Topics - MINDS MAPS included (Daily current affairs 30th November 2024

- The naming process of cyclone fengal
- Tungsten Mining Locations in India
- National Seed Congress: A Call for Modernization
- Tax Terrorism: An Overview
- Uranium Enrichment Overview
- A cayuco
- MAINS



### By saurabh Pandey





Target Mains -2025/26 -

**Q** 'Essay topic  $\rightarrow$  Virtual world is gaining prominence over physical world but not without any cost ''

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Sharp showers: Rain lashed Chennai under the influence of the cyclone that may make landfall on Saturday. B. VELANKANNI RAJ

### Cyclone Fengal to cross Puducherry coast today noon

#### The Hindu Bureau CHENNAI

With the slow-moving weather system gathering pace, the Regional Meteorological Centre (RMC), Chennai, announced that Cyclone Fengal will cross the coast close to Puducherry by Saturday afternoon.

The RMC has maintained the red alert – indicating isolated extremely heavy rainfall – in seven coastal districts for Saturday. Intense rain will lash other districts.

On the day of the cyclone's landfall, Chennai and its neighbouring districts, Cuddalore, Puducherry, Villupuram, and Kallakurichi will receive intense rain. With the weather system consolidating itself, it is likely to bring heavy rain in north Tamil Nadu till Saturday, and in the Western Ghat districts and interior parts from December 1 to December 3.

Orange and yellow alerts have been issued for other districts which are expected to receive heavy to very heavy rain. The Cauvery delta districts and north interior districts, too, may receive heavy to very heavy rain on Saturday.

The RMC has said Cyclone Fengal will cross the north Tamil Nadu-Puducherry coast between Karaikal and Mamallapuram as a cyclonic storm by Saturday afternoon. It would have a wind speed of 70-80 kmph gusting to 90 kmph.



### $\textbf{Topic} \rightarrow \textbf{The naming process of cyclone}$

- SAURABH PANDEY CSE
- The naming of cyclones in the North Indian Ocean is managed by the World Meteorological Organization (WMO), in collaboration with the Economic and Social Commission for Asia and the Pacific (ESCAP) panel on tropical cyclones
- In 2000, during the Panel's 27th session held in Muscat, Oman, a decision was made to begin assigning names to tropical cyclones over the Bay of Bengal and Arabian Sea.
- This was aimed at improving public awareness and response to these potentially devastating storms.

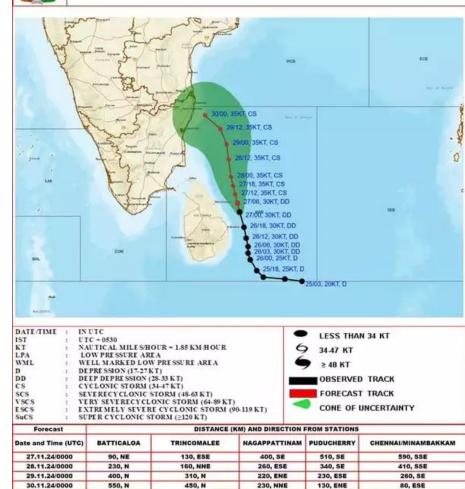


- The initial batch of names was contributed by eight countries, and over time, five additional countries joined the panel.
- This rotating list of names includes contributions from countries surrounding the North Indian Ocean, including India, Sri Lanka, Bangladesh, Myanmar, and Saudi Arabia, among others



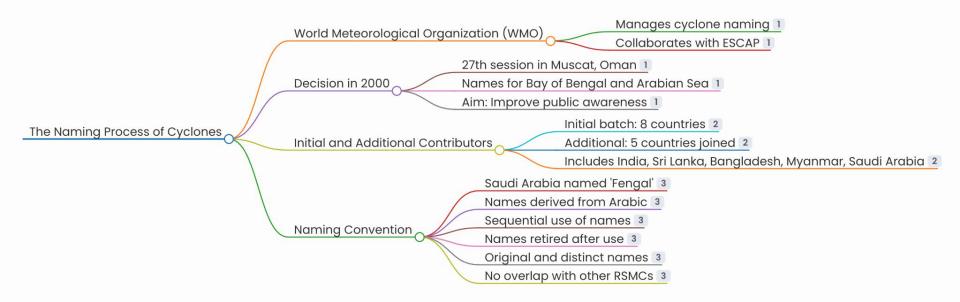
OBSERVED AND FORECAST TRACK ALONG WITH CONE OF UNCERTAINITY OF DEEP DEPRESSION OVER SOUTHWEST BAY OF BENGAL BASED ON 0000 UTC (0530 HRS. IST) OF 27<sup>TH</sup> NOVEMBER, 2024





### Why it is called 'Fengal'?

- In this particular case, Saudi Arabia was responsible for naming the storm Fengal. The name itself is derived from the Arabic language.
- Under the WMO naming convention, each country on the panel contributes names to a shared list, which are then used sequentially to name each new storm that forms in the region.
- Once a name is used for a tropical cyclone, it is retired and cannot be reused for future storms.
- The names are chosen to be original and distinct, ensuring there is no overlap with cyclone names used by other Regional Specialized Meteorological Centres (RSMCs) globally, including the RSMC in New Delhi



#### We will not allow tungsten mining at heritage site: Stalin

The Hindu Bureau CHENNAI

Tamil Nadu Chief Minister M.K. Stalin has requested Prime Minister Narendra Modi to cancel the tungsten mining rights awarded to a private company in Madurai district, as a biodiversity heritage site is located in the proposed mining area. He said mining would affect residents of the surrounding densely populated villages.

In October 2023, the State government raised concerns over auctioning of the rights to mine critical and strategic minerals. But the Union Minister for Coal and Mines had said that the auction could not be withheld, in the larger interest of the country.

Earlier this month, the Ministry declared Hindustan Zinc Limited the preferred bidder for the Nayakkarpatti tungsten block, comprising six villages including Arittapatti, which is a notified biodiversity heritage site and is famous for archaeological monuments, including cave temples, sculptures,



Arittapatti, near Madurai, is a biodiversity heritage site.

Jain symbols, Tamil Brahmi scripts, and Pancha Pandavar stone beds.

"Any mining activity will cause an irreparable damage to these sites," Mr. Stalin said.

Maintaining that the State government "would never allow any such mining to be undertaken in these areas", Mr. Stalin requested Mr. Modi to instruct the Ministry of Mines to cancel the tungsten mining rights granted to Hindustan Zinc Limited.

He also urged Mr. Modi to instruct the Ministry to desist from seeking bids for mining without the consent of the States concerned.





#### **Overview of Tungsten Mining in India**

Tungsten is a valuable mineral used in various industries, including electronics, aerospace, and defense. Mining locations primarily found in Tamil Nadu. Tamil Nadu Arittapatti Nayakkarpatti Madurai

#### **Recent Developments**

Political Concerns: Chief Minister MK Stalin has urged the Prime Minister to cancel mining licenses in specific areas due to environmental and social concerns.

Government Actions: The central government is taking inputs from the Tamil Nadu government regarding mining rights and block sales.

# Scientists, industry demand passage of new Seeds Bill, changes in policy

#### A. M. Jigeesh

VARANASI

On the second day of the three-day National Seed Congress (NSC), scientists, experts, and industry partners asked the Centre to revisit and modernise the Seeds Bill of 2004 and the Seeds Policy of 2002 to incorporate the latest developments in the sector. At a panel discussion as part of the 13th NSC, the experts also demanded strategic interventions to face the challenges faced by the seed sector.

The Seeds Bill, introduced in Parliament in 2004, was not passed due to opposition from farmers. Experts argued that the policies must be in tune with the contemporary situation in the seeds sector and the concerns of farmers should be incorporated in the new policies.



Experts say that seed certification standards in India are much lower than international standards.  $\ensuremath{\mathsf{PTI}}$ 

"A balanced focus on innovation, farmer empowerment, and policy reforms can pave the way for a resilient and globally competitive seed industry," said Shiv Kumar Agarwal, regional coordinator of International Center for Agricultural Research in the Dry Areas.

Dr. Agarwal told *The Hindu* that the Seeds Bill needs to be reworked. "The present Bill is 20 years old. Many things have changed. But it can still be sent to all stakeholders so that issues raised by farmers can be addressed. It is about working together. The public sector – the government – is good in science and the private sector is very good in taking science to the farmers. So they must join together to deliver the best products to the farmers who need them so that they can use quality seeds efficiently and affordably," Dr. Agarwal said.

Malvika Dadlani, former Joint Director of Indian Agriculture Research Institute, said the country's seed quality assurance system was weak and should be strengthened on issues such as adhering to international standards.

"Seeds Act, 1966 and Seeds Rules, 1968 have not been revised. Our seed certification standards are much lower than international standards," she said, adding that the proposed Seeds Bill was pending for too long and the existing National Seeds Policy had also not been revised. "We have to clearly define what is a farmer seed and what is a commercial seed. Defining them is very important," she said.



#### Topic → National Seed Congress: A Call for Modernization ✓ Call for Modernization



Experts at the National Seed Congress urged the Centre to update the Seeds Bill of 2004 and the Seeds Policy of 2002 to reflect current developments in the seed sector.

#### Panel Discussion Insights

Participants emphasized the need for strategic interventions to address challenges in the seed industry.

#### E Historical Context

The Seeds Bill of 2004 was never passed due to farmer opposition, highlighting the need for policies that consider farmers' concerns.

#### Need for Collaboration

Dr. Shiv Kumar Agarwal stressed the importance of collaboration between the public and private sectors to enhance seed quality and accessibility for farmers.

#### **Quality Assurance Issues**



Malvika Dadlani pointed out weaknesses in the country's seed quality assurance system, advocating for adherence to international standards.

#### **Stagnation of Policies**

The existing Seeds Act of 1966 and Seeds Rules of 1968 have not been revised, leading to outdated certification standards.

#### **Q** Defining Seed Types

There is a critical need to clearly define "farmer seed" versus "commercial seed" to improve regulations and standards in the seed sector

#### Seed Bill 2004



- The Seeds Bill, 2004 aims to regulate the quality of seeds sold, and replaces the Seeds Act, 1966.All varieties of seeds for sale have to be registered. The seeds are required to meet certain prescribed minimum standards.
- Transgenic varieties of seeds can be registered only after the applicant has obtained clearance under the Environment (Protection) Act, 1986. In addition, the label of a seed container has to indicate specified information.
- The Bill exempts farmers from the requirement of compulsory registration. Farmers are allowed to sow, exchange or sell their farm seeds and planting material without having to conform to the prescribed minimum limits of germination, physical purity and genetic purity (as required by registered seeds). However, farmers cannot sell any seed under a brand name.

- If a registered variety of seed fails to perform to expected standards, the farmer can claim compensation from the producer or dealer.
- The Bill provides for setting up a compensation committee that shall hear and decide these cases. It also provides for an appellate mechanism to be set up by notification.
- The penalty for contravening any provision of the Act or selling misbranded or substandard seeds is a fine ranging between Rs 25,000 and Rs 1 lakh.
- The penalty for giving false information may incur a prison term for upto a year and/or a fine of upto Rs 5 lakh.

#### **Seed Bill Overview**

Key Aspects of the Seed Bill

SAURABH PANDEY

Y Regulation Need: The bill addresses the necessity for regulation within the seed industry.

2 Quality Assurance: It aims to ensure the quality and availability of seeds for farmers.

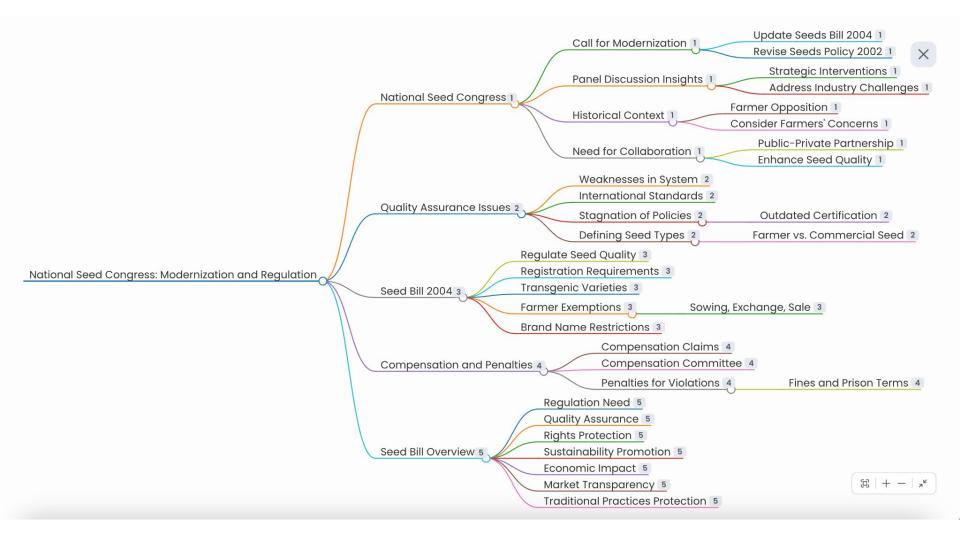
Rights Protection: The bill seeks to protect the rights of both seed producers and farmers.

Sustainability Promotion: It promotes sustainable agricultural practices and biodiversity.

**š** Economic Impact: The legislation may affect the economic aspects of seed production and distribution.

Market Transparency: The bill could enhance transparency in the seed market.
Traditional Practices Protection: It aims to prevent the misuse of patented seeds and safeguard traditional farming practices.

Summary: The seed bill is crucial for regulating the seed industry, ensuring quality, protecting rights, and promoting sustainability



## 'GST spurring fresh tax terrorism'

Former Chief Economic Adviser Arvind Subramanian laments the GST Council has become a rate cutting and exemption granting panel; expresses pessimism about rate simplification and hike prospects with States' Compensation Cess gone

#### Vikas Dhoot NEW DELHI

ormer Chief Economic Adviser (CEA) Arvind Subramanian, who authored an official report on the ideal 15.5% revenue-neutral rate for the Goods and Services Tax (GST) regime, said he is not very hopeful of a simplification of the complex, multiple-rate structure of the indirect tax, and lamented that the GST era has unleashed a fresh reign of "tax terrorism" across the country.

"We don't just need rationalization, which we do need, but we need an in-



Ground reality: Mr. Subramanian said unless GST rates are raised on some items, revenue growth will be a challenge. M. VEDHAN

crease in the rate. We brought the rate down from 15.5% to 11% but the GST Council has become a Council that only discusses rate cuts. It has become a rate cutting committee and an exemption granting committee, and part of it is because of the of the compensation [to States] that happened, they became very lax but that phase is over," he noted on Friday.

Speaking at a session on 'The GST Story: Whither Next?', hosted by the Centre for Policy Research, Mr. Subramanian said unless tax rates are raised on some items, revenue growth will be a challenge.

"We thought the advantage of the GST Council is that, because if States were handling this on their own, if they raise rates, they would face political costs. In the GST Council, you can always blame the GST Council for raising rates, and that political economy dynamic hasn't worked out. And I am very despondent," he remarked.

Citing people's experiences with the GST regime, Mr. Subramanian said something about the GST has encouraged excessive tax demands. "In the Indian system, tax terrorism and excessive demand was always a feature, but under the GST, it seems to have gone up. I don't understand this fully, but I think because the GST gives more data, people think that governments think that they have greater legitimacy, because somehow they have more data and they say, 'Oh, there's more evasion'."

This 'tax terrorism' that the GST has introduced is something that 'we really have to focus on', the former CEA cautioned.

#### $\textbf{Topic} \rightarrow \textbf{Tax Terrorism: An Overview}$

Understanding Tax Terrorism

Definition: Tax terrorism refers to the aggressive and often unlawful tactics used by tax authorities to intimidate or coerce taxpayers into compliance. Tactics: It can involve excessive audits, threats of legal action, or the seizure of assets without due process.

Impact: Disproportionately affects vulnerable populations, including low-income individuals and small businesses.

 $\widehat{\mathbf{m}}$  Concerns: Raises issues about the fairness and integrity of the tax system.

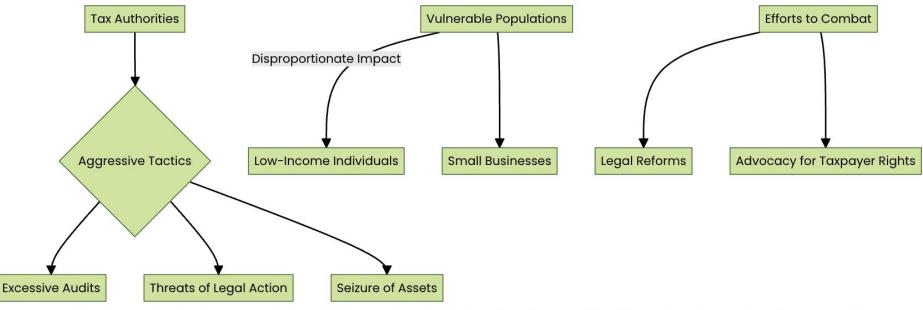
Criticism: Critics argue that tax terrorism undermines trust between taxpayers and the government.

S Variability: Can vary by country, influenced by local laws and enforcement practices.

**G** Countermeasures: Efforts to combat tax terrorism include legal reforms and advocacy for taxpayer rights



#### **Conceptual Overview:**



**Summary**: Tax terrorism is the coercive and often unlawful behavior of tax authorities aimed at enforcing compliance among taxpayers.

#### DUBAI

## Iran to enrich uranium with advanced centrifuges, says IAEA



GETTY IMAGES

Iran will begin enriching uranium with thousands of advanced centrifuges at its two main nuclear facilities at Fordo and Natanz, the United Nations' nuclear watchdog IAEA said on Friday, further raising tensions over Tehran's programme as it enriches at near weapons-grade levels. AP

#### $\textbf{Topic} \rightarrow \textbf{Uranium Enrichment Overview}$

**Key Points** 

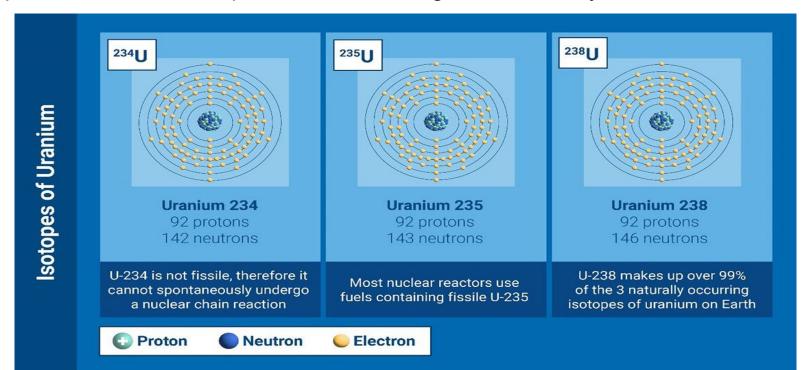
- 🔬 Uranium Enrichment: Process of increasing uranium-235 percentage in uranium ore.
- 1.5% Natural Uranium: Contains ~0.7% uranium-235; enriched uranium has 3-5% or more.
- Importance: Essential for nuclear power generation and nuclear weapons production. Methods: Includes gas diffusion and gas centrifugation.
- Regulations: Enriched uranium is regulated internationally to prevent proliferation and ensure safety.
- Enrichment Levels: Determines uranium use; higher levels for weapons, lower for reactors.
- Monitoring: Technology and facilities are monitored by the International Atomic Energy Agency (IAEA).
- Summary: Uranium enrichment increases uranium-235 concentration for nuclear power and weapons, regulated to prevent proliferation



Dual-Use Technology: Enrichment technology can be used for both civiliar nuclear power generation and military applications, complicating regulation.

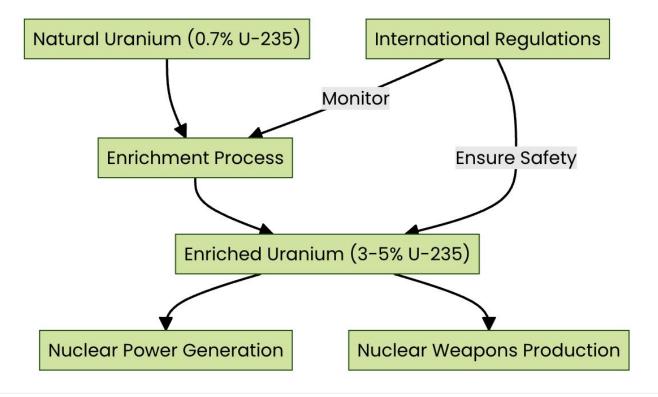


Proliferation Risks: Countries pursuing uranium enrichment capabilities may pose risks of nuclear proliferation and regional instability.





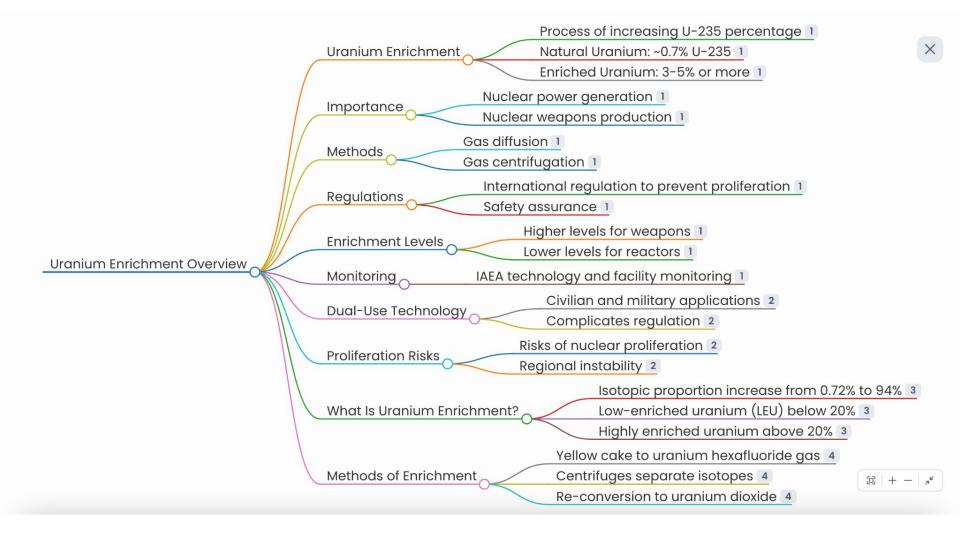
#### **Uranium Enrichment Process:**



#### What is uranium enrichment?

- Uranium enrichment is the process, through which the isotopic proportion of U-235 is increased from 0.72 per cent to up to 94 per cent.
- Uranium is considered low-enriched if its isotopic proportion of U-235 remains below 20 per cent. Most commercial reactors use low-enriched uranium (LEU) below five per cent as fuel, which is also often referred to as "reactor-grade uranium". LEU does not deteriorate and can be safely stored for many years.
- If uranium is enriched beyond 20 per cent, it is considered highly enriched. Uranium with such high isotopic proportions of U-235 is mostly used in naval propulsion reactors (for example in submarines), nuclear weapons and some research reactors.

- Different methods can be used to increase the isotopic proportion of U-235.
   Typically, the yellow cake is converted into a gaseous form, called uranium hexafluoride.
- This gas is then pumped into fast spinning cylinders centrifuges where heavier isotopes, such as U-238, are pushed towards the walls of the cylinders, and the lighter U-235 stays in the centre of the cylinders. This enables to "filter out" and collect the gas with higher concentrations of U-235.
- The process can be repeated until the isotopic proportion of U-235 is sufficient.
   The acquired gas then goes through a process of re-conversion, which enables it to turn U-235 into the form of black power uranium dioxide



#### In search of home



**Risky ride:** A 'cayuco' boat from Senegal with 136 migrants arrives at a port on the Canary Island archipelago on Thursday after being rescued at sea by a Spanish Sea Search and Rescue agency vessel. AFP



### $\textbf{Topic} \rightarrow \textbf{A} \text{ cayuco}$



A cayuco is a type of traditional boat commonly used in Central America and the Caribbean. These boats are typically made from wood and are designed for navigating rivers and coastal waters.

- → Cayucos are often used for fishing, transportation, and recreational activities.
- The design of a cayuco can vary significantly based on the region and the materials available.
- **\*\*** They are often associated with indigenous cultures and have historical significance in local communities.
- Cayucos can be paddled or sailed, depending on their construction and intended use.
- some cayucos are elaborately decorated, reflecting the cultural heritage of the area.
- Summary: A cayuco is a traditional wooden boat used in Central America and the Caribbean for various purposes, including fishing and transportation, with cultural significance in indigenous communities





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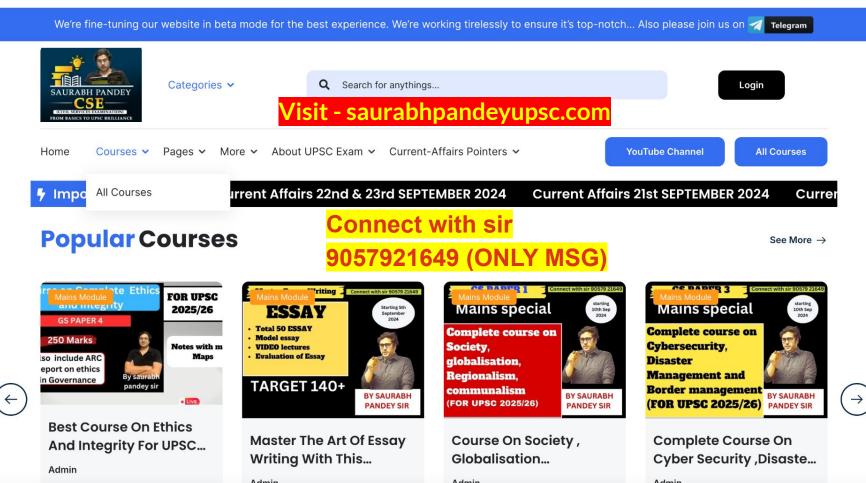
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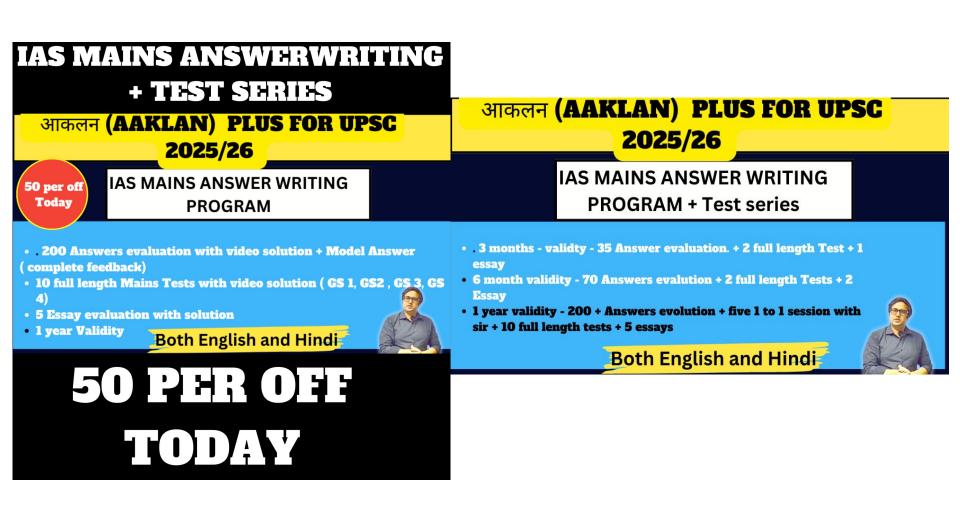
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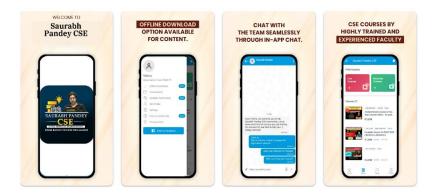


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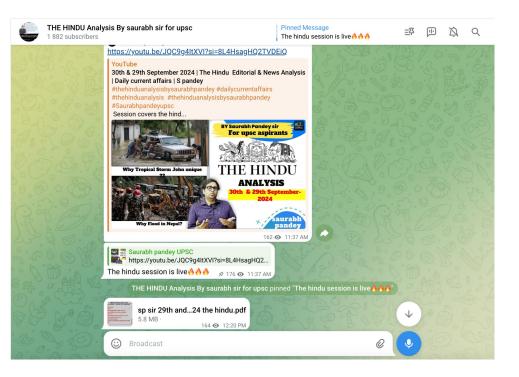
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