

# CURRENT AFFAIRS

WEEKLY



## MAINS ARTICLE

### GS-II

- CHENNAI-VLADIVOSTOK EASTERN MARITIME CORRIDOR
- INDIA-RUSSIA RELATIONSHIP
- CHINA'S PAN-ASIAN RAILWAY INITIATIVE
- BIODIVERSITY BEYOND NATIONAL JURISDICTION (BBNJ) AGREEMENT
- RAJASTHAN ROAD SAFETY ACTION PLAN
- SC HOLDS BENGAL'S SUIT MAINTAINABLE
- LOW FEMALE LABOUR FORCE PARTICIPATION
- ARTICLE 361 AND IMMUNITY CHALLENGE
- DRAFT DIGITAL COMPETITION BILL, 2024

### GS-III

- GLOBAL SHIPPING INDUSTRY & CHALLENGES
- RUSSIA'S RESILIENCE IN FACE OF SANCTIONS
- UNEMPLOYMENT IN INDIA
- NEGATIVE SOIL MOISTURE ANOMALY (SMA)
- FAST FASHION & ENVIRONMENT

## PRELIMS ARTICLE

### GEOGRAPHY

- Upper Siang Multipurpose Storage Project
- Teesta River

### INTERNATIONAL RELATIONS

- Hannibal Directive

### POLITY & GOVERNANCE

- NITI Aayog's Sampoonata Abhiyan
- New Provisions for Police Officer
- Classical Languages

### ECONOMY

- Vadhavan Port
- India's Balance of Payments
- IMF's Artificial Intelligence Preparedness Index (AIPI)
- RBI's Financial Inclusion (FI) Index

### ENVIRONMENT

- Beki River's Changing Course
- Ancient Ice of Antarctica
- People's Biodiversity Register (PBR)
- New species of Horned Frog (Xenophrys apatani)
- Gharial (Gavialis gangeticus)
- Yak (Bos grunniens)

### SCIENCE & TECHNOLOGY

- Indian Astronauts Selected for Axiom-4 Mission to ISS
- Earth observation (EO) Data
- African Swine Fever (ASF)
- Stryker Armoured Infantry Combat Vehicles

**GS SCORE**

An Institute for Civil Services

[www.iasscore.in](http://www.iasscore.in)

## DISCLAIMER

**T**he current affairs articles are segregated from prelims and mains perspective, such separation is maintained in terms of structure of articles. Mains articles have more focus on analysis and prelims articles have more focus on facts.

However, this doesn't mean that Mains articles don't cover facts and PT articles can't have analysis. You are suggested to read all of them for all stages of examination.

# CONTENT

2<sup>nd</sup> WEEK - JULY, 2024

## SECTION - A

### INTERNATIONAL RELATIONS (GS-II)

- Chennai-Vladivostok Eastern Maritime Corridor ..... 01
- India-Russia Relationship ..... 03
- China's Pan-Asian Railway Initiative ..... 05
- Biodiversity Beyond National Jurisdiction (BBNJ) Agreement ..... 06
- Low Female Labour Force Participation ..... 9
- Article 361 and Immunity Challenge ..... 10
- Draft Digital Competition Bill, 2024 ..... 11

### POLITY & GOVERNANCE (GS-II)

- Rajasthan Road Safety Action Plan ..... 7
- SC holds Bengal's Suit Maintainable ..... 9
- Global Shipping Industry & Challenges ..... 12
- Russia's resilience in face of Sanctions ..... 13
- Unemployment in India ..... 14
- Negative Soil Moisture Anomaly (SMA) ..... 16
- Fast Fashion & Environment ..... 17

### ECONOMY (GS-III)

## SECTION - B

### GEOGRAPHY

- Upper Siang Multipurpose Storage Project ..... 19
- Teesta River ..... 19

### INTERNATIONAL RELATIONS

- Hannibal Directive ..... 21

### POLITY & GOVERNANCE

- NITI Aayog's Sampoonata Abhiyan ..... 21
- New Provisions for Police Officer ..... 21

### ECONOMY

- Classical Languages ..... 22
- Vadhavan Port ..... 22
- India's Balance of Payments ..... 22
- IMF's Artificial Intelligence Preparedness Index (AIPI) ..... 24

- RBI's Financial Inclusion (FI) Index ..... 24

### ENVIRONMENT

- Beki River's Changing Course ..... 25
- Ancient Ice of Antarctica ..... 26
- People's Biodiversity Register (PBR) ..... 27
- New species of Horned Frog (*Xenophrys apatani*) ..... 27
- Gharial (*Gavialis gangeticus*) ..... 27
- Yak (*Bos grunniens*) ..... 28

### SCIENCE & TECHNOLOGY

- Indian Astronauts Selected for Axiom-4 Mission to ISS ..... 28
- Earth observation (EO) Data ..... 28
- African Swine Fever (ASF) ..... 29
- Stryker Armoured Infantry Combat Vehicles ..... 30



# GS SCORE

An Institute for Civil Services

“ You Decide **Your SCORE.**  
Toppers **Do It Better!** ”

## COURSES for IAS 2025-26



**GS  
FOUNDATION**



**MAINS  
CLASSES**



**OPTIONAL  
FOUNDATION**



**TEST  
SERIES**

- POL. SCIENCE
- ANTHROPOLOGY
- SOCIOLOGY
- LAW
- HISTORY
- GEOGRAPHY
- PUB. AD.

- PRELIMS TEST SERIES
- MAINS TEST SERIES
- INTEGRATED TEST SERIES
- OPTIONAL TEST SERIES



I am grateful to GS SCORE for providing guidance to me and many more aspirants. I practiced a lot with GS SCORE.

AISHWARYAM PRAJAPATI (AIR-10, CSE 2023)



I am truly grateful to GS SCORE for their guidance. They offered genuine mentorship.

MEDHA ANAND (AIR 13, CSE 2023)

Access

**400+**  
**TOPPER'S  
COPIES**



Scan QR Code  
to get the copies

Only **SCORE** Matters!

- IASSCOREofficial
- gsscoreofficial
- gsscoreofficial iasscore
- gsscoreofficial
- gsscoreofficial/

For Information, Contact

**8448496262**

Website:

<https://iasscore.in/>

## SECTION -A

# MAINS ISSUES

### CHENNAI-VLADIVOSTOK EASTERN MARITIME CORRIDOR

#### CONTEXT

Prime Minister Modi announced the commencement of the Chennai-Vladivostok Eastern Maritime Corridor during a community program in Moscow, Russia.

#### About the Project

- The Chennai-Vladivostok Maritime route connects Chennai on **India's east coast with Vladivostok**, Russia's eastern port city, opening a plethora of opportunities for trade and investment for both countries.



- Vladivostok is the end point of the **Trans-Siberian Railway**, the fourth in terms of cargo turnover, and the first free seaport of the Far East.
- The Vladivostok-Chennai route passes through the Sea of Japan past the Korean peninsula, Taiwan and the Philippines in the South China Sea, past Singapore and through the Strait of Malacca, to emerge into the **Bay of Bengal** and then cuts across through the **Andaman and Nicobar archipelago to Chennai**.
- This sea route covers a distance of approximately 5,647 nautical miles or about 10,500 km

#### Need of new route (to improve connectivity):

- Lack of connectivity is one of the reasons for limited trade between India and Russia, which has for the past few years hovered around the US \$12-13 billion level.
- At present, the two countries are linked through the traditional European route which passes through **Red Sea, Mediterranean Sea and Baltic Sea**.
- Operationalised in 2000, the circuitous route spans from the **Nhava Sheva Port** in Mumbai to the Port of St. Petersburg in Russia and goods take an average of 40 days to cover the distance of 8,675 nautical miles or about 16,000 km.

#### Significance

- **Shorter route:** The **Chennai-Vladivostok corridor** is a shorter alternative to the current **Mumbai-St. Petersburg sea route**, reducing shipping distances to about 5,400 km and transport time to approximately 24 days.



## FACT BOX

### Far East

- The Far East is the easternmost part of Russia.
  - The macro-region borders two oceans, the Pacific and the Arctic, and five countries — **China, Japan, Mongolia, the United States and the DPRK.**
  - Located on the **Golden Horn Bay** north of North Korea and a short distance from Russia's border with China, the region extracts 98 per cent of Russian diamonds, 50 per cent of Gold, 14 per cent of Tungsten, and 40 per cent of fish and seafood and has about one-third of Russia's coal reserves.
- **Ideal gateway:** The strategic location of Chennai Port on the Bay of Bengal makes it an ideal gateway for trade with Southeast Asian countries like Thailand, Vietnam, and Indonesia.
  - **Key commodities** such as **crude oil, coal, LPG, and various goods** are expected to benefit from faster transportation.
- **Better trade:** The trade route promises to enhance trade not only between India and Russia but also with countries like **Singapore, Thailand, Vietnam, Malaysia, and Indonesia.**
  - **Immense opportunities:** The **Port of Vladivostok** in Russia provides access to the resource-rich **Far East region**, offering immense opportunities for Indian businesses to tap into the market sectors like energy, mining, and technology.
- **Economic Impact:**
    - ▶ The corridor is set to boost Chennai's economic prominence by increasing cargo traffic with Southeast Asian nations and potentially reaching landlocked Mongolia.
    - ▶ It positions Chennai to become a robust economic hub similar to Mumbai.
    - ▶ Russia aims to double its current trade volume with India through the Vladivostok port, currently at 150 million tonnes.



FIGURE: 01



**FACT BOX**

**International North-South Transport Corridor (INSTC)**

- The International North-South Transport Corridor (INSTC) and the Chennai-Vladivostok, or Eastern Maritime Corridor, would ensure transportation corridors between both the Western and Eastern coasts of India with Russia.
- The INSTC was established in September 2002 between **Iran, India and Russia**.
- The **7,200-kilometre-long multi-modal transportation corridor** facilitates the movement of freight between **Afghanistan, Armenia, Azerbaijan, Russia, Central Asia and Europe, besides Iran and India**.

*(see Figure No. 1 on previous page)*

**UPSC PYQ**

**Q: Mention the significance of straits and isthmus in international trade. (2022)**

**INDIA-RUSSIA RELATIONSHIP**

**CONTEXT**

Prime Minister Modi’s first bilateral visit to Russia after being sworn in, showcases the importance of India-Russia ties for India, especially in energy and defence. India and Russia have maintained a relationship for over seventy years. However, as India has expanded its global ties in a **multi-polar world**, its partnership with Russia has seen stagnation in some areas and decline in others.

**Defence** remains the strongest aspect of their strategic alliance, with significant cooperation also in **nuclear and space sectors**.

**Significance of Russia for India**

- **Critical Defence Interests:** India heavily relies on Russian and Soviet-origin defence equipment, constituting 60-70% of its arsenal. Cooperation includes joint R&D, co-development, and production of various military systems like **S-400 missiles, MiG-29s, and tanks**.
  - ▶ India’s armed forces still rely heavily on armoured divisions and 97 percent of its 3,740 tanks are Russian-made.
  - ▶ The **Brahmos supersonic antiship missile**, for instance, was jointly designed by Indian and Russian engineers for the Indian armed forces and first tested in 2001.
  - ▶ Russian joint ventures with India also include making

- ◆ 35,000 Kalashnikov AK203 assault rifles for the Indian army
- ◆ licensed production of **advanced T-90 tanks** and **Sukhoi Su-30-MKI fourth-generation** fighter jets
- ◆ maintenance facilities for **India’s MiG-29 fighter jets**
- ◆ collaboration on making the Konkurs antitank guided missile
- ▶ India urgently needs assistance with its **Sukhoi fighter jets**, especially the **SU-30MKI**, of which 272 are in operation, and form the backbone of the **Indian Air Force**.
- **Economic Link:** In 2023, India imported approximately 6.4 million tonnes of fertiliser from Russia, underscoring Russia’s role as a key supplier for the Indian farmer amid global supply chain disruptions.
- **Oil Trade Boost:** India buys Russian oil at discounted rates, significantly impacting bilateral trade.
  - ▶ Despite the threat of even more US sanctions, Russia has become the **No.1 supplier of oil for India**, which in turn is the **top buyer of seaborne Russian oil**. In June, India bought a stunning 2.13 million barrels of oil per day from Russia.
  - ▶ This trade helps mitigate inflation from rising crude prices, though it creates diplomatic **challenges with Western allies** due to Russia’s actions in Ukraine.

**Limits of Friendship (Challenges)**

While India has secured a trifecta of benefits—defence security, discounted fertiliser, and continued energy security through affordable oil and gas—the limitations of this friendship are becoming increasingly apparent.

- **Peaceful Resolution in Ukraine:** India’s calls for a peaceful resolution in Ukraine, amidst global economic challenges, may be seen by Russia as mere rhetoric.
- **Silence on China’s Aggression:** Russia’s silence on China’s aggression in the Himalayas is notable, especially since a significant portion of Chinese arms imports in 2023 came from Russia.
- **Trade Deficit:** India faces a substantial trade deficit with Russia, currently around \$60 billion. This deficit is due to low demand for Indian products in Russia and Russian companies’ hesitancy to invest significantly in India.
- **US Factor:** United States is concerned about India’s relationship with Russia.

**Factors irritating United States in India-Russia Relations**

- India continues to strengthen its trade and diplomatic relationship with the **world’s most-sanctioned country**.
- India has taken a **neutral stance** regarding Ukraine.
- The **Chennai-Vladivostok maritime route** and the **International North-South Transport Corridor (INSTC)**, are aimed at long-term integration of the Indian and Russian economies. The INSTC also brings **Iran** - another American adversary - into the mix.

## MILITARY

## India-Russia military cooperation

India and Russia have a longstanding defence relationship, through which India acquires large amounts of weaponry for its armed forces.

Here are some of the weapons produced through Russia-India joint ventures:



FIGURE: 02

- India has even defied the US to strike a 10-year deal to develop **Iran's Chabahar port**.
- India significantly boosted India-Russia cooperation in military affairs. For example, India bought the **Russian S-400 missile defense systems**.
- India and Russia are considering cooperation on numerous strategic areas such as **joint production of weapons, reciprocal access to military facilities, joint deployment of troops, warships and fighter jets**.

### Indo-US vs Indo-Russia Defence Deals

Aspect	Indo-US Defence Deals	Indo-Russian Defence Deals
<b>Historical Background</b>	Started gaining momentum post-Cold War.	Strong and longstanding since the Cold War era.
<b>Nature of Cooperation</b>	Emphasizes technology transfer and joint development.	Primarily involves supply of Russian equipment and technology.

Aspect	Indo-US Defence Deals	Indo-Russian Defence Deals
<b>Key Equipment</b>	Includes advanced aircraft (e.g., P-8I, Apache), naval systems (e.g., drones, ships), Stryker Armoured Infantry Combat Vehicles	Includes fighter jets (e.g., Su-30MKI, MiG-29), missiles (e.g., BrahMos), tanks (e.g., T-90).
<b>Strategic Implications</b>	Seen as bolstering India's capabilities vis-à-vis China.	Ensures reliable supply of critical defence equipment.

### UPSC PYQ

**Q:** What is the significance of Indo-US defence deals over Indo-Russian defence deals? Discuss with reference to stability in the Indo-Pacific region. (2020)



# CHINA'S PAN-ASIAN RAILWAY INITIATIVE

## CONTEXT:

China is taking interest in constructing a **pan-Asian railway network** to bolster regional connectivity and economic integration across Southeast Asia. This initiative forms a crucial part of **China's broader Belt and Road Initiative (BRI)**. Malaysia's **ECRL project** is sometimes linked to

a **China-led "pan-Asian" railway network** that would connect the southern Chinese city and transportation hub of Kunming with Singapore at the tip of the Malaysian peninsula by lines running across multiple Southeast Asian countries.

## What is East Coast Rail Link (ECRL)?

- The ECRL is a significant railway project in Malaysia, spanning 665 kilometers from **Kota Bharu to Port**

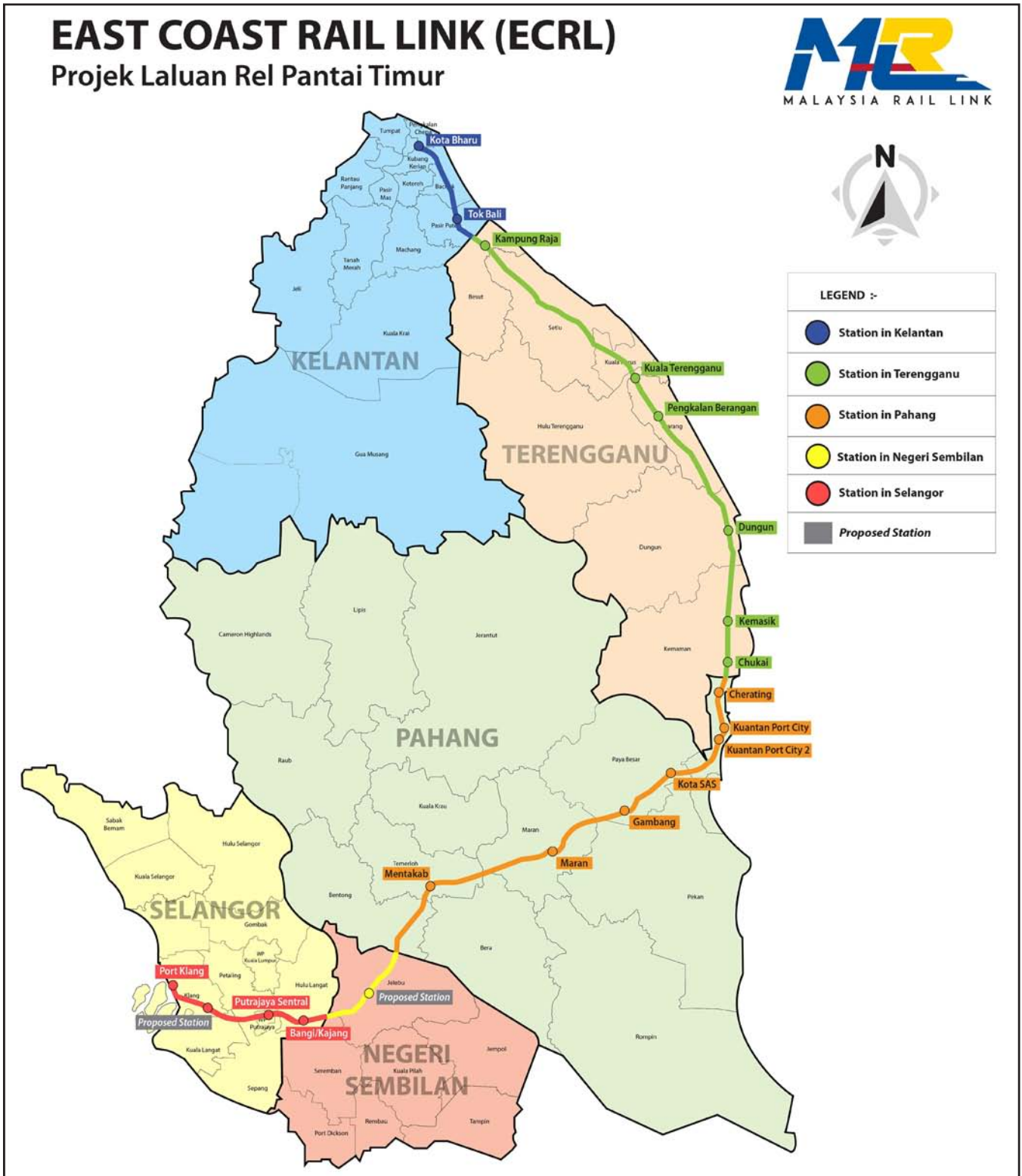


FIGURE: 03

**Klang.**

- Originally started in 2017, the project faced funding issues and political obstacles before resuming in 2020.
- It is expected to enhance economic ties and infrastructure development between China and Malaysia.

**China's Pan-Asian Rail Network Plans**

- China envisions a comprehensive pan-Asian rail network comprising three main lines:
  - Western line:** Kunming through Myanmar and Thailand.
  - Central line:** Laos and Thailand.
  - Eastern line:** Vietnam, Cambodia, and Thailand. These lines aim to facilitate trade and travel across the region, with potential extensions to connect to Singapore, a key global trade hub.
- Current Status and Challenges:** While progress has been made, challenges such as varying railway track widths and economic viability have slowed implementation:
  - Laos-China section operational since 2021; other sections facing delays.
  - High costs and logistical complexities in Thailand and other countries.
  - Questions regarding the economic benefits and demand for rail transport versus maritime shipping.

**China's Regional Strategy and BRI**

- China's involvement in Southeast Asia through infrastructure investments under the BRI aims to strengthen economic ties and geopolitical influence:
  - Significant trade volumes between China and ASEAN underscore economic interdependence.
  - Despite concerns over debt and terms of financing, China aims to build goodwill through infrastructure development.
  - Geopolitical tensions in the South China Sea influence regional dynamics, with China seeking to balance economic cooperation and territorial disputes.

**FACT BOX****China's Belt and Road Initiative (BRI)**

- Launched in:** 2013
- China's Belt and Road Initiative (BRI), sometimes referred to as the **New Silk Road**, is one of the most ambitious infrastructure projects ever conceived.
- The BRI, often referred to as the **New Silk Road**, is a colossal network of infrastructure projects designed to facilitate trade, economic development, and cultural exchange.
- It consists of two primary components:
  - the Silk Road Economic Belt, which stretches overland across Asia

- the 21st Century Maritime Silk Road, which traverses the seas
- These routes will ultimately connect **China to Europe, the Middle East, and Africa**, fostering greater trade and communication between countries.
- It has since expanded to **Oceania and Latin America**, significantly broadening China's economic and political influence.

## BIODIVERSITY BEYOND NATIONAL JURISDICTION (BBNJ) AGREEMENT

**CONTEXT**

The Union Cabinet approved India's signing of the **Biodiversity Beyond National Jurisdiction (BBNJ) Agreement**. This agreement focuses on conserving and sustainably using marine biodiversity in areas beyond national jurisdiction, often referred to as the 'High Seas'.

**About the Agreement**

- The BBNJ Agreement, part of the **United Nations Convention on the Law of the Sea (UNCLOS)**, aims to protect marine biodiversity in the high seas.
- The agreement provides for the **common governance of about half of the Earth's surface and 95% of the ocean's volume**, the largest habitat on our blue planet.
- It establishes mechanisms for sustainable use through international cooperation and coordination.
- Objective:** The treaty is meant "to prevent a cascading of species extinctions" brought on by overfishing, oil extraction, deep-sea mining and other activities with environmental impacts that occur in the high seas.

It enables Marine Protected Areas (MPAs) to be established within the high seas, which will limit the presence of harmful human activities.

**Features and Principles:**

- Parties cannot claim sovereign rights over marine resources in the high seas, ensuring fair and equitable benefit-sharing.
- Emphasizes an ecosystem-centric approach, integrating traditional knowledge and scientific insights.
- Promotes environmental impact assessments and area-based management tools to minimize harm to marine ecosystems.
- Implementation:** The Ministry of Earth Sciences will lead India's implementation of the BBNJ Agreement. When ratified, it will be the third UNCLOS implementation agreement, alongside those regulating seabed mining and fish stocks.

**Need of the Agreement**

- Overexploitation of Global Fish Stocks:** As of 2023, 90% of large fish populations are depleted. Overfishing disrupts marine food chains and ecosystems, impacting biodiversity.

- **Plastic Pollution:** Millions of tons of plastic waste with toxic chemicals enter coastal ecosystems. This harms marine life such as fish, sea turtles, seabirds, and mammals. Plastic enters the food chain and can affect human health.
- **Climate Change Impact on Oceans:** Global warming is raising ocean temperatures. This leads to more severe storms, higher sea levels, and salinization of coastal areas. These changes threaten marine habitats and coastal communities.

**Benefits for India:**

- It will enhance India’s strategic presence beyond its Exclusive Economic Zone (EEZ), facilitating scientific research, technology transfer, and capacity building.
- Furthermore, it will strengthen marine conservation efforts and promotes collaborations for shared benefits and sustainable development.



**FACT BOX**

**UNCLOS:**

- Adopted in 1982, UNCLOS governs maritime boundaries, marine resource rights, and dispute resolution.
- It establishes the International Seabed Authority to regulate deep-sea mining activities.
- Over 160 countries have ratified UNCLOS, ensuring orderly use of the world’s oceans.

**Mapping the High Seas**

- The “high seas” refers to international waters — sea space that doesn’t fall within any nation’s sovereign or extended maritime zone.

- It lies outside any country’s **exclusive economic zone (EEZ)**, make up 64% of global ocean and cover 46% of Earth’s surface.
- Nearly half of planet is beyond the reach of any enforceable law or governance.
- It is estimated that just 1.3% of the High Seas is protected, compared to 17% of the land.

**MPAs in India**

- A marine protected area (MPA) is a section of the ocean where a government has placed limits on human activity.
- MPAs in India are designated under the **Wildlife (Protection) Act of 1972**.
- There are 31 MPAs in India. MPAs occupy less than 4.01% of the total area of all Protected Areas in India.

*(see Figure No. on bottom of the page)*

**RAJASTHAN ROAD SAFETY ACTION PLAN**

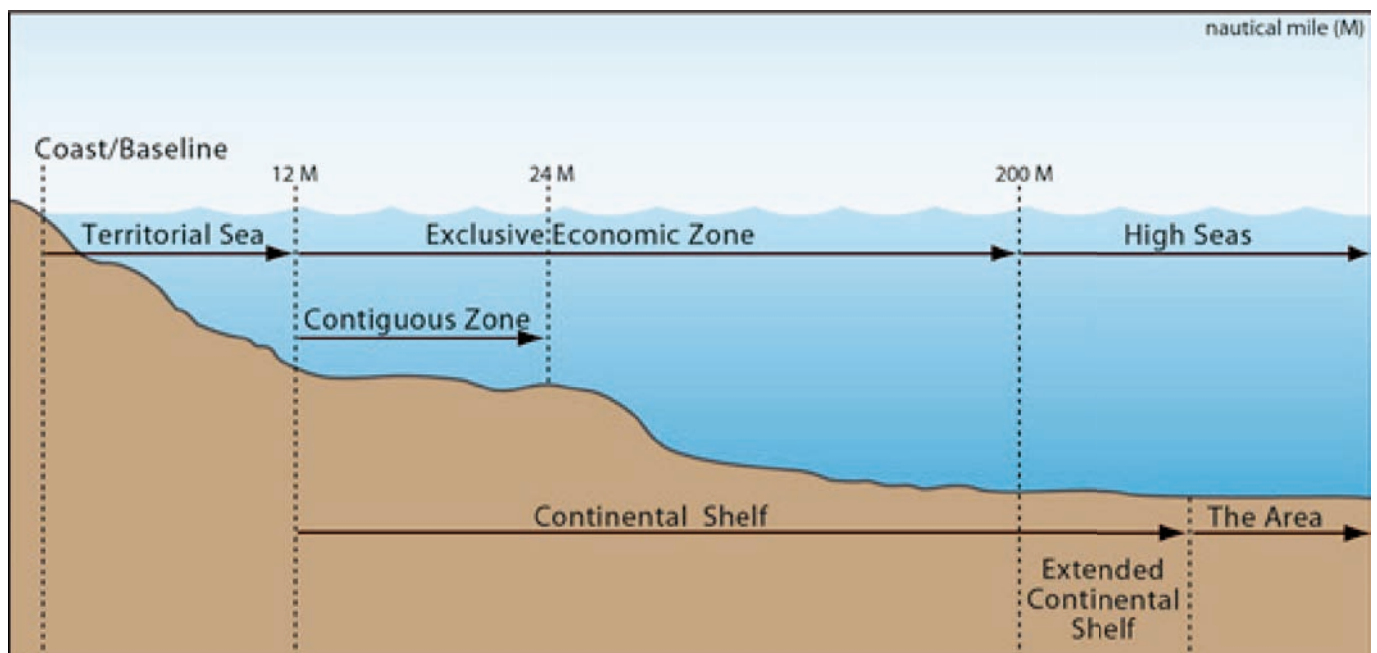
**CONTEXT:**

In a positive development, Rajasthan will shortly become the **first State in the country to adopt an action plan for road safety** for the next 10 years. The action plan, to be accompanied by a government policy, will be aimed at reducing road accidents in the State by 50% till 2030.

**Key-highlights of the Plan**

As per the draft,

- **Phase 1 (2025 till 2027):** The focus will be on institutional strengthening, capacity building, and completion of action plan interim targets.



**FIGURE: 04**

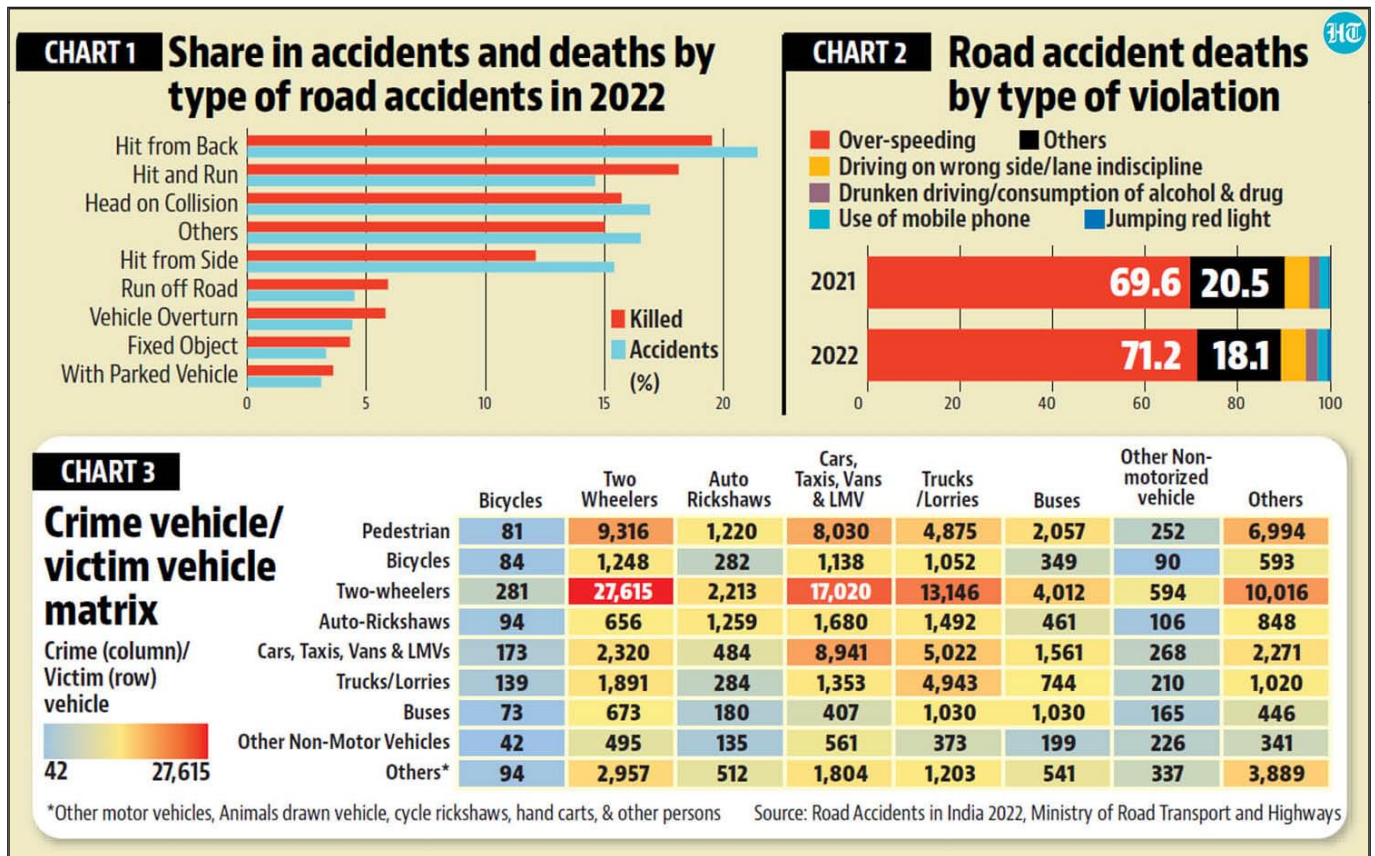


FIGURE: 05

- Phase 2 (2028 till 2030): The focus will be on reduction of 50% of road accident fatalities in line with UN's **Second Decade of Action for Road Safety**.
- Phase 3 (2031 till 2033): The plan will focus on reduction of 75% of road accidents fatalities.

### Reason behind increasing road accidents

- As per the "Annual Report on 'Road Accidents in India-2022'" published by the **Ministry of Road Transport and Highways**, India saw 4.6 trillion accidents, and 168,000 deaths and over 400,000 seriously injured people in these mishaps. It's a 12 per cent jump in accident numbers and a 10 per cent spike in deaths.

### Factors responsible:

- inadequate infrastructure
- inadequate law enforcement of traffic laws
- inadequate engineering practices
- lack of public awareness about safe driving practices
- unsatisfactory quality of detailed project reports (DPRs)
- lack of fear regarding legal repercussions

### Impact of Road Accidents

- Road accidents' impact goes far beyond the immediate tragedy. They result in an **economic loss equivalent to 3.18% of the GDP**.
- The workforce also suffers from lost productivity due to fatalities and disabilities.
- These accidents also incur immense financial burdens from medical costs, vehicle repairs, and infrastructure damage.

### Good Governance

Kerala achieved zero deaths in the network of roads, including the narrow hill stretches, leading to the Sabarimala temple. Kerala's interventions saw zero road accident deaths for two consecutive years, beginning 2019-20, owing to sustained intervention by the state government—a first in India.

### Required Measures:

- Integration of smart infrastructure, like**
  - intelligent traffic management systems
  - real-time data analytics
- Emerging technologies** also hold immense promise in minimizing human errors and enhancing collision avoidance capabilities, such as
  - vehicle-to-vehicle (V2V) communication
  - autonomous driving systems
- India has set a target to halve the number of road accidents by 2030.



### FACT BOX

- India has the second largest road network in the world, with about 63.32 lakh km of roads as of March 2019.

- National Highway network length: 1,46,145 km

**Government Initiatives on road safety**

- **Motor Vehicle Amendment (MVA) Act 2019:** The Act amended Motor Vehicles Act of 1988. It includes inter-alia, provisions like stiff hikes in penalties for traffic violations, electronic monitoring of the same, enhanced penalties for juvenile driving, etc.
- **Vehicle Scrapping Policy:** It provides for creating an ecosystem to phase out older, unfit polluting vehicles.
- **National Road Safety Policy:** Based on the recommendations of the **Sunder Committee**, the Policy outlines the policy initiatives to be framed/taken by the Government at all levels to improve road safety activities in the country.
- **Road Safety Audit (RSA)** for all National Highways (NHs) have been made mandatory through third-party auditors at all stages, including design, construction, operation, and maintenance.
- **Electronic Detailed Accident Report (e-DAR)** to establish a central repository for reporting, management, and analysis of road accident data across the nation.
- **Good Samaritan Law:** MoRTH has published rules for the protection of Good Samaritan.
- **India State Support Programme for Road Safety by World Bank:** The World Bank has approved a USD 250 million loan for seven States under which a single accident reporting number will be set up to better manage post-crash events.

**Global initiatives on road safety**

- Brasilia Declaration on Road Safety, 2015
- Decade of Action for Road Safety 2021-2030
- Bloomberg Initiative for Global Road Safety (BIGRS) 2020-2025

- Article 131 deals with the Supreme Court’s original jurisdiction in a dispute between the Centre and one or more states.

**Can States bar CBI from functioning in their territory?**

- The CBI is a national agency empowered with police authority. Its operational jurisdiction is primarily Delhi and Union Territories.
- **Consent Requirement:** The **Delhi Special Police Establishment Act** governs the CBI, mandating state government consent for investigations within their territories.

**Scope of CBI’s Jurisdiction:**

- **Central Government Consent:** The CBI investigates cases of national importance or those requiring specialized expertise beyond state police capabilities. Permission from the central government is necessary to conduct investigations within a state.
- **Court Directives:** Courts can instruct the CBI to investigate specific offenses or incidents within state boundaries, especially in cases involving corruption, impartiality concerns, or serious crimes.
- **Cases Involving Central Government Personnel:** The CBI has jurisdiction over offenses committed by central government employees or those associated with central government entities nationwide.
- **Inter-State and International Cases:** The CBI handles cases spanning state borders or with international implications, such as organized crime or economic offenses referred by other states or international agencies.
- **State Cooperation:** Effective investigation often requires collaboration with state police and local authorities, despite central government permissions or court orders.

In essence, while the CBI can investigate within a state’s jurisdiction under specific circumstances outlined by law, its actions typically require consent from the central government or court directives to proceed.

**SC HOLDS BENGAL’S SUIT MAINTAINABLE**

**CONTEXT**

The Supreme Court held as legally maintainable the suit moved by the West Bengal government against the central government’s directive allowing the Central Bureau of Investigation or CBI to conduct investigations within the state’s jurisdiction.

**Background**

- The West Bengal government has filed an original suit in the apex court against the Centre under Article 131 of the Constitution, alleging that the CBI has been filing FIRs and proceeding with investigations despite the state having withdrawn the general consent to the federal agency to probe cases within its territorial jurisdiction.

**LOW FEMALE LABOUR FORCE PARTICIPATION**

**CONTEXT:**

Efforts towards financial inclusion have highlighted a critical barrier: **low labor force participation** among women. In the fiscal year 2022, female participation stood at 32.8%, significantly lower than the 77% among men. Despite women leading nearly a fifth of **Micro, Small & Medium Enterprises (MSMEs)**, they receive only 7% of outstanding loans in this sector.

This discrepancy underscores structural challenges such as **limited capital, restrictive societal norms (like inheritance laws), and unequal access to education and training.**

## Current Challenges in Women's Economic Participation

- **Low Labor Force Participation Rates:** Disparity in female (32.8%) vs. male (77%) participation.
- **Credit Access Discrepancies:** Only 7% of MSME loans go to women-led businesses despite their significant presence (nearly a fifth).
- **Gender Inequality:** As per **World Economic Forum's Gender Gap Report 2022**, India ranked 135 out of 146 countries and was behind smaller neighbours, with gender inequalities exceeding five percent.
- **Gender Pay gap:** The **Oxfam India Discrimination Report 2022** highlighted the gender pay gap in India, with women facing bias in recruitment and pay across the country.

## Barriers to Financial Inclusion

- **Structural Challenges:** Limited capital, societal norms (e.g., inheritance restrictions), unpaid labour and vulnerable employment and unequal access to education and training.
- **Perceptions and Biases:** Stereotyping of women borrowers as higher risks, resulting in higher interest rates, stringent collateral requirements, and loan rejections.
- **Behavioral Factors:** Risk aversion, lower confidence in negotiating loan terms, and fear of rejection.

## Pathways to Enhance Women's Participation

- **Addressing Systemic Biases:** Promoting fair assessment and treatment of women borrowers.
- **Empowering Through Education:** Enhancing financial literacy and skills training.
- **Ensuring Access to Capital:** Facilitating easier access to credit with reasonable terms.
- **Supporting Women-Led MSMEs:** Providing tailored support and incentives to foster growth and sustainability.

The increased involvement of women in entrepreneurship has the potential to boost India's GDP by \$0.7 trillion by 2025.



### FACT BOX

#### Schemes to Promote Women Empowerment:

- **National Commission for Women:** Established in 1992, this statutory body is tasked with monitoring and addressing issues related to women's rights and welfare, including political representation.
- **Reservation for Women in Local Self-Government:** The 73rd Constitutional Amendment Act of 1992 mandates one-third reservation for women in all elected offices in local bodies, aiming to enhance their participation in grassroots governance.

- **Women's Reservation Act of 2023:** The Act provides that reserved seats for women may be allotted by rotation to different constituencies in States or Union Territories.
- **Pradhan Mantri Jan-Dhan Yojana:** Improving access to financial services.
- **Priority Sector Lending (PSL) Mandate:** Encouraging banks and microlenders to extend credit to underserved segments, including women entrepreneurs.
- **RBI Regulations:** Mandating literacy centers in each district to promote financial education.
- **Other Initiatives:** Various government schemes and programs, such as
  - ▶ Beti Bachao Beti Padhao
  - ▶ Pradhan Mantri Awas Yojana
  - ▶ National Social Assistance Programme
  - ▶ Samagra Shiksha
  - ▶ Mahila Shakti Kendra (MSK)
  - ▶ Mission Shakti (Integrated Women Empowerment Programme)

## ARTICLE 361 AND IMMUNITY CHALLENGE

### CONTEXT:

In a significant development, a woman who formerly worked at the Raj Bhawan has moved the Supreme Court challenging the immunity granted to West Bengal Governor CV Ananda Bose under **Article 361 of the Indian Constitution**. She has accused the Governor of sexually assaulting her and argues that Article 361 should not prevent police investigation and criminal proceedings in such cases.

### What is Article 361?

- Article 361 of the Constitution of India provides immunity to the President of India and Governors of states from certain legal actions during their term in office.

### Supreme Court's Stance

- In a landmark case, **Rameshwar Prasad v Union of India**, the Supreme Court has upheld the broad immunity granted under Article 361.
- It has consistently affirmed that the President and Governors enjoy significant protection from legal accountability during their tenure, reinforcing the constitutional principle of separation of powers and the autonomy of these offices.
- This constitutional provision aims to safeguard the independence and functioning of these high offices without undue interference from legal proceedings.

**Key Provisions of Article 361**

- ▶ According to **Article 361(2)**, no criminal proceedings can be initiated or continued against the President or Governor of a State in any court during their term of office. This immunity extends to actions taken in the course of their official duties.
- ▶ The intent is to shield these officials from potential harassment or disruption caused by legal challenges during their tenure.
- ▶ **Limitations of Immunity:** While immunity prevents criminal proceedings and arrest warrants during their term, **it does not provide absolute impunity for all actions.**
- The immunity clause primarily covers acts done in the exercise of their official powers and duties. It does not shield them from prosecution once they leave office, nor does it extend to actions clearly outside the scope of their constitutional responsibilities.

**Subject of legal scrutiny**

- Article 361 of the Indian Constitution serves as a crucial safeguard for the President and Governors, shielding them from certain legal actions during their term in office.
- However, the extent of this immunity remains a subject of legal scrutiny and interpretation, especially in cases where allegations of serious wrongdoing arise.



**FACT BOX**

**Role of the Governor**

- The Governor plays a pivotal role as the Executive Head of the State under Articles 153 and 154 of the Indian Constitution.
- **Executive Powers:**
  - ▶ **Article 154:** The Governor holds executive powers of the State, exercised directly or through subordinate officers in accordance with the Constitution.
  - ▶ **Article 163:** As the Constitutional Head, the Governor acts on the aid and advice of the Council of Ministers. This includes duties such as summoning and proroguing State Legislature sessions, promulgating ordinances, giving assent to bills, and appointing the Council of Ministers.
- **Discretionary Functions:**
  - ▶ The Governor exercises discretion in certain matters such as sending reports to the President under **Article 356** and reserving bills for the President's consideration under **Article 254(2)**.

**Appointing Authority:**

The Governor appoints various key authorities including:

- ▶ Advocate General
- ▶ Lokayukta and Upa Lokayukta
- ▶ State Election Commissioner
- ▶ Chairperson and Members of Human Rights Commission
- ▶ Chairperson and Members of Public Service Commission
- ▶ State Chief Information Commissioner and members of Information Commission.

**DRAFT DIGITAL COMPETITION BILL, 2024**

**CONTEXT**

In February 2023, the **Ministry of Corporate Affairs** formed the **Committee on Digital Competition Law (CDCL)** to explore the need for specific legislation on competition in digital markets. The CDCL recommended supplementing the current **Competition Act, 2002** (which focuses on penalizing anti-competitive behavior after it occurs) with a proactive, preventative framework known as an **“ex-ante” regulation**.

**Need of the Bill**

- The draft bill aims to address the concerns against **anti-competitive practices** by Big Tech in digital markets. Over the years, Indian internet companies, as well others globally, have been fighting the alleged monopoly imposed by major US players like Google and Apple.
- Among the significant problems noticed in digital markets were **preferential pricing, deep discounting, anti-steering, bundling and tying, accumulation of big data and its usage, network effects, exclusive tie-ups, search and rank preferencing, restricting third-party applications, advertising policies**, etc.
- The **ex-ante provisions** in the draft bill aim to prevent anti-competitive behaviour before it harms the market.

**Key-highlights of the Draft Digital Competition Bill:**

- The draft Bill, inspired by the **EU’s Digital Markets Act**, targets dominant digital enterprises rather than all digital businesses.
- It identifies specific **“core digital services”** and sets criteria (such as financial strength and user base) to determine dominance.
- The Bill proposes that for certain **“core digital services”** like **search engines, and social media sites**, the **Competition Commission of India (CCI)** should designate companies as **“Systematically Significant Digital Enterprise (SSDE)**. SSDEs are obligated to operate fairly, transparently, and non-discriminatively.

- Prohibited practices include self-preferencing, restricting third-party applications, anti-steering measures, and leveraging user data unfairly.
- This framework empowers the Competition Commission of India (CCI) to monitor potential misconducts by major enterprises.

### What is an ex-ante framework?

- Unlike the current “ex-post” framework under the Competition Act, an ex-ante framework aims to prevent anti-competitive practices by digital enterprises before they occur.
- This approach is unusual globally, with the European Union being the only jurisdiction currently implementing a comprehensive ex-ante framework under the Digital Markets Act.
- Concerns: Concerns arise about the effectiveness of the ex-ante model, its potential negative impact on startup investments and scalability, and its implications for MSMEs.



### FACT BOX

- In India, competition in digital markets is regulated by the Competition Commission of India (CCI) under the Competition Act, 2002 (Competition Act).
- The Competition Commission of India (CCI) is a statutory body of the Government of India responsible for enforcing the Competition Act, of 2002.

## GLOBAL SHIPPING INDUSTRY & CHALLENGES

### CONTEXT:

Recent months have brought significant challenges to the global shipping industry. While there is no respite in the Middle East for the shipping industry that continues to face hardship due to the Red Sea route suspension, there is now tension in the South East due to severe congestion at Singapore port and China's Shanghai/Ningbo ports has only aggravated the disruptions.

### What is Red Sea crisis?

- The Red Sea crisis involves increased attacks by Iran-backed Houthi rebels in Yemen on commercial ships in the Bab-el-Mandeb strait, a narrow passage connecting the Arabian Peninsula and the Horn of Africa.
  - These attacks have intensified since late November and are seen as a response to Israel's actions in Gaza.
- The Bab-el-Mandeb strait is crucial because it serves as a gateway for ships traveling from Asia to the Suez Canal, which handles about 12% of global trade. This route is vital for transporting goods like oil from the Persian Gulf to Europe and North America.
- Due to the attacks, ships may need to take a longer route around the Cape of Good Hope in southern Africa, adding about 10 days and 6,000 kilometers to their journey between Europe and Asia.

### Impact of Red Sea Attacks on Shipping

- The shipping industry, responsible for approximately 80% of global trade, continues to grapple with the repercussions of frequent attacks on vessels navigating the Red Sea.
- This sustained threat has forced the suspension of routes critical for maritime trade, exacerbating logistical bottlenecks and delays.
- Congestion Crisis in Southeast Asia:** The ports of Singapore, Shanghai, and Ningbo—key hubs connecting Asia to Europe and beyond—are experiencing unprecedented congestion.
  - Delay:** The bunching of vessels outside these ports has disrupted ship rotations and significantly delayed cargo handling processes. Indian exporters, reliant on Singapore and Port Klang for trans-shipment, are particularly affected.
  - Increasing cost:** This delay has compelled many vessels to bypass Singapore altogether, complicating logistics planning and increasing costs for exporters, as evidenced by rising container prices from \$950 to over \$1,200 since September 2023.
  - Affected movements:** The congestion crisis in Singapore and neighboring ports like Port Klang is disrupting global trade flows, affecting the movement of goods between Asia, Europe, and the Americas.

### How a new route can change things for India?

- A multimodal route that includes a railway, roadway network and seaports, the INSTC spans 7,200km (4,500 miles) from St. Petersburg to the port of Mumbai in India.
- INSTC connects Russia to India through Iran's Chabahar port.
- INSTC is being seen as an alternative to the Suez Canal trade route. The INSTC corridor can be a critical geopolitical tool India needs to enhance its trade footprints in Central Asia.

### Maritime Routes:

- Suez Canal Route:** Connects Europe and the Mediterranean with Asia and the Indian Ocean. About 12% of global trade, around one million barrels of oil and roughly 8% of liquefied natural gas pass through the canal each day.
- Panama Canal Route:** Links the Atlantic and Pacific Oceans, crucial for trade between the Americas and Asia.
- Straits of Malacca:** Key passage for ships traveling between the Indian Ocean and the Pacific Ocean, particularly important for trade with East Asia.
- Cape of Good Hope (South Africa):** The fastest alternative to transiting through the Red Sea is circumnavigating Africa through the Cape of Good Hope.



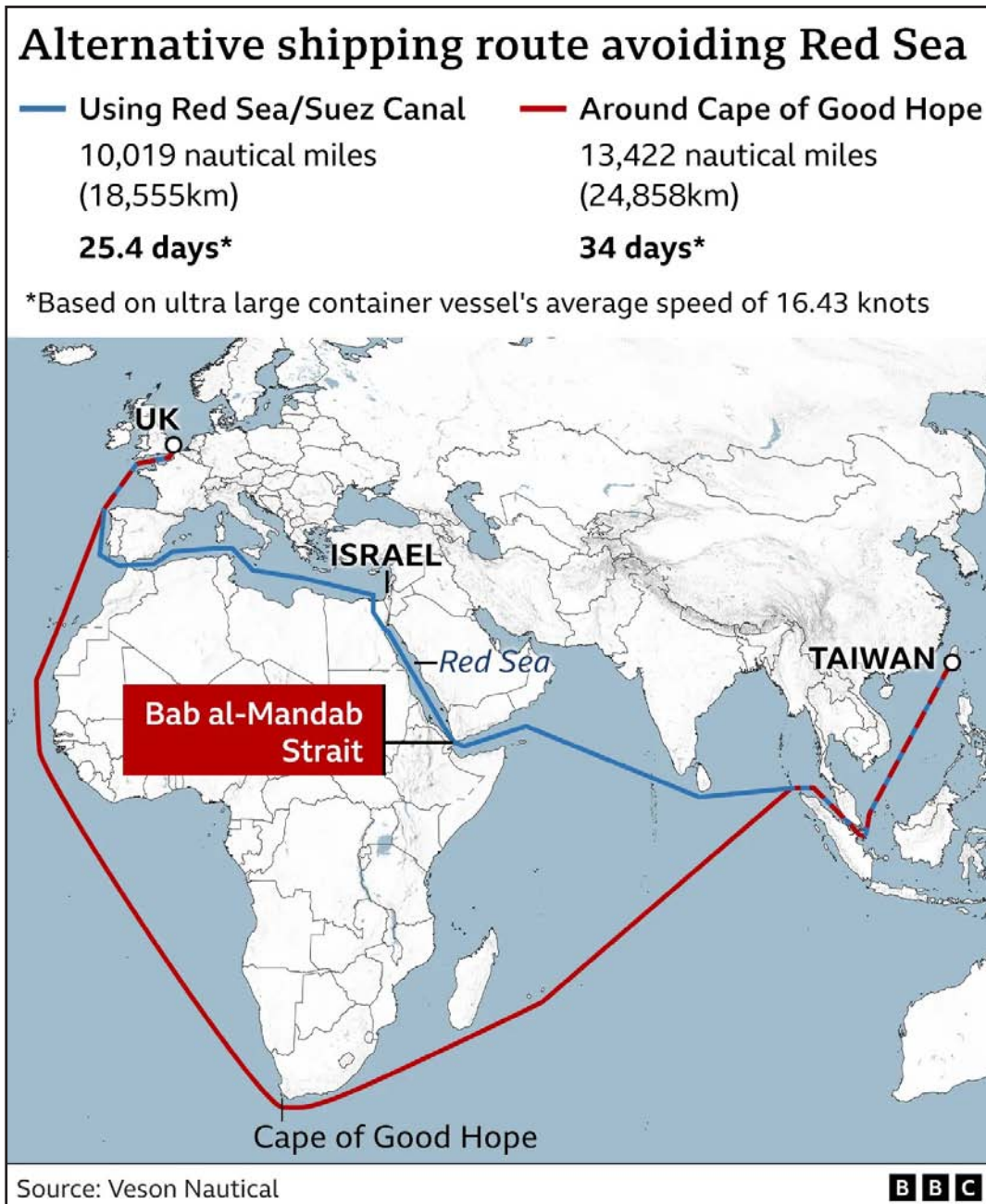


FIGURE: 06

## RUSSIA'S RESILIENCE IN FACE OF SANCTIONS

### CONTEXT

Despite extensive Western sanctions in place for over two years, Russia's economy has surprisingly performed well recently. The World Bank upgraded Russia to a "high-income" country due to significant growth in trade (+6.8%), finance (+8.7%), and construction (+6.6%) sectors.

### Factors Driving Growth:

- Growth is largely attributed to increased **military-related activity**, which has boosted economic indicators temporarily.
- **Fiscal stimulus, military spending, and credit expansion** have supported recovery post-sanctions.

- **Trade diversification** to China, India, Türkiye, and Central Asia helped mitigate the impact of Western sanctions.
- **Strong private consumption**, driven by low unemployment (3%) and rising wages, has bolstered economic activity.
- **Government spending**, including increased defense spending (about 7% of GDP), has also contributed to growth.
- **Challenges and Uncertainties:** Long-term economic prospects remain uncertain due to ongoing sanctions and supply chain disruptions.

### Why Sanctions on Russia Haven't Worked?

- **Oil Sector Dynamics:** Sanctions on Russia's energy sector were designed with loopholes to prevent a sharp rise in global oil prices and ensure continued supply to

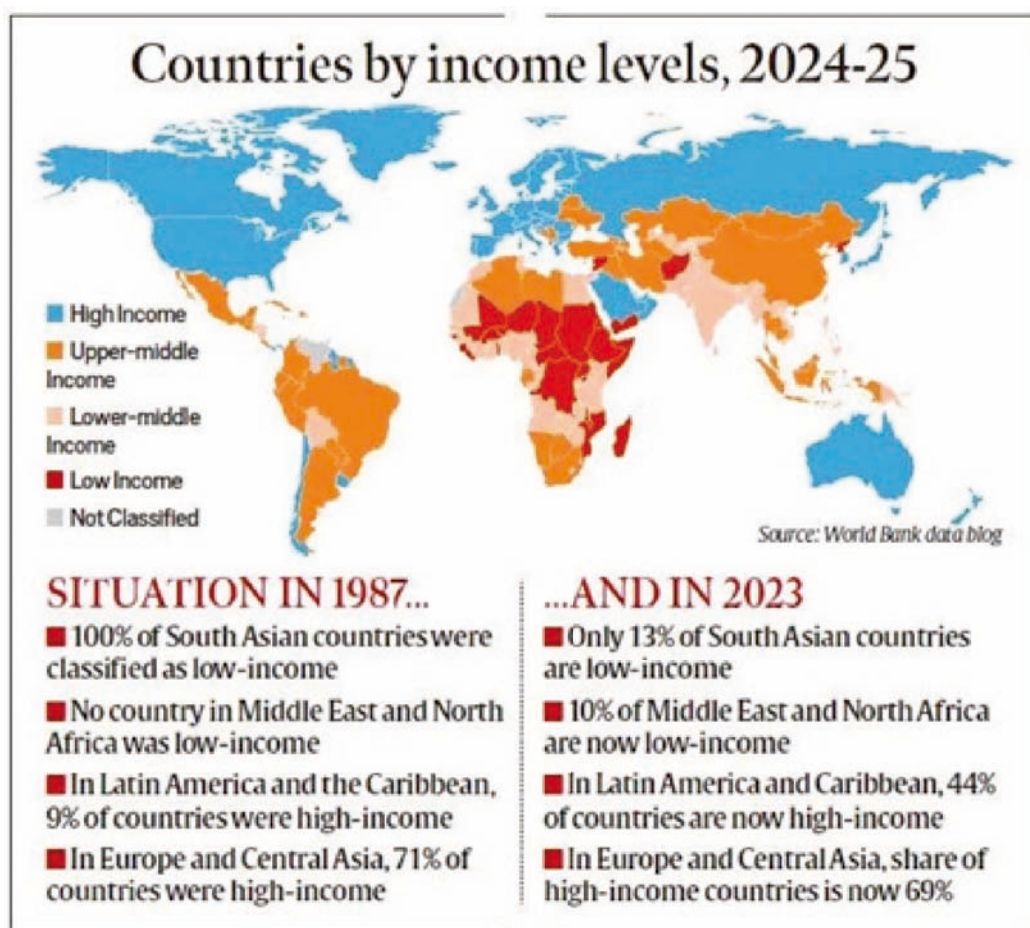


FIGURE: 07

Western markets. Despite reduced exports to Western Europe, Russia has successfully redirected oil shipments to other regions like China and India, maintaining overall export volumes and revenue.

- **Investment Resilience:** Despite sanctions, corporate investment in Russia has rebounded, particularly in defense and manufacturing sectors. Some imports have been substituted with domestic production, prompting investments in new manufacturing facilities.
- **Consumption and Economic Activity:** Strong consumer spending, supported by low unemployment and rising wages, has sustained economic growth. Fiscal policies and increased defense spending have injected further stimulus into the economy, countering the impact of sanctions.
- **Economic Adaptation:** Russia has successfully shifted its trade focus away from Western countries to alternative markets in Asia and Eurasia, reducing reliance on sanctioned economies. Over time, Russian economic policies have adapted to sanctions imposed since 2014, minimizing their overall impact.



#### FACT BOX

- The World Bank Group assigns the world's economies to four income groups:
  - ▶ Low Income

- ▶ Lower-Middle Income
- ▶ Upper-Middle Income
- ▶ High Income
- The classifications are updated each year on July 1, based on the **GNI per capita** of the previous calendar year.

In each country, factors such as **economic growth, inflation, exchange rates, and population growth** can all influence the level of Atlas GNI per capita.

India remains in the lower-middle income category.

## UNEMPLOYMENT IN INDIA

### CONTEXT

The **Ministry of Labour** rebutted a recent report by Citigroup which forecast that India will struggle to create sufficient employment opportunities even with a 7 per cent growth rate. The Ministry stated that official data sources like PLFS, RBI, etc. show consistent improvements in the key labour market indicators, including increased **LFPR and WPR**, and a declining Unemployment Rate during last five years.

### State of 'unemployment' in India

- **India Employment Report 2024** (created jointly by the Institute for Human Development and the International

Labour Organisation)

- ▶ India’s working population increased from 61 percent in 2011 to 64 percent in 2021, and it is projected to reach 65 percent in 2036.
- ▶ However, the percent of youth involved in economic activities declined to 37 percent in 2022.

▫ **Centre for Monitoring Indian Economy (CMIE):**

Unemployment Rate in India	
Year	Unemployment Rate (%)
2024	9.2 (June 2024)
2023	8.003
2022	7.33
2021	5.98
2020	8.00
2019	5.27
2018	5.33
2017	5.36
2016	5.42
2015	5.44
2014	5.44
2013	5.42
2012	5.41
2011	5.43
2010	5.55
2009	5.54
2008	5.41

- ▶ The unemployment rate in India stood at 9.2 percent in June 2024, a sharp increase from 7 percent in May 2024.
- ▶ Female unemployment reached 18.5 percent, exceeding the national average, in June 2024. This is up from 15.1 percent in the same period last year.
- ▶ At the same time, male unemployment stood at 7.8 percent, slightly higher than 7.7 percent in June 2023.
- ▶ The Labour Participation Rate (LPR) rose to 41.4 percent in June 2024 from 40.8 percent in May and up from 39.9 percent in June 2023, the rural unemployment rate rose to 9.3 percent in June from 6.3 percent in May.
- ▶ The urban unemployment rate climbed from 8.6 percent to 8.9 percent.
- **As per PLFS and RBI’s KLEMS data**, India has generated more than 8 crore (80 million) employment opportunities from 2017-18 to 2021-22. This translates to an average of over 2 crore (20 million) employment per year.
- The **Annual Periodic Labour Force Survey (PLFS)** report highlights positive trends in key labour market indicators over the past five years for individuals aged

15 years and above.

- ▶ **Labour Force Participation Rate (LFPR):** The LFPR rose from 49.8% in 2017-18 to 57.9% in 2022-23.
- ▶ **Worker Population Ratio (WPR):** The WPR increased from 46.8% in 2017-18 to 56% in 2022-23.
- ▶ **Unemployment Rate (UR):** The Unemployment Rate decreased from 6% in 2017-18 to 3.2% in 2022-23.

**How unemployment rate is calculated in India?**

- The unemployment rate is expressed as a percentage and is influenced by economic conditions:
  - ▶ **High Unemployment:** Occurs during economic downturns when job opportunities are scarce.
  - ▶ **Low Unemployment:** Seen in periods of economic growth and prosperity when job availability increases.
- **Formula for Calculating Unemployment Rate:** The unemployment rate in India is calculated using the following formulas:
  - ▶ Unemployment Rate = Number of Unemployed Persons / Civilian Labor Force or
  - ▶ Unemployment Rate = Number of Unemployed Persons / (Number of Employed Persons + Number of Unemployed Persons)
- **Criteria for Classification as Unemployed:** To be considered unemployed in India, individuals must meet specific criteria:
  - ▶ **Age:** Must be at least 16 years old.
  - ▶ **Availability:** Available to work full-time during the last four weeks.
  - ▶ **Actively Seeking Employment:** Actively searching for job opportunities during this period.
  - ▶ **Exceptions:** Temporarily laid-off individuals actively seeking to return to their previous jobs are also classified as unemployed.



**FACT BOX**

- **Worker-Population Ratio (WPR):** The WPR is defined as the percentage of employed persons in the population.
- **Labour Force Participation Rate (LFPR):** It is defined as the percentage of persons in the labour force who are working or seeking or available for work in the population, in urban areas for persons aged 15 and above.

## Key Economic Events Impacting Unemployment in India

- **Global Financial Crisis (2008-2009):** Economic slowdown led to reduced job opportunities across sectors.
- **Demonetisation (2016):** Disruption in the informal sector caused temporary job losses and market instability.
- **GST Implementation (2017):** Initial disruptions in businesses adjusting to new tax norms affected employment stability.
- **Covid-19 Pandemic (2020):** Nationwide lockdowns halted economic activities, resulting in widespread job losses.
- **Inflationary Pressures:** High inflation reduced consumer demand, prompting businesses to implement cost-cutting measures like layoffs.

## NEGATIVE SOIL MOISTURE ANOMALY (SMA)

### CONTEXT

A recent study has highlighted **significant soil moisture anomalies** (Negative Soil Moisture Anomaly (SMA)) across India in 2023, impacting agricultural productivity and water resource management.

### Key-findings:

#### Extent of Soil Moisture Anomalies

- ▶ Approximately 32.8% of India's total land area experienced negative Soil Moisture Anomalies (SMA), indicating vulnerability to drought stress, covering about 1.08 million square kilometers.
- ▶ Conversely, 47.7% of the country's geographical area saw positive SMA, leading to wetter soil conditions than usual and increasing the risks of flooding and water logging.

#### Seasonal Variations

- ▶ Monsoon Period (June-September):
  - ◆ Punjab benefited from positive soil moisture levels, supporting robust crop growth and potentially preventing flooding.
  - ◆ Odisha, with near-average soil moisture, could improve agriculture output by adopting water management techniques from Punjab.
  - ◆ Bihar and Jharkhand faced below-average soil moisture, necessitating improved irrigation and water conservation methods.
- ▶ Pre-Monsoon Period (March-May):
  - ◆ Punjab maintained above-average soil moisture levels, whereas Odisha experienced slight deficits, suggesting a need for shared water management practices.

- ◆ Andhra Pradesh and Kerala showed favorable conditions, while Bihar exhibited below-average soil moisture, emphasizing water conservation.
- ◆ The Andaman and Nicobar Islands faced dry conditions, highlighting the urgency for enhanced water management practices.
- ▶ Winter Period (December-February):
  - ◆ Punjab recorded positive soil moisture anomalies, benefiting winter crops and reducing the need for excess irrigation.
  - ◆ Odisha faced negative SMA, indicating drier conditions compared to historical averages, suggesting potential benefits from adopting Punjab's irrigation techniques.
- ▶ State-Wise Implications
  - ◆ **Punjab:** Benefits from positive soil moisture anomalies, supporting robust agriculture.
  - ◆ **Odisha:** Faces challenges with negative SMA during specific periods, suggesting the adoption of efficient irrigation practices from other states.
  - ◆ **Bihar, Jharkhand:** Require improved water conservation and irrigation techniques to address drought impacts.
  - ◆ **Maharashtra, Madhya Pradesh:** Showed variability in soil moisture levels, necessitating stable water management policies.
  - ◆ **Andhra Pradesh, Kerala:** Require customized water management plans due to varying soil moisture conditions.

### Policy Recommendations

- There is need to develop tailored water management policies based on regional soil moisture conditions.
- The state must implement drought management plans in deficit areas and flood management strategies in surplus moisture areas.
- Farmers should invest in advanced soil moisture monitoring systems using remote sensing and ground-based sensors for real-time data.



### FACT BOX

#### What is Negative Soil Moisture Anomaly (SMA)?

- Negative Soil Moisture Anomaly (SMA) refers to a situation where the soil moisture levels are below what is considered normal or average for a specific area and time period.
- It indicates that the soil has less moisture than expected, which can lead to drought conditions and stress for vegetation and agriculture.
- Soil moisture is essential for the development of plants. It regulates soil temperature, salinity, the availability of nutrients and the presence of toxic substances, and it gives structure to soil and contributes to preventing soil erosion.

## FAST FASHION & ENVIRONMENT

### CONTEXT

Textile waste poses a pressing global challenge, with only 12% of textiles recycled worldwide. Merely 1% of discarded clothes are recycled into new garments, with the rest often repurposed into low-value items like insulation or mattress stuffing.

### The dark side of fast fashion (Impact)

Despite affordability, fast fashion has significant environmental and social repercussions:

- **Environmental Impact:** The fast fashion sector contributes 2-8% of global carbon emissions and 9% of annual microfiber pollution in oceans, as per the UN Environment Programme.
- **Resource Intensive:** It consumes approximately 215 trillion liters of water annually, equivalent to 86 million Olympic-sized swimming pools.
- **Social Issues:** Workers often endure exploitative conditions for minimal wages, while shareholders profit extensively.
- **Greenhouse Gas Emissions:** Every phase of the fast fashion lifecycle—from resource extraction and manufacturing to transportation and waste management—contributes to greenhouse gas emissions, exacerbating global warming.
- **Synthetic Fabrics:** The industry heavily relies on fossil fuel-derived synthetic fibers (e.g., polyester, nylon), intensifying the climate crisis through emissions and contributing to non-biodegradable plastic pollution.
- **Microplastics:** Synthetic fibers shed microplastics when washed, comprising 35% of microplastic pollution in oceans, perpetuating environmental degradation.



### FACT BOX

#### What is Fast Fashion?

- Fast fashion denotes the rapid production and distribution of clothing to quickly reflect current trends.
- Technological advancements, reduced production costs, and efficient supply chains since the early 1990s have dramatically shortened fashion cycles.

#### Measures in India

- **Water (Prevention and Control of Pollution) Act, 1974:** It regulates the discharge of pollutants into water bodies and establishes penalties for non-compliance.
- **Sustainable Textiles of India initiative:** It aims to promote sustainable production and consumption of textiles.

#### Other notable initiatives

- ▶ **Sustainable Fashion Policy:** In 2020, the Ministry of Textiles launched National Hand-loom Day with the theme "Handloom for Atmanirbhar Bharat" to promote sustainable fashion and textiles, support local artisans, and reduce the environmental impact of the fashion industry.
- ▶ **Extended Producer Responsibility for plastic waste management.**
- ▶ **Ban on Single-Use Plastics:** In 2019, the government announced a ban on single-use plastics.
- ▶ **Others:** Clean Ganga Fund, Green Building Norms, National Action Plan on Climate Change, Textile Waste Management (Swachhta Saarthi Fellowship, Green Wardrobe Initiative)



# GS MAINS CLASSES

**BASIC TO ADVANCE**

**Elevate *your* Mains  
Exam Readiness through**

**10  
STEPS**

*The Ultimate Mains  
Programme*

**01** COVERAGE OF  
GS MAINS  
PAPER 1, 2, 3, 4  
& ESSAY

**02** DAILY  
ANSWER  
WRITING

**03** COMPACT  
STUDY  
MATERIAL

**04** PERSONALISED  
MENTORSHIP

**05** INTEGRATION  
OF PYQs

**06** GS MAINS  
TEST SERIES  
**TOTAL 20 TESTS**

**07** ETHICS  
TEST SERIES  
**24 TESTS**

**08** ESSAY  
TEST SERIES  
**30 SESSIONS**

**09** 150 Hrs.  
MAINS UPDATION  
CLASS AFTER  
PRELIMS

**10** 2 YRS.  
CONTEMPORARY  
ISSUES COVERED

Scan QR Code  
for more details



**8448496262**



**iascore.in**

## SECTION - B

## QUICK BYTES

## UPPER SIANG MULTIPURPOSE STORAGE PROJECT

## CONTEXT

In Arunachal Pradesh's Upper Siang district, the proposed **Upper Siang Multipurpose Storage Project** on the **Siang River** has sparked significant controversy and resistance among local communities.

## About Upper Siang Multipurpose Storage Project

- This mega hydroelectric project, initiated by the **National Hydroelectric Power Corporation (NHPC)**, aims to generate 11,000 MW of power, impacting several villages.
- The Upper Siang project is designed to harness the Brahmaputra's main tributary, known as the **Siang** in Arunachal Pradesh and **Yarlung Tsangpo** in Tibet.
- The dam is touted as **India's largest hydropower initiative** and is strategically positioned to counter similar projects being developed upstream by China.

## Issues:

- **Local Resistance and Opposition:** The dam has the potential to submerge villages and displace over one lakh Adi tribe members. It will impact their livelihoods and ancestral lands.
- **Environmental and Social Concerns:** It is feared to lead to ecological disruptions, due to the region's **seismic vulnerability** and potential for increased flooding risks.
- **Legislative and Social Impact:** Recent amendments to forest laws have raised concerns about expedited project approvals without adequate environmental clearances, further intensifying opposition from local communities and environmental activists.



## FACT BOX

- The Siang originates near Mount Kailash in Tibet, where it goes by the name of **Tsangpo**.
- It traverses more than 1,000 km eastward, before forming a horseshoe bend around the towering Namcha Barwa peak, and enters Arunachal Pradesh as the Siang.
- Further downstream, in Assam, the river becomes the **mighty Brahmaputra**.

(see Figure No. 1 on next page)

## TEESTA RIVER

## CONTEXT

West Bengal Chief Minister Mamata Banerjee has raised concerns over the **Teesta water issue and the Farakka Treaty**. Banerjee pointed out the lack of water in Teesta during summer and its overflow in the monsoon, and also highlighted the need to renew the Farakka Treaty.

## About Teesta River

- The Teesta River originates from the **Pahunri Glacier**, over 7,068 meters high in the Sikkim Himalayas.
- It flows southward through Sikkim, gathering speed through gorges and rapids.
- As it passes **Rangpo**, the Rangpo River joins it, marking the border between Sikkim and West Bengal up to Teesta Bazaar.
- Near the Teesta Bridge, it meets its **main tributary**, the **Rangpo River**, and then turns southward into West Bengal.



Figure No. 1

- From there, the river continues south, crossing into Bangladesh near **Fulchori**. It eventually merges with the Brahmaputra River at **Teestamukh Ghat** in Bangladesh's Rangpur district.
- The Teesta River is known for its turbulent flow and carries a significant amount of sediment and boulders. Its basin covers 9,855 sq.km in India, primarily in Sikkim (72.43%) and West Bengal (27.57%). The river itself is 414 km long with a total drainage area of 12,540 sq.km, spanning across India and Bangladesh.



### FACT BOX

#### Farakka Treaty

- In 1996, the treaty on the sharing of the Ganges waters at Farakka was intended to end the differences between Bangladesh and India.
- Its principal objective was to determine the amount of water to be released by India.

(see figure no. 2 below)



- From the outset Bangladesh has apparently adopted a "policy of secrecy" over this project
- Power-China's Teesta project will not offer permanent solutions to Teesta's problems
- India must stop withdrawal of water during the dry season by means of Gazoldoba barrage
- The scope is ending for Bangladesh to take loans indiscriminately to implement questionable projects

Figure No. 2



## HANNIBAL DIRECTIVE

### CONTEXT

As Hamas raided southern Israel (October 7, 2023), the Israel Defence Forces (IDF) activated the "Hannibal Directive", a purported operational doctrine of using maximum force to ensure no soldiers are captured, even if it means sacrificing military and civilian lives, a media investigation has found.

### What is Hannibal Directive?

- The Hannibal Directive is a secretive Israeli military policy aimed at preventing the capture of Israeli soldiers by using maximum force, even if it risks the soldiers' lives.
- It was created in 1986 after Hezbollah captured three Israeli soldiers in Lebanon, where Israel had a military presence.
- The directive allows the Israel Defense Forces (IDF) to take extreme measures to prevent soldiers from being taken captive, including using lethal force if necessary.
- Its purpose is to avoid situations where captured soldiers could be used in prisoner swaps, which can be politically sensitive and emotionally challenging for Israel.

## NITI AAYOG'S SAMPOORNATA ABHIYAN

### CONTEXT

In a concerted effort to achieve comprehensive development across India's aspirational districts, NITI Aayog has launched the ambitious **Sampoornata Abhiyan**. This nationwide campaign aims to address key social sector indicators through targeted interventions in 500 aspirational blocks and 112 aspirational districts.

### About Sampoornata Abhiyan

- Sampoornata Abhiyan is a focused initiative aimed at achieving saturation in 12 critical social sector indicators.
- These indicators encompass areas crucial for holistic development, including **health, nutrition, agriculture, social development, and education**.
- The campaign is designed to run for three months, from June to September, engaging district and block officials alongside elected representatives to organize a series of awareness and developmental activities.

### It targets 12 key social sector indicators:

- ▶ **Health and Nutrition:** Health camps and *Paushtik Aahar Melas* for better healthcare and nutrition outcomes.
- ▶ **Agriculture and Rural Development:** Agricultural exhibitions and sustainable farming practices promotion.
- ▶ **Social Development:** *Gram Sabhas, Nukkad Nataks*, and cultural events to foster community engagement.

- ▶ **Education and Skill Development:** Workshops and competitions to enhance educational and vocational skills.



### FACT BOX

### About Aspirational Districts Programme

- **Launched in:** 2018
- It aims to effectively and quickly transform 112 most under-developed districts across India.
- Aspirational Districts are those districts affected by poor socio-economic indicators across the country.
- **NITI Aayog** anchors this programme.

## NEW PROVISIONS FOR POLICE OFFICER

### CONTEXT

The new criminal laws have become effective from July 1. SOPs have been issued by the **Bureau of Police Research and Development (BPRD)** to guide police officers in implementing the new provisions.

### Key-highlights of the new Provisions

#### Rules for Registering FIRs:

- ▶ Police must register an FIR (First Information Report) regardless of jurisdiction issues ("zero FIR") and transfer it to the appropriate police station.
- ▶ FIRs can be filed orally, in writing, or electronically, which must be acknowledged within three days by the police.

**Bharatiya Nagarik Suraksha Sanhita (BNSS)** has a direct provision under **Section 173**; non-registration of FIRs may attract penal action under various sections.

#### Videography Requirements:

- ▶ The BNSS mandates videography during a search conducted by the police under **Section 185**; of the scene of crime (**Section 176**); and of the process of conducting a search of a place or taking possession of any property (**Section 105**).
- ▶ The **'eSakshya'** mobile app facilitates capturing geo-tagged and time-stamped photos and videos for legal integrity.

#### Provisions on Arrest:

- ▶ Information about arrested persons must be prominently displayed at police stations and district control rooms.

- ◆ **Section 37 of the BNSS** requires a police officer in every police station, not below the rank of Assistant Sub-Inspector, to be responsible for maintaining and prominently displaying information about the arrested persons.
  - ▶ Special provisions govern the arrest of frail, sick, or elderly individuals, requiring higher-level approval and cautious use of handcuffs.
  - ◆ **Section 35(7) states** that the permission of an officer not below the rank of DySP is mandatory for arresting a person charged with an offence punishable for imprisonment of less than three years if such person is infirm or is above 60 years of age.
- Timelines and Procedures:**
- ▶ **Section 184 (6):** Medical reports for rape victims must be forwarded to the investigating officer within seven days for submission to the magistrate.
  - ▶ POCSO cases (Protection of Children from Sexual Offences) must be investigated within two months from the date of reporting.
  - ▶ Chain of custody for electronic devices is crucial, with updates on investigation progress to be provided to informants or victims within 90 days.
  - ▶ **Section 113 introduced in the Bharatiya Nyaya Sanhita (BNS)** defines what is a 'terrorist act' and imposes the duty on an officer, not below the rank of Superintendent of Police (SP), to decide whether to register a case under this Section or the UAPA.



## FACT BOX

### The New Criminal Laws

- Three new criminal laws came into effect from July 1, 2024. **The Bharatiya Nyaya Sanhita (BNS), the Bharatiya Nagrik Suraksha Sanhita (BNSS), and the Bharatiya Sakshya Adhinyam (BSA)**, passed in Parliament will replace the Indian Penal Code (IPC), 1860, the Criminal Procedure Code (CrPC), 1973, and the Indian Evidence Act, 1872 respectively.
- The new law seeks to **replace the colonial-era sedition law** which was mainly used against Indian political leaders seeking independence from British rule.

### Previous Act/Code

- **New Law**
- Indian Penal Code, 1860
- Bharatiya Nyaya Sanhita (BNS)
- Criminal Procedure Code, 1898
- Bharatiya Nagrik Suraksha Sanhita (BNSS)
- Indian Evidence Act, 1872
- Bharatiya Sakshya Adhinyam (BSA)

## CLASSICAL LANGUAGES

### CONTEXT

The Central government's Linguistics Expert Committee recommended tweaks in the criteria for granting classical status.

### Current Status and Demands:

- Currently, India has six classical languages: **Tamil (declared in 2004), Sanskrit (2005), Kannada (2008), Telugu (2008), Malayalam (2013), and Odia (2014).**
- **Current Criteria for Classical Language Status:**
  - ▶ High antiquity of its early texts/recorded history over a period of 1500-2000 years;
  - ▶ A body of ancient literature/texts, which is considered a valuable heritage by generations of speakers
  - ▶ The literary tradition be original and not borrowed from another speech community
  - ▶ The classical language and literature being distinct from modern, there may also be a discontinuity between the classical language and its later forms or its offshoots.
- **Benefits:** Designated classical languages receive benefits such as
  - ▶ international awards for scholars
  - ▶ establishment of centers of excellence
  - ▶ creation of professional chairs in universities
  - ▶ There have been demands from various states and literary circles, including Maharashtra, for classical status for languages like Marathi, Bengali, Assamese, and Maithili.
  - ▶ The demand for Marathi has been pending for over a decade despite multiple assurances from the Central government. In 2014, a committee chaired by **Prof. Ranganath Pathare** concluded that Marathi meets all criteria for classical language status.

## VADHAVAN PORT

### CONTEXT

India is gearing up to launch its most ambitious port project yet—a colossal venture set to reshape the country's maritime capabilities. Situated on the Maharashtra coast, the VadHAVAN Port promises to be a game-changer in global shipping, projected to rank among the top 10 container ports worldwide upon completion.

### Key Features of VadHAVAN Port

The Rs 76,220 crore, all-weather, deep-draft port near the Gujarat border received cabinet approval in June 2024. Its important features are:

- **Capacity:** Annual capacity of 298 Million Metric Tonnes (MMT) and handling 23.2 Million Twenty-foot Equivalent Units (TEUs) annually.

- **Phase 1:** Initial operations will start with a capacity to handle 15 Million TEUs.
- **Infrastructure:** The port will feature nine container terminals, each extending 1,000 meters along the coast, and multiple specialized berths including multipurpose, liquid bulk, Ro-Ro, and small craft facilities.
- **Container Terminals:** Spread across the port, these terminals include storage yards directly behind the quay apron, optimized for streamlined container handling.
- **Specialized Berths:** Apart from container handling, the port includes berths for multipurpose cargo, liquid bulk, Ro-Ro operations, and small craft, catering comprehensively to diverse maritime needs.
- **Rail and Onshore Facilities:** A dedicated rail terminal and onshore reclamation areas further enhance logistical capabilities, ensuring seamless integration with national and regional transport networks.
- It will be over three times the size of India's current largest ports—the government-operated Jawaharlal Nehru Port Authority (JNPA) in Mumbai and the Adani-owned Mundra.
- The VadHAVAN port, set to be operational by 2030, will be developed by reclaiming 1,448 hectares of sea land, eliminating the need for land acquisition.

- ▶ **Western coast:** Deendayal Port (Kandla), Jawaharlal Nehru Port, Mumbai Port, Mormugao Port, New Mangalore Port, Cochin Port
- 95% of India's trade by volume and 70% by value is facilitated through these ports.
- **Important Government Initiatives:** Sagarmala programme (2015), PM Gati-Shakti National Master Plan (2021), National Infrastructure Pipeline (NIP)

## INDIA'S BALANCE OF PAYMENTS

### CONTEXT

Data from the Reserve Bank of India (RBI) showed that India's current account registered a surplus during the fourth quarter (Jan-Mar) of the 2023-24 financial year. This was the first time in 11 quarters that India had witnessed a surplus.

### What is Balance of Payments (BoP)?

- The Balance of Payments (BoP) is like a financial record that tracks all the money flowing into and out of a country from its international transactions.
- It helps understand how much money India gains or lose from its dealings with other countries.
- **Components of Balance of Payments:**
  - ▶ **Current Account:**
    - ◆ **Trade of Goods:** This accounts for physical goods (like cars, wheat, gadgets) that India buys from or sells to other countries. If India imports more goods than it exports, it results in a trade deficit.

VadHAVAN Port  
FACT FILE

<p><b>23.2 mn TEU</b> Projected volume of container cargo it will handle by 2040; it could be one of the top 10 ports globally</p> <p><b>₹76,220 cr</b> Estimated cost of the project</p> <p><b>74:26</b> Shareholding ratio of Jawaharlal Nehru Port Authority &amp; Maharashtra Maritime Board in the VadHAVAN Port Project Ltd</p>	<p><b>₹37,244 cr</b> Amount to be financed by private players through PPP</p> <p><b>1.2 mn</b> Total jobs to be created</p> <p><b>2030</b> The year of completion of phase I; first bidding likely in October 2025</p> <p><small>Note: TEU is twenty-foot equivalent unit</small></p> <p style="text-align: right; font-size: x-small;">Source: JNPA</p>
---	--

### Strategic Significance

- **Geopolitical Importance:** Serving as a pivotal hub in the Arabian Sea, the port is strategically placed to facilitate trade routes linking India with the Middle East, Europe, and Africa.
- **IMEC Corridor:** As the starting point for the India-Middle East-Europe Economic Corridor (IMEC), VadHAVAN Port is poised to play a pivotal role in enhancing India's trade relations across continents.

### Elements of Current Account

- Trade in goods and services
- Foreign aid (sent or received)
- Salaries or pensions that residents receive
- Remittances

- ▶ **Trade of Services (Invisibles):** Includes services like banking, IT, tourism, and money transfers from Indians working abroad. In Q4 of 2023-24, India saw a surplus on the current account mainly due to a surplus in invisible services despite a trade deficit.
- ▶ **Capital Account:**
  - ◆ Records investments rather than day-to-day transactions. It includes Foreign Direct Investment (FDI), Foreign Institutional Investments (FII), banking capital, currency and deposits, trade credits, special drawing rights.

**FACT BOX**

### Indian Ports

- India has a coastline which is more than 7,516.6 km long, interspersed with 12 major ports and more than 200 ports.
  - ▶ **Eastern Coast:** Kolkata Port, Paradip Port, Visakhapatnam Port, Kamarajar Port, Chennai Port, Tuticorin Port

### ► Foreign Exchange Reserves:

- ◆ The BoP always balances through changes in foreign exchange reserves. When India receives more money from exports, investments, or loans than it spends, the RBI adds these dollars to its foreign exchange reserves.

- **Innovation:** India's score was 0.11, similar to Indonesia, but less than China, Singapore, the UK, and the US.
- **Regulation and Ethics:** India and China both scored 0.15, with Singapore leading at 0.22, followed closely by the US and the UK.

## Positives and negatives of a Current Account Surplus:

Positives of Current Account Surplus	Negatives of Current Account Surplus
Strengthens domestic currency	Reduces export competitiveness
Increases foreign exchange reserves	Impacts export-oriented industries
Lowers external debt	Dependency on external demand
Boosts economic confidence	Potential for reduced domestic consumption
Supports investment in infrastructure	Contributes to global imbalances

## IMF'S ARTIFICIAL INTELLIGENCE PREPAREDNESS INDEX (APII)

### CONTEXT

In a recent development, the **International Monetary Fund (IMF)** has unveiled its **Artificial Intelligence Preparedness Index (APII) Dashboard**, ranking 174 economies worldwide based on their readiness to adopt and integrate artificial intelligence (AI) technologies.

### Key Highlights of the APII

- **Global Rankings and Categories:** The index categorizes countries into Advanced Economies (AE), Emerging Market Economies (EM), and Low-Income Countries (LIC).
  - Singapore, Denmark, and the United States lead as top-ranked Advanced Economies with scores of 0.80, 0.78, and 0.77 respectively.
  - India is classified as an Emerging Market with a score of 0.49, positioned at the 72nd rank globally.

### Factors Influencing Rankings

- **Digital Infrastructure:** India scored 0.11, lagging behind China (0.19), the US (0.18), and Singapore (0.21).
- **Human Capital and Labor Market Policies:** India scored 0.12, slightly lower than China (0.15) and Singapore (0.20).

### About the APII Index

- **Released by:** International Monetary Fund (IMF)
- The APII Index aims to provide a comprehensive assessment of each country's readiness for AI adoption across critical sectors.
- This index evaluates countries across four key dimensions: **digital infrastructure, human capital and labor market policies, innovation and economic integration, and regulation and ethics.**
- It tracks **174 economies globally for AI readiness.**
- The index is based on data from **Fraser Institute, International Labour Organization, International Telecommunication Union, United Nations, United Nations Conference on Trade and Development, Universal Postal Union, World Bank, and World Economic Forum.**

## RBI'S FINANCIAL INCLUSION (FI) INDEX

### CONTEXT

The **Reserve Bank of India's (RBI) Financial Inclusion (FI) Index** rose to 64.2 in March 2024 (compared to 60.1 in March 2023), showing growth across all parameters.

### About the Index

- The RBI's FI Index measures the level of financial inclusion in India, scoring between 0 (complete exclusion) and 100 (full inclusion).
- **Parameters:** The FI Index comprises:
  - **Access (35%):** Measures the ease of accessing financial services.
  - **Usage (45%):** Evaluates the extent to which financial services are utilized by the population.
  - **Quality (20%):** Assesses the standard and reliability of financial services provided.
- **Implications:** The increase in the FI Index suggests improvements in access, usage, and service quality of financial services across India. This growth reflects efforts to enhance financial inclusion, enabling more people to benefit from banking services.

### Government Schemes for Financial Inclusion

- **Pradhan Mantri Jan Dhan Yojana (PMJDY):** It is a national mission for financial inclusion to ensure access to financial services

- **Pradhan Mantri Jeevan Jyoti Bima Yojana (PMJJBY):** It is an insurance scheme offering life insurance cover for death due to any reason.
- **Pradhan Mantri Suraksha Bima Yojana (PMSBY):** The scheme is available to people in the age group 18 to 70 years with a bank account. It is an Accident Insurance Scheme offering accidental death and disability.
- **Atal Pension Yojana (APY):** It aims to create a universal social security system for all Indians, especially the poor, the under-privileged and the workers in the unorganised sector. APY is administered by Pension Fund Regulatory and Development Authority (PFRDA).
- **Pradhan Mantri Mudra Yojana (PMMY):** Under the scheme a loan of upto ₹50,000 is given under sub-scheme 'Shishu'; between ₹50,000 to ₹5.0 Lakhs under sub-scheme 'Kishore'; and between ₹5.0 Lakhs to ₹10.0 Lakhs under sub-scheme 'Tarun'.
- **Stand-Up India Scheme:** The scheme facilitates bank loans between ₹10 lakh and ₹1 crore to at least one Scheduled Caste (SC)/ Scheduled Tribe (ST) borrower and at least one woman borrower per bank branch for setting up greenfield enterprises.

**UPSC PYQ**

**Q: With reference to India, consider the following: (2010)**

- 1: Nationalization of Banks
- 2: Formation of Regional Rural Banks
- 3: Adoption of villages by Bank Branches

Which of the above can be considered as steps taken to achieve the "financial inclusion" in India?

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

**Solution: (d)**

**BEKI RIVER'S CHANGING COURSE**

**CONTEXT**

In Lower Assam, the **Beki River**, a tributary of the Brahmaputra, has triggered a crisis by altering its course, displacing thousands and wreaking havoc on state infrastructure. The roots of the issue date back to changes initiated in 2004 when the Beki River started carrying a significant silt load from both itself and the **Manas River**.



Figure No. 3

## Causes of Course Alteration

- The **Integrated Flood and Erosion Management Plan of 2022**, supported by the World Bank, highlighted the increased flood hazard and severe erosion along the Beki River's path.
- **Periodic releases of water** from the Kurichu Dam in Bhutan further escalated floods and erosion downstream, altering the Beki's natural course significantly.
- **Lack of proactive bank protection measures** and failures in coordination between the water resources department, district administration, and public works department exacerbated the crisis.



### FACT BOX

#### About Beki River

- **Origin:** Bhutan
- Beki, locally as the Kurisu River, is a tributary (right bank) of the Brahmaputra, which flows along the Manas National Park.
- Flowing through Assam, it eventually **merges into the Bay of Bengal**.

#### Other major tributaries of Brahmaputra

- **North:** Subansiri, Ronganadi, Dikrong, Buroi, Borgong, Jiabharali, Dhansiri (North) Puthimari, Manas, Beki, Aie, Sonkosh
- **South:** Noadehing, Buridehing, Desang, Dikhow, Bhogdoi, Dhansiri, Kopilli, Kushi, Krishnai, Dhhdhnoi, Jinjiran

(see figure no. 3 on previous page)

## ANCIENT ICE OF ANTARCTICA

### CONTEXT

Antarctica, a vast expanse of white, holds a surprising secret: its **eastern and western regions** froze over at vastly different times. This disparity may hold clues to why West Antarctica is more vulnerable to today's warming trends.

### Key-highlights

- **Timeline of Freezing:** Recent research reveals that **Eastern Antarctica** locked in its **permanent ice sheets** about 34 million years ago. However, it took another 7 million years for Western Antarctica to experience the same ice formation. This delay is significant as it correlates with a pivotal shift in **Earth's climate from a greenhouse to an icehouse state**.
- **Impact of Climate Shift:** The transition to an icehouse climate initiated the growth of massive ice sheets in Antarctica, reshaping global climate patterns ever since. During the initial major phase of Antarctic glaciation around 34 million years ago, there is no evidence of ice in what is now West Antarctica.

- **Climate Conditions:** At that time, West Antarctica likely hosted dense **broadleaf forests** due to a **cool-temperate climate** that deterred ice formation. In contrast, **East Antarctica**, particularly in the **Northern Victoria Land**, had conditions conducive to permanent ice formation, supported by moist air masses from the **Transantarctic Mountains**.
- **Challenges in West Antarctica:** The advance of ice towards West Antarctica's **Amundsen Sea** sector was hindered by milder air and ocean temperatures. However, ice did begin its spread towards the **Ross Sea sector** earlier, facilitated by favorable climatic conditions and geographical features.
- **Current Vulnerabilities:** Today, many parts of West Antarctica are below sea level, making them inherently more susceptible to warming-induced ice loss. Even slight increases in temperature can accelerate the melting of the West Antarctic ice sheet, a phenomenon already observed.



### FACT BOX

#### Fact Addition

- West Antarctica, also known as **Lesser Antarctica**, is a significant region within the Antarctic continent, located in the **Western Hemisphere**.
- It encompasses the **Antarctic Peninsula** and is distinct from East Antarctica by the imposing **Transantarctic Mountains**.
- West Antarctica is dominated by the **expansive West Antarctic Ice Sheet**, a massive ice formation covering the region.
- It is bordered by the **Ross Sea**, partially covered by the **Ross Ice Shelf**, and the **Weddell Sea**, mostly covered by the **Filchner-Ronne Ice Shelf**.



#### West Antarctica comprises:

- The Antarctic Peninsula, which includes **Graham Land and Palmer Land**.

- ▶ Ellsworth Land, Marie Byrd Land, and King Edward VII Land.
- ▶ Offshore islands like Adelaide Island.
- ▶ **Significant ice shelves** such as the **Filchner-Ronne Ice Shelf** bordering the **Weddell Sea**, and the **Ross Ice Shelf** bordering the **Ross Sea**.
- It is characterized by its unique geography and the presence of vast ice shelves that play crucial roles in global climate dynamics.

## PEOPLE'S BIODIVERSITY REGISTER (PBR)

### CONTEXT

With the city expanding and with unplanned urbanisation, documentation of ecologically rich spaces in the People's Biodiversity Register (PBR) is a step towards conservation and benefit sharing of traditional knowledge

### What is a People's Biodiversity Register (PBR)?

- The People's Biodiversity Register (PBR) is a mandated repository of information on flora, fauna, local livelihoods, and traditional knowledge about medicinal herbs and plants.
- It is governed by the **Biological Diversity Act, 2002**.
- The PBR serves as a comprehensive database that documents locally available bio-resources, including the landscape and demographics of specific areas.
- It aims to protect intellectual property rights associated with traditional knowledge.
- It is crucial for conservation efforts amidst urban expansion and unplanned urbanization.
- **Implementation:** The **National Biodiversity Authority (NBA)** oversees PBR activities at the national level, while state biodiversity boards and local Biodiversity Management Committees (BMCs) coordinate at state and local levels respectively.
- **Role in Conservation and Benefit Sharing:**
  - ▶ The PBR facilitates conservation efforts by identifying ecologically rich spaces and documenting traditional knowledge.
  - ▶ It ensures benefit sharing from the commercial use of biological resources and associated traditional knowledge.

## NEW SPECIES OF HORNED FROG (*XENOPHRYS APATANI*)

### CONTEXT

Researchers from the Zoological Survey of India (ZSI) have identified a **new species of horned frog** in Northeast India, previously mistaken for another species found in Vietnam and China.

### Key-facts of the Species:

- Initially misidentified as *Xenophrys maosonensis*, the newly described frog is now recognized as *Xenophrys apatani*.
- The species is named after the **Apatani tribe of Arunachal Pradesh**, where it was first reported.
- This leaf-litter dwelling frog, distinguished by **small horns and dark brown coloration**, inhabits tea leaf environments.
- There is a significant genetic difference of 4.4% to 5.5% from its Vietnamese counterpart, prompting the species' reclassification.
- *Xenophrys apatani* contributes to **India's herpetofaunal diversity**, particularly in the Eastern Himalayas and Indo-Burma biodiversity hotspots.

### About Apatani tribe

- The Apatani tribe is a prominent ethnic group residing in the **Ziro valley of Arunachal Pradesh**, in the eastern Himalayas.
- **Language and Religion:** They speak the **Tani language** and follow traditional beliefs, worshiping the sun and the moon.
- **Festivals:** Dree, Myoko, Yapung, and Murung. Dree is celebrated with prayers for a prosperous harvest and the well-being of humanity, while Myoko celebrates friendship akin to a modern Friendship Day.
- The Apatanis practice a unique form of agriculture where rice and fish are cultivated together, a method known as integrated rice-fish farming.
- In their terraced mountain fields, the Apatanis cultivate three principal varieties of rice: **Emeo, Pyape, and Mypia**.

## GHARIAL (*GAVIALIS GANGETICUS*)

### CONTEXT

A lone female has been spotted for more than three years in a stretch of the river within the **Kaziranga National Park and Tiger Reserve**.

### About the Reptile Species

- Indian Gharial (*Gavialis gangeticus*) is the only surviving member of an ancient family of crocodiles
- Indian gharial is one of the largest river-dwelling crocodile species of the world.
- Adult gharials exhibit a strong association with river systems, often displaying seasonal migratory patterns.
- **India's largest gharial population** resides in the **National Chambal Sanctuary** (77% of the global adult population). The remaining gharial populations in India are found in Katarniaghat Wildlife Sanctuary, the Gandak River (Indo-Nepal border), Corbett National Park, the Son River, Mahanadi River, and Hastinapur Sanctuary.

### Conservation Status:

- ▶ **International Union for Conservation of Nature (IUCN) Red List:** Critically endangered
- ▶ **Wildlife Protection Act, 1972:** Schedule 1
- In 2009, a gharial reintroduction programme has been launched for saving the gharials in India.

## YAK (*BOS GRUNNIENS*)

### CONTEXT

A Nature study shows that researchers identified a bone as being Denisovan & analysed other mammalian bones found at the site to find that the ancient humans fed on & processed these bones.

### About:

- The yak (*Bos grunniens*) is a large, long-haired bovine native to the Himalayan region and Tibetan Plateau.
- These hardy animals are well-adapted to high altitudes, cold temperatures, and low oxygen environments.
- **Habitat:** They typically live at elevations between 3,000-5,000 meters (9,800-16,400 feet).
- **IUCN Status:** Vulnerable

## INDIAN ASTRONAUTS SELECTED FOR AXIOM-4 MISSION TO ISS

### CONTEXT

The Indian Space Research Organisation (ISRO) has identified two astronauts from its Gaganyaan program for the upcoming Axiom-4 mission to the International Space Station (ISS), scheduled tentatively for October 2024. This mission is a collaboration between NASA and the private US company Axiom Space.

### About Axiom-4 Mission

- The Axiom-4 mission is a private spaceflight to the **International Space Station**.
- It is operated by Axiom Space and used a SpaceX Crew Dragon spacecraft.
- The mission marks **NASA's fourth private astronaut mission**, organized in partnership with Axiom Space.
- The mission is part of NASA's broader strategy to transition **low Earth orbit activities** from government-led initiatives to a marketplace where NASA is one of many customers.
- It involves transporting astronauts to the ISS aboard SpaceX's Dragon spacecraft for a fourteen-day mission duration.

### Significance of the mission:

- ▶ It will help in increasing global access to space
- ▶ It will normalise living and working in microgravity.



### FACT BOX

### International Space Station (ISS)

- The International Space Station (ISS) is a large spacecraft that orbits Earth in **low-earth orbit**, approximately 400 km above the Earth's surface.
- It serves as a **space laboratory** where astronauts conduct experiments in microgravity conditions.

### Key Points:

- **Operational Status:** Currently, the ISS is the only operational space laboratory. It has been continuously inhabited since 2000.
- **Participants:** The ISS is a collaborative effort involving five space agencies:
  - ▶ NASA (United States)
  - ▶ Roscosmos (Russia)
  - ▶ JAXA (Japan)
  - ▶ ESA (Europe)
  - ▶ CSA (Canada)
- **Orbit and Speed:** The ISS completes approximately 16 orbits around the Earth daily, with each orbit taking about one and a half hours.
- **Purpose:** It serves as a platform for various scientific experiments, space exploration studies, and technological advancements in a zero-gravity environment.

## EARTH OBSERVATION (EO) DATA

### CONTEXT

An estimated \$3.8 trillion could be generated by Earth observation (EO) data by 2030, according to a new **World Economic Forum (WEF)**.

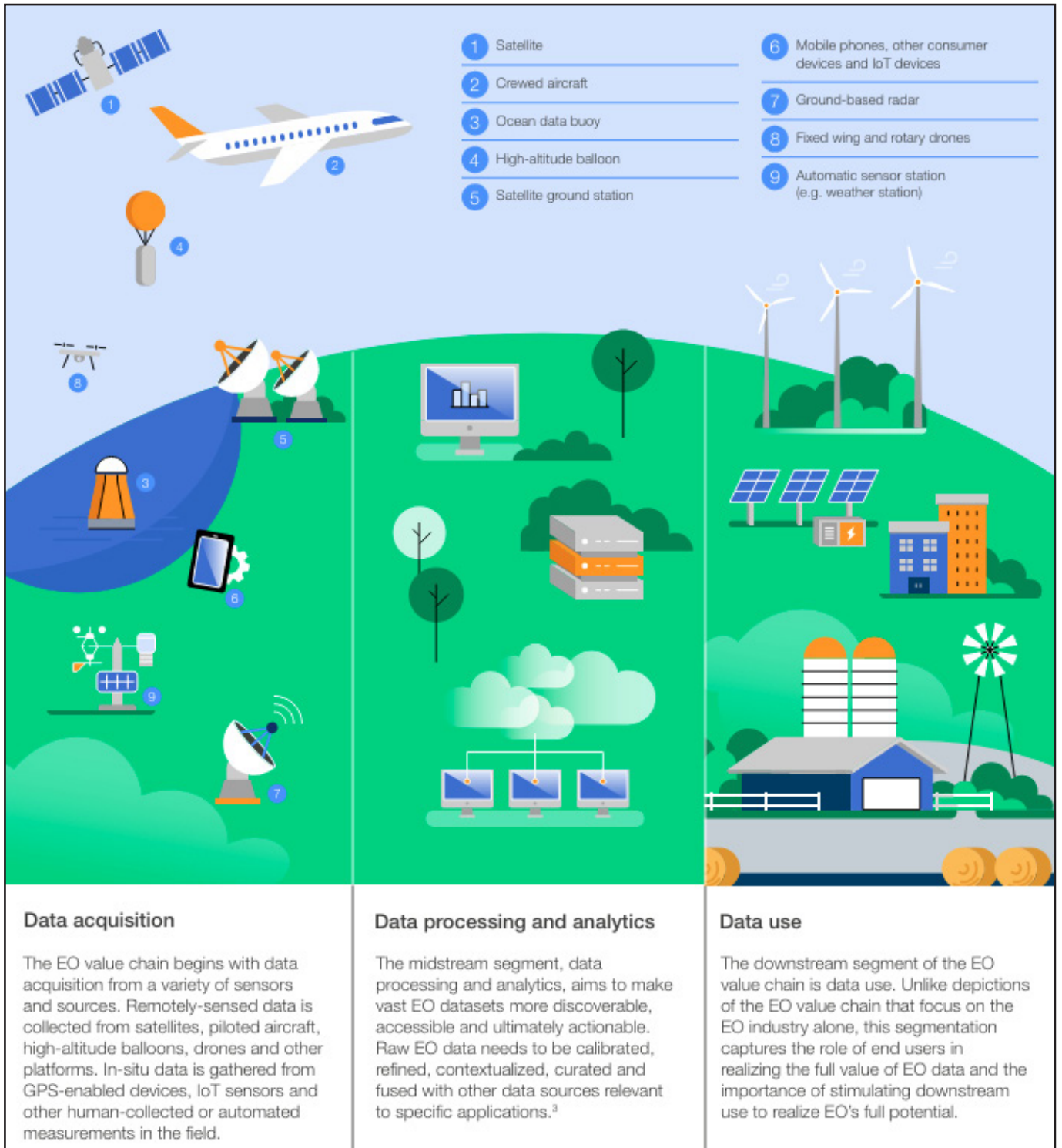
### What is Earth Observation Data?

- Earth observation (EO) data refers to information gathered about Earth's physical, chemical, and biological systems using various sensor technologies.
- These include satellites, aircraft, underwater devices, and even people equipped with specialized equipment.

### Applications in Environmental Protection:

- ▶ **Monitoring Natural Ecosystems:** EO data monitors variables like soil moisture, atmospheric conditions, and temperature changes on land and sea. It tracks changes in land cover and detects the presence of chemicals and radiation levels.
- ▶ **Protecting Ecosystems:** EO plays a crucial role in safeguarding ecosystems like mangroves and coral reefs.





- ◆ Mangroves, vital for marine life and carbon storage, are monitored to prevent loss from human activities and natural disasters.
- ◆ **Disaster Prevention and Response:** EO data aids in early warning systems for wildfires and helps identify illegal deforestation. It detects gas leaks from pipelines and other sources, reducing greenhouse gas emissions.
- ◆ **Optimizing Resource Use:** EO optimizes shipping routes to save fuel and minimize emissions. It monitors crop health, allowing for efficient use of fertilizers and water.

- ◆ **Environmental Impact Reduction:** By applying EO technologies, global greenhouse gas emissions could potentially be reduced by 3.6% annually, equivalent to 2 gigatonnes.

## AFRICAN SWINE FEVER (ASF)

### CONTEXT

A recent outbreak of African swine fever (ASF) has been reported from a farm in Kerala's Thrissur district.

## Key Facts about African Swine Fever (ASF)

- ASF is a viral disease that affects pigs and wild boar, causing high fatality rates.
- It is not harmful to humans but severely disrupts socioeconomic systems in affected regions.
- **Transmission:**
  - ▶ Direct contact with infected animals
  - ▶ Ingestion of contaminated animal products
  - ▶ Contact with contaminated equipment or clothing
  - ▶ Bites from infectious ticks
- **Symptoms:** Fever, abortions, bleeding, sudden deaths, depression, loss of appetite, skin hemorrhages, vomiting, and diarrhea.
- **Control and Treatment:** There are currently no vaccines or cures for ASF. Control measures involve strict biosecurity protocols, movement restrictions, and culling of infected animals.

## STRYKER ARMoured INFANTRY COMBAT VEHICLES

### CONTEXT

The Army is set to initiate the trials of the US-made Stryker armoured infantry combat vehicles here in both deserts and high-altitude Ladakh soon. India and the US selected the Stryker under the **US-India Initiative on Critical and Emerging Technologies (iCET)** for joint production trials.

### What is Stryker armoured infantry combat vehicles?

- The Stryker armored infantry combat vehicle is a family of **eight-wheel-drive vehicles** developed jointly by General Dynamics Land Systems Canada and the United States.
- It originated from the GDLS Canada LAV III 8×8 vehicle, which itself evolved from Switzerland's **Mowag Piranha III**.
- Named after American soldiers Stuart S. Stryker and Robert F. Stryker, the vehicle entered US Army service as the first new military vehicle since the 1980s Abrams tank.

### Features of the Stryker:

- ▶ **Design:** V-hull armored infantry vehicle.
- ▶ **Armament:** Equipped with a 30 mm cannon and a 105 mm mobile gun.

- ▶ **Protection:** Made from high-hardness steel with basic protection against 14.5mm rounds on the front and 7.62mm ball ammunition from all directions. Features bolt-on ceramic armor for added protection.
- ▶ **Mobility:** Can be transported by Chinook helicopters, which are used by the Indian Air Force.

### Variants:

- ▶ **Infantry Carrier Vehicle (ICV):** Main variant for transporting infantry.
- ▶ **Mobile Gun System (MGS):** Variant equipped with a 105 mm gun for direct fire support.

### Purpose in India:

- ▶ India and the US selected the Stryker under the US-India Initiative on Critical and Emerging Technologies (iCET) for joint production trials.
- ▶ The Indian Army aims to replace its fleet of over 2,000 BMP-II vehicles with modern wheeled and tracked infantry combat vehicles.



### FACT BOX

#### US-India Initiative on Critical and Emerging Technologies (iCET)

- **Launched in:** 2023
- iCET involves multiple streams for cooperation and collaboration between the United States and India on critical and emerging technologies.
- Critical and Emerging Technologies (CETs) are a subset of advanced technologies that has great significance and are critical in a nation's progress.
- CETs include supercomputing, cloud computing, etc.

#### What are Infantry Combat Vehicles (ICVs)

- Infantry Combat Vehicles (ICVs) are armored vehicles designed to transport infantry soldiers into combat while providing protection and fire support.
- The mainstay ICV currently in use is the **BMP-2, of Russian origin**, capable of carrying a squad of infantry.
- India is focused on modernizing its ICV fleet to enhance battlefield capabilities.



# GS SCORE

An Institute for Civil Services

# IAS 2025

## INTEGRATED TEST SERIES

&

## MENTORSHIP PROGRAMME

for **PRELIMS & MAINS** through

**350<sup>+</sup>** HRS.  
CONCEPT BUILDING

**3000<sup>+</sup>**  
MCQs

**650<sup>+</sup>**  
MAINS QUESTIONS



### INTEGRATED PREPARATION

Especially designed Integrated Test Series that synchronize the syllabus of both Prelims & Mains.



### CONCEPT BUILDING

Informative Classes on all subjects to enhance understanding and conceptual clarity of subjects.



### TESTS

Assessment-based learning modules comprising 96 Tests (45 Prelims Tests & 51 Mains Tests)



### MENTORSHIP

Mentorship through exhaustive Study Planner & Engaging Test discussion and personalised Feedback.



### STUDY MATERIAL

Crisp Value Addition Notes for Contemporary Issues, PYQs and Worksheets

*More than just a Test Series*

PROGRAMME FEE

₹ **32,500 +GST**

FOR MORE DETAILS

Scan the QR Code



**8448496262**



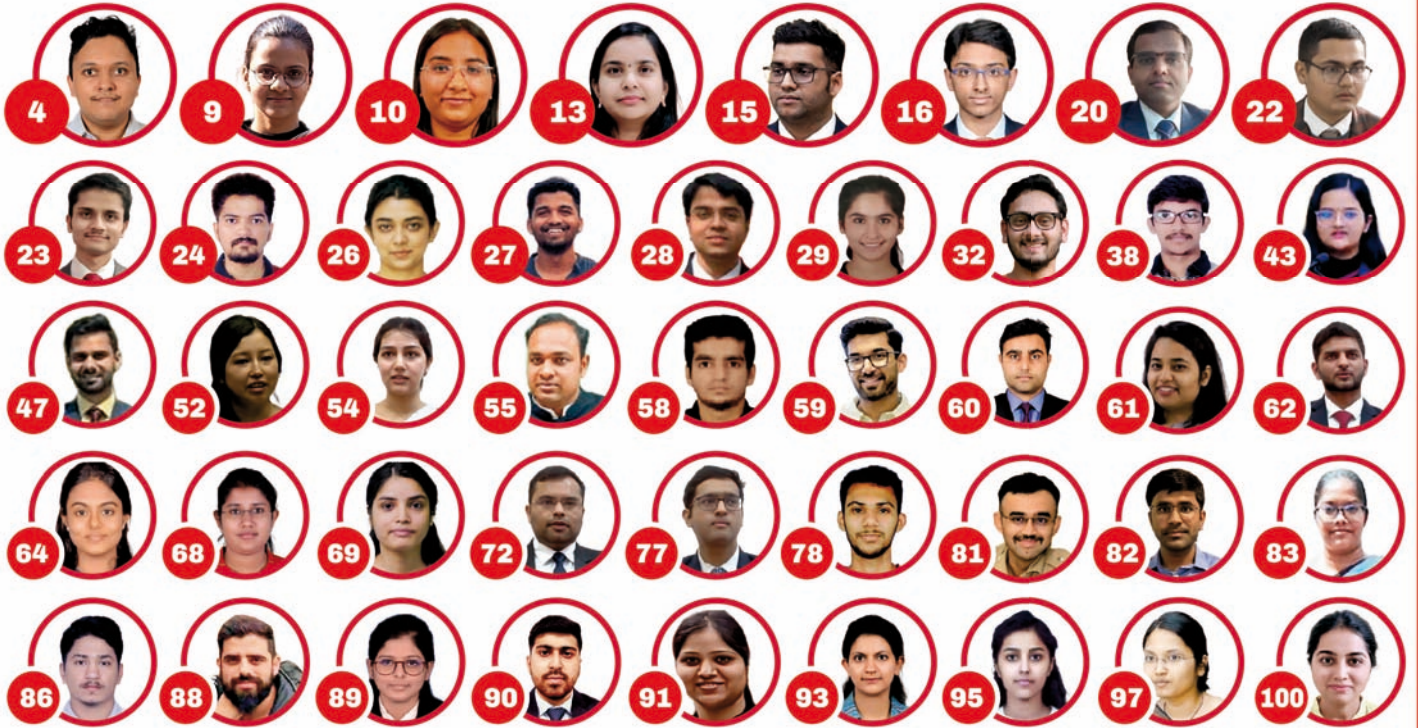
**iascore.in**





Scan QR Code for detailed RESULT

### TOP 100 ALL INDIA RANKING CSE 2023



### TOP 100 ALL INDIA RANKING CSE 2022



### TOP 100 ALL INDIA RANKING CSE 2021

