

# **CURRENT AFFAIRS**

National and International



**NOV-DEC** 

2023

ध्वा राष्ट्रीय उद्या



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Prelims & Mains

### **HIGHLIGHTS**

- **BRU REFUGEES**
- SATELLITE INTERNET
- DUDHWA TIGER RESERVE
- LIGHT COMBAT HELICOPTER PRACHAND
  - TECHNOLOGY DEVELOPMENT BOARD (TDB)





# NOVEMBER-DECEMBER 2023

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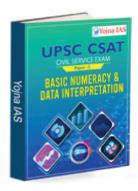
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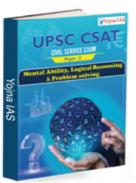


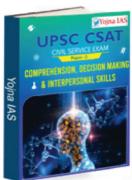
## Inside the Pages ....

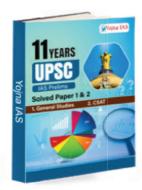
### **MAIN ATTRACTION**

- National Affairs
- International Affairs
- Economy & Banking
- State Affairs
- Science & Technology
- Space Technology
- Defence & Security
- Health & Nutrition
- Sports Panorama











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**UPSC** 

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# **CURRENT AFFAIRS**



### **Sources:**

The Hindu | The Indian Express | The Economic Times | Press Information Bureau PIB News | PRS (Recent Bills and their analysis) | CPCB | NDMA | IDSA: Institute for Defense Studies and Analysis (For in-depth IR and Internal Security articles) unesco World Heritage Convention | BBC | NCERTs All standard reference books.

Yojna IAS Current Affairs Monthly Magazine covers a wide range of topics that overlaps with the CORE subjects.





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### **FOREWORD**

### Dear Aspirants,

Every one of you dreams and desires something to accomplish. Nobody can stop you from dreaming. Dreams are the only objective we all have and don't work until we do. Every new day, you dream of motivating yourself for a new purpose of improving your life. Preparing and nourishing the mind. Vanishing the failed person within us. Discard the obstacles, doubts and justifications. And that's how victory will arrive at you. One should realize the most achieving regions in the preliminary and main IAS examination. One should know which editions must be read and which books must be prevented. To achieve an IAS position with the least effort, candidates must be discreet.

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We Wish you Good Luck, Keep Believing in Yourself, and if you are well prepared, vou will Succeed.

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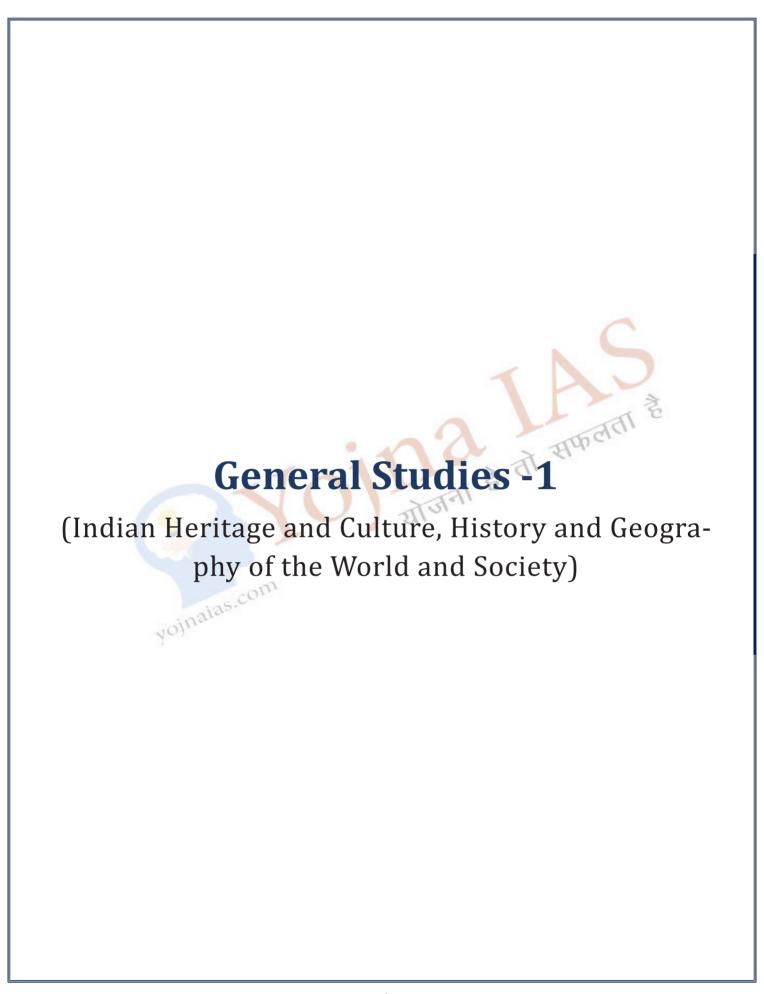
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### **BRU REFUGEES**

This article covers "Daily Current Affairs" and the topic details "Bru refugees". This topic has relevance in the "Social Issues" section of the UPSC CSE exam.

### FOR PRELIMS:

Who are Bru refugees?

### FOR MAINS:

GS1: Society

### WHY IN THE NEWS?

For the first time, Bru refugees will not vote in Mizoram elections since they have been permanently settled in Tripura through a Central government-sponsored program.

### **BRU TRIBE**

- The Brus, also known as Reangs, are an indigenous community primarily residing in Northeast India, notably in **Tripura**, **Mizoram**, and **Assam**.
- In Tripura, they hold the status of a **Particularly Vulnerable Tribal Group (PVTG)**, a designation by the government for tribes facing heightened vulnerability within the tribal community.
- The Brus speak the Reang dialect of the Kokborok language, which is locally referred to as Kau Bru.
- Their Hojagiri folk dance is well-known all over the world. 'Buisu' is the most famous festival of the Reang tribes.

### Particularly Vulnerable Tribal Group (PVTG)

CODY

- PVTG is a classification designed to identify tribal communities with heightened vulnerability within the broader tribal population.
- These groups exhibit specific characteristics, including:
- o Pre-Agricultural Technology
- o Stagnant or Declining Population
- o Extremely Low Literacy
- o Subsistence Economy
- These communities often reside in remote areas with limited infrastructure and administrative support.
- As of 2011, there are 75 PVTGs dispersed across 18 states and one Union Territory in India.

### **BRU-REANG REFUGEE CRISIS**

- The crisis dates back to the late 1990s when violence and ethnic tensions between the Bru and the majority Mizos led to the displacement of thousands of Bru people from Mizoram state.
- The Bru-Reang Refugee Crisis has fueled since 1997, with over 40,000 Brus taking refuge in six camps in northern Tripura's Kanchanpur sub-division following ethnic violence in neighbouring Mizoram.
- These refugee camps were initially intended to be temporary, but due to the protracted nature of the crisis, the displaced population has remained in these camps for over two decades.

### REHABILITATION OF BRUS

- In June 2018, leaders of the Bru camps agreed with the Centre and the two state governments to enable repatriation to Mizoram. However, many camp residents rejected the terms of the agreement, citing concerns about their safety in Mizoram.
- Subsequently, a quadripartite agreement was inked in January 2020, involving the Centre, the state governments of Tripura and Mizoram, and representatives of the Bru-Reang community. This agreement was designed to facilitate the permanent settlement of Bru refugees in Tripura.
- According to the terms of this pact, each refugee family is entitled to receive a designated plot of land, a fixed deposit of Rs. 4 lakh, complimentary rations, and a monthly stipend of Rs. 5,000 for two years. Additionally, each family will receive Rs. 1.5 lakh for the construction of their houses.

**Sources:** 

For the first time, Bru refugees to have no participation in Mizoram Assembly polls – The Hindu

### Q1. With reference to Bru Tribe, consider the following statements:

- 1. They are an indigenous tribe primarily residing in Tripura, Mizoram, and Assam.
- 2. Bihu is the most famous festival of the Reang tribes.
- 3. The recent agreement facilitated the permanent settlement of Bru refugees in Mizoram.

### Which of the statements given above is/are NOT correct?

- (a) 1 and 2 only
- (b) 2 and 3 only
- (c) 3 only
- (d) None

Answer: (b)

### **Q2.** Consider the following:

- 1. Post- Agricultural Technology
- 2. Stagnant or Increasing Population
- 3. Extremely Low Literacy
- 4. Subsistence Economy

How many of the characteristics of a Particularly Vulnerable Tribal Group (PVTG) are mentioned above?

- (a) Only one
- (b) Only two
- (c) Only three
- (d) All four

Answer: (b)

### **IEHOVAH'S WITNESSES**

This article covers "Daily Current Affairs" and the topic details "Jehovah's Witnesses". This topic has relevance in the Art and Culture section of the UPSC CSE exam.

### FOR PRELIMS:

About Jehovah's Witnesses?

### FOR MAINS:

GS 1: Art and Culture Jehovah's Witnesses in India?

### WHY IN THE NEWS?

### About Jehovah's Witnesses:

गोजना है तो सफलता Jehovah's Witnesses are a Christian sect with distinct beliefs, differing from mainstream Christianity, particularly in their rejection of the Holy Trinity.

### **Origins:**

- The origins of Jehovah's Witnesses can be traced back to a Bible Student movement initiated in the 1870s by American pastor Charles Taze Russell.
- Today, the Governing Body of Jehovah's Witnesses is headquartered in Warwick, New York.

Aspect	Jehovah's Witnesses
STRUCTURE	
Clergy Class	They have no clergy class.
Financial Support	Elders, teachers, and missionaries are unsalaried. All activities are supported by anonymous donations. They do not tithe or collect money at their places of worship (Kingdom Halls).
Political Neutrality	They remain neutral with regard to politics and advocate peace, not participating in warfare.
Global Unity	They are globally united in their faith and Bible-based beliefs, with no social, ethnic, racial, or class divisions. They are not affiliated with any other religion, whether Catholic, Orthodox, or Protestant.
DOCTRINE	
Belief in God	They believe in one true God, whose name is Jehovah.

Belief in Jesus	They do not believe that Jesus Christ is Almighty God or in the Trinity doctrine. They follow the teachings of Jesus and honor him as the Son of God.
Religious Symbols	They do not venerate the cross, nor do they use idols in their worship.
Belief in Hell	They do not believe in a fiery hell where all bad people go after death.
Eternal Life Belief	They believe that God will bless obedient mankind with perfect everlasting life in an earthly paradise.
Christianity Claim	Jehovah's Witnesses believe that they have successfully reestablished first-century Christianity, the form of Christianity that Jesus' apostles practiced.

### **PRACTICES AND FESTIVALS:**

- Jehovah's Witnesses do not celebrate Christmas or Easter, as they view these festivals as influenced by Pagan traditions.
- Paganism refers to a group of contemporary religions rooted in reverence for nature and often linked to indigenous traditions.

### **EVANGELICAL WORK:**

- Jehovah's Witnesses are known for their evangelical work, emphasizing the importance of belief in Jesus Christ and the study of the Bible.
- They engage in door-to-door outreach to spread what they refer to as "The Truth."

### **END-TIMES BELIEF:**

• They believe that the end of the world is imminent and anticipate the Kingdom of God replacing human governments to fulfill God's purpose for the earth.

### JEHOVAH'S WITNESSES IN INDIA:

- Jehovah's Witnesses have had a presence in India since 1905.
- They established an office in Mumbai (formerly Bombay) in 1926 and obtained legal registration in 1978.

### **SUPREME COURT VERDICT:**

- A significant legal case involving Jehovah's Witnesses in India was Bijoe Emmanuel vs. State of Kerala. In 1986, the Supreme Court ruled in favor of three children from the sect who refused to sing the National Anthem at their school.
- The court held that compelling them to participate violated their fundamental right to freedom of religion under Article 25 of the Indian Constitution.

Source:

Who are Jehovah's Witnesses (indianexpress.com)

### Q.1 Which of the following statements about Jehovah's Witnesses is/are correct?

- 1. Jehovah's Witnesses originated in India in the 19th century.
- 2. They believe in the doctrine of the Holy Trinity.

### Which of the statements given above is/are correct?

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

ANSWER: D

### Q.2 Consider the following statements about Jehovah's Witnesses:

- 1. It is a sect of Iudaism
- 2. They consider the Bible as their ultimate holy scripture.
- 3. They do not consider Jesus Christ as a God.

### How many of the above statement/s is/are correct?

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

ANSWER: B



This article covers "Daily Current Affairs" and the topic details "Galápagos Islands". This topic has relevance in the Geography section of the UPSC CSE exam.

GS 1: Geography

# WHY IN THE NEWS?

Recently, scientists made discoveries of two previously unknown coral reefs and identified two uncharted seamounts in the Galapagos Islands.

### ABOUT GALÁPAGOS ISLANDS:

The Galápagos Islands, situated in the vast expanse of the Pacific Ocean approximately 600 miles off the coast of Ecuador

### **KEY ASPECTS OF THE GALÁPAGOS ISLANDS:**

- Geographic Location: The Galápagos Archipelago comprises 19 islands, including 13 larger islands and 6 smaller ones, along with numerous islets and rocks. This vast expanse covers over 17,000 square miles and is distributed on both sides of the Equator.
- Geological Formation: The Galápagos Islands owe their dramatic, rugged landscapes to repeated volcanic eruptions. Despite their pristine appearance, these islands are relatively young compared to most oceanic archipelagos. The largest and youngest islands, Isabela and

Fernandina, are less than one million years old, while the oldest islands, such as Española and San Cristóbal, are estimated to be between three to five million years old. Mount Azul, standing at 5,541 feet, is the highest point in the Galápagos.

- **Climate:** The Galápagos Islands are characterized by low rainfall, low humidity, and relatively cool air and water temperatures. These environmental conditions have contributed to the islands' unique ecosystems and have had a profound impact on the evolution of their wildlife.
- **UNESCO World Heritage Site:** In recognition of its extraordinary natural heritage, the Galápagos Islands were designated as a UNESCO World Heritage site in 1978. This status underscores their global importance for scientific research and conservation.

### **BIODIVERSITY OF THE GALÁPAGOS:**

The Galápagos Islands are renowned for their rich and diverse flora and fauna, much of which is endemic to the region. Notable species include:

- **Giant Galápagos Tortoise (Chelonoidis nigra):** These iconic reptiles are among the most famous inhabitants of the islands. They come in various shapes and sizes on different islands, showcasing remarkable adaptability.
- Marine Iguana (Amblyrhynchus cristatus): The Galápagos are the only place in the world where marine iguanas exist. They have adapted to feed underwater and are excellent swimmers.
- **Flightless Cormorant (Phalacrocorax harrisi):** As the name suggests, these cormorants have lost their ability to fly. They are excellent divers and have evolved on the islands without natural predators.
- Galápagos Penguin (Spheniscus mendiculus): This is the only penguin species that lives in the Northern Hemisphere. The Galápagos penguin thrives in the archipelago's unique marine environment.

### **UNDERSTANDING SEAMOUNTS:**

In addition to the terrestrial wonders of the Galápagos, the surrounding waters feature underwater formations known as seamounts.

### **Key characteristics of seamounts include:**

- **Underwater Mountains:** Seamounts are underwater mountains with steep sides that rise from the seafloor. They are often remnants of extinct volcanoes and exhibit diverse features like craters and linear ridges.
- **Diversity Hubs:** Seamounts function as "oases of life" in the deep ocean, supporting higher species diversity and biomass compared to the surrounding seafloor. They also provide a substrate for various organisms to attach and grow.
- **Global Distribution:** Seamounts can be found in every ocean basin around the world, making them vital areas for ecological research and exploration.

### Q.1 Galápagos Islands is located in:

- 1. Atlantic Ocean
- 2. Pacific Ocean
- 3. Indian Ocean
- 4. Black Sea

**ANSWER: B** 

### **Q.2** Consider the following statements regarding seamounts:

- 1. Seamounts are typically underwater mountains with steep sides rising from the seafloor.
- 2. Most seamounts are remnants of active volcanoes.
- 3. They are primarily found in the Atlantic Ocean.

### How many of the above statement/s is/are correct?

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

**ANSWER: B** 

Q.3 Discuss the significant ocean relief features and their geological origins. How do these features influence marine ecosystems, weather patterns, and human activities? Provide examples to support your answer.

### BIRSA MUNDA: THE TRIBAL FREEDOM FIGHTER

This article covers "Daily Current Affairs" and the topic details "Birsa Munda: The Tribal Freedom Fighter". This topic has relevance in the "History and Culture" section of the UPSC CSE exam.

### FOR PRELIMS:

Who was Birsa Munda?

What is Janjatiya Gaurav Divas?

### FOR MAINS:

GS1: History and Culture

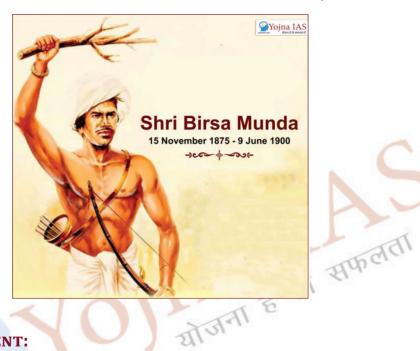
### WHY IN THE NEWS?

The Birth Anniversary of Birsa Munda was celebrated on 15th November as Janjatiya Gaurav Divas across the country.

### EARLY LIFE AND BACKGROUND:

 Birsa Munda, born on 15 November 1875 in the village of Ulihatu in the Ranchi district of Bengal Presidency (now in Khunti district of Jharkhand), was a significant Indian tribal independence activist and folk hero belonging to the Munda tribe.

- Birsa Munda received his education in Salga under the guidance of his teacher, Jaipal Nag. He later converted to Christianity to join the German Mission School, but he dropped out when he learned that the British aimed to convert tribals to Christianity through education.
- After leaving school, he founded a faith called Birsait and attracted members of the Munda community to join this faith, which posed a challenge to British activities.
- The Birsaits openly declared that the real enemies were the British, not Christian Mundas.



### TRIBAL MASS MOVEMENT:

- Munda spearheaded an Indian tribal mass movement, rallying the tribals against forceful land grabbing orchestrated by the British government.
- This exploitative practice aimed to transform the tribals into bonded labourers, pushing them into abject poverty.
- **Struggle for Land Rights:** Recognising the importance of land ownership, Birsa Munda inspired his people to resist the British government's attempts to seize their lands and assert their rights.
- **Ulgulan The Revolt:** In 1894, as a reaction to the introduction of the Zamindari system and Permanent settlement in tribal areas, Birsa Munda declared "**Ulgulan" or revolt against the British and the Dikus (outsiders).**
- **Known as 'Dharti Abba,**' Birsa Munda stressed the importance of tribal people studying their religion while propagating principles of the Hindu religion.

### **LEGACY AND IMPACT:**

- Despite his young age, Birsa Munda's struggle against the exploitation and discrimination of tribals had a lasting impact.
- The **Chotanagpur Tenancy Act**, passed in 1908, was a significant blow against the British government, restricting land transfer from tribal people to non-tribals.

### RECOGNITION AND COMMEMORATION:

- In recognition of his influence on the national movement, the state of Jharkhand was created on Birsa Munda's birth anniversary in 2000.
- Additionally, November 15, commemorated as the birth anniversary of Birsa Munda, was declared 'Janjatiya Gaurav Divas' by the Central Government in 2021.

### Sources:

PM Modi makes tribal push in Jharkhand; to visit Birsa Munda's birthplace on November 15 - The Hindu

### **Q1.** With reference to Birsa Munda, consider the following statements:

- 1. He founded a faith called Birsait, which attracted members of the Munda community.
- योजना है तो सफलता 2. Birsa Munda declared "Ulgulan" against the British with the help of the Dikus.

Which of the statements given above is/are correct?

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

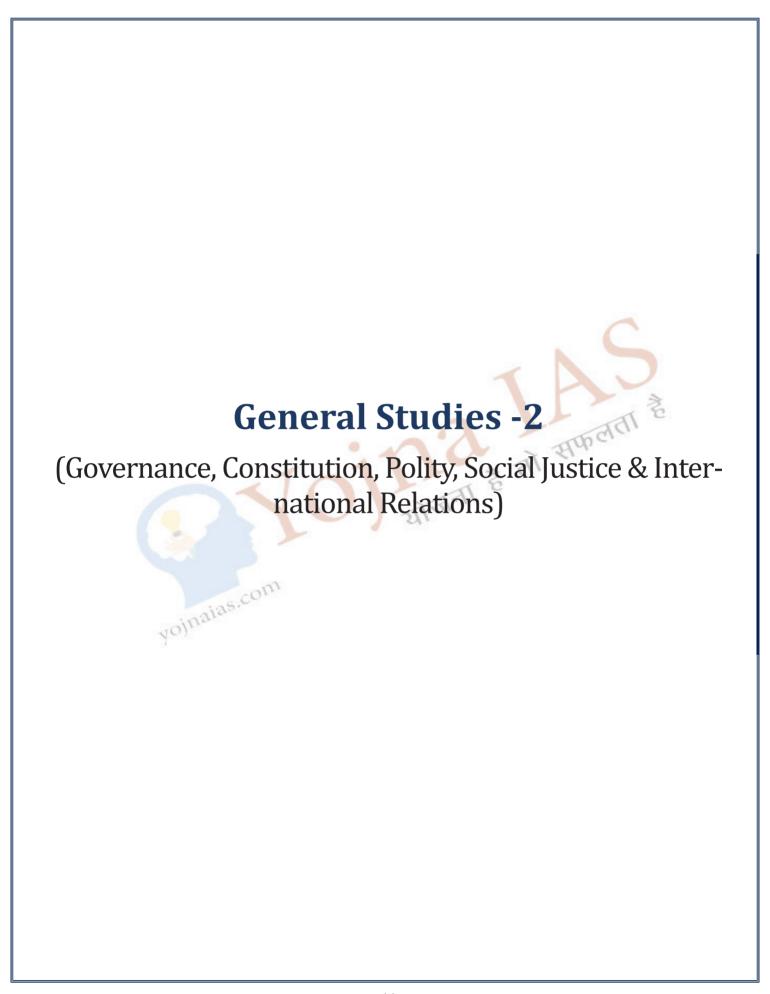
Answer: (a)

Q2. With reference to the history of India, "Ulgulan" or the Great Tumult is the description of which of the following events? (PYQ Civil Services Exam (Prelims) 2020)

- (a) The Revolt of 1857
- (b) The Mappila Rebellion of 1921
- (c) The Indigo Revolt of 1859 60
- (d) Birsa Munda's Revolt of 1899 1900

Answer: (d)

03. Discuss the Munda Ulgulan movement led by Birsa Munda as a significant tribal uprising during the Indian independence struggle.



### SATELLITE INTERNET

This article covers "Daily Current Affairs" and the topic details "Satellite Internet". This topic has relevance in the "Science and Technology" section of the UPSC CSE exam.

### FOR PRELIMS:

What is Satellite internet and its uses?

### FOR MAINS:

GS2: Science and Technology

### WHY IN THE NEWS?

Recently, Reliance Jio made a significant announcement, showcasing **India's first satellite-powered** gigabit internet service. This breakthrough technology has the potential to deliver high-speed internet to remote and hard-to-reach regions within the country.

### SATELLITE INTERNET

- Satellite internet technology is a form of internet access provided through communication satellites orbiting the Earth.
- It allows users to connect to the internet without relying on traditional terrestrial methods like cable or fibre optic connections. गोजना

### WORKING OF SATELLITE INTERNET

- An internet service provider (ISP) deploys satellites into orbit around the Earth.
- The ISP then relies on a signal transmitted through one of these satellites in either low-Earth or high-Earth orbit. A strategically placed receiver dish, situated with an unobstructed view of the sky, captures this signal.
- To establish a functional internet connection, a modem is connected to this receiver dish, translating the incoming signal.
- Traditional high-speed satellite internet methods often involve constellations of low-Earth orbit (LEO) satellites, which orbit the Earth at altitudes ranging from 250 to 2,000 kilometres.
- Communication between these satellites and the Earth takes place through the transmission of radio waves.

### **ADVANTAGES:**

- **Global Coverage:** Satellite internet is not restricted by geographical barriers, making it an ideal solution for remote and rural areas where traditional broadband connections are unavailable.
- High Speed: While it may not match the speeds of fibre-optic or cable internet, satellite technology can deliver significantly faster internet than dial-up or DSL connections.
- **Quick Deployment:** Satellite internet can be deployed relatively quickly, making it a valuable solution in emergencies and for businesses in need of rapid connectivity.
- **Redundancy:** It can serve as a backup or redundant internet connection for businesses, ensuring connectivity even when terrestrial networks fail.

### CHALLENGES AND LIMITATIONS:

- Latency: Due to the long distance data must travel between the Earth and satellites, satellite internet experiences higher latency than terrestrial connections, making it less suitable for timesensitive applications like online gaming or Video conferencing.
- **Cost:** Satellite internet services are more expensive than traditional broadband, often involving equipment and installation costs.
- Data Caps: Many satellite internet plans come with data usage restrictions, which can be a limiting factor for heavy internet users.
- Weather Interference: Adverse weather conditions, such as heavy rain or snow, can disrupt satellite signals, leading to connectivity issues.

### MORE ABOUT THE NEWS:

- At the recent India Mobile Congress, Reliance Jio unveiled its latest technological innovation, IioSpaceFiber.
- This advanced satellite internet technology, developed in partnership with SES, a Luxembourgbased satellite communications company, harnesses medium Earth orbit (MEO) satellites to provide internet connectivity.
- SES's O3v and o3b mPOWER networks form the foundation of this groundbreaking initiative, claiming to offer internet services comparable to traditional fibre connections from space. तो सफले

SOURCES:

Reliance Jio demonstrates its satellite-based gigabit internet in India | Technology News – The Indian Express

### Q1. With reference to Satellite Internet Technology, consider the following statements:

- 1. It allows users to connect to the internet without relying on cable or fibre optic connections.
- 2.. Communication between these satellites and the Earth takes place through the transmission of infra-red waves.

### Which of the statements given above is/are correct?

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

### Answer: (a)

### **Q2.** Consider the following:

- 1. **Global Coverage**
- 2. Faster internet than broadband
- 3. Quick deployment
- No effect of weather conditions

### How many of the abovementioned are advantages of Satellite Internet?

- (a) Only one
- (b) Only two
- (c) Only three
- (d) All four

### Answer: (b)

03. Discuss the significance and challenges of satellite internet technology with reference to India's recent development in this field.

### **BELT AND ROAD INITIATIVE (BRI)**

This article covers "Daily Current Affairs" and the topic details "Belt and Road Initiative (BRI)". This topic has relevance in the "International Relations" section of the UPSC CSE exam.

### FOR PRELIMS:

What is BRI? What are its principles?

### FOR MAINS:

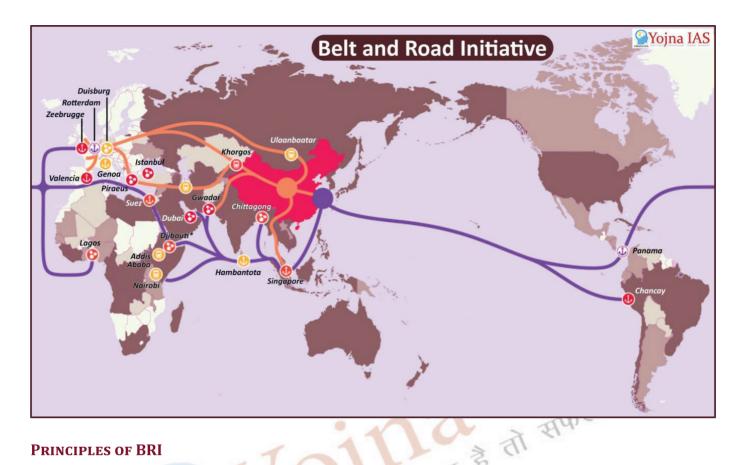
GS2: International Relations

WHY IN THE NEWS?

The year 2023 commemorates ten years since President Xi Jinping introduced the ambitious infrastructure funding project known as the Belt and Road Initiative (BRI) in China.

### ABOUT BELT AND ROAD INITIATIVE (BRI)

- In 2013, President Xi Jinping launched the Silk Road Economic 'Belt' focusing on revitalising trade and infrastructure connections between Asia and Europe, particularly through Central Asia.
- Expanding on this, he later introduced the 'Road,' which aimed to establish sea trade infrastructure connecting China to Southeast Asia, Europe, and Africa, prioritising the development of ports, bridges, industry corridors, and critical infrastructure throughout Southeast Asia and the Indian Ocean.
- While initially termed the One Belt One Road Initiative (OBOR), these projects have been commonly referred to as the Belt and Road Initiative (BRI) since 2015.
- This ambitious undertaking involves the creation of an extensive network encompassing railways, energy pipelines, highways, and more efficient border crossings.
- As of now, **over sixty countries**, accounting for a significant portion of the world's population, have either signed on to BRI projects or expressed their interest in doing so.
- Behind the BRI lie both geopolitical and economic motives for China. The initiative aligns with China's vision of a more assertive global presence.
- Additionally, factors like slowing economic growth and challenging trade relations with the United States have compelled Chinese leadership to seek new markets for its products.



### PRINCIPLES OF BRI

- The BRI was underpinned by five core principles initially:
  - **Policy Coordination**
  - **Infrastructure Connectivity**
  - **Trade**
  - **Financial Integration**
  - **People-to-People Connections**
  - Later, a sixth principle of 'Industrial cooperation' was added.

### INDIA'S POSITION ON THE BRI

India's stance on the Belt and Road Initiative (BRI) has remained consistent since 2013.

- **Sovereignty Concerns:** India's main reservations stem from sovereignty issues, particularly regarding the China-Pakistan Economic Corridor (CPEC) passing through Pakistan-occupied Kashmir (PoK).
- **Geopolitical Implications:** India is concerned about the geopolitical implications of the BRI's expansion in the Indian Ocean region, as China's presence grows, impacting trade, energy transport, and investments in neighbouring countries.
- **Broader Impact on Relations:** Negative developments in India-China relations, such as the trade deficit and border tensions, further influence India's view of the BRI.
- Non-Endorsement and AIIB Participation: India refrains from endorsing the BRI and has not participated in BRI Forums. Instead, it has actively engaged with the Asian Infrastructure Investment Bank (AIIB) since its inception, emerging as a significant market for the agency.

### China-Pakistan Economic Corridor (CPEC)

The China-Pakistan Economic Corridor (CPEC) has been a central element of the Belt and Road Initiative (BRI) from its inception. Pakistan faces economic and political difficulties, but it remains committed to the CPEC, despite concerns about potential long-term economic consequences.

- **Cornerstone of China-Pakistan Partnership:** The \$60 billion CPEC is a crucial part of the "all-weather" strategic partnership between China and Pakistan, bolstered by a bilateral free trade agreement.
- **Project Focus:** The CPEC emphasises energy projects to address Pakistan's energy needs, alongside extensive infrastructure development and the strategic Gwadar port.
  - o **Strategic Objectives:** The primary objectives of CPEC are to provide China with an alternate and shorter route to the Middle East and Africa, bypassing the Malacca Strait. Simultaneously, it seeks to promote Pakistan's economic development and bolster its energy security.
- **Operational Achievements:** Several CPEC projects are now operational, including the Sukkur-Multan section of the Peshawar-Karachi Motorway, the Havelian-Thakot section of the Karakoram Highway Phase II, the Lahore Orange Line Metro, and various operational energy projects such as coal-fired plants.
- **Regional Expansion:** Some CPEC projects may extend into Afghanistan, potentially broadening the corridor's regional impact.

The Belt and Road Initiative (BRI) serves as a platform through which China leverages its infrastructure, knowledge, and financial prowess to cultivate enhanced political connections with countries reliant on capital imports. In light of these evolving dynamics, it is imperative for India to carefully assess the geopolitical interests it holds in the Indian Ocean region. This critical examination is vital, as the Indian Ocean region presents potential security challenges that India must proactively address and navigate.

**SOURCES:** 

An Expert Explains | 10 years of China's Belt and Road Initiative: The project, its aims and where it stands now | Explained News - The Indian Express

### Q1. With reference Belt and Road Initiative (BRI), consider the following statements:

- 1. 'Belt' has a focus on revitalising trade and infrastructure connections between China to Southeast Asia, Europe, and Africa.
- 2. The 'Road' component, reminiscent of the Ancient Silk Road, will connect between Asia and Europe, particularly through Central Asia.

### Which of the statements given above is/are correct?

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

Answer: (d)

### **O2.** Consider the following:

- The China-Pakistan Economic Corridor (CPEC) is a bilateral venture between Pakistan and China, aiming to enhance infrastructure and connectivity within Pakistan.
- 2. CPEC is an integral component of the Belt and Road Initiative (BRI).
- 3. CPEC's main goals include offering China a more direct route to the Middle East and Africa, bypassing the Gulf of Aden.

### How many of the abovementioned statements are correct?

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

Answer: (b)

Q3. Discuss the Belt and Road Initiative (BRI) and its evolution over the past decade. Evaluate India's stance on the BRI.

# LIGHT COMBAT HELICOPTER PRACHAND

This article covers "Daily Current Affairs" and the topic details "Light Combat Helicopter Prachand". This topic has relevance in the "Security" section of the UPSC CSE exam.

### FOR PRELIMS:

What is Light Combat Helicopter Prachand? What yojnaias.com are its features?

### FOR MAINS:

GS2: Security

### WHY IN THE NEWS?

The Indian Army's Light Combat Helicopter (LCH), known as 'Prachand', successfully conducted rocket firing on Monday, both during the day and at night.

### LIGHT COMBAT HELICOPTER PRACHAND

- The LCH Prachand is India's first indigenous **multi-role combat** helicopter. designed and manufactured by Hindustan Aeronautics Limited (HAL).
- The helicopter features modern stealth characteristics, strong armour protection, and powerful night attack capabilities. It



- **Developed by Hindustan Aeronautics Limited** (HAL)
- Modern stealth features and strong armor protection
- Fitted with Shakti Engine (co-developed by **HAL and France's Safran**)
- Received operational clearance in 2017
- Maximum speed of 288 kmph and combat radius of 500 km
- Can land and take off at altitudes of 5,000 meters

- has advanced navigation systems, close combat guns, and effective air-to-air missiles.
- The LCH Prachand is **suitable for high-altitude operation**s and accurate strikes on targets located at elevated positions.
- It holds the distinction of being the **only attack helicopter** in the world capable of **landing and** taking off at altitudes of 5,000 meters while carrying significant weapons and fuel payload.
- It is powered by the **Shakti Engine**, which is a collaborative effort between HAL and France's Safran, ensuring top-notch performance.
- LCH Prachand received operational clearance in 2017, highlighting its readiness for military service.

### **Performance Specifications**

- Capable of flying at a maximum speed of 288 kmph.
- With a combat radius of 500 km, it can reach a service ceiling of 21,000 feet.
- The LCH Prachand can carry out an array of activities, including Combat Search and Rescue (CSAR), Destruction of Enemy Air Defence (DEAD), operations against slow-moving aircraft and Remotely Piloted Aircraft (RPAs), high-altitude bunker busting operations, counter-insurgency missions in jungle and urban environments, and providing crucial support to ground forces.
- It will be **equipped with Helina missiles**, with the Air Force version named Dhruvastra.

The LCH Prachand stands as a remarkable achievement in Indian aeronautics, designed to meet the diverse needs of the armed forces across a range of challenging terrains and operational scenarios. Its cutting-edge features, indigenous development, and versatile capabilities make it a key asset in India's military arsenal. योजना है

SOURCES:

Army's LCH Prachand carries out inaugural firing of 70mm rocket - The Economic Times (indiatimes.com)

### Q1. With reference LCH Prachanda, consider the following statements:

- 1. It is India's first indigenous multi-role combat fighter aircraft.
- It is designed and manufactured by Hindustan Aeronautics Limited (HAL).

### Which of the statements given above is/are correct?

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

Answer: (b)

### Q2. Consider the following statements with reference to LCH Prachanda:

- 1. LCH Prachand is suitable for high-altitude operations.
- 2. It is the only attack helicopter in the world capable of landing and taking off at altitudes of 8,500 meters while carrying significant weapons and fuel payload.
- The Shakti Engine that powers it is developed entirely indigenously in the country.

### How many of the abovementioned statements are correct?

(a) Only one

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

Answer: (a)

### **CAYMAN ISLANDS**

This article covers "Daily Current Affairs" and the topic details "Cayman Islands". This topic has relevance in the Economy section of the UPSC CSE exam.

GS 2: Economy

### WHY IN THE NEWS?

The removal of the Cayman Islands from the Financial Action Task Force (FATF) grey list is anticipated to bring about a favorable effect for international private equity funds looking to make investments in India.

### **CAYMAN ISLANDS: A BRITISH OVERSEAS TERRITORY**

**Location:** The Cayman Islands, located within the Western Caribbean Sea, is a British Overseas Territory. This territory consists of three main islands: Grand Cayman, Cayman Brac, and Little Cayman. They are positioned to the south of Cuba and northwest of Jamaica.

### HISTORICAL BACKGROUND:

- The Cayman Islands were colonized by the British during the 18th and 19th centuries.
- After 1863, these islands were administered by Jamaica.
- In 1959, the Cayman Islands became a territory within the Federation of the West Indies.
- Following the dissolution of the Federation in 1962, the Cayman Islands chose to remain a British dependency.

**Language:** While English is the predominant language spoken in the Cayman Islands, many inhabitants also communicate in local Creole dialects.

**Geography:** The Cayman Islands feature a low-lying landscape with extensive coral reefs that contribute to their natural beauty.

**Capital:** George Town, situated on Grand Cayman Island, serves as the capital of the Cayman Islands. **Currency:** The official currency of the Cayman Islands is the Cayman Island dollar. However, American currency is widely accepted throughout the islands.

**Government:** The government system in the Cayman Islands is based on a parliamentary democracy. The chief of state is the queen of the United Kingdom, while the head of government is the premier.

### **ECONOMY:**

- The Cayman Islands boast a mixed economic system.
- They are renowned as a thriving offshore financial center, attracting international businesses and corporations.
- The Cayman Islands are considered a tax haven due to their lack of corporate taxation, making

them an attractive location for multinational companies to establish subsidiary entities and shield their incomes from taxation.

- Notably, the Cayman Islands do not impose taxes on residents. There are no income taxes, property taxes, capital gains taxes, payroll taxes, or withholding taxes.
- The Caymans generate revenue through tourism-related fees, work permits, financial transactions, and import duties.

The Cayman Islands' unique economic and tax structure make them an intriguing destination for both businesses and tourists.



### FINANCIAL ACTION TASK FORCE (FATF):

**Overview:** The Financial Action Task Force (FATF) is an inter-governmental body established in 1989 at the initiative of the G7 nations.

**Mandate:** FATF serves as a "policy-making body" focused on generating political will to encourage national legislative and regulatory reforms in various areas.

**Secretariat:** The OECD headquarters in Paris houses the FATF Secretariat.

### **ROLES AND FUNCTIONS:**

- Money Laundering: Initially, FATF was established to examine and develop measures to combat money laundering.
- Terrorist Financing: In October 2001, FATF expanded its mandate to include efforts to combat terrorist financing alongside money laundering.
- Weapons of Mass Destruction: In April 2012, it added efforts to counter the financing of the proliferation of weapons of mass destruction.

**Composition:** FATF currently consists of 37 member jurisdictions and 2 regional organizations, representing major financial centers worldwide. Additionally, the organization includes observer and

associate members.

### **OBJECTIVES: FATF AIMS TO:**

Set standards for and promote effective implementation of legal, regulatory, and operational measures to combat money laundering, terrorist financing, and threats to the international financial system's integrity.

### BLACKLIST AND GREY LIST:

- **Black List:** Countries known as Non-Cooperative Countries or Territories (NCCTs) are placed on the blacklist due to their support for terror funding and money laundering activities. The blacklist is periodically revised by FATF, with countries added or removed.
- **Grey List:** Countries considered safe havens for supporting terror funding and money laundering are placed on the FATF grey list. This inclusion serves as a warning to the country that it may eventually be moved to the blacklist.

### **Implications of Being in the Grey List:** Countries in the grey list may face:

- Economic sanctions from international financial institutions like IMF, World Bank, and ADB.
- Challenges in obtaining loans from international financial organizations. सफलता है
- Reduction in international trade opportunities.
- Risk of international boycott.

FATF President: The FATF President is a senior official appointed by the FATF Plenary from among its members for a one-year term.

SOURCE:

https://www.msn.com/en-in/money/topstories/cayman-islands-exitfrom-fatf-grey-list-to-boost-fdi-inflow-in-india/ar-AA1j7tEh

## voinalas.cc **Q.1** Consider the following statements:

- This territory is located in the Caribbean Sea and is a British Overseas Territory. 1.
- 2. The Cayman Islands are known for being a part of the European Union (EU).
- 3. The Cayman Islands have gained recognition for their advanced technological developments in the field of aerospace.

### How many of the above statement/s is/are correct?

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

**ANSWER: A** 

### Q.2 Consider the following statements about the Financial Action Task Force (FATF):

- 1. FATF was established primarily to combat money laundering and was formed under the guidance of the G20 nations.
- 2. The FATF Secretariat is situated in London.

### Which of the statements given above is/are correct?

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

ANSWER: D

0.3 Discuss the impact of black money havens on the global economy and the measures that can be taken at both national and international levels to combat the issue.

### GAZA STRIP AND RAFAH BORDER STATE FOOD SAFETY INDEX (SFSI) 2023

This article covers "Daily Current Affairs" and the topic details "State Food Safety Index (SFSI) 2023". This topic has relevance in the "Social Issues" section of the UPSC CSE exam. गोजना है तो सफलता

### FOR PRELIMS:

What is State Food Safety Index (SFSI) 2023?

### FOR MAINS:

GS2: Social Issues

### WHY IN THE NEWS?

The State Food Safety Index (SFSI) for 2023 has been released by the Food Safety and Standards Authority of India (FSSAI).

### STATE FOOD SAFETY INDEX (SFSI) 2023

- The aim behind the creation of the State Food Safety Index is to assess the performance of various states in relation to different aspects of food safety.
- This index is constructed based on five crucial parameters:
  - **Human Resources and Institutional Data**
  - Compliance
  - **Infrastructure and Surveillance for Food Testing**
  - **Training & Capacity Building**
  - **Consumer Empowerment**
- To ensure a fair comparison among similar entities, the states are classified into three categories: Large States, Small States, and Union Territories (UTs)
- Starting from 2019, the Food Safety and Standards Authority of India (FSSAI) has been annually releasing the State Food Safety Index (SFSI) on June 7, coinciding with World **Food Safety Day.**
- Notably, the 2023 edition of the index introduced a new parameter called 'Improvement in SFSI **Rank**, which measures the degree of improvement in each state's ranking from the previous year.

### **KEY FINIDINGS OF SFSI 2023**

- Kerala has claimed the top position in the index, with Punjab and Tamil Nadu following closely behind.
- In the category of smaller states, Goa has secured the first position for the fourth consecutive time, with Manipur and Sikkim trailing behind.
- Among the Union territories, Jammu and Kashmir, Delhi, and Chandigarh have secured the first. second, and third positions, respectively.
- 19 out of 20 large states recorded a drop in their 2023 scores from 2019, indicating a decline in food safety performance across the country.
- The worst drop was seen in Maharashtra, which scored 45 out of 100 in 2023 compared to 74 in 2019, followed by Bihar and Gujarat.
- The steepest fall in scores over five years was observed in the Food Testing Infrastructure parameter, where the average score for all large states dropped to 7 points out of 17 in 2023 from 13 points out of 20 in 2019.
- The only parameter that recorded significant improvement was Training and Capacity Building. where the average score improved to 5 points out of 8 in 2023 from 3.5 points out of 10 in 2019.



### ABOUT FSSAI (FOOD SAFETY AND STANDARDS AUTHORITY OF INDIA)

**Parent Act:** Food Safety and Standards Act, 2006, the primary legislation governing food safety and standards in India.

**Nodal Ministry:** FSSAI falls under the jurisdiction of the Ministry of Health and Family Welfare in vojnaias.com India.

### **PRIMARY AIM:**

- To ensure the availability of safe and wholesome food for human consumption.
- It does this by laying down science-based standards for articles of food and regulating their manufacture, storage, distribution, sale, and imports.

### **FUNCTIONS:**

- Establishing and laying down scientific and comprehensive food safety standards for various food products.
- Regulating and licensing food businesses, including manufacturers, processors, distributors, and retailers.
- Inspecting and monitoring food businesses for compliance with the food safety standards and guidelines.
- Providing suggestions to the government in framing the policies related to food safety.
- Protecting and promoting public health through the regulation and supervision of food safety.

SOURCES:

In FSSAI index, nearly all major states

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### slip on food safety compared to 2019 | Business News - The Indian Express

### Q1. With reference to State Food Safety Index (SFSI) 2023, consider the following statements:

- 1. The SFSI aims to assess the performance of various states in relation to different aspects of food safety.
- 2. It is being released by the Food and Drug Administration every year.
- 3. The recent 2023 report indicates an overall improvement in food safety performance across the country

### Which of the statements given above is/are NOT correct?

- (a) 1 and 2 only
- (b) 2 and 3 only
- (c) 3 only
- (d) None

Answer: (b)

### Q2. Consider the following statements with reference to Food Safety and Standards Authority of India:

- 1. Food Safety and Standards Authority of India is a statutory body.
- 2. FSSAI falls under the jurisdiction of the Department of Food and Public Distribution.
- 3. FSSAI lays down science-based standards for articles of food and regulating their manufacture, storage, distribution, sale, and imports.

### How many of the abovementioned statements are correct?

naias.com

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

Answer: (b)

Q3. Elaborate on the FSSAI's functions and its pivotal role in regulating and supervising food safety in India.

### **POSHAN TRACKER**

This article covers "Daily Current Affairs" and the topic details "Poshan Tracker". This topic has relevance in the Social Justice section of the UPSC CSE exam.

### FOR PRELIMS:

About Poshan Tracker?

### FOR MAINS:

GS 2: Social Justice

Significance of Poshan Tracker?

Challenges? Wav Forward?

### WHY IN THE NEWS?

The launch of the Poshan Tracker by the Indian government stands as the most extensive mobile phone-based nutrition monitoring system in the annals of global health.

### INTRODUCTION:

- Poshan Tracker, the largest mobile phone-based nutrition monitoring system globally, is revolutionizing nutrition monitoring in India.
- Unlike previous global examples, Poshan Tracker demonstrates universal uptake among Anganwadi workers, reaching nearly 3 million users across India.
- Central to Poshan 2.0 guidelines, this app aims to ensure transparency and accountability in nutrition service delivery.

### **UNPRECEDENTED DATA MONITORING:**

- Poshan Tracker offers real-time monitoring of over 50% of children under five in India, covering their height and weight measurements.
- Nearly 94% of beneficiaries have been Aadhar-verified.
- The app captures national, state, and district-level data on Anganwadi infrastructure, ration dis-Hiper tribution, and nutritional outcomes.

### SIGNIFICANCE OF POSHAN TRACKER:

- Acts as a real-time feedback loop for frontline workers to identify and address malnutrition in its early stages.
- Key modules include beneficiary registration, growth monitoring, and migration tracking.
- The app targets beneficiaries facing acute malnutrition and tracks the effectiveness of ICDS services.

### **CHALLENGES:**

- Poshan Tracker's effectiveness in improving data accuracy and timeliness remains a question.
- Decision-makers may not highly value older data.

### **ACCURACY AND POTENTIAL:**

- A study from Indonesia shows a mobile app can significantly improve growth monitoring accuracy.
- Poshan Tracker uses WHO growth charts to automatically calculate nutritional outcomes, reducing manual errors.
- Granular data addresses malnutrition variability and provides timely information for decision-makers.

### **WAY FORWARD:**

- User-friendliness improvements and feedback from overburdened Anganwadi workers are cru-
- Ongoing skill-building and technical assistance are needed for system sustainability.
- Poshan Tracker's data must catalyze actionable outcomes in delivering essential services to address malnutrition.

Source:

Mother, child and the Poshan Tracker | The Indian Express

### **Q.1** Consider the following statements regarding Poshan Tracker:

- Poshan Tracker is the largest mobile phone-based nutrition monitoring system globally.
- 2. The app captures real-time data on the height and weight measurements

### Which of the statements given above is/are correct?

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

ANSWER: C

0.2 Poshan Tracker, an innovative technology platform, has been introduced to monitor the progress of India's National Nutrition Mission (POSHAN Abhivaan). Discuss the significance of Poshan Tracker in addressing the issue of malnutrition in India. What are the kev features and challenges associated with its implementation, and how can it contribute to achieving better nutritional outcomes?

### FINANCE COMMISSION

This article covers "Daily Current Affairs" and the topic details "Finance Commission". This topic has relevance in the "Polity and Governance" section of the UPSC CSE exam. योजना है ते

### FOR PRELIMS:

What is Finance Commission? Appointment, Eligibility Criteria?

### FOR MAINS:

GS2: Polity and Governance

Appointment to various Constitutional posts, powers, functions and responsibilities of various Constitutional Bodies.

### WHY IN THE NEWS?

The government has begun the constitution process for the Sixteenth Finance Commission. This commission, crucial for determining the tax-sharing formula between the Centre and states, is expected to be formed by the end of this year.

### **FINANCE COMMISSION**

- The Finance Commission, established as a constitutional body, provides recommendations on distributing tax revenues among the Union and the States and the States themselves.
- It is constituted by the President under Article 280 of the Constitution, occurring at the end of every fifth year or earlier if deemed necessary.

### **COMPOSITION**

- The Commission comprises a chairman and four members appointed by the President.
- They serve for a period specified by the president in his order and are eligible for reappointment.
- The Constitution authorises Parliament to determine commission members' qualifications and selection process.

- The Parliament, under the *Finance Commission (Miscellaneous Provisions) Act, 1951*, has specified the qualifications for the chairman and members:
  - o **Chairman:** Must have experience in public affairs.
  - o **Members:** Can be selected from among individuals with the following qualifications:
- A high court judge or someone qualified to be appointed as one.
- A person with specialised knowledge of government finance and accounts.
- Someone with extensive experience in financial matters and administration.
- An individual with **exceptional knowledge of economics.**

### **FUNCTIONS:**

The Commission is tasked with making recommendations to the President on:

- The distribution of net tax proceeds between the Centre and states and the allocation among states.
- Principles governing grants-in-aid to states from the Consolidated Fund of India.
- Based on state finance commission recommendations, measures to augment a state's consolidated fund to support resources for panchayats and municipalities.
- Any other matter referred by the President in the interests of sound finance.

### NATURE OF FC'S RECOMMENDATIONS:

- The Constitution does not mandate that the Commission's recommendations be binding or confer a legal right on beneficiary states to receive the recommended funds.
- The Union government can decide whether to implement the Commission's suggestions regarding financial allocations to states.

### **ACHIEVEMENTS:**

- The Finance Commission of India has significantly reduced vertical and horizontal fiscal imbalances, accomplishing its core objectives.
- It has played a pivotal role in promoting cooperative federalism by serving as a platform for dialogue and negotiation between the central and state governments.

The Finance Commission is a valuable institution that plays a vital role in Indian fiscal federalism. However, it can be improved by making its formula for distributing tax revenues more transparent and giving more weight to the needs of special category states and new fiscal challenges.

Sources:

Govt begins process of constituting Sixteenth Finance Commission | Business News – The Indian Express

### Q1. With reference to the Finance Commission, consider the following statements:

- 1. It is established as a constitutional body.
- 2. It provides recommendations on distributing tax revenues among the Union and the States and the Local Bodies.

### Which of the statements given above is/are correct?

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

### Answer: (a)

### **O2.** Consider the following statements regarding the Finance Commission:

- The Constitution has specified the qualifications for the chairman and members.
- 2. The Commission's recommendations are advisory and not binding on the government.
- The Commission plays a vital role in Indian fiscal federalism.

### How many of the abovementioned statements are correct?

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

Answer: (b)

Q3. The Finance Commission is regarded as a balancing wheel of fiscal federalism in India. Discuss.

### INDO-PACIFIC MARITIME DOMAIN AWARENESS (IPMDA) INITIATIVE

This article covers "Daily Current Affairs", and the topic details "Indo-Pacific Maritime Domain Awareness (IPMDA) Initiative". This topic has relevance in the "International Relations" section of the UPSC CSE exam.

### FOR PRELIMS:

What is the Indo-Pacific Maritime Domain Awareness (IPMDA) Initiative? For Mains: yojnaias.com

**GS2: International Relations** 

### WHY IN THE NEWS?

Navy Chief Admiral R. Hari Kumar recently stated that the Indo-Pacific Maritime Domain Awareness (IPMDA) initiative, introduced by the Quad grouping, reflects our dedication to a free, open, inclusive, and rules-based Indo-Pacific.

### INDO-PACIFIC MARITIME DOMAIN AWARENESS (IPMDA) INITIATIVE

The IPMDA initiative is a technology and training initiative to enhance maritime domain awareness in the Indo-Pacific region and increase transparency to its critical waterways.

It was announced by the Quadrilateral Security Dialogue (Quad) grouping, comprising India, Australia, Japan, and the United States, at the Tokyo summit in May 2022.

### AIMS:

Establish a comprehensive system for monitoring and securing maritime activities in the Indo-

Pacific.

- Ensure the safety of critical sea lines of communication
- Promote cooperation among like-minded nations in the region

### **BENEFITS OF THE IPMDA:**

- Maritime domain awareness and Tracking of "dark shipping":
  - Dark shipping refers to maritime vessels that have turned off their Automatic Identification
     System (AIS) transponders, making them difficult to track.
  - The IPMDA initiative will help to track dark shipping and other tactical-level activities, such as rendezvous at sea, which can be used for illicit purposes.
- Improved response to climate and humanitarian events:
  - The IPMDA initiative will provide partners with a better understanding of maritime activities in their waters, which will help them to better respond to climate and humanitarian events, such as natural disasters and search and rescue operations.
- Increased transparency:
  - The initiative is designed to increase transparency in the Indo-Pacific maritime domain, which will help to reduce the risk of misunderstandings and miscalculations between the nations.

### QUADRILATERAL SECURITY DIALOGUE

- The Quadrilateral Security Dialogue (Quad) is a strategic security dialogue between Australia, India, Japan, and the United States.
- It was initiated in 2007 and revived in 2017.
- The Quad is not a formal alliance but a significant forum for dialogue and cooperation on various security issues.

### **OBJECTIVES OF THE QUAD**

- Promote a free and open Indo-Pacific region
- Uphold the rules-based international order
- Cooperate on security issues such as maritime security, counter-terrorism, and humanitarian assistance and disaster relief.
- Promote free and open trade and investment in the Indo-Pacific region.

### SIGNIFICANCE OF QUAD:

- Regional Security:
  - The Quad promotes a free, open, prosperous Indo-Pacific region.
  - It serves as a counterbalance to the increasing assertiveness of China in the region, contributing to regional security and stability.
- Strategic Cooperation:
  - As an inter-governmental security forum, the Quad facilitates strategic cooperation and dialogue among its member countries the United States, India, Australia, and Japan.
  - This collaboration enables sharing of information, joint military exercises, and discussions on maritime security and economic resilience.
- Economic and Infrastructure Development:

- The Quad members are committed to enhancing connectivity, infrastructure development, and economic resilience cooperation.
- This can have a significant impact on regional economic development and prosperity.
- **Indo-Pacific Influence:** 
  - The Quad represents a concerted effort by democratic nations to uphold the principles of democracy, the rule of law, and respect for international law in the Indo-Pacific region.
  - This underscores the shared commitment to regional influence and the promotion of common values.
- Response to China:
  - The revival of the Quad in 2017 and its subsequent activities have been viewed as a response to China's expanding economic and military power.

SOURCES:

Quad's IPMDA a proof of our commitment to a free, open, inclusive Indo-Pacific: Navy Chief - The Hindu

Q1. With reference to the Indo-Pacific Maritime Domain Awareness (IPMDA) Initiative, consider the following statements:

- 1. IPMDA initiative is an initiative to enhance maritime domain awareness in the Indo-Pacific region.
- 2. It was announced by the G-20 grouping at the New Delhi Summit 2023.

Which of the statements given above is/are correct?

- (a) 1 only
- (b) 2 only
- yojnaias.com (c) Both 1 and 2
- (d) None

Answer: (a)

### Q2. Consider the following:

- 1. Quadrilateral Security Dialogue (Quad) is a strategic dialogue between Australia, India, the United Kingdom, and the United States.
- 2. The Quad is not a formal alliance or a treaty-based organisation.
- 3. The Quad was initiated in 2007 as a response to China's expanding economic and military power.

How many of the abovementioned statements are correct?

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

03. Evaluate the strategic and geopolitical implications of India's participation in the Quad grouping, with a focus on its impact on national security.

# **BROADCASTING SERVICES (REGULATION) BILL, 2023**

This article covers "Daily Current Affairs" and the topic details "Broadcasting Services (Regulation) Bill, 2023". This topic has relevance in the "Polity and Governance" section of the UPSC CSE exam.

#### FOR PRELIMS:

What are the key features of the Broadcasting Services (Regulation) Bill, 2023?

#### FOR MAINS:

**GS2: Polity and Governance** 

#### WHY IN THE NEWS?

The Ministry of Information & Broadcasting recently unveiled the draft version of the सफलता Broadcasting Services (Regulation) Bill, 2023.

# **BROADCASTING SERVICES (REGULATION) BILL, 2023.**

- The draft Bill introduces a unified framework for overseeing broadcasting services in the country, aiming to supersede the Cable Television Networks (Regulation) Act, 1995, and prevailing Policy Guidelines governing the sector.
- It simplifies regulatory procedures, expanding its scope to include Over-the-Top (OTT) content and digital news.
- The bill incorporates modern definitions and provisions for emerging technologies.
- It also proposes the establishment of Content Evaluation Committees and a Broadcast Advisory Council for self-regulation.
- Additionally, it advocates distinct program and advertisement codes for various Broadcasting Network Operators, outlines accessibility measures for persons with disabilities, and introduces statutory penalties.

#### **KEY HIGHLIGHTS:**

#### **Consolidation and Modernization:**

- Addresses the long-standing need to consolidate and update regulatory provisions for various broadcasting services under a single legislative framework.
- Streamlines the regulatory process, enhancing efficiency and modernising the framework.
- Extends regulatory purview to include over-the-top (OTT) content, digital news, and current affairs, currently regulated through the IT Act, 2000.

#### **Contemporary Definitions and Future-Ready Provisions:**

- Introduces comprehensive definitions for contemporary broadcasting terms to keep pace with evolving technologies and services.
- Incorporates provisions for emerging broadcasting technologies, ensuring the legislation

remains future-readv.

# **Strengthens the Self-Regulation Regime:**

- Enhances self-regulation by introducing 'Content Evaluation Committees.'
- Evolves the existing Inter-Departmental Committee into a more participative and broader 'Broadcast Advisory Council.'

# **Differentiated Programme Code and Advertisement Code:**

- Allows for a differentiated approach to Programme and Advertisement Codes across various services.
- Requires self-classification by broadcasters and implements robust access control measures for restricted content.

# **Accessibility for Persons with Disabilities:**

 Addresses the specific needs of persons with disabilities by providing enabling provisions for issuing comprehensive accessibility guidelines.

# **Statutory Penalties and Fines:**

- Introduces statutory penalties such as advisory actions, warnings, censures, or monetary penalties for operators and broadcasters.
- Retains provision for imprisonment and fines but only for grave offences, ensuring a balanced regulatory approach.

# **Equitable Penalties:**

 Links monetary penalties and fines to the financial capacity of the entity, considering investment and turnover to ensure fairness and equity.

# Infrastructure Sharing, Platform Services, and Right of Way:

- Includes provisions for infrastructure sharing among broadcasting network operators and the carriage of platform services.
- Streamlines the Right of Way section to address relocation and alterations more efficiently.
- Establishes a structured dispute resolution mechanism.

**SOURCES:** 

Ministry of Information and Broadcasting Proposes Broadcasting Services (Regulation) Bill, 2023

# Q1. With reference to the Broadcasting Services (Regulation) Bill, 2023, consider the following statements:

- 1. It aims to supersede the Information Technology Act of 2000.
- 2. The Bill expands its scope to include Over-the-Top (OTT) content, digital news, and traditional broadcasting services.

# Which of the statements given above is/are correct?

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

Answer: (b)

Q2. Explain the key objectives of the Broadcasting Services (Regulation) Bill, 2023 and its significance in the context of the evolving broadcasting landscape in India.

# PARLIAMENTARY SESSIONS IN INDIA

This article covers "Daily Current Affairs" and the topic details "Parliamentary Sessions in India". This topic has relevance in the Polity and Governance section of the UPSC CSE exam.

GS 2: Polity and Governance

#### WHY IN THE NEWS?

The Parliament's Winter session is scheduled to start on December 4th and extend till December 22nd.

#### ABOUT:

Parliamentary sessions in India, as delineated in Part-V (Article 79 – 122) of the Constitution, are pivotal periods for legislative activities. A nuanced grasp of the organization, composition, duration, officers, procedures, privileges, and powers of the Parliament is essential for a comprehensive understanding of its functioning.

#### **SESSIONS:**

- Budget Session (February to May): Primarily centered on budgetary deliberations.
- Monsoon Session (July to September): Addresses a diverse range of legislative issues.
- Winter Session (November to December): Focuses on specific agenda items.

#### **SESSION STRUCTURE:**

• Meetings and Sittings: A session consists of multiple meetings, each featuring two sittings – one in the morning (11 am to 1 pm) and another post-lunch (2 pm to 6 pm).

#### **SUMMONING:**

- Summoning involves calling all members of Parliament to convene.
- It is the responsibility of the Indian President to summon each House of Parliament periodically.
- Parliament is required to meet at least twice a year, with a maximum gap between two sessions not exceeding six months.

#### **ADJOURNMENT:**

Adjournment temporarily halts the proceedings during a sitting for a specified period, which can

range from hours to days or weeks.

- An adjournment concludes a sitting but does not end a session of the House.
- The authority to adjourn lies with the presiding officer of the House.

#### **ADJOURNMENT SINE DIE:**

- Adjournment sine die signifies concluding a parliamentary sitting indefinitely without specifying a date for reconvening.
- When the House is adjourned without setting a day for reassembly, it is termed adjournment sine die.
- The power to adjourn sine die rests with the presiding officer of the House.

#### PROROGATION:

- Prorogation refers to ending a session of the House through a presidential order under Article 85(2) (a) of the Constitution.
- Prorogation terminates both the sitting and session of the House.
- Typically, shortly after the presiding officer adjourns the House sine die, the President issues a
  notification for proroguing the session. However, the President can also prorogue the House while
  in session.

#### DISSOLUTION:

- Dissolution marks the conclusion of the existing House's tenure, leading to the formation of a new House after general elections.
- The Rajya Sabha, being a permanent House, is not subject to dissolution; only the Lok Sabha can be dissolved.
- The dissolution of the Lok Sabha can occur in two ways: automatic dissolution or by the President's order.

SOURCE:

Winter Session of Parliament to commence from December 4 – The Economic Times (indiatimes.com)

# Q.1 With reference to summoning of Parliament, consider the following statements:

- 1. It is the responsibility of the Presiding officer of the house to summon each House of Parliament periodically.
- 2. Parliament is required to meet at least twice a year, with a maximum gap between two sessions not exceeding six months.

## Which of the statements given above is/are correct?

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

**ANSWER: B** 

# Q.2 Regarding adjournment and adjournment sine die, Consider the following statements:

- 1. An adjournment concludes a sitting but does not end a session of the House.
- 2. When the House is adjourned without setting a day for reassembly, it is termed adjournment sine die.
- 3. The power to adjourn sine die rests with the President.

# How many of the above statements are correct?

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

**ANSWER: B** 

Q.3 Discuss the significance and functions of parliamentary sessions in a democratic system. Elaborate on how the structure of parliamentary sessions contributes to effective governance, legislative processes, and the representation of citizens' interests.

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# PM-PVTG DEVELOPMENT MISSION

This article covers "Daily Current Affairs" and the topic details "PM-PVTG Development Mission". This topic has relevance in the Social Justice section of the UPSC CSE exam.

GS 2: Social Justice

#### WHY IN THE NEWS?

The Prime Minister has recently inaugurated the PM PVTG Development Mission, targeting the most vulnerable segment within the Tribal Population.

#### **ABOUT PM-PVTG DEVELOPMENT MISSION:**

The PM-PVTG Development Mission program, with an allocated budget of Rs.15,000 crore for Scheduled Tribes in the Union Budget, aims to uplift the socio-economic status of Particularly Vulnerable Tribal Groups (PVTGs). This initiative focuses on providing essential facilities and improving living conditions for these marginalized communities.

#### **KEY PARAMETERS OF THE MISSION:**

- Provision of basic facilities such as safe housing.
- Ensuring access to clean drinking water and sanitation.
- Advancing education, health, and nutrition for PVTGs.
- Enhancing accessibility to roads in settlements inhabited by backward scheduled tribes.

# PARTICULARLY VULNERABLE TRIBAL GROUPS (PVTGs):

- Identification and Designation:
- Designated by the Ministry of Home Affairs, PVTGs include 75 tribal groups spread across 18 states and the Union Territory of Andaman and Nicobar Islands.
- Introduced in 1975, the concept of PVTGs identifies the most vulnerable among tribal communities.
- The list expanded in 1993, encompassing 23 additional groups, resulting in the current total of 75.
- Regional Concentration:
- o Odisha has the highest concentration of PVTGs, with 13 groups identified.
- Andhra Pradesh follows closely with 12 designated PVTGs.

#### **CLASSIFICATION CRITERIA FOR PVTGS:**

Particularly Vulnerable Tribal Groups (PVTGs) are classified based on specific criteria:

- Population Dynamics: PVTGs exhibit declining or stagnant populations, emphasizing their vulnerability.
- **Education Levels:** These groups have low levels of literacy, indicating a need for educational interventions.
- **Technological Development:** PVTGs often maintain pre-agricultural levels of technology, requiring developmental support.
- **Economic Status:** Economic backwardness is a crucial criterion for the classification of PVTGs, reflecting the need for targeted socio-economic initiatives.

The PM-PVTG Development Mission focuses on addressing the unique challenges faced by Particularly Vulnerable Tribal Groups, aiming to uplift their socio-economic status through targeted interventions and provisions of essential services.

Source:

pib.gov.in/PressReleaseIframePage.aspx?PRID=1947246

- 0.1 With reference to Particularly Vulnerable Tribal Groups (PVTGs), consider the following statements:
- 1. PVTGs are designated by the Ministry of Home Affairs
- 2. Odisha has the highest concentration of PVTGs

# Which of the statements given above is/are correct?

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

ANSWER: B

0.2 Discuss the criteria for their identification and designation of the PVTGs. Evaluate the challenges faced by PVTGs and suggest policy measures to address their socio-economic ADMM PLUS AT B ATT HUP CATE vulnerabilities.

This article covers "Daily Current Affairs" and the topic details "ADMM Plus". This topic has relevance in the International Relations section of the UPSC CSE exam.

GS 2: International Relations

#### WHY IN THE NEWS?

In conjunction with the ADMM Plus meetings, the Indian Defence Minister is set to engage in bilateral discussions with the defence ministers of participating nations. The focus will be on addressing defence cooperation and fostering mutually beneficial partnerships. This engagement holds significance in the context of India's evolving relationship with ASEAN and its commitment to regional security.

#### **INDIA-ASEAN RELATIONS TIMELINE:**

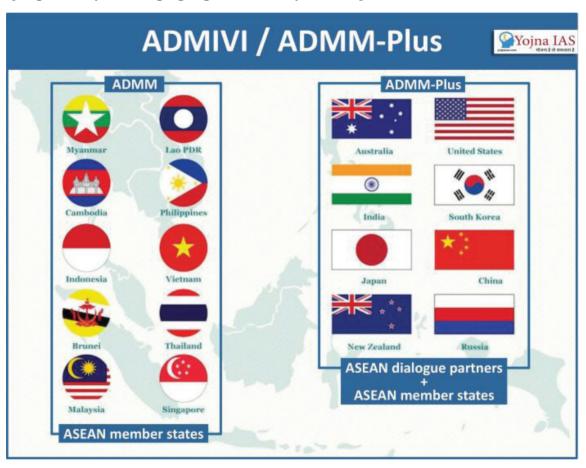
India's formal involvement with ASEAN began in 1992 as a 'Sectoral Dialogue Partner,' involving Secretary-level interactions. By 1995, India had attained the status of a 'Dialogue Partner,' marking the progression of its engagement with ASEAN.

#### **ABOUT ADMM PLUS:**

The ASEAN Security Community (ASC) Plan of Action, endorsed during the 10th ASEAN Summit, laid the foundation for the establishment of the annual ASEAN Defence Ministers' Meeting (ADMM). Inaugurated in Kuala Lumpur in 2006, the ADMM became a preeminent defence consultative and cooperative mechanism within ASEAN.

#### **ADMM-PLUS AND ITS OBJECTIVES:**

- The ADMM-Plus serves as a pivotal platform for ASEAN and its eight Dialogue Partners, including India. The collaborative effort aims to strengthen security and defence cooperation, contributing to peace, stability, and development in the region.
- Key objectives include fostering the development of capabilities, promoting mutual trust, collaborating in defence and security initiatives, and contributing to the realization of an ASEAN Security Community.
- Since 2017, the ADMM-Plus has been holding annual meetings, providing a forum for intensified dialogue and cooperation among ASEAN and the Plus Countries. This is particularly crucial given the progressively challenging regional security landscape.



#### ACHIEVEMENTS AND FOCUS AREAS:

- ADMM Plus concentrates on seven key areas of practical collaboration i.e. maritime security, counter-terrorism, humanitarian assistance and disaster management, peacekeeping operations, military medicine, humanitarian mine action, and cyber security.
- Experts' Working Groups (EWGs) facilitate cooperation in these domains, operating on a threeyear cycle and co-chaired by ASEAN Member States and Plus Countries.

#### **MEMBERSHIP PRINCIPLES:**

Principles for Membership outline the criteria for participating in the ADMM-Plus process. The Plus country must hold the status of a full-fledged Dialogue Partner of ASEAN, have substantial interactions

with ASEAN's defence establishment, and demonstrate the ability to collaborate on capacity-building initiatives in defence and security within the region.

India's active participation in the ADMM Plus reflects its commitment to regional security and the fostering of collaborative efforts among ASEAN member-states and Dialogue Partners. The annual meetings and achievements in key focus areas underscore the growing importance of such platforms in addressing contemporary security challenges in the region.

#### **ASEAN OVERVIEW:**

# Formation and Purpose:

The Association of Southeast Asian Nations (ASEAN) is a regional organization established to promote political and social stability in the Asia-Pacific region, addressing tensions among post-colonial states.

#### Motto:

The motto of ASEAN is "One Vision, One Identity, One Community." ASEAN Day is observed on 8th August annually.

#### **ASEAN Secretariat:**

The ASEAN Secretariat is located in Jakarta, Indonesia.

#### **Member Nations:**

तो सफलता है Indonesia, Malaysia, Philippines, Singapore, Thailand, Brunei, Vietnam, Laos, Myanmar, Cambodia

SOURCE:

fence-ministers-meeting-plus-affirms-centrality-of-region/ar-AA1k2uMK

- Q.1 With reference to the ASEAN Defence Ministers' Meeting (ADMM) Plus, consider the following statements:
- 1. The inaugural ADMM took place in Kuala Lumpur in 2006.
- 2. The ASEAN Defence Ministers' Meeting (ADMM) Plus involves ASEAN member-states and eight dialogue partners, including India, China, and the United States.

# Which of the statements given above is/are correct?

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

#### ANSWER: C

Q.2 With reference to the Association of Southeast Asian Nations (ASEAN), consider the following statements:

- 1. ASEAN consists of ten member nations, including Bangladesh
- 2. The ASEAN Secretariat is headquartered in Bangkok, Thailand.

# Which of the statements given above is/are correct?

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

ANSWER: D

Q.3 Discuss the significance of the ASEAN Defence Ministers' Meeting Plus (ADMM Plus) in fostering regional security cooperation.

# AYURVEDA GYAN NAIPUNYA INITIATIVE (AGNI)

This article covers "Daily Current Affairs" and the topic details " Ayurveda Gyan Naipunya है तो सफरी Initiative (AGNI)". This topic has relevance in the Social Issues section of the UPSC CSE exam.

GS 2: Social Issues

# WHY IN THE NEWS?

The Central Council for Research in Ayurveda Sciences (CCRAS) recently launched the 'Ayurveda Gyan Naipunya Initiative' (AGNI) with the aim of promoting evidence-based medical practices in the field of Ayurveda.

#### **OBJECTIVES OF AGNI INITIATIVE**

- Platform for Innovative Practices: AGNI provides a dedicated platform for Ayurveda practitioners to report their innovative practices and share experiences in treating various disease conditions.
- Culture of Evidence-Based Practice: The initiative focuses on fostering a culture of evidence-based practice among Ayurveda practitioners, emphasizing the importance of scientific validation.
- Research for Mainstreaming Practices: AGNI aims to undertake research to mainstream pragmatic Ayurvedic practices by subjecting them to scientific validation and evidence-based appraisal.
- Documentation and Publication: CCRAS, in consultation with the National Commission for Indian System of Medicine (NCISM), will document and publish reported medical practices and therapeutic regimens for educational and academic purposes.
- Database Creation and Capacity Building: The initiative involves creating a comprehensive database through applications and enhancing capacity through training in research methods and good clinical practices.
- Further Research Collaboration: CCRAS plans to conduct further research on reported medical practices, collaborating with Ayurveda practitioners and relevant institutes/organizations to validate and mainstream these practices.

#### ABOUT CCRAS

The Central Council for Research in Ayurveda Sciences (CCRAS) serves as the apex research organization dedicated to coordinating, formulating, developing, and promoting research on scientific lines in Ayurveda.

#### ADDITIONAL INITIATIVES BY CCRAS

- SPARK Program: The Studentship Program for Ayurveda Research Ken (SPARK) targets undergraduate scholars, aiming to boost scientific research in Ayurveda colleges and hospitals.
- PG-STAR Program: The Scheme for Training in Ayurveda Research for PG Scholars (PG-STAR) focuses on postgraduate scholars, providing training opportunities to enhance research skills.
- SMART Program: The Scope for Mainstreaming Ayurveda Research in Teaching Professionals (SMART) program is designed for teachers, encouraging research integration into teaching practices.

#### **ABOUT AYURVEDA**

Ayurveda, a natural system of medicine originating in India over 3,000 years ago, is derived from the Sanskrit words 'ayur' (life) and 'veda' (science or knowledge), translating to the knowledge of life.

# NATIONAL COMMISSION FOR INDIAN SYSTEM OF MEDICINE (NCISM)

- Establishment and Role: NCISM, a statutory body constituted under the NCISM Act, 2020, is committed to improving access to quality and affordable medical education. It ensures the availability of high-quality medical professionals in the Indian System of Medicine across the country.
- Objectives: NCISM promotes equitable and universal healthcare aligned with national health goals. It encourages medical professionals to adopt the latest research and maintains a medical register while enforcing high ethical standards in all aspects of medical services.

**SOURCE:** 

pib.gov.in/PressReleaseIframePage.aspx?PRID=1978802

# Q.1 Consider the following Programs:

- 1. SPARK Program
- 2. PG-STAR Program
- 3. SMART Program

# How many of the above are related to the development of Ayurveda?

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

**ANSWER: C** 

Q.3 Examine the relevance and challenges of integrating traditional medicine systems into mainstream healthcare. Assess the measures necessary for the harmonious coexistence of traditional medicine with modern healthcare practices

# JUSTICE GITA MITTAL COMMITTEE ON MANIPUR VIOLENCE

This article covers "Daily Current Affairs", and the topic details " Justice Gita Mittal Committee on Manipur Violence". This topic has relevance in the Governance section of the UPSC CSE exam.

GS 2: Governance

#### WHY IN THE NEWS?

The interim report concerning the May 2023 violence in Manipur has been submitted to the Supreme Court by the Justice Gita Mittal committee.

#### **BACKGROUND:**

On May 3, 2023, violent ethnic clashes erupted in Manipur between the Meitei people in the Imphal Valley and the Kuki-Zo tribal community from the surrounding hills. The catalyst for the violence was a 'Tribal Solidarity March' protesting the Meitei community's demand for Scheduled Tribe (ST) status. The Manipur High Court's order, directing the state government to recommend ST status by May 29, further intensified tensions. सफलता है

#### **IMMEDIATE CAUSES AND IMPACT:**

The violence resulted in more than 175 casualties, with 94 unclaimed bodies in state mortuaries. Over 70,000 people were displaced from their homes. The genesis of the conflict lies in the historical ST status of the Meitei community, seeking restoration after the merger of Manipur with the Indian Union.

# **JUSTICE GITA MITTAL COMMITTEE:**

In response to the escalating situation, the Supreme Court appointed a three-member committee, led by former Jammu and Kashmir High Court Chief Justice Gita Mittal, in August 2023. Empowered to submit reports directly to the Supreme Court, the committee recently presented its thirteenth interim report.

#### **MAJOR FINDINGS AND RECOMMENDATIONS:**

- The committee's key findings center on the sensitive issue of handling the deceased. It recommends directing victims' relatives to perform the last rites, with state intervention if necessary.
- The report highlights external pressures from civil society organizations, alleging interference with last rites due to "vested interests" and to extract "unwarranted" concessions from state authorities.
- The committee urges the Supreme Court to intervene by compelling the next of kin to claim bodies and conduct last rites. Additionally, it recommends prohibiting civil society organizations from obstructing or interfering with the solemn process.

#### ETHNIC DIVERSITY IN MANIPUR:

Manipur is characterized by its diverse population, primarily divided into three main ethnic communities: Meiteis residing in the valley, and 29 major tribes in the hills, categorized into two primary ethno-denominations – Nagas and Kuki-Chins.

#### **MEITEIS:**

- Population: With a majority presence of over 50%, Meiteis are the predominant ethnic group in Manipur, primarily residing in the Imphal Valley.
- Religion: Meiteis predominantly follow the Hindu religion, contributing to the religious pluralism within the state.

#### **NAGA GROUP:**

- It Comprises various tribes such as Zeliangrong, Tangkhul, Mao, Maram, Maring, and Tarao.
- Represents a significant portion of the hill communities in Manipur, each tribe contributing to the rich cultural tapestry of the region.

#### **CHIN-KUKI GROUP:**

- Encompassing tribes like Gangte, Hmar, Paite, Thadou, Vaiphei, Zou, Aimol, Chiru, Koireng, Kom, Anal, Chothe, Lamgang, Koirao, Thangal, Moyon, and Monsang.
- The term 'Chin' refers to people in the neighboring Chin state of Myanmar, while in the Indian side, they are known as 'Kukis.'
- Certain group<mark>s l</mark>ike Paite, Zou, Gangte, and Vaiphei identify themselves as Zomi, distancing from the term 'Kuki.'
- Population: Constituting 25% of Manipur's demographic landscape, Kukis predominantly inhabit the hilly regions of the state.
- Religion: The majority of Kukis adhere to the Christian faith, contributing to the religious diversity in Manipur.

#### **CULTURAL COMMONALITIES:**

- Despite diverse ethnicities, all groups in Manipur share Mongoloid origins, fostering close similarities in culture and traditional practices.
- The legend among various tribes, including Meiteis, narrates their origin from a cave in the north, underlining a shared historical narrative.

#### **CULTURAL DISTINCTIONS:**

- Meiteis, residing in the valley, exhibit cultural differences from the surrounding hill tribes by predominantly following Hindu customs.
- This cultural distinction adds a layer of diversity to Manipur's social fabric, where religious practices contribute to the unique identity of each community.

#### **SHARED HERITAGE:**

• The coexistence of Meiteis in the valley and diverse tribes in the hills reflects the harmonious integration of various ethnicities in Manipur.

• The shared heritage, despite cultural nuances, emphasizes unity in diversity, creating a mosaic of traditions that contributes to the cultural richness of the region.

**SOURCE:** 

Manipur violence: SC directs disposal of unclaimed bodies, tells state to give kin one week's notice | India News – The Indian Express

# Q.1 Consider the following statements regarding Manipur's Ethnic Communities:

- 1. Meiteis constitute the majority ethnic group in Manipur.
- 2. Meiteis primarily reside on the hills of Manipur
- 3. Meiteis are primarily Christian by faith

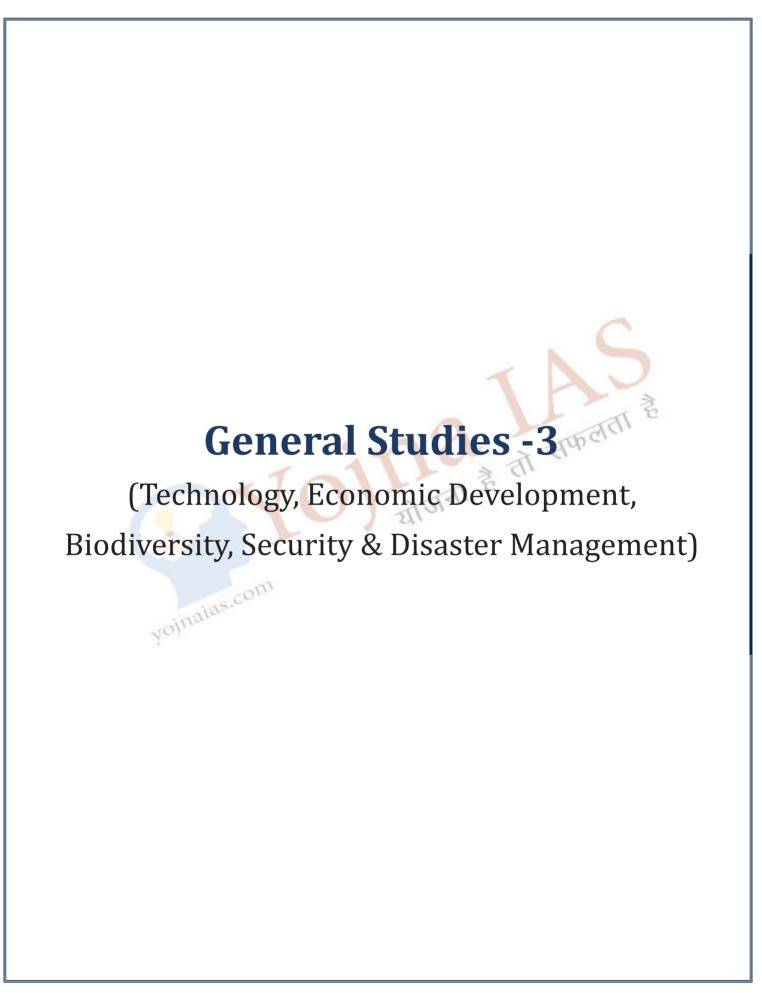
yojnaias.com

How many of the above statement/s is/are correct?

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

ANSWER: A

Q.2 Discuss the recent ethnic violence in Manipur, highlighting the underlying causes, and the socio-political implications for the region. Evaluate the role of historical factors, administrative decisions, and societal dynamics in contributing to the unrest.



# **CARBON NANO FLORETS**

This article covers "Daily Current Affairs" and the topic details "Carbon Nano Florets". This topic has relevance in the Science and technology section of the UPSC CSE exam.

#### FOR PRELIMS:

About Carbon Nano Florets?

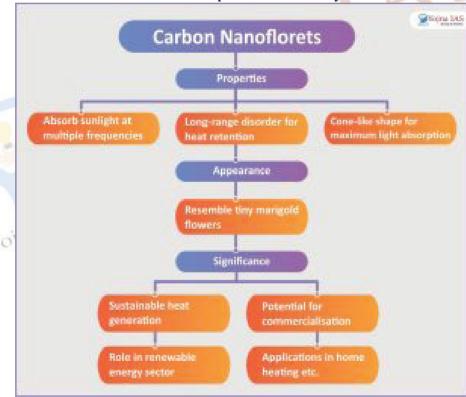
Special properties of Nano Florets?

#### FOR MAINS:

GS 3: Science and technology Significance of Nano Florets?

#### WHY IN THE NEWS?

Scientists at IIT Bombay have successfully created particles that can absorb sunlight at three different frequencies and convert it into heat with an impressive efficiency rate of 87%



#### **ABOUT CARBON NANO FLORETS:**

- The potential for revolutionizing solar energy conversion lies within the carbon nanostructure. Scientists initiated their research using dendritic fibrous nanosilica (DFNS), a white material, and engineered it into the deepest black carbon nanoflorets.
- In the process of creating these carbon nanoflorets, DFNS powder was subjected to heat in a furnace while being exposed to acetylene gas within the chamber. The transformation from white to black signified the deposition of carbon onto the DFNS.
- Upon the dissolution of the DFNS using a potent chemical, what remained were carbon cone-

shaped spherical nanostructures. These nanoflorets take on the appearance of diminutive marigold flowers.

#### **Special properties of Nano Florets:**

- The distinctive characteristics of carbon nanoflorets include their unparalleled capacity to absorb sunlight across various frequencies and convert it into heat with remarkable effectiveness.
- These nanoflorets exhibit the exceptional ability to absorb infrared, visible, and ultraviolet light, setting them apart from conventional materials for solar-thermal conversion, which typically only absorb visible and ultraviolet light.
- Their conical structure serves to minimize reflection, ensuring maximum light absorption by allowing most incident light to be internally reflected.
- Moreover, the nanoflorets feature long-range disorder, which hinders heat dissipation over extended distances, thus facilitating efficient heat retention.

#### SIGNIFICANCE OF NANO FLORETS:

- This material is poised for commercialization due to the cost-effectiveness of carbon and the sustainable heat generation capabilities of nanoflorets, eliminating the need for burning fossil fuels.
- A single square meter of carbon nanofloret coating has the remarkable capacity to vaporize 5 liters of water per hour, surpassing the performance of conventional commercial solar stills. This breakthrough opens the door to sustainable solutions for heating residential spaces and sterilizing hospital surfaces without dependence on fossil fuels.
- With its diverse array of potential applications and minimal environmental footprint, this material holds the potential to make a substantial impact in the realm of renewable energy.

SOURCE:

yojnaias.com https://www.thehindu.com/sci-tech/science/carbon-nanoflorets-iitbombay-solar-thermal-conversation-high-efficiency/article67472739.ece

#### Consider the following statements about carbon nanoflorets: 0.1

- 1. Carbon nanoflorets can only absorb visible and ultraviolet light, unlike traditional solarthermal conversion materials.
- 2. The conical structure of carbon nanoflorets enhances reflection, reducing light absorption.
- 3. Carbon nanoflorets' unique feature of long-range disorder promotes heat dissipation over extended distances.
- 4. Carbon nanoflorets possess the exceptional ability to absorb sunlight at various frequencies, converting it into heat effectively, unlike conventional solar-thermal materials.

# How many of the above statement/s is/are correct?

- (a) Only one
- (b) Only two
- (c) Only three
- (d) All four

ANSWER: A

#### **Q.2** In relation to carbon nanotubes, assess the following statements: (2020)

- 1. They can serve as carriers for delivering drugs and antigens within the human body.
- 2. They have the potential to be fashioned into synthetic blood vessels for damaged areas of the human body.
- They find utility in the field of biochemical sensors. 3.
- 4. Carbon nanotubes do not naturally degrade in biological environments.

# How many of the above statement/s is/are correct?

- (a) Only one
- (b) Only two
- (c) Only three
- (d) All four

ANSWER: C

# **DUDHWA TIGER RESERVE**

This article covers "Daily Current Affairs" and the topic details " Dudhwa Tiger Reserve". This है तो सफलती topic has relevance in the Environment section of the UPSC CSE exam.

GS 3: Environment

#### WHY IN THE NEWS?

In response to the growing human-elephant conflict around the Katarniaghat wildlife sanctuary in Uttar Pradesh's Dudhwa Tiger Reserve, forest officials have introduced the 'gajamitra' initiative.

#### **DUDHWA TIGER RESERVE**

Dudhwa Tiger Reserve, situated on the Indo-Nepal border within the Lakhimpur-Kheri district of Uttar Pradesh, is a remarkable haven for wildlife and biodiversity. Established in 1988, it comprises Dudhwa National Park, along with two adjacent sanctuaries, Kishanpur and Katerniaghat. This reserve covers an extensive area of 1,284 square kilometers and is characterized by its unique Tarai-Bhabar habitat, nestled within the upper Gangetic Plains Biogeographic province.

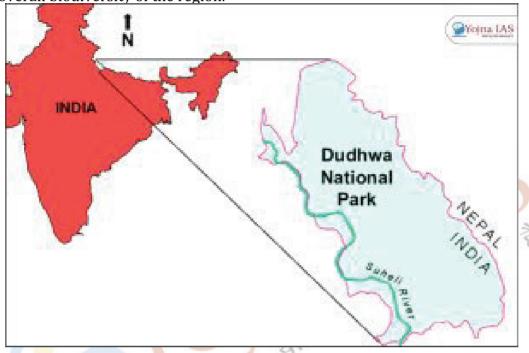
#### **ABOUT DUDHWA TIGER RESERVE:**

- Geographic Location: Dudhwa Tiger Reserve is strategically located along the India-Nepal border, offering a diverse range of habitats for various wildlife species.
- Constituent Areas: The reserve encompasses Dudhwa National Park, Kishanpur Wildlife Sanctuary, and Katerniaghat Wildlife Sanctuary, creating a substantial protected area for flora
- **Ecosystem Variety:** Dudhwa Tiger Reserve boasts a rich and diverse ecosystem, with the presence of several rivers and distinct habitats.
- **River Systems:** The reserve is blessed with the flow of significant rivers. The Sharda River meanders by Kishanpur Wildlife Sanctuary, while the Geruwa River gracefully flows through Katerniaghat Wildlife Sanctuary. Within Dudhwa National Park, the Suheli and Mohana streams contribute to its unique ecosystem, eventually joining the Ghagra River as vital tributaries.
- Flora: The reserve is characterized by the North Indian Moist Deciduous type of vegetation. It

is home to some of the finest Sal forests (Shorea robusta) in India, along with extensive tracts of moist grasslands. These lush green landscapes are integral to the region's ecological balance.

• **Fauna:** Dudhwa Tiger Reserve is renowned for its impressive array of rare and endangered species. The reserve provides a safe haven for tigers, leopards, leopard cats, sloth bears, one-horned rhinoceroses, hispid hares, elephants, black deer, swamp deer, and many other remarkable creatures. This diverse wildlife population contributes to the reserve's conservation significance

and the overall biodiversity of the region.



#### **SOURCE:**

Dudhwa National Park to reopen on November 15; helicopter service in the offing (msn.com)

# Q.1 Which of the following statements about Dudhwa Tiger Reserve is correct?

- 1. Dudhwa Tiger Reserve is situated solely within the Lakhimpur-Kheri district of Uttar Pradesh.
- 2. The reserve includes only Dudhwa National Park, with no adjacent sanctuaries.
- 3. Dudhwa Tiger Reserve is characterized by the Tarai-Bhabar habitat.

# How many of the above statement/s is/are correct?

inalas.com

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

ANSWER: B

Q.2Discuss the significance of tiger reserves in India for the conservation of biodiversity and the protection of the tiger population. Analyze the key challenges and measures needed to ensure the long-term sustainability of tiger reserves in the country.

# TCAS KAVACH

This article covers "Daily Current Affairs" and the topic details "TCAS Kavach". This topic has relevance in the "Economy" section of the UPSC CSE exam.

#### FOR PRELIMS:

What is TCAS Kavach?

#### FOR MAINS:

GS3: Economy

Infrastructure: Railways

#### WHY IN THE NEWS?

Railway officials have said that the domestically developed Train Collision Avoidance System (TCAS) 'Kavach' was not in place on the route where the Andhra Pradesh train collision occurred.

#### **ABOUT TCAS KAVACH:**

- Kavach is an advanced cab signalling and train control system with built-in anti-collision features to enhance railway safety.
- Kavach was developed by the Indian Railways Research Designs and Standards Organisation योजना है ती (RDSO) over ten years, starting in 2012.

#### **FUNCTIONS OF KAVACH:**

- Acts as a guardian for the existing railway signalling system, ensuring enhanced safety. o
- Warning and Automatic Braking:
- Alerts the locomotive pilot in the event of failing to recognize a 'red signal.' 0
- If the pilot does not slow down below 15 kilometers per hour after receiving warnings, Kavach takes control and automatically applies the brakes to bring the train to a halt.

#### COMPONENTS OF KAVACH INFRASTRUCTURE:

- Radio Frequency Identification (RFID) Technology: Installed in the tracks, using radio waves 1. to identify objects and convey information wirelessly.
- **Locomotive Equipment:** Locomotive cabins have RFID readers, computers, and brake interface 2. systems.
- 3. **Radio Infrastructure:** Towers and modems are established at railway stations.

#### WORKING OF KAVACH INFRASTRUCTURE:

- The three components (RFID in tracks, locomotive equipment, and radio infrastructure) communicate with each other.
- They constantly monitor train movements and transmit signals ahead to locomotives.
- The system remains effective even in challenging conditions such as hilly terrain or poor visibility.
- Direct communication between locomotives is established, sharing information about location and track IDs when multiple trains share the same track.

• Locomotives use antennas to communicate with towers at railway stations, displaying warnings on the driver's monitor.

Unique Features of the Kavach		
Cost	Kavach is cost-effective, priced at Rs 50 lakh per kilometre, significantly cheaper than the European Train Control System (ETCS), which costs about Rs 2 crore worldwide.	
Compatibility with Existing Infrastructure	Kavach doesn't replace traditional lineside signalling; it serves as a cab signalling train control system with anti-collision capabilities, enhancing existing infrastructure.	
Comprehensive Cov- erage	The Kavach program covers railway stations, signalling devices, and various train types, unlike the previous Auxiliary Warning System (ACD), which was limited to specific trains and locomotives.	
Incorporation of Key Elements from Other Systems	Kavach integrates elements from established systems like the European Train Protection and Warning System and the indigenous Anti Collision Device.  Plans include features from the European Train Control System Level-2.	
Future Compatibility	Ongoing efforts aim to make Kavach comp <mark>ati</mark> ble with 4G LTE technology and expand its application to global markets.	
Safety Integrity Level (SIL)	Kavach adheres to the highest safety and reliability standards known as Safety Integrity Level.	

#### COST OF DEPLOYING KAVACH:

- Deployment costs ₹50 lahks per kilometre for Indian Railways.
- Current Kavach coverage is limited to 65 trains (1,500 kilometers), with potential for a lengthy implementation process. This amounts to only 2 percent of all trains in India.

#### FUNDING ALLOTMENT FOR KAVACH:

- Indian Railways allocated ₹4,000 crore under the Signalling and Telecom budget head.
- This budget may enable the implementation of Kavach on about 2,500 to 3,000 kilometres of railway tracks in the upcoming year.

**SOURCES:** 

What is the status of Kavach installations? | Explained - The Hindu

#### Q1. Which of the statements given below correctly describe TCAS Kavach?

- (a) A Public health initiative aimed at providing affordable healthcare services and insurance coverage
- (b) Government of India program for protecting critical infrastructure from cyber threats.
- (c) A program designed to protect and preserve a country's cultural heritage, including historical sites, monuments, and artifacts.
- (d) An automatic train protection technology designed to prevent rail accidents

Answer: (d)

#### **Q2.** Consider the following statements regarding Kavach:

1. Kavach is a cutting-edge signalling and control system with built-in anti-collision features.

- 2. Kavach was developed by the Council of Scientific & Industrial Research (CSIR).
- 3. Kavach is limited to specific trains and locomotives.

# How many of the abovementioned statements are correct?

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

Answer: (a)

03. Discuss the significance of the domestically developed Train Collision Avoidance System (TCAS) 'Kavach' in enhancing railway safety.

# WOLBACHIA

This article covers "Daily Current Affairs" and the topic details " Wolbachia". This topic has relevance in the Science and Technology section of the UPSC CSE exam. योजना है तो सफलता है

#### FOR PRELIMS:

About Wolbachia?

#### FOR MAINS:

GS 3: Science and Technology About Global Impact of Dengue?

#### WHY IN THE NEWS?

The global rise in dengue cases remains a pressing issue. Researchers assert that the utilization of the Wolbachia Method can potentially reduce the transmission of dengue by a substantial 77%.

#### INTRODUCTION:

Wolbachia, a naturally occurring bacterium found in many insect species, including some mosquitoes, has become a powerful tool in the fight against mosquito-borne diseases like dengue, chikungunya, Zika, and yellow fever. This bacterium can inhibit viral infections in mosquitoes and has the potential to reduce disease transmission significantly. Here are the key points and developments related to Wolbachia and its role in combating dengue.

#### WOLBACHIA'S ROLE IN DISEASE PREVENTION:

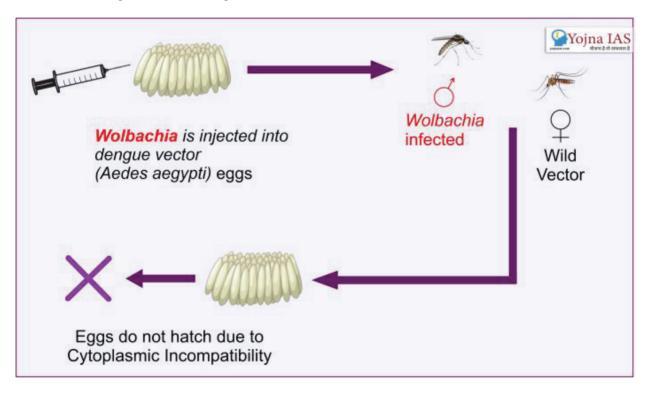
- The Aedes aegypti mosquito, responsible for transmitting diseases like dengue, chikungunya, Zika, and yellow fever, can be rendered incapable of transmitting these diseases when artificially infected with Wolbachia.
- Wolbachia inhibits viral infection by preventing the replication of the virus in the mosquito, reducing the number of infected mosquitoes in the population.

#### POPULATION REPLACEMENT STRATEGY:

- Scientists have employed a method called the "Population Replacement Strategy." They infected some mosquitoes with Wolbachia and released them into affected areas.
- These Wolbachia-infected mosquitoes bred with local mosquitoes, gradually replacing the mosquito population in the area with those carrying Wolbachia.

#### RESULTS AND IMPACT:

- After 27 months of implementing the Population Replacement Strategy, researchers observed a 77% reduction in the incidence of dengue in areas where Wolbachia-infected mosquitoes were released, compared to areas without such deployments.
- Importantly, this approach is not limited to dengue and has the potential to block the transmission of other viruses present in mosquitoes.



## MASS PRODUCTION OF WOLBACHIA-INFECTED MOSQUITOES:

• Companies like InnovaFeed are exploring mass production of Wolbachia-infected mosquitoes as a sustainable way to control dengue and other mosquito-borne diseases.

## INDIAN COUNCIL OF MEDICAL RESEARCH (ICMR) PROJECT:

- ICMR has been working on a project to develop a strain of Aedes aegypti mosquitoes containing Wolbachia, known as the Puducherry Strain.
- This strain was developed in collaboration with Monash University in Australia and is a promising development in the fight against mosquito-borne diseases.

#### **ABOUT DENGUE:**

• Dengue is a tropical disease caused by the dengue virus, primarily transmitted by Aedes aegypti

mosquitoes.

- Common symptoms include fever, headache, joint and muscle pain, and a characteristic skin rash.
- There are four dengue virus strains, with Types II and IV considered more severe.

#### **GLOBAL IMPACT OF DENGUE:**

- Dengue has seen a significant increase in global incidence, with many cases going underreported, according to the World Health Organization (WHO).
- WHO estimates approximately 390 million dengue virus infections annually, with 96 million showing symptoms.
- In India, over 150,000 dengue cases are reported each year, as per the National Vector-Borne Disease Control Programme (NVBDCP).

#### **DENGUE VACCINE:**

- The dengue vaccine CYD-TDV or Dengvaxia received approval from the US Food & Drug Administration in 2019, becoming the first dengue vaccine to gain regulatory approval in the US.
- Dengvaxia is a live, attenuated dengue virus vaccine intended for individuals aged 9 to 16 with laboratory-confirmed prior dengue infection living in endemic areas.

#### **CONCLUSION:**

सफलता The use of Wolbachia in controlling mosquito-borne diseases, particularly dengue, represents a promising approach with significant potential for reducing the global burden of these diseases. Mass production and ongoing research in this field hold the key to its future success in disease prevention.

**SOURCE:** 

https://www.thehindu.com/sci-tech/science/wolbachia-an-unlikely-hero/article67500802.ece

# Q.1The "Wolbachia method" is often discussed in the context of which of the following options? (2023)

- (a) Controlling the spread of viral diseases transmitted by mosquitoes
- (b) Converting agricultural residues into packaging materials
- (c) Producing environmentally friendly, biodegradable plastics
- (d) Generating biochar through the thermochemical conversion of biomass

ANSWER: A

# Q.2 Regarding Wolbachia method, consider the following statements:

- 1. Wolbachia is a naturally occurring bacterium commonly found in numerous arthropods.
- 2. It is a genetic engineering process utilized to manage the spread of viral diseases by mosquitoes.

# Which of the statements given above is/are correct?

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

**ANSWER: D** 

# NATIONAL COAL INDEX

This article covers "Daily Current Affairs" and the topic details "National Coal Index". This topic has relevance in the "Economy" section of the UPSC CSE exam.

#### FOR PRELIMS:

What is the National Coal Index?

#### FOR MAINS:

GS3: Economy

#### WHY IN THE NEWS?

In September, the National Coal Index witnessed a 3.83-point increase, driven by a temporary surge in coal prices in the global markets.

#### ABOUT THE NATIONAL COAL INDEX

- The National Coal Index (NCI), introduced by the Ministry of Coal on June 4, 2020, serves as a price index reflecting changes in coal prices relative to a fixed base year FY 2017-18.
- The NCI determines Premium (per tonne) or Revenue Share (percentage basis) using a market-based mechanism and covers all raw coal transactions in the Indian market.
- This includes various grades of coking and non-coking coal in both regulated (power and fertilizer) and non-regulated sectors, covering transactions at notified prices, coal auctions, and coal imports.
- The upward movement of the NCI signals a growing demand for coal, attributed to the upcoming festive season and winter in the country.
- This trend encourages coal producers to capitalize on the rising demand by scaling up domestic coal production to meet the increasing energy requirements.

#### AN OVERVIEW OF INDIA'S COAL SECTOR

#### **COAL RESERVES:**

• India boasts the world's fourth-largest coal reserves, estimated at approximately 319.02 billion tonnes.

#### **COAL PRODUCTION:**

- As of FY 2022, India ranks as the second-largest producer and consumer of coal globally, with a mining output of 777.31 million metric tons.
- The majority of the extracted coal is dedicated to electricity production.

#### **COAL CONSUMPTION:**

- India's energy sector heavily relies on coal as a primary fuel for thermal power plants.
- Coal currently contributes to about 70% of the total energy generation, dominating India's energy generation mix.

#### Types of Coal found in India:

#### **Anthracite:**

- Best quality coal with 80 to 95 per cent carbon content.
- Ignites slowly with a blue flame and possesses the highest calorific value.
- Found in small quantities in Jammu and Kashmir.

#### **Bituminous:**

- Contains 60 to 80 per cent carbon content and a low moisture level.
- Widely used with high calorific value.
- Found in Jharkhand, West Bengal, Odisha, Chhattisgarh, and Madhya Pradesh.

# Lignite:

- Often brown, carries 40 to 55 per cent carbon content.
- The intermediate stage is during the alteration of woody matter into coal.
- High moisture content, resulting in smoke when burnt.
- It is found in Rajasthan, Lakhimpur (Assam), and Tamil Nadu.

#### Peat:

- Less than 40 per cent carbon content.
- The first stage of transformation from wood to coal.
- Low calorific value burns like wood.

# **Geological classification**

- India's coal-bearing strata fall into two main categories: Gondwana and Tertiary coal fields.
- Gondwana coal comprises about 98 per cent of the total reserves and 99 per cent of the coal production in India.

#### **Coal Market:**

• The India Coal Market is projected to grow from 0.90 billion tons in 2023 to 1.30 billion tons by 2028, reflecting a Compound Annual Growth Rate (CAGR) of 7.57% during the forecast period (2023-2028).

#### **Challenges:**

• The recent power crisis in India has thrust coal into the spotlight. Challenges include a sudden surge in electricity demand, inadequate demand forecasting, transportation issues, global coal price hikes, delays in coal mine operationalisation, and delayed payments.

#### **Future Outlook:**

- As India takes decisive steps towards achieving its 2030 Conference of Parties (COP) 26 goals and embraces a greener path, the role of coal in the future energy mix is under reassessment.
- Initiatives are underway to address and mitigate its harmful environmental impact.

**SOURCES:** 

https://pib.gov.in/PressReleasePage.aspx?PRID=1975343

#### Q1. With reference to National Coal Index (NCI), consider the following statements:

- 1. Using a market-based mechanism, the NCI determines Premium (per tonne) or Revenue Share (percentage basis).
- 2. The National Coal Index (NCI), introduced by the Ministry of Coal, serves as a price index reflecting changes in coal prices relative to the previous year.

# Which of the statements given above is/are correct?

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

# Answer: (a)

# Q2. Consider the following:

- 1. Anthracite coal ignites slowly with a blue flame and possesses the highest calorific value.
- 2. Anthracite coal is found in large quantities in Gangetic Plains.
- 3. The tertiary coal comprises about 98 per cent of the total reserves and 99 per cent of the coal production in India.

# How many of the abovementioned statements are correct?

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

Answer: (d)

Q3. Discuss the key components and challenges in India's coal sector, including the types of coal found, their distribution, their implications.

# **INFRASTRUCTURE INVESTMENT TRUSTS (INVITS)**

This article covers "Daily Current Affairs" and the topic details "Infrastructure Investment Trusts (InvITs)". This topic has relevance in the Economy section of the UPSC CSE exam.

GS 3: Economy

#### WHY IN THE NEWS?

As per SEBI data, the period from April to September in the fiscal year 2023-24 saw a total collection of Rs 18,658 crore through these emerging investment instruments. Out of this amount, Rs 12,753 crore was raised via InvITs, while the remaining Rs 5,905 crore was collected through REITs.

#### **INTRODUCTION**

• Infrastructure Investment Trusts (InvITs) are investment vehicles designed to facilitate investments in infrastructure assets, making them accessible to both private and retail investors. These trusts operate in a manner similar to mutual funds and focus on long-term infrastructure projects, including roads, gas pipelines, transmission lines, and renewable assets, among others. They are subject to regulation by SEBI (Securities and Exchange Board of India).

#### **DESIGN AND FEATURES OF INVITS**

• InvITs are structured as tiered entities, with a sponsor establishing the InvIT. This trust, in turn, invests in eligible infrastructure projects, either directly or through special purpose vehicles (SPVs).

#### **INVESTOR ELIGIBILITY**

• InvITs have a minimum subscription limit of 1 lakh, allowing not only institutional investors like banks, insurance companies, pension funds, and sovereign wealth funds to participate but also retail investors. Investors in InvITs receive units, making them unit holders.

#### **RETURNS ON INVESTMENT**

• Investments made by InvITs are divided into two components: loan and capital. Consequently, unit holders receive returns in the form of both dividends and interest, both of which are subject to taxation. If unit holders make a profit from selling their units, capital gains tax is applicable.

#### **REDUCED RISK**

• SEBI regulations mandate that InvITs must allocate a minimum of 80% of their assets to completed and revenue-generating projects. This significantly reduces the risks typically associated with infrastructure investments, such as delays due to regulatory approvals or poor project management.

#### **LEGAL RECOGNITION**

• InvITs, along with Real Estate Investment Trusts (REITs), are recognized as borrowers under the Securitisation and Reconstruction of Financial Assets and Enforcement of Securities Interest (SARFAESI) Act. This legal status empowers investors, particularly banks, to take action against InvIT trustees in the event of defaults.

**SOURCE:** 

REITs, InvITs collect ₹18,658 crore in Apr-Sep on robust infra demand – The Hindu BusinessLine

# Q.1 Consider the following statements:

**Statement-I:** The interest income generated from deposits in Infrastructure Investment Trusts (InvITs) and distributed to their investors enjoys tax exemption, while dividends are subject to taxation. **Statement-II:** InvITs are accorded recognition as borrowers under the 'Securitization and Reconstruction of Financial Assets and Enforcement of Security Interest Act, 2002,' providing them with certain legal status and privileges in financial matters.

# Which one of the following is correct in respect of the above statements?

- (a) Both Statement-I and Statement-II are correct and Statement-II is the correct explanation for Statement-I
- (b) Both Statement-I and Statement-II are correct and Statement-II is not the correct explanation for Statement-I
- (c) Statement-I is correct but Statement-II is incorrect
- (d) Statement-I is incorrect but Statement-II is correct

#### ANSWER: D

# Q.2 Regarding Infrastructure Investment Trusts (InvITs), read the following statements:

- 1. SEBI regulates InvITs.
- 2. InvITs are required to invest exclusively in infrastructure projects that are finished and producing revenue.
- 3. The returns generated from investments in InvITs are tax-exempt.

# How many of the above statement/s is/are correct?

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

**ANSWER: A** 

Q.3 Discuss the role and significance of Infrastructure Investment Trusts (InvITs) in facilitating infrastructure development and attracting investment in the Indian infrastructure sector.

# **GREEN CRACKERS**

This article covers "Daily Current Affairs" and the topic details "Green Crackers". This topic has relevance in the Environment Section of the UPSC CSE exam.

GS 3: Environment

#### WHY IN THE NEWS?

The Supreme Court has specified that its directive, prohibiting the utilization of barium and other prohibited chemicals in firecrackers, is applicable nationwide and extends beyond the confines of the National Capital Region.

- **Definition and Characteristics:** Green crackers, as defined by the CSIR-National Environmental Engineering Research Institute (CSIR NEERI), are characterized by a smaller shell size, absence of ash, and additives like dust suppressants. These modifications aim to reduce emissions, particularly particulate matter, contributing to environmental health.
- **Barium-Free Composition:** Distinguished by the absence of barium compounds, green crackers deviate from conventional counterparts known for their distinctive green color. Barium, a metal oxide in traditional firecrackers, is a known air pollutant and noise contributor.
- **Emission Reduction Benefits:**Burning green crackers results in water vapor emission, diminishing the release of dust. Compared to conventional firecrackers, green counterparts reduce particulate matter (PM) emissions by an impressive 30%.
- **Noise Reduction Measures:** Green firecrackers exhibit sound levels between 110 and 125 decibels, in stark contrast to the approximately 160 decibels produced by conventional firecrackers. This makes green crackers nearly 30% less noisy, contributing to noise pollution mitigation.
- **Identification Criteria:**Recognition of green crackers is facilitated by the distinct green logo of CSIR-NEERI and PESO, along with a Quick Response (QR) code.

#### VARIETIES OF GREEN CRACKERS:

- SWAS (Safe Water Releaser):
  - Releases water vapor to minimize dust emission.
  - 30% reduction in particulate matter.
  - Free of Sulphur and potassium nitrate.
- STAR (Safe Thermite Cracker):
  - No potassium nitrate or Sulphur content.
  - Lower particulate matter emission.
  - Reduced sound intensity.
- SAFAL:
  - Minimal aluminum usage, increased magnesium content.
  - Lower noise production compared to traditional firecrackers.

#### LEGAL FRAMEWORK AND SUPREME COURT DIRECTIVES:

- In 2021, the Supreme Court issued directions to prevent the use of banned chemicals in firecrackers before Diwali.
- The court clarified that the ban was specific to firecrackers containing barium salts.
- Green crackers received approval as per the 2018 directives.
- In 2023, the Supreme Court extended firecracker restrictions beyond Delhi-NCR to all states. emphasizing the need for nationwide measures to control air and noise pollution.

**SOURCE:** 

SC says cracker order applies to country, not just NCR: What types of fireworks are allowed, and where | Explained News - The Indian Express

# Q.1 Consider the following statements regarding green crackers:

- Green crackers, defined by CSIR-NEERI, aim to reduce emissions by incorporating larger shell sizes and additives.
- 2. The distinctive green color of traditional firecrackers is attributed to the presence of barium compounds.
- 3. SWAS, a type of green cracker, releases Sulphur and potassium nitrate, contributing to a 30% योजना है तो सफलता reduction in particulate matter emissions.

# How many of the above statement/s is/are correct?

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

ANSWER: D

0.2 Evaluate the role of green crackers in aligning with the court's objectives and contributing to environmental sustainability. Additionally, analyze the challenges and opportunities associated with implementing and enforcing the Supreme Court's directives on firecrackers.

# CHIKUNGUNYA

This article covers "Daily Current Affairs" and the topic details " Chikungunya". This topic has relevance in the Science and Technology section of the UPSC CSE exam.

#### FOR PRELIMS:

About Chikungunya?

About the Chikungunya Vaccine?

#### FOR MAINS:

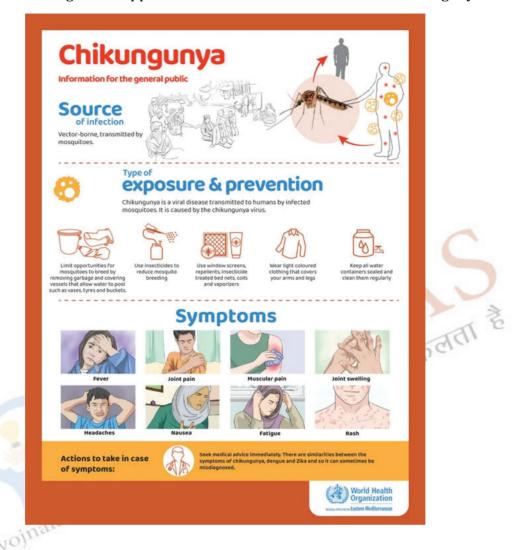
GS 3: Science and Technology

Factors Contributing to the Rise in Chikungunya Cases?

Governmental Measures to Combat Chikungunya?

#### WHY IN THE NEWS?

The United States FDA has granted approval to the world's first vaccine for Chikungunya.



#### ABOUT CHIKUNGUNYA

- Chikungunya is a viral infectious disease primarily transmitted to humans through mosquito hites.
- **Causative Agent:** Caused by the Chikungunya virus (CHIKV), an RNA virus belonging to the alphavirus genus in the family Togaviridae.
- **Historical Context:** First reported in Tanzania in 1952, Chikungunya later spread to various regions across Asia, Africa, and the Americas.
- **Transmission:** Transmitted by Aedes aegypti and Aedes albopictus mosquitoes, which are also vectors for dengue and Zika viruses. These mosquitoes are active during the daytime. Additionally, transmission from a pregnant woman to newborns is possible.
- **Symptoms:** Symptoms include severe joint pain, reduced mobility, fever, joint swelling, muscle pain, headache, nausea, fatigue, and rash. Similar symptoms with dengue and Zika viruses can lead to misdiagnosis.

- **Treatment:** Clinical management involves anti-pyretics, optimal analgesics, fluid intake, and rest. There is no specific antiviral drug for CHIKV infections.
- **Prevention & Control:** Focus on controlling mosquito vectors, avoiding bites, and using preventive measures like mosquito nets, repellents, and insecticides.

#### CHIKUNGUNYA VACCINE:

- Ixchiq is a single-dose vaccine containing a live, weakened Chikungunya virus, potentially causing symptoms akin to natural infection.
- Developed by Valneva, a European vaccine manufacturing company. It is approved for individuals aged 18 years or older, who are at an increased risk of virus exposure.

#### FACTORS CONTRIBUTING TO THE RISE IN CHIKUNGUNYA CASES:

The surge in Chikungunya cases can be attributed to several factors, particularly in urban, peri-urban, and rural areas:

- **Haphazard Urbanization:** Unplanned and rapid urbanization has created conducive environments for the proliferation of disease vectors.
- **Inadequate Water and Waste Management:** Deficient management of water resources and solid waste has resulted in the creation of breeding sites for mosquitoes, facilitating the spread of Chikungunya.
- **Lack of Antiviral Drug or Vaccine:** The absence of a specific antiviral drug or vaccine leaves the population vulnerable to Chikungunya, as there is no targeted medical intervention available.

#### GOVERNMENTAL MEASURES TO COMBAT CHIKUNGUNYA:

The Indian government has implemented initiatives to prevent and control Chikungunya, primarily through the National Vector Borne Disease Control Programme (NVBDCP):

- A comprehensive program under the Ministry of Health and Family Welfare.
- Focuses on preventing and controlling various vector-borne diseases, including Chikungunya.
- Aims to create awareness, conduct surveillance, and implement measures to reduce the incidence of diseases like Malaria, Filaria, Kala-azar, Japanese Encephalitis (JE), Dengue, and Chikungunya.

SOURCE:

How was the first vaccine for chikungunya approved? | Explained - The Hindu

#### Q.1 Regarding the Chikungunya recently seen in the news, consider the following statements:

- 1. The Chikungunya virus is a DNA virus belonging to the alphavirus genus.
- 2. Chikungunya is primarily transmitted by Anopheles mosquitoes.
- 3. Transmission from a pregnant woman to newborns is not possible.

#### How many of the above statements are correct?

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

**ANSWER: D** 

# Q.2 Regarding the Chikungunya Vaccine recently seen in the news, consider the following statements:

- 1. Ixchiq is a multi-dose vaccine containing a live, weakened Chikungunya virus.
- 2. The Chikungunya vaccine is approved for individuals of any age who are at risk of virus exposure.

# Which of the statements given above is/are correct?

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

**ANSWER: D** 

Q.3 Examine the impact of vector-borne diseases on public health in developing countries.

सफलता

# **TANTALUM**

This article covers "Daily Current Affairs" and the topic details "Tantalum". This topic has relevance in the Science and Technology section of the UPSC CSE exam.

GS 3: Science and Technology

#### WHY IN THE NEWS?

In a groundbreaking revelation, a team of researchers from the Indian Institute of Technology (IIT), Ropar, has discovered the presence of tantalum, a rare metal, in the sands of the Sutlej River in Punjab. This discovery is poised to have far-reaching implications, particularly in the realms of electronics, semiconductors, and India's strategic mineral policy.

#### **UNDERSTANDING TANTALUM:**

- Properties:
- Tantalum, with atomic number 73, is characterized by its grey color, heaviness, and exceptional corrosion resistance.
- Possessing high ductility, tantalum can be stretched into thin wires without breaking, and it boasts an extremely high melting point, surpassed only by tungsten and rhenium.

#### **Discovery:**

Discovered by Swedish chemist Anders Gustaf Ekenberg in 1802, tantalum was found in minero als obtained from Ytterby, Sweden.

#### **USES OF TANTALUM:**

#### **Electronic Sector:**

- Tantalum plays a pivotal role in the electronics sector, particularly in the manufacture of capacitors.
- Capacitors made from tantalum are known for their ability to store more electricity in smaller 0 sizes, making them ideal for devices like smartphones, laptops, and digital cameras.

#### **Substitute for Platinum:**

Its high melting point positions tantalum as a cost-effective substitute for platinum in various 0 applications.

# **Medical Applications:**

Tantalum, due to its non-reactivity with bodily fluids, is employed in the production of surgical o है तो सफट equipment and implants, including artificial joints.

#### **Industrial Uses:**

- Tantalum carbide (TaC) in combination with graphite forms one of the hardest known materials, o utilized on the cutting edges of high-speed machine tools.
- Widely used in components for chemical plants, nuclear power plants, aerospace, and missile 0 systems.



#### SIGNIFICANCE OF TANTALUM DISCOVERY IN SUTLEJ RIVER:

- **Semiconductor Manufacturing:**
- The discovery holds particular significance for India's semiconductor industry, aligning with re-0 cent governmental efforts to boost domestic manufacturing.
- **Critical Mineral Policy:**
- Tantalum is listed in India's critical mineral policy, which addresses the country's dependence on imports for 10 crucial minerals.
- This policy strategically maps mineral requirements for sectors such as renewables, defense, electronics, telecommunications, and transportation.
- **Reducing Dependence on China:**
- The discovery of tantalum in the Sutlej River is a step towards reducing India's reliance on China 0 for critical minerals.
- **Renewable Energy Goals:**
- Supports India's ambitious renewable energy targets, aiming for a 500 GW share in the grid and o सफलि a significant transition to electric vehicles by 2030.
- **Economic Impact on State:**
- The tantalum discovery has the potential to positively impact the state's economy by promoting o the mining of these valuable metals.

Source:

https://indianexpress.com/article/explained/explainedsci-tech/tantalum-metal-sutlej-use-9036349/

# Q.1 Regarding Tantalum, consider the following statements:

- 1. Tantalum has atomic number 73.
- 2. It is highly corrosion-resistant.
- 3. Tantalum is crucial in the electronics sector, especially for capacitors known for efficient electricity storage.

# How many of the above statement/s is/are correct?

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

ANSWER: C

Q.2 Examine the importance of critical minerals for India's strategic sectors. Discuss the challenges posed by their import dependency.

# **TECHNOLOGY DEVELOPMENT BOARD (TDB)**

This article covers "Daily Current Affairs" and the topic details "Technology Development Board (TDB):". This topic has relevance in the Science & Technology section of the UPSC CSE exam.

GS 3: Science & Technology

#### WHY IN THE NEWS?

In a recent initiative aimed at strengthening the Micro, Small, and Medium Enterprise (MSME) sector in India, the Technology Development Board (TDB) and the Small Industries Development Bank of India (SIDBI) have entered into a formal Memorandum of Understanding (MoU).

#### ABOUT:

• In a significant move to bolster the Micro, Small, and Medium Enterprise (MSME) sector in India, the Technology Development Board (TDB) and the Small Industries Development Bank of India (SIDBI) have formalized a Memorandum of Understanding (MoU).

# **TECHNOLOGY DEVELOPMENT BOARD (TDB):**

- Established under the Technology Development Board Act, 1995, the TDB is a statutory body.
- **Mission:** Promotion of indigenous technology development, commercialization, and adaptation of imported technology for broader applications.
- **Composition:** Consists of 11 Board members.
- **Functionality:** Provides equity capital or loans to industrial concerns and extends financial assistance to research and development institutions.
- **Funding Source:** Receives grants from the Indian government, sourced from cess collections under the Research and Development Cess Act, 1986 (amended in 1995).

#### SMALL INDUSTRIES DEVELOPMENT BANK OF INDIA (SIDBI):

- Established in 1990 under an Act of Parliament, SIDBI is the Principal Financial Institution dedicated to promoting, financing, and developing the MSME sector.
- **Objective:** Extending both direct and indirect loans to MSMEs to address developmental and financial gaps within the MSME ecosystem.
- Role: Coordinates functions among various institutions engaged in similar activities, aiding MS-MEs in acquiring funds for market growth, technology development, and commercialization of innovative products.
- **Administrative Responsibility:** Manages the Small Industries Development Fund and National Equity Fund.

#### **COLLABORATIVE EFFORTS:**

- The MoU formalizes collaborative efforts between TDB and SIDBI to enhance support for MS-MEs.
- Focus areas include technology development, commercialization, and addressing financial needs crucial for MSME growth.

**SOURCE:** 

https://www.financialexpress.com/business/sme/sidbi-partners-with-technology-development-board-for-credit-access-to-msmes-developing-technologies/3310057/

- Q1 Regarding the Technology Development Board (TDB) recently seen in the news, consider the following statements:
- 1. The TDB is a statutory body established under the Technology Development Board Act, 1995.
- 2. The mission of the TDB is primarily development, commercialization, and the adaptation of imported technology for broader applications.

# Which of the statements given above is/are correct?

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

**ANSWER: A** 

जना है तो सफलता है Q.2 Discuss the role and significance of the Technology Development Board (TDB) in promoting indigenous technology development and supporting the Micro, Small, and Medium Enterprise (MSME) sector in India. Assess the potential impact of such collaborations on technological innovation and financial support for the growth of MSMEs. yojnajas.con

# ROLE OF THE GOVERNOR

This article covers "Daily Current Affairs" and the topic details "Role of the Governor in Granting Assent to Bills Passed by the Assembly.' This topic has relevance in the Polity and Governance section of the UPSC CSE exam.

#### WHY IN THE NEWS?

Recently, there has been friction between the Governors and the State Governments of several states. This is due to withholding assent to bills passed by state assemblies for several months and years without providing any reason for doing so.

#### **CURRENT CRITICISM OF GOVERNOR'S ROLE**

In 2020, the Tamilnadu Government passed 12 bills, most of which were related to the appointment of a vice-chancellor of the University by the State Government instate of the governor. The Governor kept them on hold or reserved them for pending for more than 3 years. When the Tamilnadu Government reached the Supreme Court regarding the long pending of these bills, the Court asked the Governor to take immediate action. The Governor returned 10 bills and is still holding 2 bills. Just after that, the Tamilnadu Government called a special session to adopt them again.

- Chief Minister Stalin criticized this act of the governor as unconstitutional, anti-people, and against the sovereignty of the state assembly. It is not an isolated incident. Earlier, in February 2023, the Governor of Kerala approved and enacted into law five bills endorsed by the Assembly. However, the Governor chose to withhold assent for the remaining six bills, which encompassed legislative proposals such as the Kerala Lokayukta (Amendment) Bill and the Kerala University (Amendment) Bill. The governor was accused of delaying the passage of some bills for up to 26 months.
- The Supreme Court expressed displeasure over similar delays by the Governors of Telangana and Punjab. The court has expressed 'serious concern' over inaction by the Governor on Bills presented for his assent

# **NATIONAL PENSION SYSTEM (NPS)**

This article covers "Daily Current Affairs" and the topic details "National Pension System (NPS)". This topic has relevance in the Economy section of the UPSC CSE exam.

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GS 3: Economy

#### WHY IN THE NEWS?

The Union Home Minister's recent announcement to deliberate on the restoration of the Old Pension Scheme (OPS) has reignited discussions on the National Pension System (NPS).

As a retirement benefit scheme introduced by the Government of India, the NPS aims to provide a regular income post-retirement for all its subscribers.

# **KEY FEATURES OF THE NATIONAL PENSION SYSTEM (NPS):**

# **Inception and Expansion:**

- Launched on January 1, 2004.
- o Initially for new government recruits, it was extended to all citizens, including those in the unorganized sector, on a voluntary basis from May 1, 2009.

# **Voluntary Nature:**

Open to all citizens, allowing flexibility in investment amounts at any time.

#### **Permanent Retirement Account Number (PRAN):**

Each subscriber is assigned a unique PRAN for account identification.

#### **Portability:**

o NPS accounts and PRANs remain constant despite changes in employment, location, or state, accessible from anywhere in India.

#### **Regulatory Authority:**

o Governed by the Pension Fund Regulatory and Development Authority (PFRDA).

#### **Defined Benefit Absence:**

o Unlike traditional pension schemes, NPS lacks a defined benefit at exit; accumulated wealth depends on individual contributions and investment returns.

#### **Investment Structure:**

- o Individual savings are pooled into pension funds managed by PFRDA-regulated professionals.
- o Diversified portfolios include Government Bonds, Bills, Corporate Debentures, and Shares.

# **Corpus Growth and Withdrawal:**

- o Contributions accumulate until retirement, with market-linked returns.
- o Subscribers can exit before retirement or opt for superannuation.

#### Two Personal Accounts under PRAN:

- o Tier I Account: Non-withdrawable, designed for retirement savings.
- o Tier II Account: Voluntary savings with withdrawal flexibility, not eligible for tax benefits.

# PROSPECTS OF RESTORING THE OLD PENSION SCHEME (OPS):

- The government's consideration of restoring OPS prompts a reevaluation of retirement benefit schemes, emphasizing the need for a balanced approach between voluntary contributions and defined benefits.
- The committee's report will likely play a crucial role in shaping the future of pension schemes in India.

Aspect	Old Pension Scheme	National Pension Scheme (NPS)
Guarantee of Income	Guarantees a lifelong income post-retirement.	Participants contribute, and the scheme does not guarantee a fixed income.
Financial Responsibility	Government bears the expenditure on the pension.	Employees contribute, and the government may match the contributions.
Monthly Payment	Assures a fixed monthly payment, typically 50% of the last drawn salary.	Contributions are invested in earmarked schemes with potential market-linked returns.
Contribution Structure	The entire financial responsibility lies with the government.	Employees contribute a portion, and the government may contribute as well.
Investment of Funds	Not applicable, as the govern- ment bears the financial burden.	Funds are invested in earmarked investment schemes through Pension Fund Managers.

Withdrawal at Retirement	Monthly pension payment continues, as per the predetermined amount.	At retirement, a portion (60%) can be withdrawn tax-free, while the remaining (40%) is invested in annuities.
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**SOURCE:** 

Will deliberate on Old Pension Scheme after panel report: Amit Shah – The Hindu

तो सफलता है

- Q.1 With reference to the provided information on the National Pension System (NPS), consider the following statements:
- The NPS was initially launched for new government recruits and later extended to all citizens 1.
- 2. The NPS Tier II Account is designed for non-withdrawable retirement savings.

# Which of the statements given above is/are correct?

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

ANSWER: A

Q.2 In light of the ongoing discussions regarding the potential revival of Old Pension Scheme (OPS), critically assess the implications of such a move on India's pension landscape

# **RAT-HOLE MINING**

yojnaias.com This article covers "Daily Current Affairs" and the topic details "Rat-Hole Mining". This topic has relevance in the Economy section of the UPSC CSE exam.

GS 3: Economy

#### WHY IN THE NEWS?

Recently, the efforts to rescue workers trapped in the Silkyara-Barkot tunnel have brought attention to the use of horizontal auger machines and the adoption of rat-hole mining practices.

#### **HORIZONTAL AUGER MACHINES:**

#### **Definition and Functionality:**

- Also known as horizontal boring machines or directional drills. It is a specialized tool for creating horizontal bores or underground tunnels without surface disturbance.
- Comprise a rotating helical screw blade (auger) attached to a central shaft or drill.

• Commonly used in construction, utility installations, and infrastructure projects.

#### **WORKING MECHANISM:**

- It is positioned at the bore's starting point on the surface.
- It consists of a drill head with a rotating auger or drill string. The auger cuts through soil, rock, or other materials underground.
- Rotation is powered by hydraulic or mechanical systems and the material removal is facilitated by drilling fluid or mud pumped through the drill string.

#### **RAT-HOLE MINING:**

- It is a method of extracting coal from narrow, horizontal seams, prevalent in Meghalaya. It involves narrow pits ("rat holes") dug into the ground for coal extraction.
- Miners descend using ropes or bamboo ladders to reach coal seams.
- Manual extraction using primitive tools like pickaxes, shovels, and baskets.

#### Types of Rat-Hole Mining:

- **Side-Cutting Procedure:** Narrow tunnels dug on hill slopes until the coal seam is found. Coal seams in Meghalaya are typically thin, less than 2 meters.
- **Box-Cutting:** A rectangular opening is made, followed by a vertical pit, and horizontal rat-hole-sized tunnels for coal extraction.

#### **ENVIRONMENTAL AND SAFETY CONCERNS:**

- Unregulated mines lacking safety measures.
- Potential for land degradation, deforestation, and water pollution.
- Hazardous working conditions, accidents, injuries, and fatalities.

#### BAN ON RAT-HOLE MINING:

- Banned by the National Green Tribunal (NGT) in 2014 and retained in 2015. cited reasons include flooding during the rainy season, resulting in deaths and environmental damage.
- Despite bans, challenges persist due to economic factors and the lack of alternative livelihoods.

**SOURCE:** 

Silkyara tunnel rescuers resort to traditional mining method: Rat-hole mining explained | Dehradun News – Times of India (indiatimes.com)

#### Q.1 With reference to the rat-hole mining, consider the following statements:

1. Rat-hole mining is a method of extracting coal from narrow, horizontal seams, prevalent in Maharashtra.

2. The Supreme Court banned rat-hole mining in 2014.

# Which of the statements given above is/are correct?

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

**ANSWER: D** 

Q.2 Evaluate the reasons behind the National Green Tribunal's (NGT) ban on rat-hole mining.





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