs to raise awareness of using safe and legal channels while traveling for employment abroad.
- **Migration and mobility partnership agreements:** Such agreement with countries (e.g., France) assures return of identified illegal migrants to their country and combat irregular migration.
- **Comprehensive Integrated Border Management System (CIBMS):** Technological solution to improve situational awareness along border areas.

Global Initiatives

- **Global Compact for Safe, Orderly and Regular Migration** under **International Organization for Migration:** To Prevent, combat and eradicate trafficking in persons in context of international migration.

- **Protocol against Smuggling of Migrants by Land, Sea and Air,** under UNTOC.
- **Organizations like INTERPOL** support the efforts of national police authorities in breaking up criminal networks behind smuggling of migrants.

Way Forward

- **International Cooperation:** Transnational illegal migration requires institutional mechanisms for cooperation, data exchange, and safeguarding human rights.
- **Combat human trafficking:** Better coordination of law enforcement agencies under ambit of INTERPOL is crucial to dismantling human trafficking and migrant smuggling.
- **Capacity development of local law enforcement:** To detect and prevent illegal migration and safeguard migrants in vulnerable situations.
- **Countering Organized crime:** UNTOC can help in addressing the involvement of organized groups.
- **Demarcate between Refugees and Illegal migrant**.

1.6. FREE MOVEMENT REGIME (FMR)

Why in the News?

Union Ministry of Home Affairs has scraped **Free Movement Regime (FMR) between India and Myanmar**.

FMR between India and Myanmar

- **Formalized in 2018** as part of **India's Act East Policy.**
- Allows visa-free travel within **16 km of border for residents.**
- **Reason for FMR regime:** Strong ethnic and familial ties across the border; the region has a long history of trans-border commerce through customs and border haats.

Reasons for Scrapping FMR:

- **Uncontrolled immigration**: From Myanmar leading to demographic changes in region.
- **Meitei-Kuki tensions** linked to perceived illegal migration of tribal Kuki-Chin communities.
- **Exodus of junta soldiers** seeking sanctuary in Mizoram which has serious security implications in India's northeast.
- **UNODC** says Myanmar's political unrest under military junta fuels regional narcotics surge.

Way Forward

- **Border management**: Governments and border residents should collaborate to secure the border.
  - Give the Assam Rifles the single mandate of guarding border; else shall deploy a dedicated border guarding force for Indo - Myanmar border.
  - Expedite **construction of Integrated Check Posts (ICPs)** along with other infrastructure.
- **Diplomatic:** There is a need of diplomatic agility in India's engagement with Myanmar.
  - A cost-benefit analysis of action in context of regional security and **'Act East' policy.**
- **Community engagement:** Involve tribal communities in decision making.

1.7. ARMED FORCES SPECIAL POWERS ACT (AFSPA) 1958

Why in the news?

Union Ministry of Home Affairs has extended **AFSPA in parts of Nagaland and Arunachal Pradesh** by another 6 months.

About AFSPA

- AFSPA **grants special powers to armed forces** to bring back order in **"disturbed areas"**.
  - They can **open fire** against any person **in contravention to law, arrest and search premises without warrant, etc.**

- **Key highlights**
  - **Disturbed areas:** A **part or whole** state/UT is declared disturbed area when **use of armed forces in aid of civil power is necessary** to restore order.
    - ✓ Declaration is made by **Governor** of state, **administrator** of UT or by **Centre.**
  - **Immunity to Armed forces personnel:** Prohibition legal proceeding against them except **with the previous sanction of the Central Government.**
    - ✓ In 2016, Supreme Court ruled that the **armed forces could not be immune from investigation for excesses committed** during the discharge of their duties even in **disturbed areas**.
  - **Treatment of arrested person**: Army authority is duty bound to **handover** the arrested person to the officer-in-charge of the **nearest police station** with **least possible delay.**
  - **Applicability:** Parts of Assam, Manipur, Nagaland, and Arunachal Pradesh.

Issues with AFSPA

- **Violation of rights:** Act violates non-derogable provisions of Constitution, including **right to life**, **right to remedy** and **right to be free from arbitrary deprivation** of liberty.
- **Violates International Law**: The AFSPA, by its form and in its application, **violates the Universal Declaration of Human Rights (UDHR),** the International Covenant on Civil and Political Rights (ICCPR), the Convention Against Torture and the UN Code of Conduct for Law Enforcement Officials.
- **Centre-state conflicts: Law and order** is a state subject, and concerned states are always in a **better position to carry out direct assessment** on ground. However, acts like AFSPA **undermine states' autonomy** even in times of peace.
- **Misuse of powers**: There are several instances reported where armed forces have allegedly **misused the powers given by the Act**.

> **Judicial pronouncements on AFSPA**
>
> - **Naga People's Movement of Human Rights v Union of India (1997)**: Supreme Court **upheld the constitutionality** of AFSPA and laid out procedure:
>   - While declaring a region as "disturbed area", the **opinion of the state government** must be taken.
>   - Act has to be **reviewed every six months** by the state.
> - **Extra Judicial Execution Victim Families vs Union of India & Anr (2016):** Supreme Court held that **AFSPA is not invincible** and **ended immunity** of armed forces from prosecution under AFSPA.
>
> **Committees related to AFSPA**
>
> - **B P Jeevan Reddy committee** (2005): It called for **repeal of AFSPA** by terming it a symbol of hate and oppression.
>   - Also, Incorporation of AFSPA in **Unlawful Activities (Prevention) Act, 1967.**
> - **Second ARC (2007**): Recommended that **AFPSA be repealed to remove feeling of discrimination and alienation** among North East people.
> - **Santosh Hegde committee** (2013): Appointed by Supreme Court to review **encounter killing** in Manipur since 1979.

Way forward

- **Ensure Accountability:** Government and the security forces have to **abide by the guidelines set out** by Supreme Court and various committees.
- **Dialogue and engagement**: The government can engage in a dialogue with the affected communities and work towards addressing their grievances.
  - This can help in building trust and confidence between the state and the citizens.
- **Limit applicability:** The government should consider the imposition and lifting of AFSPA on a case-by-case basis and limit its application only to a few disturbing districts instead of applying it for the whole state.
- **Alternative approaches**: The government can explore alternative approaches to conflict resolution, such as promoting economic development, providing basic services, and addressing the root causes of the conflict.

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2. THREATS TO INTERNAL SECURITY

2.1. TECHNOLOGY AND INTERNAL SECURITY

2.1.1. MISUSE OF SOCIAL MEDIA

Why in news?

Supreme Court denounced spread of **factually incorrect and unfounded statements** made regarding pending cases on social platforms.

Reasons for Misuse of social media

- **Internet penetration** (over 880 million as of March 2023, TRAI).
- **Anonymity** due to AI, deepfake, etc.
- **Ambiguity in law,** like on responsibility of social media platforms.
- Absence of **robust grievance redressal mechanism**

Negatives Impacts of Misuse of social media

- **Prejudiced Narratives and Trolling** due to inaccurate information.
- **Defamation and invasion of privacy** (like revenge porn).
- **Social disharmony,** incitement of violence, etc.
- Attempt to **influence judicial decisions.**
  - **Pressure on Judiciary to align** with public sentiment.
- **Financial frauds** (In 2022–2023, UPI fraud reported cases exceeded from 84,000 cases to 95,000, Ministry of finance).

Measures taken to address the misuse of technology by extremists

- **UNSC's Delhi Declaration** on countering the use of new and emerging technologies for terrorist purposes.
- **Financial Action Task Force issued guidelines** in 2018 to **regulate virtual assets.**
- Use of **Facial Recognition Technology by Indian Army** in counter-terrorism operations.
- Global Counterterrorism Forum has adopted **Berlin Memorandum on Good Practices to Counter Terrorist use of Unmanned Aerial Systems.**

Steps taken by government to curb misuse of Social Media

- Information Technology (**Intermediary Guidelines and Digital Media Ethics Code**) Rules 2021.
- **Section 67 of Information Technology Act (IT), 2000** Punishes transmission of **obscene materials** in electronic form
- PIB's Fact **Check Unit** under IT Rules 2021**.**
  - Social media intermediaries must use technology-based measures to identify vulgar content under IT rules 2021

Way ahead

- **Invest in R&D** to improve deep fake detection techniques and **Collaboration** between governments, tech companies, and civil society organizations etc.

2.1.2. ONLINE RADICALISATION AT A GLANCE

Online Radicalisation At a Glance

> Digital revolution and **rising internet penetration** have offered terrorists and extremist **groups new access points to amplify and spread their messages**
> They **radicalize youth and solicit support through social media** for their political agenda.

What are the factors Responsible for Radicalisation?

> **Push Factors**
  ⊙ **Economic Factor** like lack of employment opportunities for youth. E.g. In 2022, share of unemployed youths in total unemployed population was 82.9% (India Employment Report 2024).
  ⊙ **Socio-religious Factor:** Ethnic or religious marginalization, feelings of alienation, etc.
> **Pull Factors**
  ⊙ **Economic incentive** provided by extremist group.
  ⊙ **Propaganda** by distorting religious philosophies.
  ⊙ **Capitalising crises** like Israel-Gaza conflict.
  ⊙ **Ideals of alternative outlet for political engagement,** Sense of adventure etc.

Role of digital platforms in radicalisation

Social media as echo chamber to **spread propaganda and disinformation**	Enables **terror fundraising campaigns**	**Micro-targeting** using data collection for psychological profiling	**Organized** crimes such as human trafficking, drug smuggling, money laundering etc.	**Cybercrimes like financial frauds**

Major Challenges in Curbing Online Radicalisation

> **Rising internet penetration.** E.g. In 2023, internet penetration grew 8% year-on-year (Internet in India 2023 Report).
> **Encrypted messaging apps, Dark Web, etc.** provides anonymity and hinder tracing of source.
> **Gamification techniques** used to spread extremist ideologies, etc.
> **Lack of standard definition** for Radicalisation, terrorism, etc.
> **Support by states** E.g., Houthis (a rebellion group in Yemen) is supported by Iran.

Key Initiatives to curb Online Radicalisation

> **At Global Level**
  ⊙ **United Nations Global Counter-Terrorism Strategy**
  ⊙ **European Union's Digital Services Act (DSA)** to prevent illegal activities online
  ⊙ **Global Internet Forum to Counter Terrorism (GIFCT)** founded by Meta, Microsoft, YouTube and X.
  ⊙ **Tech Against Terrorism** led by UN Counter-Terrorism Committee Executive Directorate (CTED).
> **At National level**
  ⊙ Unlawful Activities (Prevention) Act (UAPA) 1967.
  ⊙ Information Technology Act of 2000.
  ⊙ Indian Cybercrime Coordination Centre (I4C).
  ⊙ **Sahi Raasta programme** and **Operation SADBHAVANA** by Indian Army.

Way forward

> **Targeted counter-narrative campaigns** that debunk misinformation, **disrupting echo chambers.**
> **Implementing content moderation** and fact-checking.
> **Promoting international cooperation** among law enforcement agencies, intelligence agencies.
> **Strengthen Cybersecurity** and regulating virtual and crypto assets.

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2.1.3. VIRTUAL ASSETS AND TERROR FINANCING

Why in the news?

Financial Action Task Force (FATF) has recognized deficiencies in enforcing its standards regarding virtual assets (VAs) and **virtual asset service providers (VASPs).**

Virtual assets and Virtual Asset Service Providers (VASPs)

- Virtual assets refer to any digital representation of value that can be digitally traded, transferred or used for payment. Example: **Bitcoin**, Litecoin, Ethereum or Dogecoin.
- **VASPs:** Entities conducting transactions (exchanges, transfers) between virtual assets or fiat currencies.
- **E.g. Cryptocurrency exchanges, ATM operators, wallet custodians, and hedge funds.**

Reasons for use of Virtual Assets Used in Terror Financing

- **Anonymity:** Virtual Assets are **high risk** due to anonymity and **decentralization of peer-to-peer online transactions**, **use of VPNs.**
- **Absence of global standard regulations:** Different Anti-Money Laundering and Combating Financing of Terrorism (AML/CFT) obligations and oversight as highlighted by IMF.
- **Crowdfunding with VAs:** Terrorist groups leverage crowdfunding platforms and social media to solicit funds.

How do the FATF Standards apply to virtual assets?

Countries need to:	Virtual Assets service providers need to:
• **Understand** money laundering and terrorist financing **risks Licence or register** virtual asset service providers. • **Supervise sector** as it supervises other financial institutions.	• Implement **preventive measures as financial institutions**. • Obtain, hold and security transmit originator and **beneficiary information when making transfers.**

Regulation of Virtual Assets and VASPs in India

- **PMLA Compliance**: India subjected Virtual Digital Assets Service Providers (VDASPs) to AML-CFT regulations of PMLA 2002.
- **VDASPs are required to register with FIU IND** and fulfill reporting and record-keeping duties.
- India has **proposed a permanent secretariat** to coordinate bid to fight terror funding.
- India has enacted the '**travel rule' for VASPs** to collect and transmit originator and beneficiary data.

Way Forward

- **Effective global implementation of FATF standards** prevent criminals from exploiting weakly supervised jurisdictions.
- **Measures by financial institutions**: such as **customer due diligence (CDD),** and suspicious transaction reporting (STR).
- **Strengthening Financial Intelligence** can reveal the structure of terrorist groups and individual terrorists.
- **International Cooperation** between **law enforcement authorities** and **Financial sector** to combat cross-border challenges.
- **Technological upgradation** like **big data and artificial intelligence are required.**

FATF releases report on Crowdfunding for Terrorism Financing (TF). Key highlights:
- **Terrorist organisations are resorting to Crowdfunding** to support their operations.
- **Humanitarian, charitable and non-profit causes** abused for TF.
- **Dedicated crowdfunding platforms** make it difficult to detect illicit activity.
- **Social media platforms and messaging apps** amplify their messages and fundraising causes.
- **Interaction of Crowdfunding with VA:** VAs can be used to **conceal origin and destination of funds.**

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Recommendations:
- Including crowdfunding in **national risk assessments.**
- Making **Crowdfunding platforms accountable.**
- **Fully implement FATF Standards** relevant to **VA, Non-Profit Organisations,** etc.

2.2. DATA PROTECTION AT A GLANCE

Data Protection at a Glance

- **Data refers to** unprocessed facts and figures which could be **'personal' or 'non-personal'.**
- **Non-personal data refers to** any data which is not personal data (data pertaining to characteristics, traits or attributes of identity, which can be used to identify an individual).

Relevance of data usage

- **Political accountability via** Open government data.
- **Efficient administration via** Processed data **(E.g. UIDAI)**
- **Reduce Leakage by** real time monitoring.
- **National security:** NATGRID for unified intelligence database and **DNA Databanks.**

Need for protecting data

- **Right of individual** to **have control over their personal data,** covered under Right to Privacy **(Article 21).**
- **Tremendous growth in digital infrastructure:** Digital India Program, Affordable access to the internet and rapid technological advances.
- **Stop data theft, prevent data loss, cut down unnecessary litigation costs and compliance fines.**

Challenges in data protection

- **Cyber security as** India ranked 10th globally in data breaches in 2023.
- **Techno-colonialism as more than 80% of India's data is exported to global data centers.**
- **Funding & Innovations** on data governance is limited.

Steps taken for data protection

- **BN Srikrishna Committee on** Data Protection Framework.
- **Digital Personal Data Protection Act (DPDP), 2023**
  - **Seven Principles:** Consented, lawful, transparent and minimum collection and use of personal data, etc.
  - **Applicability:** Within India and outside India.
  - **Consent:** Not required for legitimate reasons.
  - **Governance:** Data Protection Board of India (DPBI).
  - **Obligations of Data Fiduciaries (Companies):** Accuracy of data, Build safeguards, erase personal data.

Way forward

- **Anonymization of personal data sets:** Through techniques like Pseudonymization/ De-identification **E.g. data masking**
- **Quantify Time:** Data should be **deleted immediately once purpose is met** or Data principal withdraws consent.
- **Data Rights:** The **right to data portability** and the **right to be forgotten** should be provided
- **Cross-Border Data Governance:** Mechanisms like GDPR are needed. GDPR allows cross-border data transfers only with adequate protection.
- **Adoption of safeguards such as Role-based Access Control (RBAC)** to protect personal data

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2.3. CYBER SECURITY AT A GLANCE

Cyber Security At A Glance

About Cyber Security

> **World Cybercrime Index (2024) ranks India 10th** as major cybercrime hotspots.

Need for Cyber Security

> **World's second largest user base** on internet.
> **Strategic importance as it** stores sensitive and critical data.
> **Weaponising internet that** includes terrorist recruitment, radicalization.
> **Digital India Initiative, startup digital push, and protecting service delivery** of critical public services like railways.
> **Cyber incidents** of IPR theft, denials of service may alter outcomes in battlefield.
> **Need for cyber resilience due to incidents like data breach at Taj Hotels.**
> **Increasing role of advanced technology** like AI, ML, data analytics, IoT etc.

Existing Mechanism for Cyber Security

> **Legal/Policy Framework**
  ○ **IT Act 2000, Amendment 2008 and IT Rules 2021:** provides punishment for **cyberterrorism,** tightening cybersecurity measures
  ○ **Joint Doctrine for Cyberspace Operations (2024):** emphasis on **military aspects of cyberspace operations**
  ○ **National Cybersecurity Policy 2013:** 24*7 National Critical Infrastructure Protection Centre.
> **Institutional Framework**
  ○ **National Cybersecurity Coordination Centre (NCCC)**
  ○ **Computer Emergency Response team (CERT-In)**
  ○ **National Critical Information Infrastructure Protection Centre (NCIIPC)**
  ○ **Indian Cyber Crime Coordination Centre (I4C).**
  ○ **Cyber Swachta Kendra**

Challenges to Cyber Security In India

> **Absence of any geographical constraints**
> **Rapidly evolving technologies.**
> **Lack of national level comprehensive architecture for cyber security** like **Singapore model** (Data Protection Essentials guidelines).
> **Lack of awareness** among the local police about legislative framework to deal with cyber threats.
> **Data colonialism:** Overseas custody of data exposes the sensitive information of citizens to foreign attacks.

Way forward

> **Setting up of Information Sharing and Analysis Centres** (ISACs) for **information sharing and coordination.**
> **PPP Model for Cybersecurity** to fill financial gap.
> **Learning from best practices** like **Tallinn Manual 2.0 of US** (which is based on rules of international law governing cyber incidents).
> **Upgrading cyber labs (E.g., CyPAD Initiative of Delhi).**
> **Data localization** for better cyber security in line with **Justice B. N. Srikrishna Committee Report.**

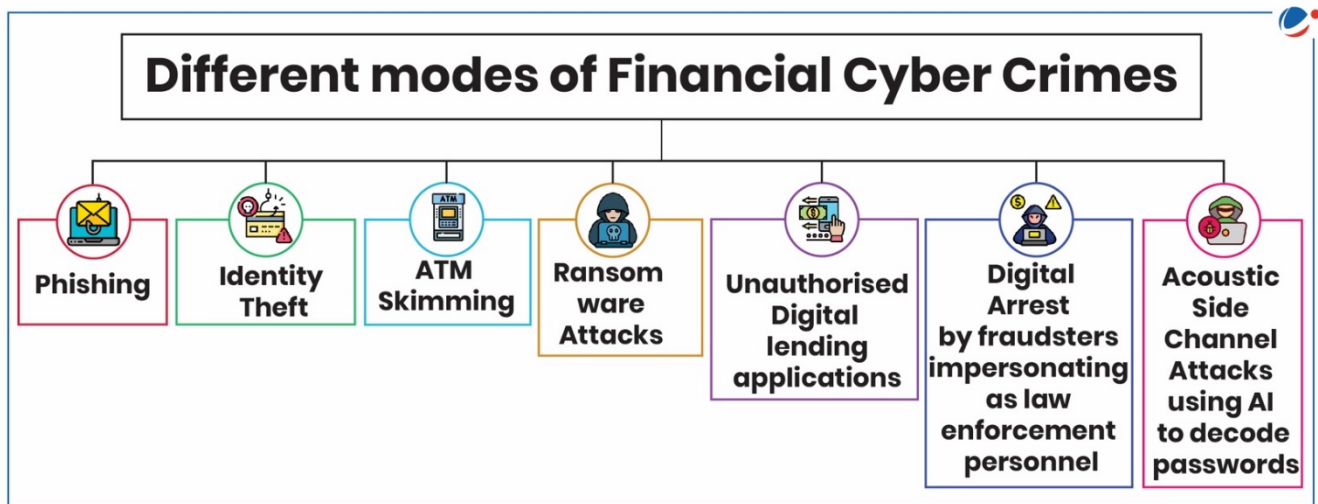## 2.3.1. CYBER THREATS AND FINANCIAL SECTORS

Why in the news?

Global Financial Stability Report 2024 released by **International Monetary Fund (IMF)** warns cyber risks as a growing threat to macro financial stability.

Key Findings of report

- Nearly **one-fifth of all cyber risks** affect financial firms.
- Number of **cyber-attacks has doubled** since COVID-19 pandemic.

About Financial frauds

- Acts intentionally deceiving victims by misrepresenting, concealing, or omitting facts like debit/credit card fraud.
- **Financial frauds accounts for 75% of cybercrimes** in India (Jan 2020-June 2023*)* (Report of Future Crime Research Foundation).
- Citizen Financial Cyber Fraud Reporting and Management System (CFCFRMS) registered around 1.1 million financial cyber fraud cases in 2023.

Different modes of Financial Cyber Crimes

Phishing | Identity Theft | ATM Skimming | Ransomware Attacks | Unauthorised Digital lending applications | Digital Arrest by fraudsters impersonating as law enforcement personnel | Acoustic Side Channel Attacks using AI to decode passwords

Reasons Behind rise in cyber attacks

- **Rapid Digital Transformation** and **evolution of fintech companies** combined with **lack of financial literacy**.
- Mushrooming of **fraudulent apps** with ability to capture financial data.
- Use of **Dark Patterns** for luring vulnerable consumers.
- **Low regulatory compliance** by the banking sectors.
- **Lack of swift action** discourages individuals from reporting.
- **Geopolitical tensions** (e.g., surge in cyber-attacks after Russia's invasion of Ukraine).

Impact of Cyber risks on Financial Systems

- **Threat to operational resilience** of financial institutions and adverse impact on macro-financial stability.
- **Cyber run** (withdrawal of funds from banks by individuals due to cyber-attack on banking system).
- Hacking of a central bank could lead to **halt in trading and price volatility**.
- **Affects government functioning** and management of **government debt, raising sovereign risks etc.**
- **Economic losses**, reputational damage, and need for increased cybersecurity investments.
- **Issues related to data integrity** due to loss or compromise of data.

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Challenges in dealing with Cyber Threats to Financial Systems

- **Inadequate cyber security audits** by financial institutions.
- **Inadequate** cooperation between regulators like RBI and SEBI.
- **Limited resources** such as experts related to cyber frauds etc.
- **Emerging technologies like** AI and quantum computing could further amplify cyber risks.
- **Lack of dedicated laws** or a dedicated court for financial frauds.
- **Nature of Crime being remote and transborder hinders investigation**: E.g. use of mule account.
- **Low Digital and financial literacy** (only 27% of India's population is financially literate, NCFE report 2022-23).

Way Forward

- **Cyber legislation at national level.**
- **Facilitating seamless coordination** between law enforcement agencies, banks and financial entities.
- Improving **cyber hygiene of firm.**
- Ensuring regular **cyber auditing.**
- Setting up of **Digital India Trust Agency (DIGITA) by RBI** for verification of digital lending apps and maintain a public register of verified apps.

2.4. CRITICAL INFORMATION INFRASTRUCTURE AT A GLANCE

CRITICAL INFORMATION INFRASTRUCTURE AT A GLANCE

About Critical Information Infrastructure (CII)

> It refers to those **essential infrastructures,** which, if disrupted/destroyed, would impact health, safety, security, economic or social well-being of nation. E.g. Dams, Power, Banking and Financial services, transportation, etc.
> CII is **declared by government under Section 70 of IT Act, 2000** (amended in 2008).

Threat to Critical Infrastructure

> **Natural:** E.g. Earthquake and subsequent tsunami damage Fukushima-Daiichi nuclear power station in Japan in 2011.
> **Anthropogenic causes:** E.g. **RedEcho campaign** caused **power outage in Mumbai.**
> **Accidental/Technical:** E.g. Bhopal Gas Tragedy.

Challenges in Protecting Critical Infrastructure in India

> India **lacks indigenization** in hardware and software cyber security tools like advanced firewall, cloud security etc.
> **Inhibition** in private and public sector to **share information** about vulnerability of their systems.
> Many organizations do **not have enough trained security professionals.** E.g. 70-75% of Indian tech companies are looking to hire more cyber security professionals.

Steps Taken for Critical Infrastructure protection in India

> **Legislative measures**
  ⊙ National Cyber Security Strategy 2020.
  ⊙ National Cyber Security Policy, 2013.
  ⊙ Information Technology Act, 2000.
> **Institutional Measures**
  ⊙ Indian Cyber Crime Coordination Centre (I4C)
  ⊙ Indian Computer Emergency Response Team (CERT-In)
  ⊙ National Cyber Coordination Centre (NCCC)
  ⊙ Defence Cyber Agency
  ⊙ National Critical Information Infrastructure Protection Centre (NCIIPC)

Way ahead

> Need to evolve a **comprehensive security policy** to address physical, legal, cyber and human dimensions of security.
> **Need for autonomous Indian organisations** to carry out independent analysis and trustworthy reporting of cyberattacks on CII.
> Use of new methodology like **cyber kill chain** that trace stages of a cyberattack.
> **Better understanding of vulnerabilities** is required, including interdependencies between infrastructures.
> **Comprehensive co-operation** and a functioning partnership between state and corporate sector.
> Need for establishing **international norms** for protecting CII in lines with Critical Infrastructure Resilience Strategy of Australia.

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2.5. GEOSPATIAL DATA AND NATIONAL SECURITY AT A GLANCE

Geospatial Data and National Security at a Glance

- **Geospatial data** is information that describes objects, events or other features with location on/near Earth's surface.
- **Captured** using photogrammetry, LIDAR, RADAR, Satellite based remote sensing, etc.
- **Combines 3 types of information:**
  - **Location information.**
  - **Attribute (object, event, etc.) information.**
  - **Temporal information**

🛡️ Significance of Geospatial Data in National Security of India

Enhancing precision and reliability of intelligence, surveillance, via GPS	Advancing situational awareness. E.g. UAVs for search and rescue operations	Supporting military operation in logistics management, developing tactical plans, etc.	Tackling new and emerging threats like cyber-attacks, hybrid warfare, etc.	Modernizing security operation e.g., Crime prediction and precision guided munitions	Securing Indian Ocean Region by improving national Maritime Domain Awareness capabilities	Build progressive defence & security partnership e.g. BECA agreement between India and USA

📍 Steps taken by India to develop its Geospatial Capabilities

- **Policy framework: National Geospatial Policy, 2022** to strengthen Geospatial sector, **National Map Policy** etc.
- Building a **constellation of Earth Observation Satellite (EOS).** E.g. EOS-07 launched in 2023.
- **Establishment of dedicated institutions** like Indian Institute of Remote Sensing.
- National Spatial Data Infrastructure like Bharatmaps platform and Bhuvan portal.
- **India's indigenous navigation system "NAVIC"** (Navigation with Indian Constellation).
- **Geospatial data gathering** through initiatives like **PM Gati Shakti and SVAMITVA.**

📑 Challenges in utilizing Geospatial Data in National Security of India

- **Lack of knowledge** and **expertise to extract information from data,** accessibility to fine-resolution data, software and hardware technology etc.
- **Research outputs are usually stand-alone** and lack unanimity.
- **Financial constraints** in technological adoption and advancement in geospatial analytics.
- **Ensuring secure storage of geospatial data,** given India's vulnerable digital ecosyem.
- **Coordination issues** due to lack of clarity on data sharing with lower levels of governance.
- **Privacy concern** due to lack of locational privacy and confidentiality in India.

🚶 Way ahead

- **Bringing cohesiveness to Geospatial sector** by enhancing collaboration between government, academia, and industry.
- **Strengthening security of critical digital infrastructure** via National Critical Information Infrastructure Protection Centre.
- **Institutionalize school projects** like '**Mapping the Neighbourhood**' to teach spatial concepts, map reading, GPS use, and satellite image interpretation.
- **Promoting education in specialised fields** like Geo-Informatics, big data analytics etc.
- **Enhancing coordination among agencies** like state police, defence, and intelligence bureau.
- **Creation of a dedicated department** for better utilization of geospatial data.

2.6. MONEY LAUNDERING AND SMUGGLING

2.6.1. MONEY LAUNDERING AT A GLANCE

MONEY LAUNDERING AT A GLANCE

About Money Laundering

> It is the **process of making illegally-gained proceeds** (Dirty Money) appears legal (Clean).

Money Laundering Cycle

- Collection of dirty money
- **PLACEMENT**
- Dirty Money integrates into the Financial System
- **LAYERING**
- Payment by "Y" of false invoice to company "X"
- Transfer on the bank account of company "X"
- Purchase of Luxury Assets, Financial Investments, Commercial/Industrial Investments
- **INTEGRATION**
- Loan to company "Y"

Consequences of Money Laundering

> **Loss of Tax Revenue.** E.g. Loss of $10.3 billion due to international corporate tax abuse and private tax evasion (State of Tax Justice 2020).
> **Distortion of markets** by allowing illegal businesses.
> **Facilitates crime and corruption.** E.g. Punjab National Bank scam.
> **Erode integrity of nation's financial institutions.** E.g. Yes Bank- DHFL money laundering case led to instability in the Indian financial sector.

Challenges in curbing Money Laundering

> **Weak enforcement mechanism.** E.g. Only 2.98% cases filed against existing and Ex-MPs/MLAs (ED data as on 31st March 2023)
> **Lack of definition. E.g. Word 'black money'** not defined under IT Act 1961, CGST Act, 2017.
> **Lack of necessary political will.** E.g. Saradha chit fund scam
> **Ineffectiveness of Know Your Customer** norms led to Crypto fraud.
> **Tax haven countries** like Cayman Islands, Bermuda, Netherlands etc. facilitate domestic tax evasion and money laundering.

Initiatives to prevent money laundering

India

> **Statutory framework:** PMLA, 2002, PMLA (Amendment) Act, 2012 and 2023 to bring individuals acting as formation agents of companies and others under its ambit.
> **Institutional framework:** ED and Financial Intelligence Unit – India (FIU-IND).
> **Empowered Regulators:** RBI, SEBI, etc.
> **Other institutions:** Economic Offences Wing, CBI, Income Tax Department, etc.

Global

> **Financial Action Task Force (FATF)**
> **UN Convention against Illicit Traffic in Narcotic Drugs and Psychotropic Substances (Vienna Convention)**
> **Global Programme against Money Laundering, Proceeds of Crime and financing of Terrorism.**

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Way Forward

› **Use of advanced technology:** AI, Blockchain technologies to increase efficiency of enforcement mechanism.
› **Regular Cross-Communication and sharing of information.**
› **International cooperation:** Countries should coordinate on UN Convention against Corruption, 2003; etc. to provide mutual legal assistance with respect to money laundering.
› **Due diligence:** Financial institutions should be **prohibited from keeping anonymous accounts**
› **Reporting suspicious transactions**

2.6.2. PREVENTION OF MONEY LAUNDERING ACT (PMLA), 2002

Why in the news?

Ministry of Finance notified **changes** in the **Prevention of Money Laundering (Maintenance of Records) Rules, 2005 notified under PMLA 2022.**

More about the news

- **Amendments:** Enlarge types of individuals under PMLA.
    - **Ownership rules:**
        - ✓ Beneficial owner if over 10% (previously 15%) of partnership capital/profits.
        - ✓ Control over partnership qualifies as beneficial owner.
    - **Principal officer of a reporting entity:**
        - ✓ Must be at management level (previously any officer).
        - ✓ Trusts must disclose trustees' status/position.
        - ✓ Keep client records for five years post-relationship/account closure.

About PMLA 2002

- Money laundering is **the processing of criminal proceeds to disguise their illegal origin (UNODC).**
    - Money laundering has been addressed in the **UN Vienna 1988 Convention.**
- PMLA was enacted in response to **India's global commitment to combat the menace of money laundering**, stemming from the trade of drugs and narcotics and organised crime that goes with it
- The Act, **empowers Directorate of Enforcement (ED) to conduct money laundering investigation.**

Issues in implementation of PMLA

- **Procedural issues**: Lack of clarity over process of selection of cases by ED.
- **Burden to prove innocence:** The accused must prima facie prove that he/she is not guilty and satisfy the Court that they will not commit any further offense in order to get bail.
- **Delay in Prosecution:** Prevalence of delays relating to concluding money laundering and terrorist financing prosecutions was recently highlighted by FATF.
- **Poor Inter-Agency Co-ordination**: Separate wings of the law enforcement agencies are dealing with digital crimes, money laundering, economic offences, and terrorist crimes.
- **Growth of technology:** The pace at which the technology is growing is not matched up with the enforcement capabilities.

Key Initiatives to strengthen Anti Money Laundering Regime
- **Broadening the scope of PMLA: Non-financial sectors** such as real estate agents, dealers in precious metals and stones, professional accountants, Virtual asset service providers (VASPs) were **brought under PMLA.**
- **Empowering Regulators:** RBI, SEBI, and IRDAI are empowered to handle matters relating to money laundering activities and establish AML standards
- **Complying with the recommendations of FATF.**

Way Forward

- **Comprehensive Risk Handling:** A properly defined, documented and consistent investigative process is need of the hour.
- **Use of advanced technology:** Using emerging technologies, such as AI, to conduct constant searches.
- **Regular Cross-Communication:** Banks and law enforcement can keep each other **up to date, verify any suspicions, identify possible networks.**

2.6.3. DRUG TRAFFICKING IN INDIA AT A GLANCE

DRUG TRAFFICKING IN INDIA AT A GLANCE

🧴 Drug trafficking characteristics in India

- India has become a **transit hub and destination for heroin and hashish** produced in Golden triangle and Golden Crescent.
- **Highest Possession of drugs for trafficking: Punjab** (maximum), followed by UP, TN. (NCRB 2022 report).
- India is **one of the world's single largest opiate markets** in terms of users (World Drugs report 2022).
- **Methamphetamine markets continue to expand** in East and South-East Asia and in South-West Asia. (World Drugs report 2024 by UNODC)

GOLDEN CRESCENT AND GOLDEN TRIANGLE
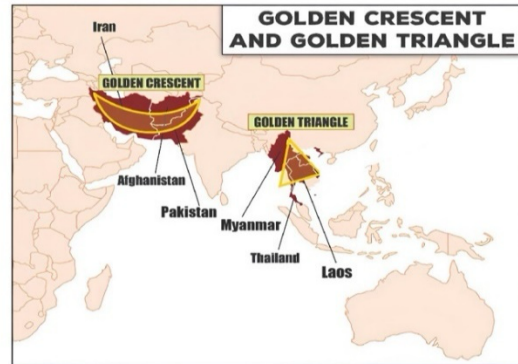
🎯 Issues associated with Drug Trafficking

- **Threat to National Security**
  - ⊙ **Facilitates other organized crimes** like human trafficking, money laundering etc.
  - ⊙ **Destabilises nation by Narco-Terrorism.**
  - ⊙ Money generated is **used for financing terrorist activities and LWE.**
- **Rise in social crimes: Encourages drug consumption** thereby creating law and order problem in society.
- **Corruption:** Drug cartels subvert, penetrate and further corrupt state institutions to control illegal drug trade. E.g. Punjab Drug Scandal, 2024.
- **Environmental impact:** Illicit drug markets can increase carbon footprint, deforestation, etc. E.g. Cannabis Cultivation in Uttarakhand.

📊 Measures taken by India

- **Operation Samudragupt** by Narcotic Control Bureau **to combat drug trafficking in Indian Ocean Region.**
- Narcotics Drugs and Psychotropic Substances Act, 1985.
- **Ensuring physical security of borders** like Comprehensive Integrated Border Management System.
- **Seizure Information Management System (SIMS)** and National Integrated Database on Arrested Narco-offenders **(NIDAAN)** portals **for an online database of drug offences and offenders.**
- **Narco-Coordination Centre (NCORD) portal** to provide common platform for Drug law enforcement agencies.
- **Signatory to international conventions** like UN Single Convention on Narcotics Drugs 1961, etc.

🚶 Way Forward

- **Effective coordination and information sharing** among enforcement agencies.
- **Develop accountability mechanism and practices** for shipping and railway companies, air cargo etc.
- **Control drug supply chain on internet** by regulating crypto-currency markets and monitoring electronic payment.
- **Enhancement of punishment** under NDPS and other drug laws.
- **Creating awareness among citizens** through programmes like **Nasha Mukt Bharat Abhiyaan.**

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2.6.4. HUMAN TRAFFICKING

Why in the news?

Nicaragua Bound Plane with Indian passengers held in France over Suspected Human Trafficking Returned to India.

About Human Trafficking

- **Human trafficking:** Recruitment, transport, harboring by coercion, abduction, fraud.
- **Forms:** Sex, entertainment, hospitality exploitation, domestic work, forced marriages.
- **2022 Global Report:** 50,000 victims detected globally by 141 countries in 2020.

Role of Transnational Organised Crime Groups in Human Trafficking

- **Global Networks:** Transnational crime groups facilitate human trafficking globally. Example: **Laos case**.
- **Logistical Expertise**: High expertise in trafficking operations.
- **Corruption and Bribery**: Corrupt officials ensure smooth trafficking.
- **Money Laundering**: Profits laundered through legitimate businesses.

Measures Taken to Combat Human Trafficking

- **At Global level:**
  - **UN Convention against Transnational Organised Crime (UNTOC)** supplemented by **Protocol against the Smuggling of Migrants by Land, Sea and Air**. (Ratified by India)
  - **SAARC Convention** on Preventing and Combating Trafficking in Women and Children for Prostitution
  - Commission on Crime Prevention and Criminal Justice (CCPCJ) launched the **Generation Justice (GenJust) initiative** to **engage youth on crime prevention and criminal justice.**
- **In India:**
  - **Article 23 of the Constitution** prohibits trafficking in human beings.
  - **Immoral Traffic Prevention Act, 1956** addresses Trafficking
  - Central Bureau of Investigation is the national Nodal Authority for transnational crimes.
  - Criminal Law Amendment Act, 2013, wherein human trafficking has specifically been defined.
  - NHRC directed all States to have **'Anti-Human Trafficking (AHT) nodal officer' in 2024.**
  - **Cri-MAC:** Facilitates dissemination of information about trafficking cases on real time basis.

Way Forward

- **Disincentivizing criminal activity** through targeting illicit profits.
- Enhance effectiveness of crime prevention efforts.
- Countering trafficking in persons in the context of rapid technological change.
- Treatment of children associated with terrorist groups.
- **Reducing reoffending** through rehabilitation and reintegration.
- **Preventing and countering violence** against children by organized criminal groups and terrorist groups.

2.7. TERRORISM

2.7.1. TERRORISM AT A GLANCE

TERRORISM AT A GLANCE

> **India** ranked **14th** on **Global Terrorism Index 2024** (Topped by Burkina Faso).

Factors that Cause Terrorism

> **Radical ideologies, Ethnic or separatist aspirations** for self-determination or autonomy (e.g. Khalistan movement).
> **Globalization** facilitates terrorism through increased mobility and communication. E.g. 2008 Mumbai attacks by Lashkar-e-Taiba.
> **State Sponsored terrorism:** E.g Jaish-e-Mohammed (JEM) in Pakistan.
> **Fueled by alleged International Injustice.** E.g. Rise of ISIS.
> **Restriction of civic freedoms like undermining rights to fair trial.**

Challenges to counter International Terrorism

> **Ambiguity around definition of 'terrorism'.** Neither UN nor International Criminal Court agrees on a universally accepted definition.
> **Lack of comprehensive international legal framework.** E.g. Extradition requests for high-profile terrorists faced delays.
> **Inadequate domestic capacity of nations.** E.g. Taliban took over Afghanistan in 2021.
> **Difficult to track cryptocurrencies due to their decentralized nature.**

Global Initiatives to Counter terrorism

> **United Nations Global Counter-Terrorism Strategy (GCTS), 2006**
> **UNSC Counter-Terrorism Committee (CTC)** to enhance ability to counter terrorist activities.
> **Global Counterterrorism Forum (GCTF): India is a member.**
> **Financial Action Task Force (FATF).**
> **SCO Regional Anti-Terrorist Structure (RATS).**
> **No Money for Terror conference:** Started by French government, India hosted **3rd edition**

Initiatives by India to Counter terrorism

> **Unlawful Activities (Prevention) Act, 1967**
> Establishment of **National Investigation Agency (NIA)**
> **National Intelligence Grid (NATGRID)**
> Creation of two **new divisions within MHA i.e. Counterterrorism and Counter-Radicalisation Division,** and **Cyber and Security division**
> **Bilateral/Regional collaborations** for counter terrorism. E.g. India-U.S. Counter-Terrorism Cooperation

Way Forward

> **Enhance capacity of intelligence agencies** and **identify gaps** to prevent and combat terrorism.
> **Focus on regional and international organizations. E.g. UNSC's Delhi Declaration** on countering use of new and emerging technologies for terrorist purposes.
> **Protect human rights and fundamental freedoms.**
  ⊙ SC addressed constitutionality of TADA 1987, modified certain provisions to ensure reasonable limits and introduced safeguards to prevent abuse. **(Kartar Singh vs. State of Punjab (1994))**

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2.7.2. INDIA'S ANTI-TERRORISM APPROACH

Why in the news?

The Union Home Minister in Anti-Terror Conference (NIA) highlighted the need to not only combat terrorism but also dismantle its entire ecosystem.

India's approach to tackling terrorism

- **Development in terrorism-affected areas**: Civic Action Programme and Udaan scheme (capacity building of youth in J&K) to **win minds and hearts of people**.
- **Dedicated Law enforcement agencies:** NIA, Research and Analysis Wing (RAW), Intelligence Bureau (IB)
- **Countering the Financing of Terrorism:** India is a member of the FATF, Asia/Pacific Group on Money Laundering, and the Eurasian Group.
- **Countering Violent Extremism (CVE):** Ministry of Home Affairs is the lead agency for CVE.
- **International and Regional Cooperation:** In 2024, India has **contributed $500,000 to U.N. Counter-Terrorism Trust Fund** to support multilateral efforts in global fight against terrorism.

6 Pillars of India's strategy against the financing of terrorism

| Strengthening the **Legislative and Technological Framework** | Creation of a **Comprehensive Monitoring Framework** | Actionable **intelligence sharing mechanism** and **strengthening** of the **investigation** and **police operations** | Provision for **confiscation of property** | **Prevent misuse of legal entities** and **new technologies and** | Establishing **international cooperation** and **coordination.** |

Need for Changing the Approach Toward Terrorism

- **Lack of hierarchical structure:** Terrorists are relying on loose affiliations lone wolf attacks.
- **Changing nature of weapons:** terrorist groups now use chemical, biological, radiological, or nuclear (CBRN) materials.
- **Use of technology:** Extensive use of information technologies and coordinated cyber-attacks increase threat risks.
- **New methods of Terrorism Financing:** Dedicated crowdfunding platforms or websites
- **Nexus with other organised crimes:** Interlinkage between Counterfeit goods, flora and fauna crimes, drug trafficking (FICCI Report).
- **Limited cooperation and data interchange** among anti-terrorist agencies at central and state levels.

Way forward

- **Model anti-terrorism structure** should be established under the NIA for all states.
- **All Anti-Terrorism activities should make multidimensional and AI-based use of databases** E.g. Inter-Operable Criminal Justice System (ICJS).
- **Collaboration from the global level to the grassroots,** involving various states within country.
- **Focus on linkages of terrorism with other organised crimes**: E.g., in **Operation Dhvast** case, a common platform to counter-terror under **Neighbourhood First policy**. (Parliamentary Standing Committee on External Affairs)
- **Strengthening safety of digital ecosystem:** Australia's 'essential 8' features for cybersecurity could be emulated.

2.7.3. 15TH ANNIVERSARY OF 26/11 MUMBAI ATTACKS

Why in the News?

Israel has listed Lashkar-e-Taiba (LeT) as a terror organisation to symbolise the marking of 15th year of commemoration of the 26/11 Mumbai attacks.

Lapses that led to 26/11

- **Police related issues:**
  - **Lack of simulated training** in facing terrorist attacks and rescuing of hostages.
  - **India's maritime security vulnerabilities**, like absence of deep-sea surveillance
- **Intelligence Failure & security lapses**
  - **Lack of intelligence from the central intelligence agencies** related to sea-borne terrorists.
  - **Communication issues:** Advanced communications like VoIP were used, which intelligence agencies couldn't intercept.

Post attack issues

- **Access to the CCTV cameras** private premises were not available to police.
- **Majority of the flying squads** not available for emergency duty.
- No NSG hub near Mumbai at that time.
- **Availability of arms and ammunition** for Police.

Improvements made after 26/11

- **Maritime security enhancements**
  - **3-layered protection of Indian coastal areas** has been strengthened and responsibilities clearly delineated. (Marine police upto 12 NM, Coast Guard from 12 to 200 NM, Indian Navy beyond 200 NM)
  - **Maritime security:** Indian Navy was given overall in charge; Indian Coast Guard monitors territorial waters
  - **Sagar Prahari Bal (SPB)** as a separate division within the navy was formed.
  - **Fast Interceptor Crafts (FIC)** have been inducted for patrol and rescue operations in India's EEZ.
  - **Sea Vigil (2019)**, a coastal defence exercise by the Indian Navy and Indian Coast Guard annually.
- **Better coordination and response**
  - **Creation of National Investigation Agency (NIA)** to investigate and prosecute terrorism-related cases.
  - **National Security Guard (NSG)** hubs have been set up to ensure a rapid response to terror attacks.
  - **Intelligence Bureau's Multi Agency Centre (MAC)** as a common counter terrorism grid has been strengthened
- **Cooperation from West**
  - Intelligence Sharing with Western agencies like FBI (USA) and MI6 (UK) has improved since 2008.
  - **Pakistan in grey list (FATF)** which forced it to take action against the terror finance architecture of LeT etc.
- **Modernisation of police**
  - **Construction of secure police stations**, providing **modern weaponry, communication equipment and forensic set-up** etc.

> **Role of NIA in Anti-Terrorism Efforts**
>
> - **Cooperation with States** and other investigating agencies in investigation of terrorist cases.
> - **Ensuring effective and speedy trial**: In 2022, **overall conviction rate was about 94%.**
> - **Data collection:** NIA has been given the task of creating a national database in 7 areas - narcotics, hawala transactions, etc. **In-depth professional investigation** where it is difficult to gather evidence.
> - **Alert and responsive measures:** NIA registered cases against overground workers in Jammu and Kashmir and destroyed their sleeper cells.

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Steps to be taken further

- **Global efforts:** Press for Universal definition of Terrorism and establishment of a permanent secretariat to tackle terrorism.
- **No Money for Terror Focus** by bringing together banks and government at global level, using the FATF, UNCAC, UNODC route etc.
- **Actions for deradicalization and safe usage of internet, social media** through flagging content should be taken.
- **Indian Ocean Region Security** should be done and an arc of with Sri Lanka, Maldives and India can be explored.

2.7.4. UNLAWFUL ACTIVITIES (PREVENTION) ACT (UAPA) 1967

Why in the news?

Ministry of Home Affairs declared 'Jammu and Kashmir Democratic Freedom Party' as an 'Unlawful Association' under UAPA 1967.

About UAPA

- **Aim:** Prevention of certain **unlawful activities** of **individuals and associations,** for **dealing with terrorist activities**
- **2019 Amendment**
  - **Designation of Terrorists:** In addition to organizations, individuals can also be designated as terrorists by the Government.
    - ✓ On the declaration of being unlawful, the notification should be **referred to Tribunal** within **30 days.**
  - **Definition of Terrorist Act:** Added **International Convention for Suppression of Acts of Nuclear Terrorism (2005)** to define terrorist acts.
    - ✓ **Terrorist act** includes any act **intended to threaten** the **unity, integrity, security or sovereignty of India** or **strike terror people in India or in any foreign country** among others.
  - **Nature of Offence:** Offences are **cognizable** (arrest could be made without a warrant).
  - **Penalty:**
    - ✓ **Death or imprisonment for life,** and shall also be liable to **a fine.**
    - ✓ **Forfeiture of proceeds of terrorism** by the Investigating officer with the prior approval of the **designated authority.**
  - **Tribunal for Appeal.**

Issues with UAPA

- **Unclear definition of terrorist:** No objective criterion has been laid for categorization of an individual as a terrorist.
- **Potential for Violation of Fundamental Rights:** Act does not provide any opportunity to the individual termed as a terrorist to justify his case before the arrest.
- **Contrary to the principle of 'innocent until proven guilty:** Act violates mandate of Universal Declaration of Human Rights and International Covenant on Civil and Political Rights.
- **Strict Bail Provisions:** Section 43D (5) of UAPA imposes strict conditions for bail, generally prohibiting it if the accusation seems prima facie true.

Way Ahead

- **Safeguards against misuse:** The different agencies of state should ensure that due process of law is applied while dealing with various cases under this legislation.
- **Protecting Fundamental Rights: Ex,** in K. A. Najeeb vs. Union of India (2021), SC held that UAPA's bail restrictions should not override constitutional rights (Right to Life and Personal Liberty under Article 21).
- **Compensations for innocent individuals:** Compensation should be provided to those individuals who were detained under the UAPA for a significant amount of time, and proven innocent.
- **Other:** Sensitization of Police, **Protection of political dissent, etc.**

2.7.5. TRANSNATIONAL ORGANISED CRIMES AT A GLANCE

Transnational Organized Crimes (TNOCs) at a glance

> **Organized crimes** are illegal activities, **conducted by groups or networks acting in concert** for a financial or material benefit.
> **TNOCs operate in two or more countries. e.g.,** Drug trafficking, money laundering, etc.

What are the different forms of TNOCs?

> **Drug trafficking: Nearly 300 million drug users globally** now, alongside an **increase in trafficking (UNODC).**
> **Human trafficking: 50 million people globally** may be subject to various forms of exploitation **(UNODC).**
> **Smuggling of migrants: More than 8,000 people dying** along migration routes globally and scale of migration estimated to be **worth 5.5 to 7 bn USD.**

Challenges in curbing TNOCs

> **Demographic shifts: Ageing population** (Like Japan, EU) raises the possibility of increased trafficking in human beings **for labour exploitation.**
> **Geopolitical unrest** like **ethnic wars in Rwanda and Ukraine war**
> **Economic disparity** brings individuals into greater proximity to organized crime. For Eg, Drug cartels in Mexico
> **Lack of synergy between law enforcement and legislative bodies**
> **Development of the Internet and related technologies. E.g. Dark web markets**

Steps taken to address TNOCs

> **At Global level:**
  ⊙ **UN Convention against Transnational Organised Crime (UNTOC)**
  ⊙ **Protocol against Smuggling of Migrants by Land, Sea and Air.** (Ratified by India)
  ⊙ **INTERPOL's Organized Crime Unit and Project Millennium**
  ⊙ **UN Commission on Crime Prevention and Criminal Justice (CCPCJ)**
  ⊙ **Financial Action Task Force (FATF)**
> **In India:**
  ⊙ **Trafficking in human beings** prohibited under **Article 23** of the Constitution, **Immoral Trafficking Prevention Act, 1956** and **Criminal Law Amendment Act, 2013**
  ⊙ India joined **combined maritime forces** in 2022 for **countering illicit non state actors.**

Way Forward

> **Coordination at international** level in identifying, investigating and prosecuting criminals.
> **Better intelligence methods** through the **training of more specialized law enforcement units.**
> **Introducing new initiatives to hold countries accountable** for permitting organized crime.
> **Building the capacity of embassies** in destination countries to identify victims and report crimes.

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2.7.6. UNITED NATIONS CONVENTION AGAINST TRANSNATIONAL ORGANISED CRIMES (UNTOC)

Why in the News?

20th Anniversary of United Nations Convention against Transnational Organised Crimes (UNTOC) celebrated in Italy.

About UNTOC

- UNTOC was adopted by **UN General Assembly in 2000** and entered into force in **2003.**
  - It is the first **comprehensive and global legally binding instrument** to fight transnational organized crime.
- Convention is further supplemented by **three Protocols:**
  - Protocol to **Prevent, Suppress and Punish Trafficking in Persons, Especially Women and Children (India has ratified it);**
  - Protocol against the **Smuggling of Migrants by Land, Sea and Air**;
  - Protocol against **the Illicit Manufacturing of and Trafficking in Firearms, their Parts**, etc.
- **Members**: Signatories-147 and Parties-191 (India ratified it in 2011).
  - Countries must become parties to the Convention itself before they can become parties to any of the Protocols.
- **India's initiatives**
  - **CBI** is the national Nodal Authority to receive and respond for transnational crimes.
  - **Criminal Law Amendment Act, 2013** has been enacted wherein human trafficking has specifically been defined.

Issues Associates with UNTOC

- **Vague definition:** The convention describes organized crime without precisely defining it leading to **exclusion of more pressing issues like terrorism.**
- **Lack of Enforcement Mechanism:** The convention lacks strong enforcement mechanisms, relying largely on voluntary cooperation between states.
- **Circumvention by powerful nations:** Some countries, like the US, bypass the convention by creating extraterritorial jurisdictions.
- **Emerging Issues:** Organized crime groups often evolve faster than international legal frameworks can adapt particularly due to AI, Deep web, etc.

Way Ahead to Enhance the Effectiveness of UNTOC

- **Define Organised Crime: It should be** precise, universally accepted and must include terrorism. Regularly update the convention to include emerging forms of crime, such as cybercrime.
- **Enhance international cooperation**: Create mechanisms for **sharing best practices and resources** among member states. Encourage countries to align their **extraterritorial operations with UNTOC principles.**
- **Strengthen enforcement:** Establish stronger compliance mechanisms within the convention. Consider creating an international body to oversee implementation and resolve disputes.

2.8. EMERGING DIMENSIONS OF WARFARE

2.8.1. HYBRID WARFARE AT A GLANCE

HYBRID WARFARE AT A GLANCE

About Hybrid Warfare

> **Hybrid warfare entails an** interplay or fusion of conventional as well as unconventional instruments **of power and tools of subversion.**
> These instruments/tools are **blended in a synchronised manner to exploit vulnerabilities.**

Key Domains of Hybrid Warfare

> **Political warfare:** E.g. 2016 US election and UK Brexit vote are suspected to have been influenced by Russia.
> **Technological warfare:** E.g. Targeting software systems of a nuclear power plant via cyberattacks.
> **Military Warfare:** E.g. Israel used cluster bombs in Israel–Hezbollah War, 2006.
> **Economic Warfare:** To weaken economy by disrupting supply chains, introducing counterfeit currency, etc.
> **Social warfare:** Exploiting already prevalent social issues and **vulnerabilities via propaganda etc.**

Reasons for growth of Hybrid warfare

> Hybrid Warfare domains are usually overlooked in **traditional threat assessments.**
> Involves **state or non-state actors or both indulging** in different roles in a synchronized manner.
> **Scale and target of attack** can be precisely controlled by staying below certain detection and response threshold.
> Hybrid Warfare campaign **may not be discovered** until it is already well underway.
> **Absence of international norms and laws** regulating Grey Zone conflicts, especially cyber-warfare.

Associated challenges for India

> **Encourages new forms of terrorism** like **Lone wolf attacks.**
> Insecure framework of **mobile apps; Cyber espionage** issue with China and Pakistan.
> **Interference in electoral processes** through media and social media campaign.
> **Using disinformation** and **fake news** to create a **parallel reality** and fuel **social fragmentation.**
> **Financial influences** through investments like in unfavourable energy-supply deals.

Ways to combat Hybrid Warfare

> **Systematic and synchronized real time response: Training in use of technological tools** like smart robots, Unmanned Aerial Vehicles etc.
> **Institutional measures: Conduct self-assessment** of vulnerabilities. E.g. regularly upgrading critical Fintech systems in country.
> ⊙ **Enhance traditional threat assessment activity** to include non-conventional tools and capabilities.
> Developing clear **definitions and protocols.**
> ⊙ Institutionalizing **intervention stages and methods.**
> ⊙ **Mainstreaming and integrating the issue** of hybrid warfare in prevalent security dialogues.

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2.8.2. GREY-ZONE WARFARE

Why in the News?

India's **Chief of Defence Staff (CDS)** highlighted issue of Grey-zone warfare during the discussion over informal wars at the 9th edition of **Raisina Dialogue**.

About Grey-zone Warfare (GZW)

- GZW involves use of **unconventional tactics** and **strategies** that fall below threshold of **traditional warfare**.
  - It aims to harm an adversary **without** them **feeling threatened** or realising they are under attack. E.g. **Salami slicing** practice of China.
  - Activities are generally **unseen** and insidious. There are no rules and the front line is everywhere.
- The dividend of **GZW action may be available only after a long time**.
- It tends to escalate in **multiple dimensions** and leads to **unintended over-escalation.**
- Key activities include cyber attack operations, support to non-state actors, economic coercion, etc.

> **Why Grey-zone Warfare is preferred over other methods?**
>
> The cost of conventional conflict in the nuclear era has grown too steep, and the risk of escalation too profound. Nations which do not have access to massive resources or power, prefer GZW.

Key Initiatives which helped India to counter Grey-zone warfare

- **CDS**: Improved coordination, tri-service effectiveness, combat capabilities integration.
- **Modernization**: Infusion of technology in war-fighting systems, leveraging iDEX initiative.
- **Self-reliance in Defence Manufacturing**: Initiatives like Defence Procurement Procedure (DAP) 2020.
- **Cooperation with like-minded countries**: Agreements like GSOMIA with the US.
- **Other**: Establishment of CERT-In for cyber security, FCRA regulation for foreign NGOs funding, etc.

Way Forward: Measures which will help India in Tackling Grey Zone Warfare

- **Formation of Theatre Commands** would contribute to the optimisation of resources and ensure unity
- **Enhancing informational warfare capability** and Cyber and Space Commands must be undertaken
- **Develop advance systems** to detect early signs of Grey Zone attempts and respond promptly.
- **Other**: Counter disinformation, prevent funding to insurgent groups etc.

2.8.3. URBAN WARFARE

Why in the news?

Activists claim that Israel's attacks on various infrastructures in Gaza including hospitals, and schools are an act of urban warfare.

About Urban Warfare:

- Urban warfare refers to **military operations conducted in urban environments** like cities and towns.
- It can take many forms, from **guerrilla attacks to militia patrols to gang violence.**
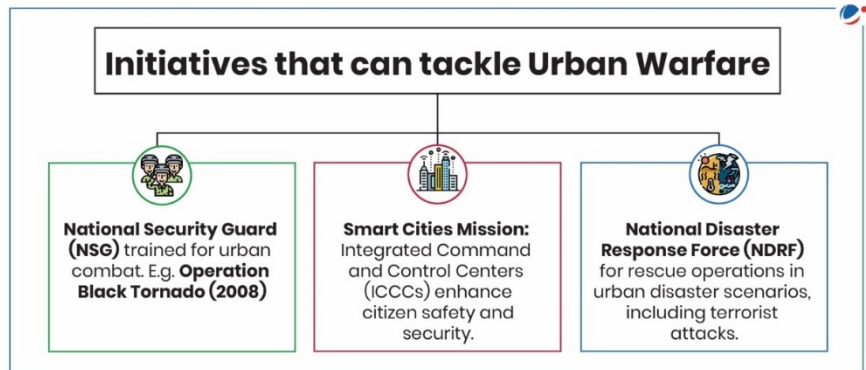
Reasons behind Urban Warfare

- **Strategic importance**: Cities are often **political, economic, and infrastructure hubs.**
- **Ideological Motivations:** Beyond physical infrastructure cities are also representatives of cultural identities.
  - E.g. Stari Most bridge in Mostar, Bosnia-Herzegovina reflects Bosnian community.
- **Asymmetric warfare**: Urban combat can be **conducted with ordinary soldiers needing to operate tactically**.

Implications for Security in India:

- **Urbicide:** Deliberate destruction of urban areas, **erasing physical structures and cultural identities.**
  - The term was used in 1990**s** to describe the **extensive destruction of Balkan towns** during the **Yugoslavic wars**
- **Civilian Vulnerability:** E.g. **Mumbai 26/11 terror attack** saw civilians targeted in hotels, railway station and hospitals.
- **High Costs and Risks:** Loss of essential services like water, schools and hospitals cause **perpetual devastation and trauma.**
- **Multi-generational Impact:** Difficult for communities to rebuild and sustain life. **E.g. Nuclear attack on Hiroshima and Nagasaki.**
- **Lack of Comprehensive Doctrine:** India lacks specific guidance for city attacks.
- **Cyber Threats**: Concentration of networked infrastructure in urban areas makes them vulnerable to cyber-attacks.

Way Forward

- **Integrated National Defense Policy**: Strengthen both military and non-military capacities to address urban threats.
- **Defence Modernisation:** Precision weapons can reduce the collateral damage to civilian infrastructure and minimize non-combatant casualties
- **Public Security and Preparedness:** Engage in public awareness campaigns and **preparedness drills** for urban threats.
- **Anticipatory Strategy for Urban Warfare**: Intelligence cooperation, diplomacy and operations. Implement specialized training programs for military personnel focusing on urban warfare.

Initiatives that can tackle Urban Warfare

National Security Guard (NSG) trained for urban combat. E.g. **Operation Black Tornado (2008)**

Smart Cities Mission: Integrated Command and Control Centers (ICCCs) enhance citizen safety and security.

National Disaster Response Force (NDRF) for rescue operations in urban disaster scenarios, including terrorist attacks.

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2.9. SPACE WEAPONIZATION AT A GLANCE

Space Weaponisation at a Glance

🚀 Space Weaponisation

> It includes **placing weapons in outer space** as well as creating weapons that will destroy targets in space.
> It **is different from the militarization of space** that assists armies on the conventional battlefield.

🔫 Reasons behind Space Weaponisation

> **Lack of faith in the present missile defence system** to stall an incoming ICBM with a nuclear war-head.
> **To preserve own satellites in space**
> Give **supremacy to a country in the conduct of war** over the land, sea and air. **E.g., Space Force of China**
> **Dual-Use Technologies:** Space technologies **like GPS trackers** have both civilian and military applications
> **Insufficient existing Treaties like Outer Space Treaty (OST)**

🔫 Implications of space weaponisation

> **Fear of War:** E.g., Space race between USA and USSR during cold war.
> **Against commercial and scientific interests: Like** those involved in scientific explorations (like **Hubble space telescope).**
> **Space Debris:** As of now, 40500 space debris objects (>10 cm in size), as per European Space Agency.
> Affecting Earth based **critical infrastructure like potential threat to IRNSS Satellites.**

🚫 Steps taken to prevent Weaponisation of Space

> **Outer Space Treaty:** Exploration for peaceful purposes only.
> **Prevention of an Outer Space Arms Race (PAROS)** advocates a ban on space weaponisation.
> **Partial Test Ban Treaty (1963)**
> **Others initiatives: Artemis Accords-India is its member.**
> **Long Term Sustainability (LTS) of Outerspace Activities Guidelines of UNOOSA: Regulatory,** safety, scientific, international cooperation aspects of space activities.

🚶 Way Forward

> **Space as 'Global Commons':** Outer Space Treaty should recognize space as a 'global commons,' aligning with Brundtland Commission's view.
> **Accessibility To All:** Promote legitimate access for all states to outer space and support the transfer of technology **(e.g., Artemis Accords).**
> **International cooperation:** For **a legally-binding treaty to prohibit** space Weaponisation.
> **Investment in Space-domain awareness:** Such as **Combined Space Operations Initiative** between the five-eyes (Australia, Canada, New Zealand, UK, US) plus Germany and France that **facilitate information sharing on space activities.**
> **Mitigating space debris:** Enhance Space Situational Awareness. **E.g., ISRO's Indian Space Situational Assessment Report.**

2.9.1. SPACE WARFARE

Why in the news?

China reportedly established the world's first 'near-space command,' equipped with hypersonic weapons.

More about the news

- **Near Space** refers to the area in Earth's atmosphere, **20 to 100 km from the Earth's surface.** The command highlights the emergence of space as the 4th dimension of warfare.

About Space warfare

- **Weaponization of space**: **Deployment of weapons in space,** a theatre of conflict, **aimed at destroying targets either in orbit or on Earth's surface**.
- **Militarisation of outer space**: Use of space in support of ground, sea and air-based military operations.
- **Advent of Space warfare began in 1962** when the US exploded a ground-based nuclear weapon in space, which eventually led to the **Outer Space Treaty of 1967.**

Space weapons can be divided into

Earth-to-space kinetic weapons	• Includes direct-ascent and briefly orbital **Anti-satellite (ASAT) weapons**
Earth-to-space non-kinetic weapons	• Includes **jammers, lasers, cyber-attack methods, electronic attacks like jamming and spoofing, high-powered microwave (HPM) and electromagnetic pulse (EMP) weapons etc.**
Space-to-space kinetic weapons	• Includes **debris-creating, co-orbital ASAT weapons** that may directly crash into a target satellite
Space-to-space non-kinetic weapons	• Includes **co-orbital jammers, HPMs, lasers, etc.**
Space-to-Earth kinetic weapons	• Some weapon is de-orbited from a carrier spacecraft to attack terrestrial targets. • E.g., **Fractional orbital bombardment system (FOBS)**

2.10. SPY (RECONNAISSANCE) SATELLITE

Why in the News?

South Korea puts second military spy (reconnaissance) satellite successfully into orbit

What are Spy or Reconnaissance satellites?

- Provides **intelligence information** on the military activities of foreign countries.
- Can be either a **communications satellite** or an **Earth observation** satellite.
- Can pick up and record radio and radar transmissions while passing over a country.
- **Major Types**:
  - **Optical-imaging satellites**: Detects missile launches and see enemy weapons on the ground.
  - **Radar-imaging satellites**: Observes the Earth using radar technologies even during cloud cover.
  - **Signals-intelligence or ferret satellites**: Capture the radio and microwave transmissions.

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- Countries like US (Keyhole series (KH)), China (Yaogan series), Russia (Persona series) etc. have launched many reconnaissance satellites.
  - **Radar Imaging Satellite – 2 (RISAT-2)** is generally considered to be India's reconnaissance satellite

Concerns

- Militarization of space.
- Promotes mistrust among countries (E.g. North and South Korea).
- Can be used as **dual used technology** (as orbital weapon by placing warheads on a low orbit satellite to be launched at a ground target), etc.
- China's reconnaissance satellite can collect crucial military information about India, etc.

3. SECURITY CHALLENGES AND THEIR MANAGEMENT IN BORDER AREAS

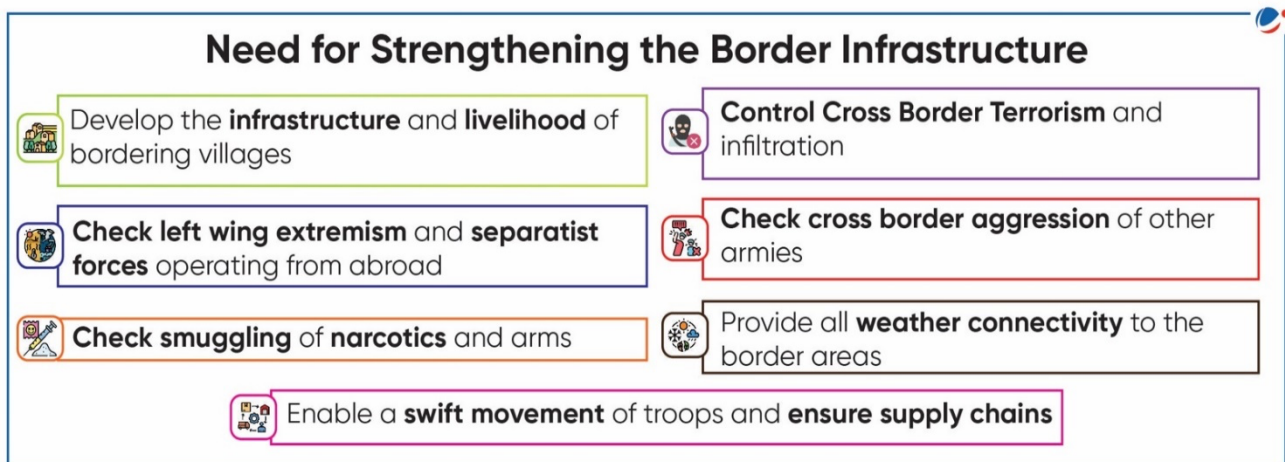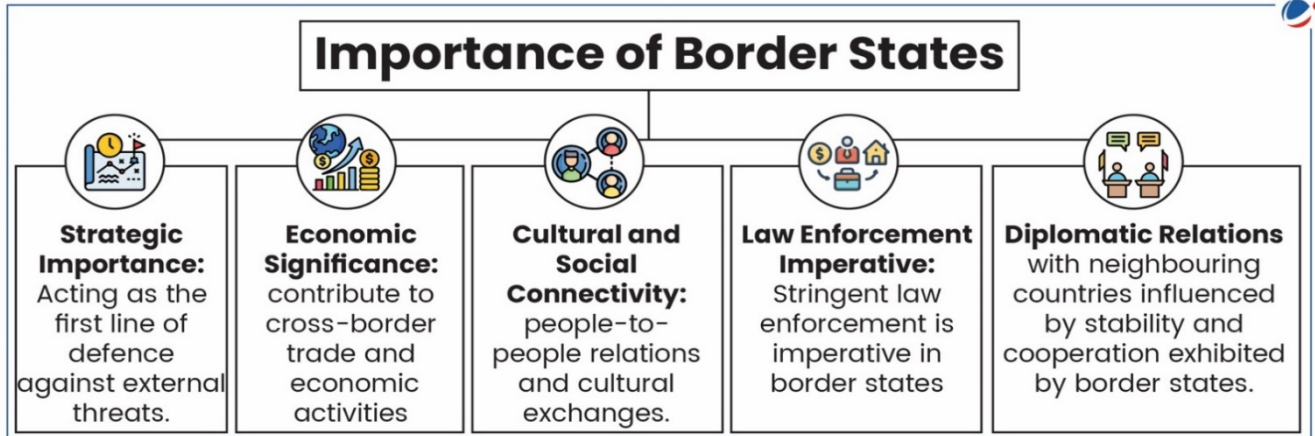## 3.1. SECURITY ISSUES IN BORDER AREAS AT A GLANCE

BORDER SECURITY AT A GLANCE

🏳️ Border	🎯 Challenges along Border	👉 Initiatives taken
India-China	➤ **Border disputes** at Galwan Valley, Aksai Chin, Doklam etc. ➤ **Large scale smuggling** of Chinese goods (E.g. Gold worth Rs 82 crore smuggled in eastern Ladakh in July 2024). ➤ **Water- sharing issues** (e.g. Brahmaputra River).	➤ **Creating infrastructure** like Dhola-Sadiya Bridge. ➤ **Development of North East Region.** E.g. Border Area Development Programme. ➤ **Army infrastructure projects** within 100 km of LAC exempted from forest clearance. ➤ **Vibrant village programme.** ➤ **Working mechanism for consultation and coordination** on India-China Border.
India-Pakistan	➤ **Border dispute** at Sir Creek and Kashmir. ➤ **Water sharing issue** at Indus River. ➤ **Cross-border terrorism.** E.g. Uri and Pulwama attack.	➤ **Implementation of Comprehensive Integrated Border Management System (CIBMS).** ➤ **Deploying National Security Guard commandos in J&K.**
India-Nepal	➤ **Border dispute** at Kalapani, Limpiyadhura and Lipulekh. ➤ **Fear of spread of Maoist insurgency** due to links of Nepal's Maoists in India. ➤ **Easy escape & illegal activities like** drugs and arms smuggling, etc. ➤ **Chinese investment in core sector of Nepal** like infrastructure, hydro energy, etc.	➤ **New intelligence section in SSB.** ➤ **Border District Coordination Committee.** ➤ **Construction** of 1377 km of border roads. ➤ **Development aid to Nepal.** (In FY 2024-25, India allocated Rs. 700 crore in aid to Nepal) ➤ **Security infrastructure development** like Fatehpur Border Outpost.
India-Bhutan	➤ **Insurgency.** E.g. United Liberation Front of Asom camps in Bhutan. ➤ **Smuggling of goods** like Bhutanese cannabis. ➤ **Open Cross-Border Movement.**	➤ **Operation All Clear** by Royal Bhutan Army to remove insurgents camps. ➤ **Establishing new border posts in Sikkim.** ➤ **General approval under Forest (Conservation) Act, 1980 for diversion of forest land** for infrastructure projects.
India-Myanmar	➤ **Drug trafficking** due to proximity to golden triangle. ➤ **No physical barrier along border** increases insurgent's incidents. (e.g. 563 insurgents have been arrested during 2015- 2018)	➤ In 2017, Cabinet **proposed to set up 13 new Integrated Check Posts** to encourage India's engagement with SAARC along with Thailand and Myanmar. ➤ India to **construct a fence** along 1643-kilometer-long Indo-Myanmar border.
India-Bangladesh	➤ **Water disputes with regard to Teesta river, Barak river.** ➤ **Illegal migration into India** ➤ **Smuggling of goods** like jamdani sarees.	➤ **India-Bangladesh Land Boundary Agreement, 2015.** ➤ Establishment of **Border Protection Grid (BPG).** ➤ **Joint River Commission** for river water dispute. ➤ **CIBMS.**

3.1.1. BORDER INFRASTRUCTURE

Why in the News?

Recently, Defence Minister inaugurated 90 projects of Border Road Organisation strengthening the border infrastructure of country.

Importance of Border States

Strategic Importance: Acting as the first line of defence against external threats.

Economic Significance: contribute to cross-border trade and economic activities

Cultural and Social Connectivity: people-to-people relations and cultural exchanges.

Law Enforcement Imperative: Stringent law enforcement is imperative in border states

Diplomatic Relations with neighbouring countries influenced by stability and cooperation exhibited by border states.

Need for Strengthening the Border Infrastructure

- Develop the **infrastructure** and **livelihood** of bordering villages
- **Control Cross Border Terrorism** and infiltration
- **Check left wing extremism** and **separatist forces** operating from abroad
- **Check cross border aggression** of other armies
- **Check smuggling** of **narcotics** and arms
- Provide all **weather connectivity** to the border areas
- Enable a **swift movement** of troops and **ensure supply chains**

Challenges in creating border infrastructure

- **Challenging Terrain:** Ranges from Marshy lands, salt pans, deserts, valleys, rivers, forests etc.
- **Political instability in neighboring countries**, like Pakistan can trigger issues like mass migrations, among others.
- **Lack of Coordination between Ministries like Home Affairs and Defence,** led to infrastructure delays in border areas.
- **Potential hotspots for radicalization:** Border areas suffering from economic underdevelopment frequently lack essential infrastructure.
  - **E.g.** Northeastern states are marred with ethnic conflicts and regional separatist forces making it difficult for border infrastructure development.
- **Porous borders:** Enable criminal operations like smuggling; human, drugs, arms trafficking; and infiltration in border regions. E.g. India- Nepal.
- **Environmental concerns**: Building of large infrastructure projects in ecologically sensitive areas may lead to severe damage to biodiversity of region.
  - Currently, **all highway projects within 100 km of India's Line of Control** are exempt from obtaining environmental clearances.
- **Under-utilisation of funds:** Parliamentary committee for home ministry has expressed dismay over 'under-utilisation of funds' for border infrastructure and border area development programmes.

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Government Initiatives to Strengthen Border infrastructure

- **Border Infrastructure and Management (BIM):** To provide better roads, electricity, and communication infrastructure along border areas.
- **Implementation of recommendations of Shekatkar Committee** relating to border Infrastructure like Outsourcing road construction work, Introduction of modern construction plants, Land acquisition and all statutory clearances etc.
- **BOLD-QIT (Border Electronically Dominated QRT Interception Technique)** on Indo-Bangladesh and Pakistan border patches.
- **Technological border surveillance** through **Comprehensive Integrated Border Management System.**
- **All-weather roads and tunnels** like **Atal tunnel** (connecting Manali to Lahaul-Spiti) and tunnel at **Shinku-La (for an all-weather road to Ladakh).**
- **Vibrant villages programme** and cross-border connectivity initiatives like **Myanmar Trilateral highway.**
- **Forest (Conservation) Amendment Act, 2023** exempts **land within 100 km of country's borders.** It will facilitate construction **of strategic linear projects for national importance or security.**

Way Forward

- **Integrate local communities** in border management, and make them as eyes and ears for forces, promoting better surveillance across border.
- **Reducing distance between inter Border Outposts** across open borders, to reduce cases of trafficking, smuggling and fake currencies.
- **Utilise Technology**, like LIDAR, Laser Fencing, flood lightings, CCTVs, Drone Surveillance etc. in feasible areas of borders and **create Border Protection Grid** in every border State.
- **Continuous upgradation** of present inventory of equipment and accessories in conjunction with new project so that they are utilized optimally.
- **Private sector participation** should be encouraged, and their capacities can be utilised in technological up gradation aspects and in context of electronic and surveillance equipment and maintenance.
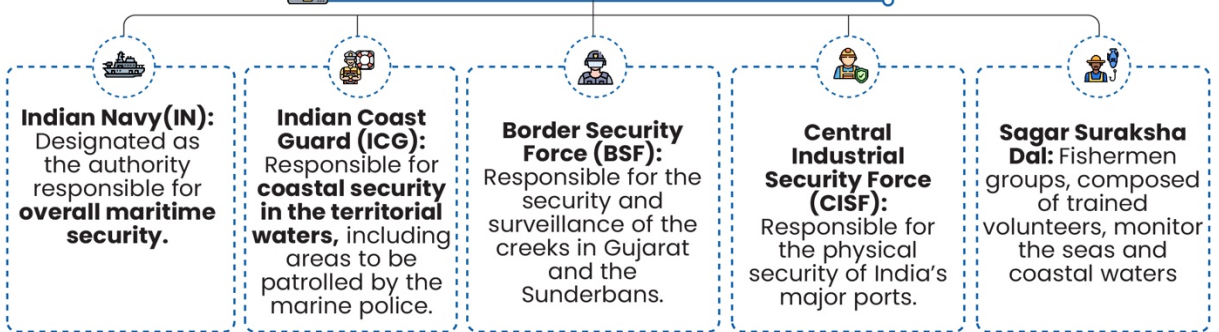
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3.2. MARITIME SECURITY

3.2.1. MARITIME SECURITY AT A GLANCE

Maritime Security at a Glance

> **Maritime Security** involves **protecting the nation's sovereignty from threats arising from the oceans and seas.**

India's Security Architecture Post '26/11'

| Indian Navy(IN): Designated as the authority responsible for **overall maritime security.** | Indian Coast Guard (ICG): Responsible for **coastal security in the territorial waters,** including areas to be patrolled by the marine police. | Border Security Force (BSF): Responsible for the security and surveillance of the creeks in Gujarat and the Sunderbans. | Central Industrial Security Force (CISF): Responsible for the physical security of India's major ports. | Sagar Suraksha Dal: Fishermen groups, composed of trained volunteers, monitor the seas and coastal waters |

🔒 Significance of Maritime Security for India

> **Vulnerabilities of coastline:** Maritime terrorism **like 26/11 Mumbai attack,** Piracy, Smuggling.
> **Geostrategic interests:** Countering Chinese influence, becoming a **net security provider** and executing HADR.
> **Climate Security:** Indian Ocean has warmed faster than any other **ocean since 1950s** (IPCC report 2021).
> **Economic development: 80%** of India's **external trade and 90% of energy trade** happens through IOR.

Challenges to Maritime Security

> **Piracy and Maritime Terrorism in IOR:** Indian Navy rescued the hijacked **Bulgarian vessel 'Ruen'** in **2024.**
> **Maritime Cyber Threats:** E.g. In 2023, **Nagoya Port** was attacked by Russian hackers **Lockbit 3.0.**
> **Lackadaisical State Government:** Underutilisation of patrol boats, delays in the creation of shore-based infrastructure, etc. **(CAG Report).**
> **Maritime Border Disputes** with neighbouring countries, **such as Pakistan.**
> **Rising Influence of USA and China** like Chinese dual-use facilities in **Myanmar and Sri Lanka.**

💡 Key Initiatives taken to enhance Maritime Security

> **Steps taken by India**
  ◉ **Inter-Agency maritime exercises: Exercise like Sagar Kavach** to enhance interoperability.
  ◉ **Regional cooperation:** MAHASAGAR, SAGAR, IORA, Indian Ocean Naval Symposium etc.
  ◉ **IFC-IOR:** Established for **Maritime Domain Awareness** and hosted by Indian navy.
> **Steps taken at Global Level**
  ◉ **The international ship and port facility security code (ISPS)** by **IMO** for **the security of ships and ports.**
  ◉ **India got elected as the First Vice Chair of the UN FAO COFI Sub-Committee on Fisheries Management in 2024.**

🚶 Way forward

> **Five-point framework for maritime security: Free maritime trade,** Settlement of maritime disputes, Responsible maritime connectivity, etc.
> **Enact Coastal security Bill**
> **Strengthening the surveillance system: E.g. High Frequency Radar**
> **Promulgate National commercial maritime security policy** for coordinated actions.
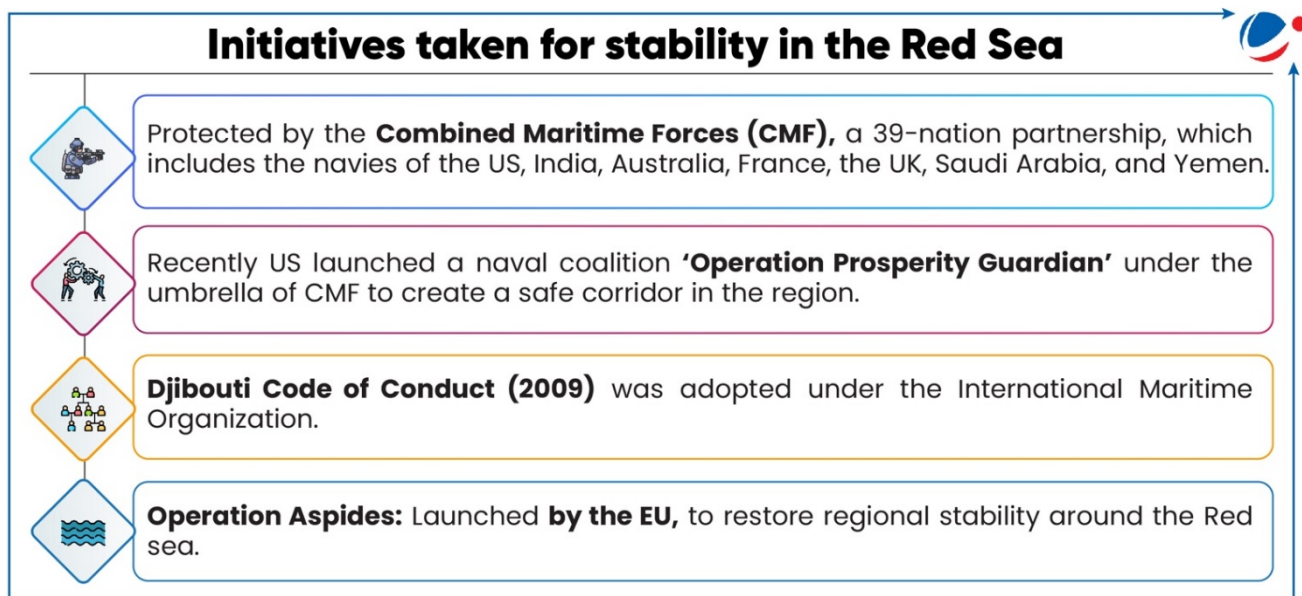> **Confidence building measures. E.g. INS Sunayna's joint patrol in Mauritius.**

3.2.2. SECURING MARITIME TRADE ROUTES

Why in the news?

Several recent incidents in the maritime domain have raised concerns regarding the security of maritime trade routes.

More about the news

- **Houthi attacks in Red Sea:** Houthi rebels in Yemen are attacking vessels traveling through **Bab-el-Mandeb Strait which is south of Suez Canal (Red Sea)** in response to Israel's bombardment of Gaza.
  - ○ **MV Chem Pluto** ship in the Red Sea was struck by a **drone attack** on its way to India.
  - ○ **Importance of Red Sea trade Route**
    - ✓ **Crucial route** for **international trade** and **energy shipments**; around 93-100%, of Arab countries' total exports pass through it.
    - ✓ Approx. 10% of seaborne cargo sails through **Red Sea** including most of **Asian trade** with **Europe.**
    - ✓ Both **U.S and China** have **Naval bases in Djibouti** which points towards **geostrategic importance** of this region.

Initiatives taken for stability in the Red Sea

- Protected by the **Combined Maritime Forces (CMF),** a 39-nation partnership, which includes the navies of the US, India, Australia, France, the UK, Saudi Arabia, and Yemen.
- Recently US launched a naval coalition **'Operation Prosperity Guardian'** under the umbrella of CMF to create a safe corridor in the region.
- **Djibouti Code of Conduct (2009)** was adopted under the International Maritime Organization.
- **Operation Aspides:** Launched **by the EU,** to restore regional stability around the Red sea.

Decoding Naval Responses to Red Sea Crisis
- **US: It announced a multi-nation Operation Prosperity Guardian** to safeguard maritime commerce in the Red Sea.
  - ○ As part of the measure, US, along with Britain, Bahrain, Canada, France, Italy, Netherlands, Norway, Seychelles, and **Spain will stage joint patrols in southern Red Sea.**
- **China:** Given China's economic interests of its expansive maritime trade and military capability in the region, it was widely expected that China would proactively intervene.
  - ○ On the contrary, the Chinese position on this crisis thus far has been notable for its inaction rather than action.
- **India**: While **India declined the invitation of the US to become part of the Operation Prosperity Guardian**, India has not remained a passive bystander to the Red Sea crisis.
  - ○ Since December 2023, the Indian Navy has **deployed 21 ships with over 5,000 personnel** and maritime surveillance aircraft in the region.
  - ○ This deployment is under the aegis of **'Op Sankalp'** which was initiated by the Indian Navy in 2019 as a response to the attacks on commercial shipping in the Gulf of Oman.
  - ○ India's conspicuous naval response to the crisis **exemplifies the attributes of how actions by a committed security provider can play a vital role in mitigating effects of such a crisis.**

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- **Piracy in Arabian Sea**: Malta-flagged vessel **MV Ruen** was hijacked in Arabian Sea near Somalia.
  - o Indian Navy swiftly **deployed Naval Maritime Patrol aircraft** to undertake surveillance in areas.
  - o **Challenges of Piracy**
    - ✓ **Deter trade along** key global shipping chokepoints and **disrupt critical supply chains**.
    - ✓ Strong nexus with **local mafia groups**, **illegal trafficking, or even terrorism.**
    - ✓ **Higher costs** arise as ships divert around piracy areas, requiring extra fuel, and **increased shipping insurance premiums,** etc.

Critical Maritime Trade Chokepoints
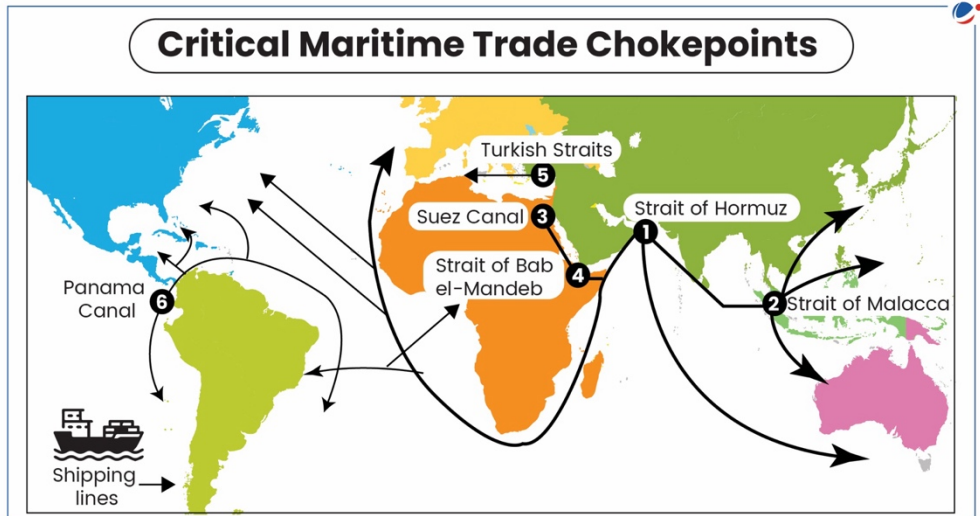
- **India's response:** Played the role of 'first responder'- Indian Navy's Maritime Patrol Aircraft deployed to investigate incident arrived overhead MV Ruen and INS Kochi intercepted the vessel.

Impacts of recent threats to maritime routes

- **Geopolitical tension:** Houthi groups receive support from Iran (Russia is perceived as Iran's ally) and oppose Western nations and Israel. Their attacks can lead to war.
- **Inflation:** For instance, disruption at Red Sea route is estimated to push the prices of Indian agricultural products by 10-20% due to shipments being re-routed through Cape of Good Hope.
- **Disruption in global supply chain:** Over 80% of global goods trade is carried by sea, with share of trade via sea is much higher for developing countries such as India.
- **Environmental impact:** Longer routes around South America and Africa mean an increase of CO_2 emissions for each ship by 20% to 35%.
- **Impact on India**
  - o **Impact on exports:** European Union is 2nd largest destination for Indian exports and Suez Canal is a key route for export shipping.
    - ✓ E.g., India's plan to export 500,000 tonnes of new season basmati rice to Europe and Middle East can be at risk.
  - o **Risk to Energy Security:** Red Sea is a key route for oil and gas shipments.
    - ✓ About 65% of India's crude oil imports in FY2023, likely passed through the Suez Canal.
  - o **Diplomatic Ties:** India maintains positive relations with both Iran and Israel, making it challenging to assess the overall diplomatic landscape.
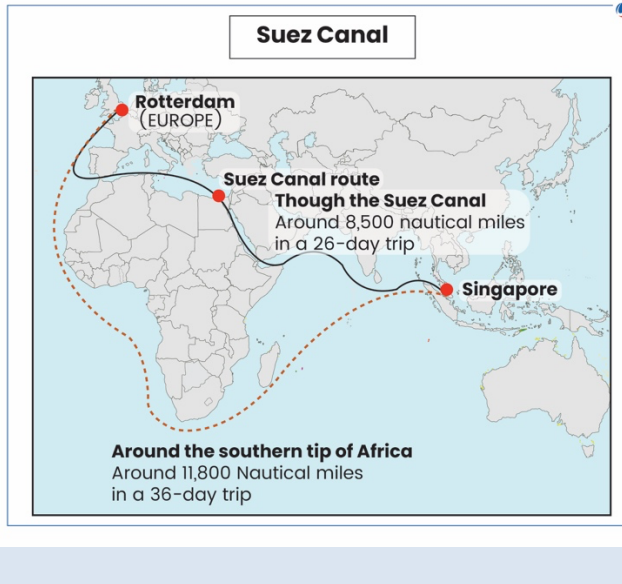
Way forward

- **Diversification of supply chains:** It will enhance resilience and contribute to creation of a more adaptive global trade infrastructure.
- **Acknowledging Non-State Actors' Roles**: Recognizing increasing military capabilities of groups like Houthis, maritime security strategies must adapt to counter their influence.
- **Global collaboration:** International organizations and multilateral groupings should aim toward restoration of stability in regional maritime routes, securing choke points, and finding regional security development models.
- **India's role as mediator:** As an affected party and as a large trading nation, India can help mediate peace given its good relations with various players in Middle East, including Iran and Israel.
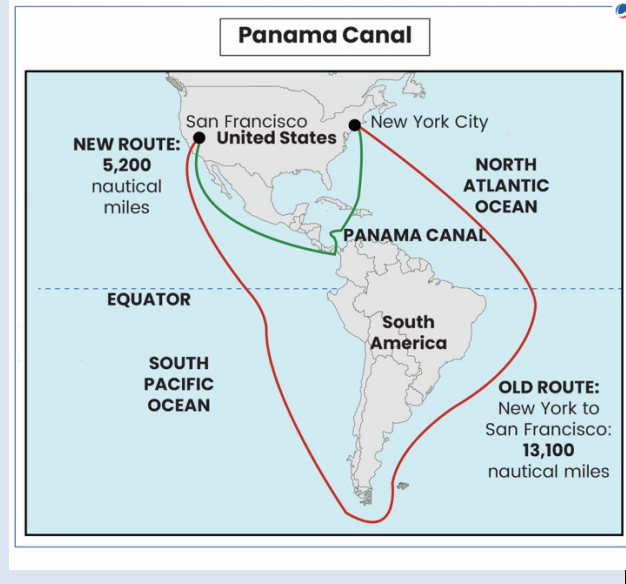
Key Maritime Choke Points	
Suez Canal	**Panama Canal**
• An **artificial sea-level waterway** in Egypt connecting **Mediterranean and Red Seas**. • **193 kilometers in length**. • **Shortest route between East and West**. • **Trade Volume**: In 2020, ~**12% of global trade** passes through it, **representing 30% of all global container traffic**. • Enables transfer of an estimated **7-10% of world's oil and 8% of liquefied natural gas**.	• ~**80 kilometers long** canal connects **Atlantic and Pacific Oceans**. • Uses a **system of locks compartments** with entrance and exit gates and locks function as water lifts. • **Republic of Panama** owns and operates Panama Canal. • **Trade Volume:** Represents approximately 6% of world trade.

Suez Canal

Rotterdam (EUROPE)

Suez Canal route
Though the Suez Canal
Around 8,500 nautical miles
in a 26-day trip

Singapore

Around the southern tip of Africa
Around 11,800 Nautical miles
in a 36-day trip

Panama Canal

San Francisco   New York City
NEW ROUTE: United States
5,200
nautical
miles   NORTH
ATLANTIC
PANAMA CANAL   OCEAN

EQUATOR

SOUTH   South
PACIFIC   America
OCEAN

OLD ROUTE:
New York to
San Francisco:
13,100
nautical miles

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3.2.3. GREAT NICOBAR ISLAND PROJECT

Why in the news?

Opposition has demanded an "immediate suspension" of all clearances granted to the "Holistic Development of Great Nicobar Island (GNI) project.

About the Project

- The project includes an **international container transhipment terminal**, an **international airport, a gas and solar power plant, two greenfield cities, etc.**
- Project is being opposed due to concerns about adverse **impact of projects on the Shompen** tribe (hunter-gatherers), Great Nicobar Biosphere reserves (**UNESCO Biosphere Reserve**)
- However, these projects are also being considered crucial for **India's security** as it could facilitate India project power, exert influence, strike friendships in its eastern neighbourhood.

Significance of the A&N In India's security

- **First line of Maritime Defence:** The islands share maritime boundaries with Myanmar, Thailand, Indonesia, and Bangladesh.
  - Through ports and airfields in GNI, India can **deters potential aggressors and project power over a vast oceanic expanse.**
- **Maritime domain awareness:** By providing island outposts with surveillance facilities facilitate **tracking and interdicting hostile ships and submarines**, enhancing overall maritime security.
- **Control of Maritime Chokepoints:** The islands' location allows India to **monitor and potentially control access to the Malacca Strait** crucial for safeguarding trade routes and monitoring regional naval activities.
- **Counter foreign power consolidation:** Foreign powers have increased its activities like port creation in the Indian Ocean Region (IOR). E.g. China's String of Pearls to encircle India.
- **Disaster Response Capabilities:** Improved infrastructure could enhance India's ability to respond to natural disasters in the region. This soft power aspect can improve regional security relationships.

Challenges associated with Development of A&N

- **Historical Preoccupations to Western India Ocean:** India's focus on the Western Indian Ocean due to security concerns with Pakistan led to the neglect of the Eastern Indian Ocean (ANI) in its security planning.
- **Maritime remoteness:** For example, GNI (southernmost of the A&N group) is a mere 140 km from Indonesia, but almost 2,000 km from Chennai.
- **Environmental Diversity:** The Group inhabits PVTGs like Onge, Jorawa, Shompen and various exotic flora and fauna
- **Geological Sensitivity:** The Islands are located in a region identified under the seismic zone-V.
- **Perception in Neighbourhood:** Some regional countries, including Malaysia and Indonesia, view India's development of the A& N Islands as an attempt to dominate the region.
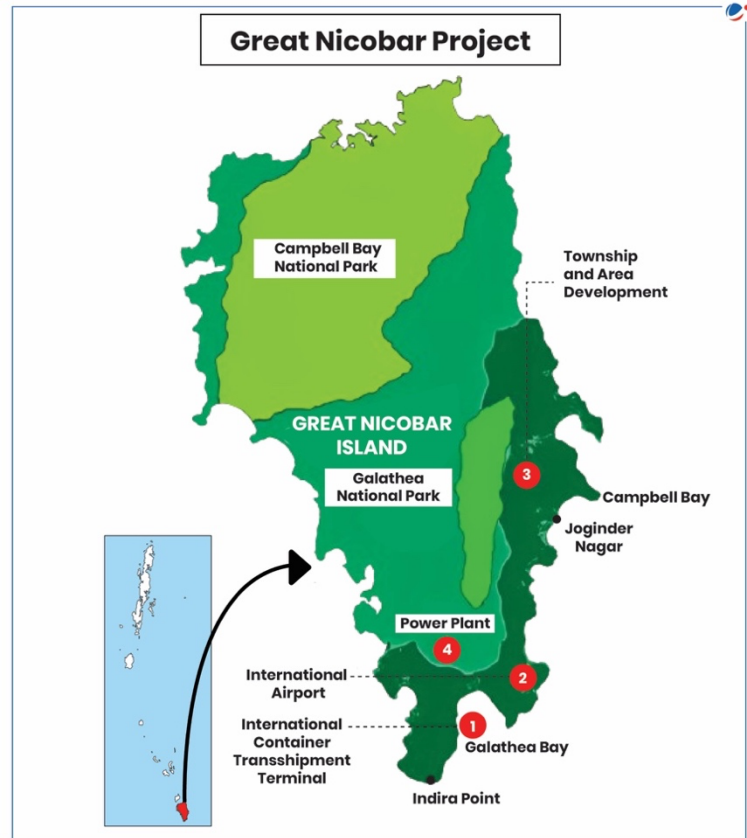
> **Initiatives Taken for Strengthening Security of A&N**
>
> - **2001:** Established the A&N Command (ANC), a joint tri-service command.
> - **2015:** Announced a INR 100,000-million plan to develop the islands as a maritime hub.
> - **2020:** Inaugurated the Chennai-Andaman and Nicobar undersea internet cable.
> - **2018:** Formed an India-Indonesia task force to enhance connectivity between ANI and Sabang.
> - **Other initiatives**: India participates in the Japan-US "fishhook" Sound Surveillance System to counter Chinese submarines in the Andaman Sea.

Way Forward

- **Impartial Review:** A thorough and unbiased review of the project, possibly involving Parliamentary committees, is essential.
- **Separate Security Considerations:** The security needs of the ANC should be addressed **independently of the project's development aspects**.
- **Alternative Locations for Development:** Exploring other islands in the Nicobar group, **like Little Nicobar and Kamorta**, for accommodating project without risking environmental, ecological and anthropological damage on this scale.

Conclusion

In 1945, Sardar K M Panikkar had warned that, "the active control of the Indian Ocean and defence of the coastline is possible only by having islands as advanced bases. The A&N archipelago is admirably placed to secure control of the Bay of Bengal." This underscore the strategic significance of development of A&N islands.

3.2.4. INFORMATION FUSION CENTRE FOR INDIAN OCEAN REGION (IFC-IOR)

Why in the News?

Recently, IFC-IOR played a crucial role in tackling the hijacking incident of the Malta-flagged vessel (Merchant Vessel) m.v. Ruen.

About IFC-IOR

- **Genesis:** IFC-IOR was **established in 2018, based at IMAC,** and hosted by **the Indian Navy.**
  - Soon after 26/11, India brought together countries of the Indian Ocean rim to form **the Information Management and Analysis Centre (IMAC)** in 2014 in Gurugram.
  - IMAC is jointly administered by the **Indian Navy and Indian Coast Guard**.
- **Aim: Strengthening maritime security** in the region by building a common coherent maritime situation picture using **White Shipping Agreements.**
  - White Shipping Agreements deal with the **sharing of information regarding commercial non-military merchant vessels.**
- **Region covered:** Indian Ocean Region and adjoining Seas.
  - **Also, IFC-IOR hosts 12 International Liaison Officers (ILOs)** from 12 partner nations viz. Australia, France, Italy, Japan, Maldives, Mauritius, Myanmar, Seychelles, Singapore, Sri Lanka, the UK and the USA.
- **Four sectors:** Gulf of Guinea, Gulf of Aden, Arabian Sea, and the Bay of Bengal & South East Asia.
- **The Maritime Information Sharing Workshop (MISW):** It is the flagship platform of IFC-IOR that conducts training programs and is attended by delegates from a large number of countries.

How does IFC-IOR strengthen India's foreign relations?

- **Strategic Partnership**: USA, France, etc. have positioned their ILOs at the Gurgaon-based facility.
- **Strengthening Neighbourhood relations**: Through the information-sharing framework by facilitating information exchange related to maritime security. **E.g.,** India is **developing 32 coastal surveillance radar stations** in neighbouring countries.

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Significance of IFC-IOR

Enhance maritime security in IOR in line with India's vision of **Security and Growth for All in the Region (SAGAR).**

Checking Piracy & Armed Robbery, Contraband Smuggling, IUU Fishing, Irregular Human Migration etc.

Reduce logistical and bureaucratic processes in the dissemination of information.

Capability building, coordination of **disaster relief,** and share **submarine safety information.**

Monthly weather forecasts and weather warnings are also hosted.

Implementation challenges faced by IFC-IOR

- **Challenge in information sharing** such as issues with standardization, duplicative efforts, etc.
- **Challenge in information processing: Countries struggle with external influences and internal politics in information processing.**
- **Trust and coordination challenge**: Arising from restricted coordination or unwillingness to share data equitably.

Way forward

- **Reciprocal Deployments**: India should also deploy its ILOs in other nations' centres.
- **Enabling coordination and standardization:** Standardize information-sharing patterns and create collaborative arrangements to reduce duplication of effort.
- **Continued Expansion:** With more countries in and beyond the IOR, to give the initiative a more global character.
- **Enhanced Maritime Surveillance**: To cover grey shipping and dark shipping at the surface level.

4. SECURITY FORCES

4.1. DEFENCE MODERNISATION

4.1.1. MODERNISATION OF ARMED FORCES AT A GLANCE

Modernisation of Armed Forces at a Glance

- Modernisation of Defence Armed Forces involves **acquisition of platforms, technologies and weapon systems to augment Defence capabilities.**
- It is a continuous process to keep Armed Forces in a state of **readiness to meet entire spectrum of security challenges.**

Need of Defence Modernisation

- **Challenging strategic environment** like assertiveness of China in Indian Ocean.
- **Inadequate number of equipments** like aircraft, submarines etc. (currently only 2 aircraft carriers in operation instead of 3 atleast).
- **Rapidly changing landscape of warfare** like **hybrid warfare, cyberwarfare, etc.**

Steps taken by India

- **Defence production and indigenization:** DAP 2020, Positive Indigenisation List, SRIJAN Portal, ADITI Scheme, iDEX.
- **Technology Development Fund scheme:** For new start-ups, MSMEs and academia.
- **Mobilising finance: 74%** FDI under automatic route and **100%** through government approval.
- **Defence R&D:** 25% of defence R&D budget to promote **development of defence technology** in the country.
- **Preparation for Space warfare: Mission DefSpace** (in space domain), **Mission Shakti** (Anti Satellite capabilities).
- **Chief of Defence Staff** for prompt decision making.

Challenges Faced in Defence Modernisation

- **Slow Decision Making:** Production and acquisition contracts take **7 to 9 years for finalisation.**
- **Budget Allocation Issues:** Inadequate allocation for defense R&D and defense capital expenditure as major defence budget goes to revenue expenditure.
- **Technological Limitations:** Lack of depth to design/manufacture critical parts.
- **Future Warfare Preparedness:** Limited discourse on **nature of future warfare such as cyber and space warfare.**

Way forward

- **Fostering innovation** through Board of Research for Advance Defence sciences (BRADS) as suggested by **Rama Rao Committee.**
- Implement **Shekatkar Committee** recommendations.
- **Non-lapsable Defence Modernisation Fund (15th Finance Commission)**
- **Providing handholding to private sector and adopting the concept of 5Is** (identify, Incubate, Innovate, Integrate and Indigenous).
- Development of **industry-defence-academia linkages.**
- **Reorienting the 'Make in India' initiative to develop a capable domestic military industrial base.**

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4.1.2. DEFENCE EXPORTS AT A GLANCE

Defence Exports at a Glance

Defence Exports

> According to SIPRI, **India was among the top five defense spenders in 2023** alongwith US, China, Russia, India, and Saudi Arabia.
> **Defence exports** reached a record **approximately US$ 2.63 billion in FY 2023-24,** an increase of 32.5% over last fiscal. **India** aims for **US$ 5 billion in defence exports by 2024-25.**

Defence Exports from India

> **Global Footprint:** India ranks among **top 25 arms exporters** (Economic Survey 2023-24). **Three PSUs** (HAL, BEL, and Mazagon Docks) were in **top 100 defence companies in 2023.**
> **Share of Private Sector:** Private sector accounted for **60%** and **40%** is from public sector firms
> **Major arsenal exported:** Armored protection vehicles, light-weight torpedo, etc.

Challenges

> **Red tapism: Hampers DPSU's** global impression. **E.g.** HAL took longer time to produce the Su-30MKI aircraft
> **IPR Issues:** India manufactures some weapon platforms (Tank T-90, Su-30 fighter aircraft with Russia) with IPR held by foreign OEMs.
> **High competition:** Malaysia preferred **South Korea's LCA over India's LCA Tejas** fighter jet.
> **Other issues:** Lack of design/development capabilities and industry-academia-defence linkages.

Steps taken up to boost Defence exports

> **Mobilising finance via FDI.**
> **Defence R&D:** 25% of defence R&D budget earmarked for it.
> **Budget Support to Indigenous Defence Industry: 75%** of defence **capital procurement budget** earmarked for domestic industry in FY 2023-24.
> **Ease of Doing Business:** Simplified defence industrial **licensing,** end-to-end online portal for receiving and processing export authorisation developed.
> **Role of MEA:** Facilitated **Lines of Credit for African countries** to import defence products from India.

Way forward

> **Focusing on new markets,** especially developing nations, by enhancing role of Defence Attaches.
> Promotion of defence products through initiatives like **DefExpo 2024.**
> Establish **Defence Export promotion/facilitation agency.**
> **Quality Assurance & testing** infrastructure development.
> Intensive level of **defence diplomacy** critical to defence exports.

4.1.3. JOINT CULTURE IN ARMED FORCES

Why in news?

While delivering a lecture, CDS called upon the three services to create a **Joint Culture** as they move towards forming **Joint Operational Structures** and termed it as **Jointness 2.0**.

About ITCs

CDS termed **Jointness & Integration as pre-requisites** to the creation of functional **Integrated Theatre Commands (ITCs).**

- **Theaterisation**: Unified tri-service organisations for combat operations in specified geographical area.
- **Jointness**: Assets from all services under theatre commander for operational planning synergy.
- **Command Structure**: Separates 'operational' functions from raise-train-sustain (RTS) and administrative functions.

Current Structure of Armed Forces

- There are 19 existing commands –**17 single-service oriented commands**: 7 Army, 7 Air Force, and 3 Navy and **Andaman and Nicobar Command** and **Strategic Forces Command.**

Challenges in creation of ITCs

- Lack of coherent **National Security Strategy**;
- **Limited resources**, particularly with Air Force, to different land-based theatres, maritime theatre, etc.

Steps taken for Integration of Armed Forces

- **Institutional**: Appointment of CDS, creation of Department of Military Affairs under Ministry of Defence to promote jointness in procurement, training, and staffing for the Services, etc.
- **Legislative:** Enactment of **Inter-Services Organisations (Command, Control & Discipline) Act, 2023**.
- **Others:** Defence Space Agency under HQ Integrated Defence Staff (HQ IDS), etc.

4.1.4. INTER-SERVICES ORGANISATION (COMMAND, CONTROL & DISCIPLINE) ACT, 2023

Why in the news?

Recently, the Act was notified through the Gazette.

Background

- **Current Act**: Personnel bound by respective Air Force Act 1950, Army Act 1950, Navy Act 1957.
- **ISO Commanders**: Lacking disciplinary/administrative power over other service personnel. Consequently, **personnel serving in ISO needed to be reverted to their parent Service units** for any action, which was time-consuming & cumbersome and had financial implications.
- **Need**: Empower ISO officers to control personnel under their command**.**

Key Highlights of the Act

- **Defines ISO:** As a body of troops including a Joint Services Command consisting of persons subject to the Air Force Army and the Navy Act, or any two of the said Acts.
- **Centre to constitute ISO Empowers the Commander-in-Chief: to take disciplinary** and administrative **actions** over personnel serving in Inter-services Organisations **in accordance with their respective service acts.**
- **Superintendence of Central Government:** To issue directions as needed for national security or general administration.
- **Applicability:** To all personnel of Army, Navy, and Air Force, and to persons of other forces as notified by Centre.

- **Expeditious disposal of cases & greater integration:** Provisions expedite disposal of cases and provide better integration and jointmanship (**theaterisation**) amongst Armed Forces personnel.

Significance of Act: Expeditious disposal of cases, avoiding multiple proceedings, reducing financial burdens, and greater integration and jointmanship amongst Armed Forces personnel.

4.1.5. POLICING POWER TO CENTRAL ARMED POLICE FORCES (CAPFS)

Why in the News?

Punjab has filed a suit against the **Union government under Article 131 of Constitution**, challenging the decision of increasing the operational jurisdiction of BSF in Punjab.

More about news

- Punjab challenged **constitutional validity of a notification issued by MHA** in 2021 under **Section 139 (1) of BSF Act, 1968**.
- It extended BSF's jurisdiction in Punjab, West Bengal, and Assam **from 15 Km to 50 Km** while **reducing** it in **Gujarat** from **80 km to 50 km.**
- **Supreme Court will assess** whether increased jurisdiction surpasses **'local limits of the area adjoining borders of India' under Section 139.**

About Central Armed Police Forces (CAPF)

- There are **7 CAPF forces** are under the authority of the **Ministry of Home Affairs (MHA).**

Forces	Mandate
Sashastra Seema Bal (SSB)	• **Created in 1963** guarding **Bhutan and Nepal borders.**
Border Security Force (BSF)	• **Created in 1965**, guarding **India's borders with Pakistan and Bangladesh.** • It is **thrusted with Anti Naxal operation**, United Nations Peace keeping operations, disaster management and Border Area development programmes.
Indo-Tibetan Border Police (ITBP)	• **Created in 1962**, guarding **India-China borders**.
Assam Rifles (AR)	• **Created in 1835** renamed in 1917. • **Protects Indo-Myanmar border**.
Central Reserve Police Force (CRPF)	• **Created in 1939** to **maintain Rule of Law, Public Order and Internal Security** and Promote Social Harmony.
Central Industrial Security Force (CISF)	• **Created in 1969**, to provide integrated security cover to certain sensitive public sector undertakings and others such as airports, etc.
National Security Guard (NSG)	• **Created in 1986**, to create a federal contingency force to tackle various manifestations of terrorism.

Policing power of CAPF

- **Initial delegation of police powers to BSF** occurred in 1969 under BSF Act 1968, with subsequent adjustments being officially notified in 1973 and 2014.
- **SSB entrusted with guarding Indo-Nepal border** has authority under CrPC.

Rationale behind extension of Jurisdiction

- **Ensuring uniformity in BSF operations** across states and enhancing border security.
- **Operational Necessity and Policing Efficiencies** to combat illegal entry and offenses under Passport Act.
- Addressing Evolving Challenges and Changing Dynamics like **drones dropping weapons and drugs**.
- Information Gathering and Proactive Action to threats.

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Challenges Arising from the Delegation of Police Powers to CAPFs

- **Federal Concerns:** States argue that **law and order is a state subject,** national accountability mechanisms are inherently less accessible than state police.
- Highlights the potential **adverse effects on core function of BSF.**
- **Risk of Turf Wars:** Lack of coordination with state police, could lead to conflicts due to concurrent jurisdiction.
- **Human Rights Violation Apprehensions:** Due to expanded jurisdiction of BSF without adequate safeguards.

Other Issues faced by CAPF

- **High Vacancies (around 83000)** burden existing force.
- **Lack of Stress management** leading to a high number of suicides.
- **Bureaucratization of Armed Forces and decreased level of promotions** as top positions in CAPFs are occupied by IPS officer, which has a demoralising effect.
- **Absence of a robust in-house grievance redressal mechanism.**
- **Poor Infrastructure,** like Lack of electricity at several installations of Border Out Posts (BOPs).
- **Lack of modern weapons** and their cumbersome procurement process.
- **States are heavily dependent on CAPFs** in the event of a law and order issue in the state.

Steps to enhance their performance

- **Develop Special Forces in States with** adequate training and equipment.
- **Enhancing the training methods** in line with latest requirements.
- **Increase representation of women** in CAPF and a separate training curriculum.
- **Ensure 10% reservation for Agniveers** in all CAPFs and enhance recruitment drives to fill vacancies.
- **Implement an efficient grievance redressal mechanism** to address delayed promotions, personnel clashes, etc.
- **Introduce scientific methods and special intermittent training** to reduce stress and improve morale.

4.1.6. TECHNOLOGY ABSORPTION IN DEFENCE

Why in the news?

Indian Army is observing the year 2024 as the year of Technology Absorption.

What is meant by Technology Absorption?

- It means **acquisition, adaptation and integration of disruptive technologies such as AI, Quantum** into existing structures (legacy systems).
- Also, **integration of artificial intelligence, hypersonic weapons, biotechnology, quantum technology** etc.

Need of Technology Absorption in Defence for India

- **Military Superiority:** Integrate disruptive technologies to compete with USA and China.
- **Regional Security:** Project India as a 'Net Security Provider.'
- **Operational Efficiency:** Free soldiers for strategic tasks through enhanced operational efficiency.
- **Defence Production Targets:** Achieve Rs 3 lakh crore in defence production and Rs 50,000 crore in exports by 2028-29.

Challenges related to technology adoption in defence

- **Low Defence R&D Expenditure:** Rs. 18,669.66 crore spent in 2021-22 against Rs. 20,757.44 crore budgets. (Parliamentary standing committee on defence).
- **Defence Budget Strain:** High initial costs for procurement and development.
- **Import dependency:** India largely dependent on foreign technology for advanced weapons.

<div style="text-align:right">**MAINS 365 – SECURITY**</div>

- **Technology Integration:** Obsolescence, long service life, and compatibility issues.
- **Administrative Issues:** Need for restructuring, HR management, and civil-military fusion.
- **Cyber Security Vulnerability:** Risks from imported communication equipment.

Technological Applications in Defense

Technology	Application
Autonomous technologies, such as robots and drones	Undertake dangerous tasks like **strikes or repetitive tasks**
Block Chain, Cloud Computing	To make **communication** and **data transfer** seamless, secure and fast
AI and Big Data Analytics	For **surveillance, reconnaissance,** and **Strengthening** situational awareness
Nano-Technology	To create **self-healing and adaptive camouflage materials,** smart skin etc
New weapons technology	• **Directed energy weapons (High Power Lasers and High-Power Microwaves):** Use focused energy to destroy, degrade or neutralize a target. • **Loiter Munitions (E.g Kamikaze drones):** Loiters around an area, locate the target and then crash into it

Measures taken by India for tech-Absorption

- **Acing Development of Innovative Technologies with iDEX (ADITI) scheme** (2024) to promote innovations in critical and strategic defence technologies.
- **2022 Amendment to Defence Acquisition Procedure (DAP) 2020**: Mandates all modernisation requirements to be indigenously sourced.
- **Technology focused Organisational framework:** Achieved by synchronising the efforts of **DRDO, ISRO etc.**
- **Signals Technology Evaluation and Adaptation Group (STEAG):** For researching futuristic technologies like 6G, AI.
- **Mission Shakti (A-SAT):** Developed by **DRDO** has demonstrated India's capability to defend its assets in outer space in a 'Hit to Kill' mode.
- **Indian Naval Indigenisation Plan (2015-2030):** Identifies domains and technologies to accomplish self-reliance in cutting-edge defence technologies.
- **Project Akashteer:** It is an automated **air defence control and reporting system** inducted by the Indian Army.

Way Forward

- **Implementation of Recommendations of Prof K Vijay Raghavan Committee:**
  - **Creation of "Department of Defence Science, Technology, and Innovation".**
  - **Establishment of "Defence Technology Council"** chaired by Prime Minister.
  - Setting up **national-level laboratory facilities** instead of DRDO labs.
- **Streamlining Regulatory and Procurement Processes** by simplifying documentation requirements.
- **Prioritizing technology over cost** to encourage selection of advanced and niche technologies.
- **Promoting private sector participation** in manufacturing by creating a level playing field, and providing access to technology.
- **Creation of specialist officers and specialised cadres** such as cyber experts by providing specific training

4.1.7. DEFENSE RESEARCH AND DEVELOPMENT ORGANIZATION (DRDO)

Why in the news?

Ministry of Defense (MoD) has constituted **Prof. K Vijay Raghavan committee** to review the functioning of DRDO and suggest restructuring and redefining its role.

More about the news

- The need to reform stems from the following factors:
  - **Failure to complete mission mode projects** on time resulting in heavy time and cost overruns.
  - **To streamline the modernisation of administrative, personnel and financial systems** to address the trilemma (high quality, low cost and quick delivery) of defence indigenisation.

Reasons for inefficient delivery by DRDO

- **Lack of harmonisation:** On projects where multiple agencies get involved. **E.g. Delay of LCA Tejas due to failure of DRDO to develop the Kaveri engine**
- **Inadequate monitoring** in engineered prototypes at the trial stage results in inordinate delays and cost overruns.
- **Working on redundant and obsolete technologies** results in **reinventing the wheel** with sub-par operational utility.
- **Bureaucratisation of DRDO** with more focus on procedural aspects than outcome and delivery.
- **Monopoly and lack of competition** due to limited involvement of private sector.
- Issue of **limited scalability** of projects.

Key Recommendations by K. VijayRaghavan Committee

- **Create an Architecturally New Defence Techno-Industrial Consortium (DTIC)** for integrated defence R&D Integrate ecosystems like iDEX to nurture innovations for armed forces.
- **Form a Defense R&D council** with top military leaders and scientists for capability development plans.
- Collaborate with national research organizations, laboratories, academia, and industries on frontier technology.
- **Create a tri-service division** within Department of Military Affairs for integrated defence R&D and capability development.
- **Modify prototypes, not production models**; establish synchronisation for multi-agency projects.
- **Wind up redundant DRDO labs/projects** to monetise assets and fund innovation.

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4.2. GLOBAL AGENCIES

4.2.1. INTERPOL AT A GLANCE

INTERPOL AT A GLANCE

About Interpol

- **Inter-governmental organisation** comprising 195 member countries.
- Enables member countries to **share and access data on crimes and criminals** and offers a range of technical and operational support.
- **INTERPOL Notices** allows police in member countries to share critical crime-related information.
  - Types of Notices-Red Notice, Blue Notice, Green Notice, Yellow Notice, Black Notice, Orange Notice, etc.
- **2023 marks the 100-year anniversary of INTERPOL**. During its 91st General Assembly, **Vienna Declaration was adopted** focusing on priority actions to tackle the challenge of rising Transnational Organised Crime.
- **CBI is designated as the National Central Bureau** for Interpol in India

Achievements of Interpol

- **ID-ART Mobile App:** To identify stolen cultural property, reduce illicit trafficking, and recover stolen items.
- **INTERPOL Financial Crime and Anti-Corruption Centre (IFCACC)** for coordinated global response against transnational financial crimes.
- **Operation First Light 2022:** To intensify efforts by member countries in fighting social engineering and telecom fraud. E.g. seizing assets worth USD 257 million in 2024.
- **Operation Jackal:** To fight online financial fraud and West African Syndicate behind it. E.g. More than 720 bank accounts blocked in 2024.
- **Operation NERVONE:** To combat threat of cybercrime.

Issues associated with Interpol

- **No influence** over its member states as extradition is possible only through bilateral agreements.
- **Politically Motivated Arrests** like arrest of Belarusian politician, Ukrainian politician etc.
- **Emergence of transnational, cyber and organised crime.** E.g. WannaCry Ransomware Attack 2017
- **National Sovereignty of member states hinders Interpol in carrying out its responsibilities.**
- **Corruption.** E.g. In 2015, Interpol was criticised for multimillion-dollar corruption deals with private sector organizations like Federation of International Football Association etc.

Way Forward

- **Possess Powers** to make members obey and ensure smooth execution of decisions.
- **Amending its Constitution** to enable it to adopt an assertive position as a supra-national police force.
- **Delete Red Notice** for those who were granted refugee status as per **1951 Refugee Convention** and establish an independent body to review Red Notices regularly.

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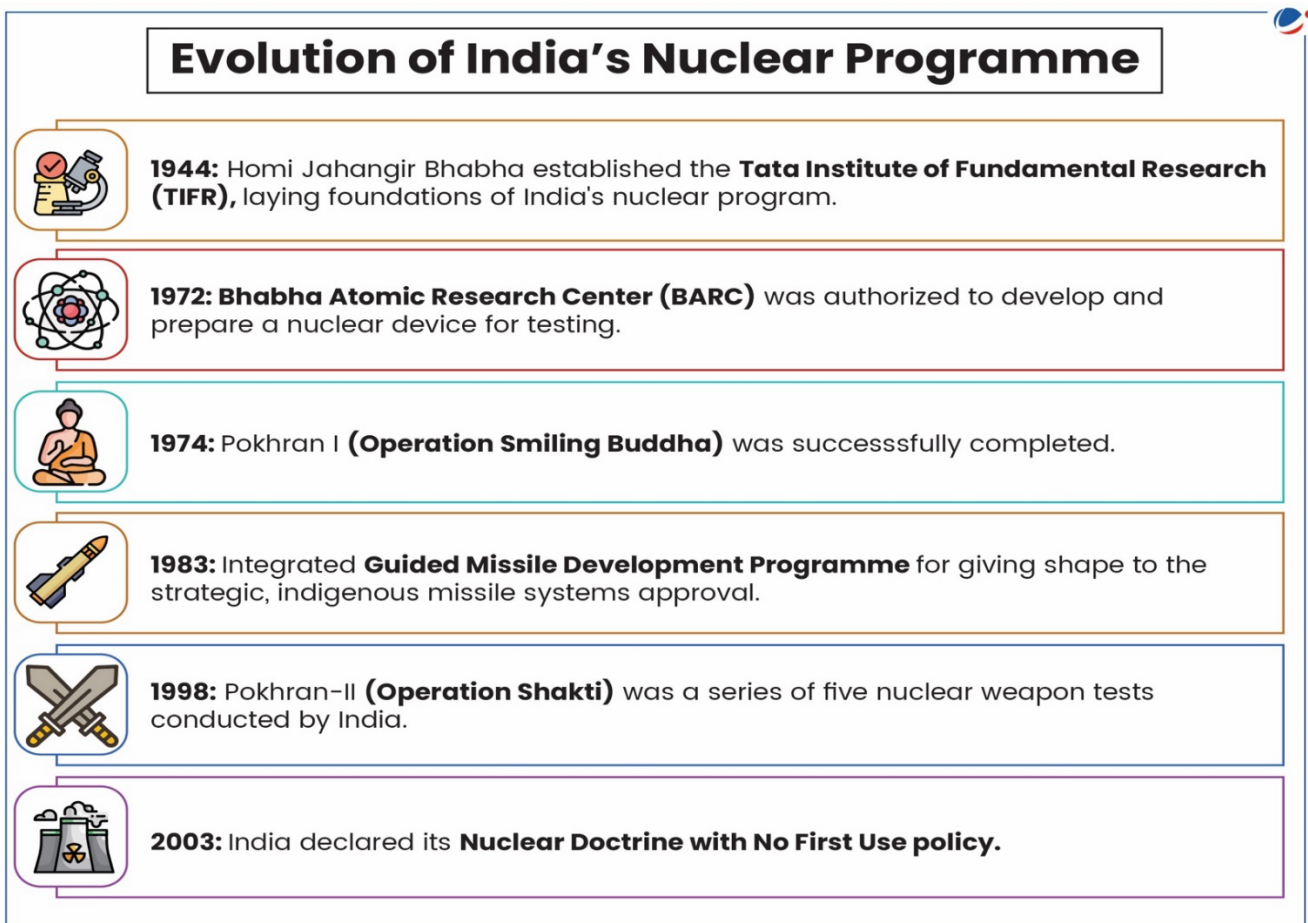
5. MISCELLANEOUS

5.1. NUCLEAR DISARMAMENT

5.1.1. POKHRAN-I

Why in the News?

India is celebrating 50 years landmark of its **first nuclear tests in Pokhran, Rajasthan**, as part of the '**Smiling Buddha'** operation conducted **on 18th May 1974.**

More about the news

- **Operation Smiling Buddha (Pokhran I)**, was India's first nuclear explosion, described as a peaceful nuclear explosion (PNE).
- India became **the first nation apart from P5 countries** to conduct the test.
- **Importance**
  o Raised **India's credible deterrence and national security.**
  o It highlighted **India's technological prowess in nuclear research.**
  o It is a key event in **evolution of India's nuclear programme**.

Evolution of India's Nuclear Programme

1944: Homi Jahangir Bhabha established the **Tata Institute of Fundamental Research (TIFR),** laying foundations of India's nuclear program.

1972: Bhabha Atomic Research Center (BARC) was authorized to develop and prepare a nuclear device for testing.

1974: Pokhran I **(Operation Smiling Buddha)** was successsfully completed.

1983: Integrated **Guided Missile Development Programme** for giving shape to the strategic, indigenous missile systems approval.

1998: Pokhran–II **(Operation Shakti)** was a series of five nuclear weapon tests conducted by India.

2003: India declared its **Nuclear Doctrine with No First Use policy.**

Impact of the test

- **Technological Apartheid with India**: US Nuclear Non-Proliferation Act halted nuclear assistance to India, impeding strategic sector. **Example**: **USA had forced Russia** to not transfer **cryogenic engine** technology to ISRO.

- **Nuclear Suppliers Group (NSG) 1974:** Established post-India's 1974 nuclear test to prevent nuclear exports for weapon-making; **India seeks membership** for nuclear power capacity and raw materials.
- **Responsible Nuclear Power:** India's nuclear capability affirmed with Pokhran-II in 1998.**After Pokhran II India** also declared **'No First Use policy'.**
- **123 Nuclear Agreement with USA** for peaceful uses of Nuclear Energy.

Conclusion

India has still not joined the NPT, but its intent is now clear, and the status of India as a responsible nuclear power has been largely accepted by the world

5.1.2. GLOBAL NUCLEAR REGULATION

Why in the news?

Recently, Russian parliament passed a bill revoking Russia's ratification of Comprehensive Test Ban Treaty (CTBT).

More about the news

- The passage of bill **will "mirror" the stand taken by U.S.**, which has signed but not ratified the CTBT.
- It raised concerns that Russia may resume nuclear tests to discourage West from supporting Ukraine.

International regulations regarding nuclear weapons

CTBT	• Prohibits all nuclear explosions; **India did not sign** due to lack of time-bound disarmament commitment by nuclear-weapon states.
Non-Proliferation Treaty (NPT), 1968	• Aimed at **limiting spread of nuclear weapons** through three pillars of non-proliferation, disarmament, and peaceful use of nuclear energy. ○ **India did not sign** the treaty **due to biases** as it divided world into "nuclear haves" and "nuclear have-nots."
Treaty on the Prohibition of Nuclear Weapons (TPNW)	• First **legally binding agreement** to ban nuclear weapons. **India did not sign** as it does not contribute to customary international law or set new standards.
Nuclear-Weapon-Free Zones (NWFZ)	• Regional approach to strengthen global nuclear nonproliferation, disarmament, and promote peace and security. **There are 5 treaties** such as Treaty of Pelindaba (for Africa).
Missile Technology Control Regime (MTCR)	• Seeks to limit the risks of **proliferation of weapons of mass destruction (WMD)** by controlling exports of goods and technologies that could contribute to delivery systems.
Fissile Material Cut-off Treaty (FMCT)	• **Proposed international agreement** that would prohibit production of two main components of nuclear weapons: **highly enriched uranium (HEU) and plutonium.**
Outer Space Treaty (OST)	• Prohibits **placing of nuclear weapons in space**.

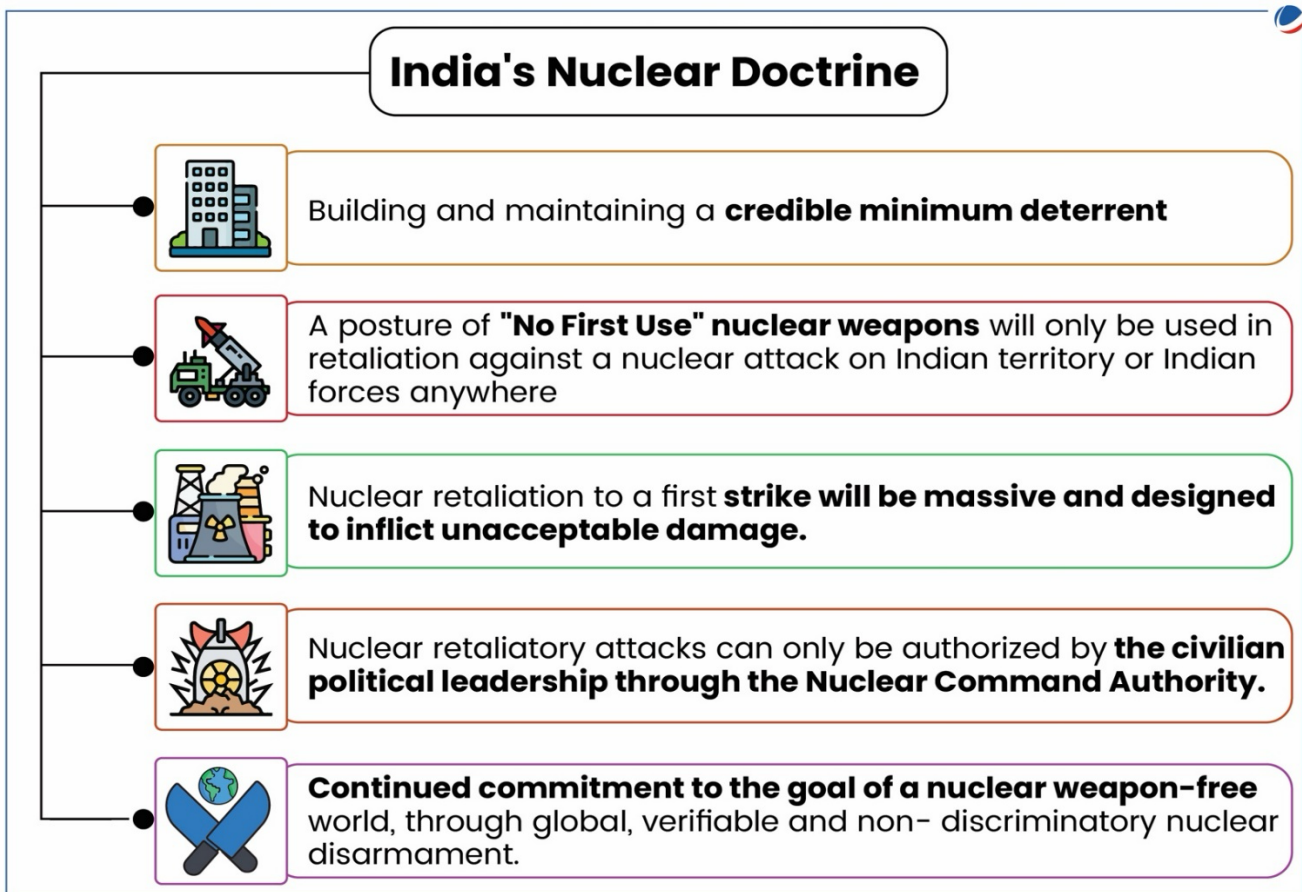**Effectiveness of Global Nuclear Regulations**

- **Consensus Building:** Achieved on IAEA safety standards against ionizing radiation effects.
- **Reduction in Nuclear Stockpile:** Global arsenals reduced by over three-fourths since mid-1980s; more countries gave up weapons/programs than acquired.
- **Peaceful Use:** Promoted nuclear technology for energy, medicine, agriculture, and research without military diversion.
- **Limited nuclear testing:** North Korea is only nation to have tested a nuclear weapon in 21st century.
- **Response Mechanisms:** IAEA strengthens emergency preparedness and response capabilities for nuclear accidents at national and international levels.

Limitations of Global Nuclear Regulations

- **Verification Inadequacies:** Concerns about illicit nuclear material trafficking and terrorism; IAEA lacks sufficient resources for effective monitoring.
- **Rapid Technology Advancements:** New reactor designs and fuel cycles outpace regulatory capabilities.
- **Noncompliance:** Example: Iran's alleged clandestine nuclear weapons program, violating NPT obligations.
- **Limited focus on disarmament:** E.g., Treaties like NPT do not specify an end date for achieving disarmament.
- **Dual-Use Technology:** Peaceful nuclear programs under safeguards can be diverted for military purposes.
- **Lack of Disarmament Commitment:** Nuclear-armed states hesitate due to strategic importance of nuclear weapons.
- **Lack of Trust:** Impedes international cooperation, effective agreements, and transparency between states on nuclear weapons.

Way forward

- **Increasing IAEA budget** and reforming its safeguards, security, and personnel systems.
  - IAEA can regularly review and adapt to address evolving challenges and technological advancements.
- **Negotiating new-age non-discriminatory nuclear arms control treaties** for complete nuclear disarmament.
- **Revisit safeguards and constraints placed on the production of fissile material,** so that they cannot be used for military purposes.
- **UN should advance international peace** and security through pursuit of elimination of nuclear and other weapons of mass destruction.

India's Nuclear Doctrine

- Building and maintaining a **credible minimum deterrent**
- A posture of **"No First Use" nuclear weapons** will only be used in retaliation against a nuclear attack on Indian territory or Indian forces anywhere
- Nuclear retaliation to a first **strike will be massive and designed to inflict unacceptable damage.**
- Nuclear retaliatory attacks can only be authorized by **the civilian political leadership through the Nuclear Command Authority.**
- **Continued commitment to the goal of a nuclear weapon-free** world, through global, verifiable and non- discriminatory nuclear disarmament.

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5.2. DRONES IN INDIA AT A GLANCE

Drones in India at a Glance

Drones in India

- **Drones:** Unmanned Aerial Vehicle (UAV) **which is intended to operate with no pilot on board.**
- **Role of drones in security**
  - Real time surveillance
  - Security planning, Search and Rescue
  - Drugs/Narcotics detection

Security Concerns with drones

- **Threat to national security:** They are **used to drop weapons and drugs** along the **Punjab border.**
- **Conventional radar systems are not meant for detecting** low flying objects. **E.g. A tiny drone landed on the deck of Britain's biggest warship.**
- **Easily accessible to terrorist groups** and provides them the **capability of air strikes. E.g. ISIS drone attack**
- They are **relatively cheaper, compact in comparison to conventional weapons** and yet can achieve far **more destructive results. E.g. Drone attack on Saudi Arabia's Aramco oil facility**
- **Remote Operation:** Controlled from a distance, minimizing risk to attackers.

Steps taken to regulate and mitigate security risk of drones

- **Draft Drone Rules, 2021** to increase ease of compliance for the industry, and ensure safety and security.
- **Ministry of Civil Aviation had issued National Counter Rogue Drones Guidelines in 2019**
- **Government set guidelines for anti-drone guns** to be deployed by security forces.
- **Anti-drone system: The Drone Detect, Deter and Destroy system (D4S) technology** by DRDO.
- **Drone (Amendment) Rules, 2022** were notified abolishing the requirement of a drone pilot licence.
- **Digital Sky platform** by DGCA for drone management.
- **Regulations on drone market** as government **banned the import** of drones **except for R&D and defence.**

Way Forward

- **International Standards:** Define acceptable limits for drone possession and use.
- **National Laws** to enable innovation in drones while restricting privacy infringements and airspace misuse.
- **Rectify Unmanned Aircraft System (UAS) classification:** shift from weight-based to performance based.
- **Incremental approach** in integrating drones in armed forces.
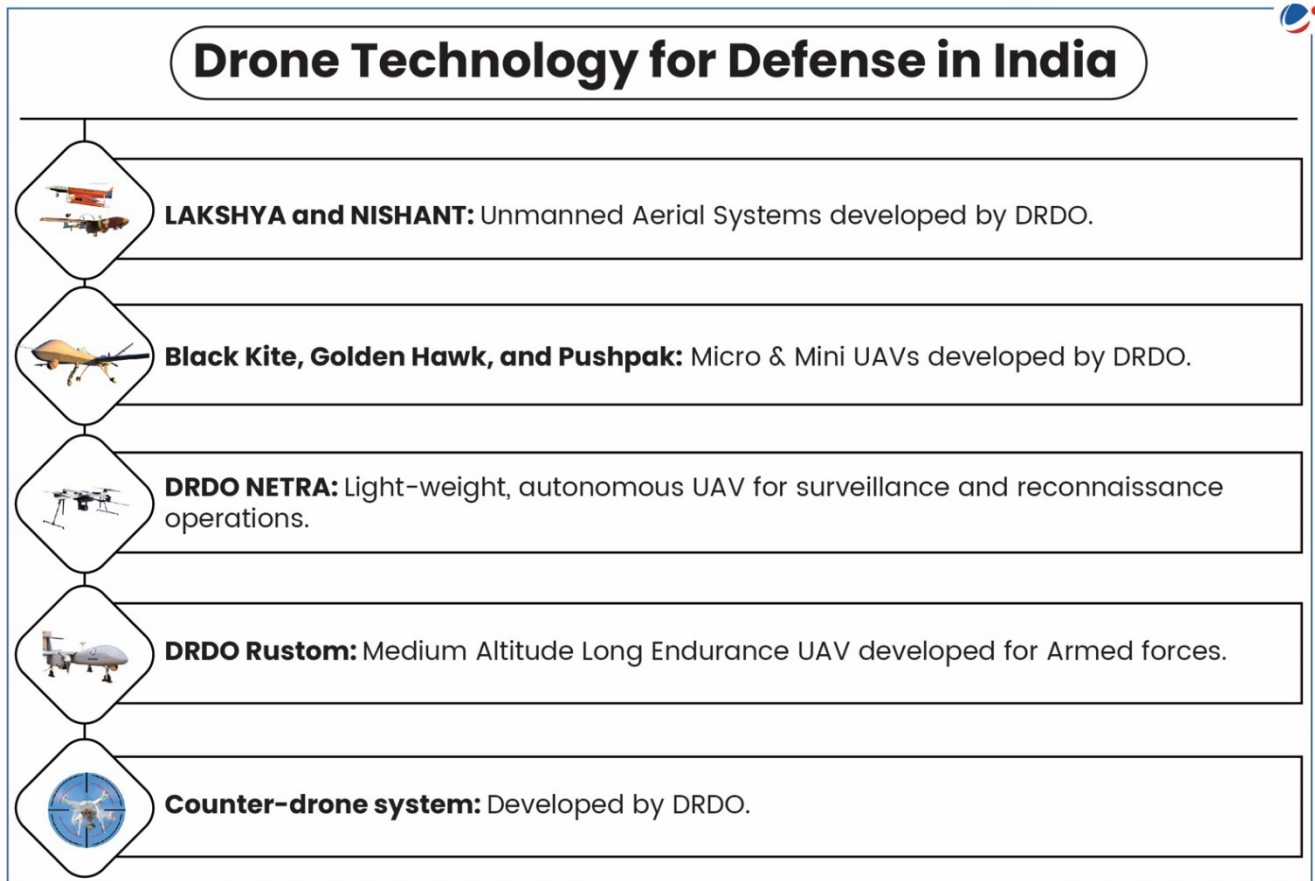- **Detection Technology: Micro-doppler radar** can detect drones and distinguish them from birds.

5.3. DRONES FOR DEFENSE

Why in the news?

DRDO successfully **tested autonomous flying wing technology demonstrator.**

About Autonomous flying wing technology demonstrator

- It is an **indigenous high-speed flying-wing** Unmanned Aerial Vehicle (UAV).
  - It has a **tailless fixed-wing aircraft** that houses its payload and fuel in its main wings.
  - It is a scaled-down version of its futuristic **unmanned combat aerial vehicle.**
- Designed and developed by DRDO's **Aeronautical Development Establishment.**
- **Drones** are powered aerial vehicles that **can fly autonomously or be piloted remotely** and can carry a **lethal or nonlethal payload(s)**.

Drone Technology for Defense in India

- **LAKSHYA and NISHANT:** Unmanned Aerial Systems developed by DRDO.
- **Black Kite, Golden Hawk, and Pushpak:** Micro & Mini UAVs developed by DRDO.
- **DRDO NETRA:** Light-weight, autonomous UAV for surveillance and reconnaissance operations.
- **DRDO Rustom:** Medium Altitude Long Endurance UAV developed for Armed forces.
- **Counter-drone system:** Developed by DRDO.

Significance of Drones for Defense

- **Intelligence gathering:** Used to identify enemy positions, assess the terrain, and track movements.
- **Precision strike**: Equipped with precision-guided munitions, which can be used to target enemy positions.
- **Search and rescue operations:** Used to locate and rescue personnel in hazardous or inaccessible areas.
- **Faster and easier to deploy** as they provide operational flexibility.
  - **Strategic:** Intelligence, Surveillance, and Reconnaissance (ISR) through real-time visuals and data to aid decision-making.
    - ✓ **Reduced risk to personnel**, **cost-effective** as compared to conventional manned aircraft, etc.
  - **Tactical: Precision strikes with minimal collateral damage**, improved **coordination and logistics in challenging terrain**, etc.

Challenges to India's Drone Potential

- **Lack of Research and Development.** E.g. India's gross expenditure on R&D at 0.65% of GDP is much lower than that of top 10 economies (Economic Survey 2020-21).
- **Lack of component ecosystem for drones** due to which the domestic manufacturers have to depend on imported materials from US, Israel etc.

- **Lack of testing facility diminishes organisational efficiency and escalating costs.** E.g. India's first Unmanned Aerial Systems (Drone) Common Testing Centre under Defence Testing Infrastructure Scheme would be established in Tamil Nadu.
- **Shortage of drone pilots,** software engineers, quality inspectors, service engineers and drone engineers.

Government Initiatives to promote Drones

- **Drone Shakti scheme** for institutionalizing and creating a framework where multiple stakeholders can work together.
- **PLI** scheme for drones and drone components.
- **India's Drone Rules 2021** to help start-ups and small and medium-sized enterprises.
- India is procuring **MQ-9B SkyGuardian drones from USA, Hermes-900 from Israel.**
- **Drone, Detect, Deter and Destroy (D4 System).**
- Anti-drone **(Vajra sentinel system)** under iDEX initiative.

5.4. MULTIPLE INDEPENDENTLY TARGETABLE RE-ENTRY VEHICLE (MIRV) TECHNOLOGY

Why in the News?

DRDO has conducted first successful flight test (named Mission Divyastra) of indigenously developed Agni-5 missile with Multiple Independently Targetable Re-Entry Vehicle (MIRV) technology.

About MIRV technology

- It allows a single missile to **carry multiple nuclear warheads,** each capable of striking different targets independently.
  - Warheads can be released from the **missile** at different speeds and in different directions.
- **First country:** USA to develop MIRV technology**.**
  - Russia, United Kingdom, France, and China also have MIRV Technology.
  - In 2017, Pakistan reportedly tested a MIRVed missile, the Ababeel.
- **MIRVs** can be launched from land or sea platforms (with submarine).
  - Use of MIRVs on submarines is considered less destabilizing than on land-based missiles as nuclear submarines (carrying these missiles) is difficult to locate.
- Although MIRVs were **not initially intended to defeat ballistic missile defences (BMD), however they** are considered **effective BMD countermeasures.**

Multiple Independently-Targetable Reentry Vehicles(MIRVs)

Re-entry Vehicles carrying nuclear warheads

Normal Missile   MIRV Missile

Each re-entry vehicle can be independently targeted launched from one missile, but hitting different targets

Challenges in MIRV technology

- **Vulnerable:** Land-based MIRVs are particularly **destabilizing** because many warheads on fewer missiles are vulnerable to attack**.**
- **Arm-race:** MIRVs held open the possibility of a damage-limiting first strike against an adversary's strategic nuclear forces**,** thereby exacerbating both arms-race and crisis instability.
- **Other Challenges:** Miniaturization of warheads, development of advanced guidance systems, requirement of additional fissile material like plutonium etc.
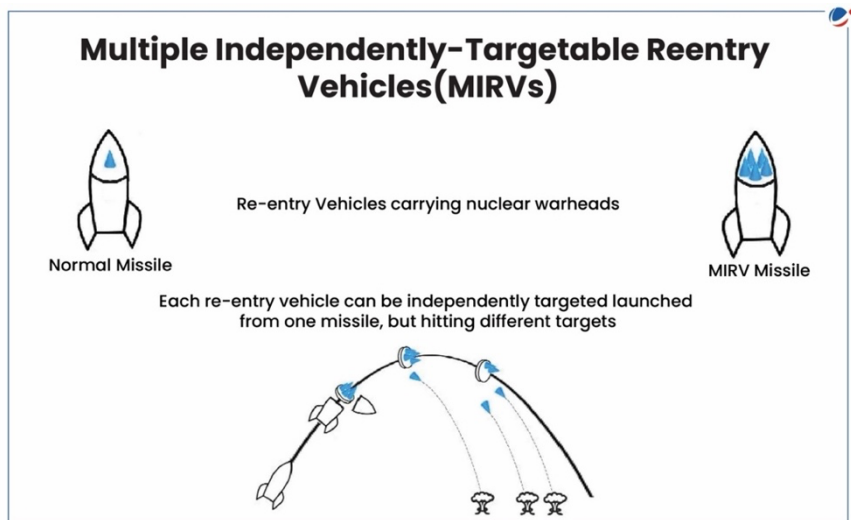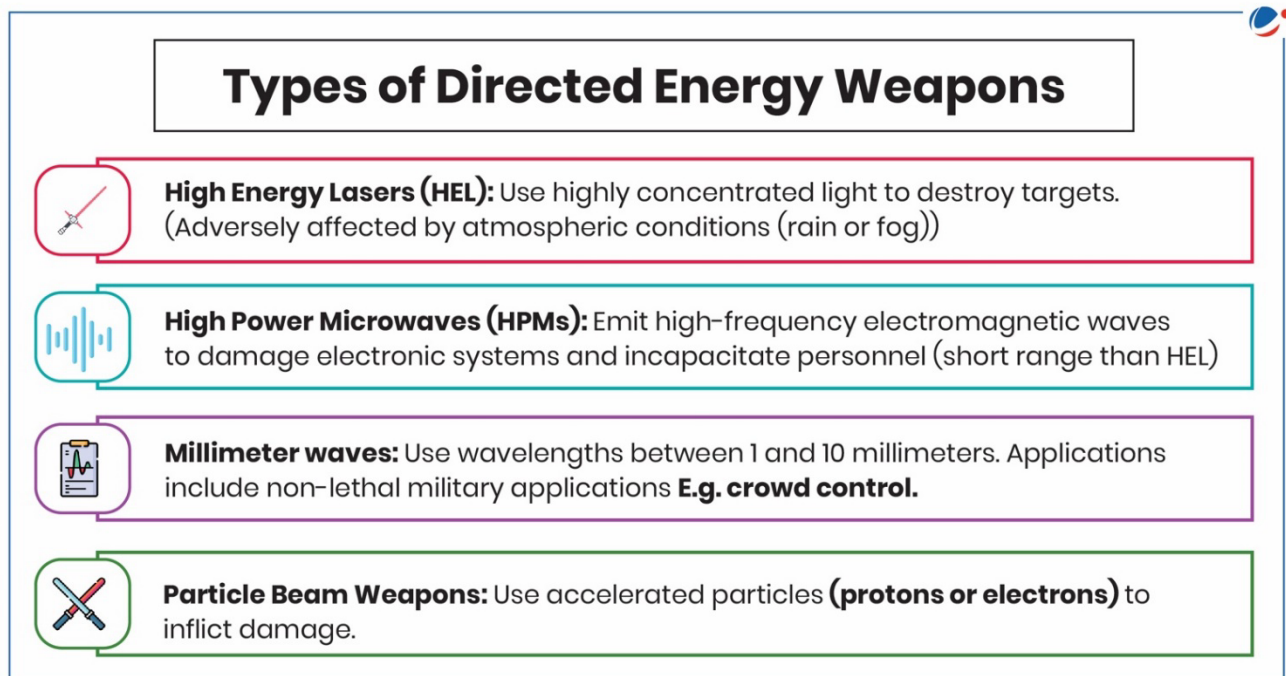
5.5. DIRECTED ENERGY WEAPONS

Why in the news?

Recently, significant investments have been made by India in fields of Directed Energy Weapons.

About Directed Energy Weapons (DEWs)

- **DEWs** are ranged weapons that **use concentrated energy** from **electromagnetic** or **particle technology,** rather than **kinetic energy,** to incapacitate, damage, disable or destroy enemy equipment, facilities, and/or personnel.
- **Applications of DEWs**
    - **Military Defense:** To intercept and destroy incoming missiles, neutralize drones, and disable enemy electronics.
    - **Law Enforcement and Border Security:** Non-lethal DEWs **e.g. microwaves or lasers** can be used for crowd control and border security.
    - **Space Operations:** To protect satellites from debris and anti-satellite weapons.

Types of Directed Energy Weapons

High Energy Lasers (HEL): Use highly concentrated light to destroy targets. (Adversely affected by atmospheric conditions (rain or fog))

High Power Microwaves (HPMs): Emit high-frequency electromagnetic waves to damage electronic systems and incapacitate personnel (short range than HEL)

Millimeter waves: Use wavelengths between 1 and 10 millimeters. Applications include non-lethal military applications **E.g. crowd control.**

Particle Beam Weapons: Use accelerated particles **(protons or electrons)** to inflict damage.

Advantages of DEWs

- **Complementary to conventional weapons**: DEWs use energy fired at speed of light, making them faster and potentially less costly.
- **Logistics**: **Eliminate need for traditional (physical) ammunition**, relying instead on a power source, which can simplify supply chains.
- **Precision:** Light and other forms of directed energy are **unaffected by gravity, wind, or Coriolis force**, allowing for **highly accurate targeting**.
- **Stealth**: Many DEWs **operate silently and invisibly**, especially those outside the visible spectrum, making them difficult to detect.

Challenges of DEWs

- **Technological limitations:** For example, fog and storms can reduce laser beam range and quality.
- **Battlefield use**: For example, wider beam DEWs such as high power microwave or millimeter wave weapons, affect all assets in an area, whether friend or foe.

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- **Ethical and health concerns**: Uncertainty around DEWs' long-term health effects on people (either intentionally or unintentionally exposed to directed energy) has raised ethical questions about their use.

Steps taken by India for DEWs

- **Directionally Unrestricted Ray-Gun Array (DURGA)-II Project:** Initiated by DRDO to build 100-kilowatt lightweight DEW.
- **2kW DEW System: Developed by Bharat electronic limited** for countering new threats like drones and Unmanned Aerial Systems.
- **Laser Science and Technology Centre (LASTEC)**: Laboratory of DRDO developing direct energy weapons.
- **Kilo Ampere Linear Injector (KALI):** A linear electron accelerator for targeting long-range missiles.

Global Scenario

- **US Department of Defense** has been spending an average of more than US$1 billion on DEWs, typically HELs and HPMs.
  - **Some deployed DEWs include** HEL with Integrated Optical-Dazzler and Surveillance (HELIOS), High Energy Laser Weapon System (HELWS) etc.
- **Russia, France, Germany, United Kingdom, Israel, and China** are reportedly among countries which have programmes to develop DEWs or Laser DEWs.

Conclusion

Given the persistent threat posed by its neighbours, particularly China and its vast technological prowess, India's defence needs to be prepared to deal with inevitable threat posed by both autonomous and hypersonic weapons, with DEWs as a potential solution.

6. APPENDIX: KEY DATA AND FACTS

Appendix: Key Data and Facts

STATE AND NON-STATE ACTORS

Left Wing Extremism

▶ Incident of LWE violence **reduced by 73%** from **2010.**

▶ **Initiatives taken to tackle LWE:** National Policy and Action Plan (2015); SAMADHAN strategy; Special taskforce Bastariya Batallion (CRPF); Skill Development Centres; Operation Octopus, Double Bull etc.

Insurgency in Northeast

▶ **Initiatives taken to restore peace**
- **Fencing of borders.** E.g. 95% of 856 km Indo-Bangladesh border in Tripura is fenced.
- **Priority to northeast routes under UDAN 4.0.**
- Development as **economic hub under Act East Policy** (National Bamboo Mission, Agri export Zones etc.).
- **Peace agreements like Bodo Peace Accord** (2020), Karbi Anglong Peace Agreement etc.
- **Other initiatives:** Maitri Setu with Bangladesh, **Bogibeel Bridge** connecting Assam and Arunachal Pradesh, Aspirational District Programmes, etc.

Illegal Migration

▶ **Initiatives to counter illegal migration**
- **Surakshit Jaaye, Prashikshit Jaaye campaign.**
- **Comprehensive Integrated Border Management System** (CIBMS).
- **Migration and mobility partnership agreements** with countries like France.
- **Global Compact for Safe, Orderly and Regular Migration under International Organization for Migration.**
- **Protocol against Smuggling of Migrants by Land, Sea and Air,** under UNTOC.

Armed Forces Special Powers Act (AFSPA) 1958

▶ **Judicial pronouncements on AFSPA**
- **Naga People's Movement of Human Rights v Union of India (1997):** SC **upheld constitutionality** of AFSPA and laid out procedure:
  • While declaring a region as "disturbed area", **state government's opinion** must be taken.
  • Act has to be **reviewed every six months** by the state.
- **Extra Judicial Execution Victim Families vs Union of India & Anr (2016): AFSPA is not invincible** and **ended immunity** of armed forces from prosecution under AFSPA.

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> **Committees related to AFSPA**
> - **B P Jeevan Reddy committee** (2005): **Repeal of AFSPA** by terming it a symbol of hate and oppression; Incorporation of AFSPA in **UAPA, 1967.**
> - **Second ARC (2007): AFPSA be repealed to remove feeling of discrimination and alienation** among North East people.
> - **Santosh Hegde committee** (2013): Appointed by SC to review **encounter killing** in Manipur since 1979.

THREAT TO INTERNAL SECURITY

Cyber Security

> **World Cybercrime Index (2024) ranks India as 10th** major cybercrime hotspots.
> Number of **cyber-attacks has doubled** since COVID-19 pandemic.
> **Financial frauds accounts for 75% of cybercrimes** in India (Jan 2020-June 2023) (Report of Future Crime Research Foundation).
> **Existing Mechanism for Cyber Security:** Joint Doctrine for Cyberspace Operations (2024), Cyber Swachta Kendra, I4C, CERT-In etc.

Critical Information Infrastructure (CII)

> **CII is declared by government under Sec 70 of IT Act 2000 (Amended in 2008).**
> **Initiatives for critical infrastructure protection:** National Cyber Security Policy, 2013, National Cyber Security Strategy 2020, National Cyber Coordination Centre (NCCC), NCIIPC etc.
> **Centre declared** certain databases related to **Census Monitoring and Management System, Population Enumeration and National Population Register as CII.**

Data Protection

> **Steps taken for data protection**
> - **BN Srikrishna Committee on** Data Protection Framework.
> - **Digital Personal Data Protection Act, 2023** by **MeitY: Seven Principles** (Consented, lawful, transparent etc.), **Governance** (Data Protection Board of India), **Applicability** (Within India and outside India) **etc.**
> - Right to Privacy Judgement **(Puttaswamy case),** etc.

Money Laundering

> **3 stages:** Placement, Layering, Integration.
> **Initiatives to prevent money laundering:** PMLA, 2002, PMLA Amendment 2023; ED and Financial Intelligence Unit – India; RBI, SEBI, FATF, Vienna Convention, etc.
> **Only 23 people convicted in 5,422 cases** registered under PMLA since law was implemented

Drug Trafficking	▶ **Myanmar** (close to NER) is **largest producer of opium** in world in 2023 (Southeast Asia Opium Survey 2023). ▶ **Highest Possession of drugs for trafficking: Punjab** (maximum), followed by UP, TN. (NCRB 2022 report). ▶ India is **one of the world's single largest opiate markets** in terms of users (World Drugs report 2022). ▶ **India has become transit hub and destination** for heroin and hashish produced in **Golden Triangle and Golden Crescent.** ▶ **Measures taken:** Operation Samudragupt; **Seizure Information Management System (SIMS)** and National Integrated Database on Arrested Narco-offenders **(NIDAAN);** UN Single Convention on Narcotics Drugs 1961 etc.
Terrorism	▶ **India** ranked **14th** on **Global Terrorism Index 2024** (Topped by Burkina Faso). ▶ No internationally agreed **definition of term "terrorism".** ▶ **India's Initiatives:** NIA; two new divisions (Counterterrorism and Counter-Radicalisation Division and Cyber and Security division) in MHA; **National Intelligence Grid etc.** ▶ **Global Initiatives:** Global Counterterrorism Forum (India is member); United Nations Global Counter-Terrorism Strategy (GCTS), 2006; **UNSC Counter-Terrorism Committee (CTC)** etc.
Unlawful Activities (Prevention) Act (UAPA), 1967	▶ **UAP Amendment Act 2019:** In addition to organizations, individuals can also be designated as terrorists by Government. ▶ **In 2023, SC stated that mere membership of a banned organization will be crime under UAPA.** (overruled its 2011 judgments in Arup Bhuyan vs State of Assam, Indra Das vs State of Assam and State of Kerala vs Raneef). ▶ **Prabir Purkayastha vs. State (NCT of Delhi) case, 2024:** SC ruled that investigative agencies should **provide written reasons for arrests** in cases related to UAPA.
Space Weaponisation	▶ **Armenia became 43rd Country to join Artemis Accords (India was 27th).** ▶ **India in race of space power:** Indian National Committee for Space Research (INCOSPAR) 1962, Mission Def-Space, Defence Space Agency 2019, IndSpaceEx etc. ▶ **Global Framework to prevent Weaponization of Space:** Outer Space Treaty (1967), Committee on Peaceful Uses of Outer Space (1959), Rescue Agreement (1968), Partial Test Ban Treaty (1963), PAROS etc.

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SECURITY CHALLENGES AND THEIR MANAGEMENT IN BORDER AREAS

Border Infrastructure

▶ **Initiatives to Strengthen Border infrastructure**
- **Border Infrastructure and Management (BIM).**
- **Implementation of recommendations of Shekatkar Committee** like Outsourcing road construction work, Introduction of modern construction plants, Land acquisition and all statutory clearances etc.
- **BOLD-QIT (Border Electronically Dominated QRT Interception Technique)** on Indo-Bangladesh and Pakistan border patches.
- **All-weather roads and tunnels** like **Atal tunnel** (connecting Manali to Lahaul-Spiti) and tunnel at **Shinku-La (for an all-weather road to Ladakh).**
- **Vibrant villages programme** and cross-border connectivity initiatives like **Myanmar Trilateral highway.**

Maritime Security

▶ **Challenges:** Terror attacks (**Houthi attacks in Red Sea impact trade route**), Piracy **in Arabian Sea,** Organised crimes, rising influence of USA and China, etc.

▶ **Measures taken:** Maritime Anti-Piracy Act, 2022; Sagar Kavach Exercise; Regional cooperation (MAHASAGAR, SAGAR, IORA); IFC-IOR, International Ship and Port Facility Security Code (ISPS) by IMO, etc.

SECURITY FORCES

Defence Modernisation

▶ **Initiatives for defence production and indigenization:** Defence Acquisition Procedure 2020, ADITI Scheme, iDEX and SRIJAN Portal.

▶ **Initiatives for improving military organization:** Agnipath scheme, Chief of Defence Staff, Integrated Battle Groups, Department of Military Affairs etc.

▶ **Other efforts:** Mission Defspace, Mission Shakti, Defence Testing Infrastructure Scheme, DRDO's dedicated labs for application-oriented research in AI etc.

Defence Exports

▶ India's defence export reached all-time high of approx. **US$ 2.63 billion in FY 2023-24 and** ranks among **top 25 arms exporters.**

▶ India set a target of **$5 billion** in defence exports by 2024-25.

▶ **Major arsenal exported:** Armoured protection vehicles, light-weight torpedo, weapons locating radar, fire control systems, offshore petrol vehicles etc.

▶ **Steps taken:** 25% of defence R&D budget, Simplified defence industrial licensing, etc.

Technology Absorption in Defence

▶ Indian Army is observing year 2024 as year of Technology Absorption.

▶ **Steps taken:** Indian Naval Indigenisation Plan (2015-2030), STEAG, Mission Shakti, **Project Akashteer, etc.**

▶ **Recommendations of Prof K Vijay Raghavan Committee:** Creation of Department of Defence Science, Technology, and Innovation; Establishment of Defence Technology Council chaired by PM etc.

7. SECURITY PREVIOUS YEAR QUESTIONS 2013-2023 (SYLLABUS-WISE)

Linkages between development and spread of extremism, Role of external state & non-state actors in creating challenges to internal security

- Winning of 'Hearts and Minds' in terrorism affected areas is an essential step in restoring the trust of the population. Discuss the measures adopted by the Government in this respect as part of the conflict resolution in Jammu and Kashmir. **(2023 10 marks)**

- Naxalism is a social, economic and developmental issue manifesting as a violent internal security threat. In this context, discuss the emerging issues gest a multilayered strategy to tackle the menace of Naxalism. **(2022 15 marks)**

- Analyse 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. **(2021 15 Marks)**

- The banning of 'Jammat-e-Islami' in Jammu and Kashmir brought into focus the role of over-ground workers (OGWs) in assisting terrorist organizations. Examine the role played by OGWs in assisting terrorist organizations in insurgency affected areas. Discuss measures to neutralize influence of OGWs. **(2019 10 Marks)**

- Indian Government has recently strengthened the anti-terrorism laws by amending the unlawful Activities (Prevention) Act (UAPA), 1967 and the NIA act. Analyze the changes in the context of prevailing security environment while discussing the scope and reasons for opposing the UAPA by human rights organizations. **(2019 15 Marks)**

- What are the determinants of left-wing extremism in Eastern part of India? What strategy should Government of India, civil administration and security forces adopt to counter the threat in the affected areas? **(2018 15 Marks)**

- Left Wing Extremism (LWE) is showing a downward trend, but still affects many parts of the country. Briefly explain the Government of India's approach to counter the challenges posed by LWE. **(2018 10 Marks)**

- 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. **(2017 10 Marks)**

- The persisting drives of the Government for development of large industries in backward areas have resulted in isolating the tribal population and the farmers who face multiple displacements. With Malkangiri and Naxalbari foci, discuss the corrective strategies needed to win the Left Wing Extremism (LWE) doctrine affected citizens back into the mainstream of social and economic growth. **(2015 12.5 Marks)**

- Article 244 of the Indian Constitution relates to administration of scheduled areas and tribal areas. Analyse impact of non-implementation of the provisions of the Fifth schedule on the growth of Left Wing extremism. **(2013 10 Marks)**

Challenges to internal security through communication networks, Role of media and social networking sites in internal security challenges, Basics of cyber security

- What are the different elements of cyber security ? Keeping in view the challenges in cybersecurity, examine the extent to which India has successfully developed a comprehensive National Cyber Security Strategy **(2022 15 marks).**

- Keeping in view India's internal security, analyse the importance of cross-border cyber attacks. Also discuss defensive measures against these sophisticated attacks. **(2021 10 Marks)**

- Discuss different types of cybercrimes and measures required to be taken to fight the menace. **(2020 10 Marks)**

- What is CyberDome Project? Explain how it can be useful in controlling internet crimes in India. **(2019 10 Marks)**

- Data security has assumed significant importance in the digitized world due to rising cybercrimes. The Justice B.N. Srikrishna Committee Report addresses issues related to data security. What, in your view, are

the strengths and weaknesses of the Report relating to protection of personal data in cyber space? **(2018 15 Marks)**

- Discuss the potential threats of Cyber-attack and the security framework to prevent it. **(2017 10 Marks)**
- Mob violence is emerging as a serious law and order problem in India. By giving suitable examples, analyse causes and consequences of such violence. **(2017 15 Marks)**
- Use of internet and social media by non-state actors for subversive activities is a major security concern. How have these been misused in the recent past? Suggest effective guidelines to curb the above threat. **(2016 12.5 Marks)**
- Discuss the advantages and security implications of cloud hosting of servers vis-a-vis in-house machine-based hosting for government businesses. **(2015 12.5 Marks)**
- Religious indoctrination via digital media has resulted in Indian youth joining the ISIS. What is ISIS and its mission? How can ISIS be dangerous to the internal security of our country? **(2015 12.5 Marks)**
- Considering the threats cyberspace poses for the country, India needs a "Digital Armed Forces" to prevent crimes. Critically evaluate the National Cyber Security Policy, 2013 outlining the challenges perceived in its effective implementation. **(2015 12.5 Marks)**
- What are social networking sites and what security implications do these sites present? **(2013 10 Marks)** 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 cyber threats which India is vulnerable to and bring out the state of the country's preparedness to deal with the same. **(2013 10 Marks)**

Money-laundering and its prevention

- Discuss how emerging technologies and globalization contribute to money laundering. Elaborate measures to tackle the problem of money laundering both at national and international levels. **(2021 10 Marks)**
- Money laundering poses a serious security threat to a country's economic sovereignty. What is its significance for India and what steps are required to be taken to control this menace? **(2013 10 Marks)**

Security challenges and their management in border areas; Linkages of organized crime with terrorism, Various Security forces and agencies and their mandate

- Give out the major sources of terror funding in India and efforts being made to curtail these sources. In the light of this, also discuss the aim and objective of the 'No Money for Terror [NMFT]' Conference recently held at New Delhi in November 2022. **(2023, 15 marks)**
- What are the internal security challenges being faced by India? Give out the role of Central Intelligence and Investigative Agencies tasked to counter such threats. **(2023, 15 marks)**
- 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, 10 marks)**
- Discuss the types of organised crimes. Describe the linkages between terrorists and organised crime that exist at the national and transnational levels **(2022, 10 marks).**
- What are the maritime security challenges in India ? Discuss the organisational, technical and procedural initiatives taken to improve the maritime security **(2022, 10 marks).**
- Analyse the complexity and intensity of terrorism, its causes, linkages and obnoxious nexus. Also suggest measures required to be taken to eradicate menace of terrorism. **(2021 15 Marks)**
- For effective border area management, discuss the steps required to be taken to deny local support to militants and also suggest ways to manage favourable perception among locals. **(2020 10 Marks)**
- Analyse 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. **(2020 15 Marks)**
- Cross-Border movement of insurgents is only one of the several security challenges facing the policing of the border in North-East India. Examine the various challenges currently emanating across the India-Myanmar border. Also, discuss the steps to counter the challenges. **(2019 15 Marks)**

- India's proximity to the 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 15 Marks)**
- 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? **(2017 15 Marks)**
- 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. **(2016 12.5 Marks)**
- 'Terrorism is emerging as a competitive industry over the last few decades." Analyse the above statement. **(2016 12.5 Marks)**
- 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 12.5 Marks)**
- Human right 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. **(2015 12.5 Marks)**
- "The diverse nature of India as a multi-religious and multi-ethnic society is not immune to the impact of radicalism which is seen in her neighbourhood." Discuss along with strategies to be adopted to counter this environment. **(2014 12.5 Marks)**
- 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 which this poses and suggest ways to contain the threat. **(2014 12.5 Marks)**
- How does illegal transborder migration pose a threat to India's security? Discuss the strategies to curb this, bringing out the factors which give impetus to such migration. **(2014 12.5 Marks)**
- In 2012, the longitudinal marking for high-risk areas for piracy was moved from 65 degrees east to 78 degrees east in the Arabian Sea by the International Maritime Organization. What impact does this have on India's maritime security concerns? **(2014 12.5 Marks)**
- China and Pakistan have entered into an agreement for development of an economic corridor. What threat does this pose for India's security? Critically examine. **(2014 12.5 Marks)**
- 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? **(2013 10 Marks)**

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4.	Indigenisation of Defence Industry: From Necessity to Opportunity	

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5.	Hybrid Warfare: New age war warrants a new age response	
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