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Demise of foreign aid in India

The new US government has reduced funding to the **U.S. Agency for International Development (USAID).** The recent targeting of USAID under U.S. President Donald Trump symbolises a broader global retreat from official aid, exacerbated by geopolitical conflicts, rising **anti-immigration sentiment, and economic pressures in donor countries.**

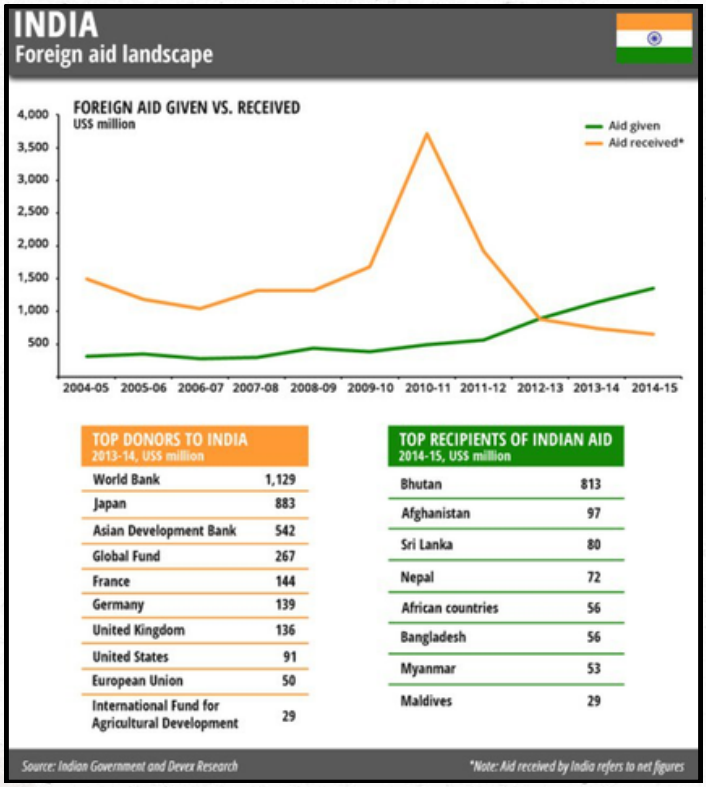
India's Aid Narrative

- In the immediate aftermath of Independence, India actively sought international aid to bridge the developmental gap with industrialised nations. The state was the primary conduit of this aid, reflecting a then-prevailing belief that governments were best positioned to drive transformative change.
- The period between 1955 and 1965 marked the zenith of aid inflows, primarily from Western nations. While some of this aid also reached private organisations, the emphasis remained on government-led development.
- However, starting in the 1970s, official development assistance began its steady decline. By the 1990s, thanks to India's burgeoning economy and robust growth narrative, ODA had dwindled to a negligible proportion of national income and public investment. Since the 1960s, two key funding streams have emerged: government grants and foreign aid. It was only after the 2013 mandate for corporate social responsibility (CSR) contributions that corporate funding gained notable traction.
- Despite steady growth in foreign aid to NGOS over the decades, recent years have seen a marked decline.

Regulatory Constraints and Their Impacts

- The crux of the decline lies less in donor reluctance and more in the Indian government's increasingly cautious, and sometimes hostile, attitude toward foreign-funded NGOs.The 1976 passage of the FCRA, in response to perceived foreign hand influences during the politically charged Emergency era, imposed stringent regulations on foreign funding.

- Over the decades, successive amendments, in 2010, 2011, 2020, 2023, and 2024, have progressively tightened the noose, leading to the cancellation of many NGO registrations. Moreover, prominent foreign donors such as the Soros Foundation have faced active discouragement. These regulatory measures, while ostensibly aimed at safeguarding national sovereignty, risk undermining the constructive role played by NGOs in India's development landscape.



The Value and Risks of Foreign Aid

- Foreign aid, despite occasional misalignments with local realities, has provided NGOs with flexible, generous funding.

It has facilitated capacity building, exposure to global best practices, and the freedom to adapt to shifting ground realities. Crucially, **foreign-funded NGOs** have acted as **watchdogs, voicing concerns** over governmental and corporate excesses and advocating for marginalised populations.

The complete cessation of foreign aid would have far-reaching consequences: unemployment in the **voluntary sector, stalled or abandoned projects,** and a deceleration of social development initiatives. More fundamentally, it would erode the system of **checks and balances that NGOs provide, potentially enabling** unchecked governmental overreach.

What are the impacts of declining foreign aid?

- Low fund flow will affect the employment in aid-giving organisations in both donor and recipient countries. Over 500 field-level workers are employed under various HIV-related projects with USAID. Declining foreign aid will affect co-operation between developed and developing countries in health and the environment.

Conclusion

- India has transitioned from an aid receiver to a partner, but NGOs still need support for social development. While self-reliance is vital, completely cutting off foreign aid could harm national interests, weakening NGOs' capacity to challenge, innovate, and support vulnerable groups

Question: [UPSC 2021] Consider the following:
1. Foreign currency convertible bonds
2. Foreign institutional investment with certain conditions
3. Global depository receipts
4. Non-resident external deposit.

Which of the above can be included in Foreign Direct Investments?

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

Ans) a

Explanation
Statements 1, 2 and 3 are correct.

- Foreign Currency Convertible Bond (FCCB) is a bond issued under the Issue of Foreign Currency Convertible Bonds and Ordinary Shares (Through Depository Receipt Mechanism) Scheme, 1993, as amended from time to time.
- Automatic Route for Issue of Foreign Currency Convertible Bonds (FCCBs) is allowed.
- Foreign Portfolio Investment is any investment made by a person resident outside India in capital instruments where such investment is (a) less than 10 percent of the post issue paid-up equity capital on a fully diluted basis of a listed Indian company or (b) less than 10 percent of the paid up value of each series of capital instruments of a listed Indian company.

It is the percentage which defines whether it is direct or institutional investment. FII made above 10 per cent of the post-issue paid-up equity capital will be considered as FDI. But once an FD, I will always be an FDI.

- Foreign investment in Indian securities has been made possible through the purchase of Global Depository Receipts, Foreign Currency Convertible Bonds and Foreign Currency Bonds issued by Indian issuers which are listed, traded and settled overseas.

Statement 4 is incorrect.

Question. Critically examine India's evolving relationship with foreign aid. Discuss how the balance between regulatory concerns, national sovereignty, civil society development, and social sector needs presents a governance challenge that requires a nuanced approach beyond simple self-reliance narratives.

‘Kamala’ and ‘Pusa’ DST Rice

Recently, the **Union Agriculture and Farmers Welfare Minister** has announced the development of two **genome-edited rice varieties,** marking a new beginning in the field of scientific research and innovation.

Background

- National Agricultural Science Fund: In 2018, ICAR initiated genome-editing research to improve two **major rice varieties – Samba Mahsuri and MTU 1010 –** under the National Agricultural Science Fund.
- In the 2023-24 budget, the Government of India allocated ₹500 crores for genome editing in crops. ICAR has initiated mega genome editing projects for horticulture crops, animals, fish, and microbes.

About Genome-Edited Rice Varieties

- Developed by: ICAR – **Indian Agricultural Research Institute (IARI), New Delhi and the Indian Rice Research Institute (IRRI), Hyderabad**

They are world’s **first genome-edited rice varieties, named as – DRR Rice 100 (Kamla) and Pusa DST Rice 1.**

About DRR Dhan 100 Kamala

- Developed by: ICAR-Indian Institute of Rice Research (ICAR-IIRR), Hyderabad
- Parent Variety: **Samba Mahsuri (BPT 5204),5.37 tonnes/ha (vs. 4.5 t/ha for parent) – 19% increase**
- **Gene Targeted: Cytokinin Oxidase 2 (CKX2 or Gn1a)**
- **Technology Used: Site-Directed Nuclease 1 (SDN1) genome editing**
- SDN1 uses DNA-cutting enzymes (nucleases) to create a targeted break in the DNA at a specific location.
- Early maturity **(~130 days; 20 days earlier than parent)**
- Drought tolerance, high nitrogen-use efficiency to 9 t/ha under optimal conditions

Zones: Andhra Pradesh, Telangana, Karnataka, Tamil Nadu, Puducherry, Kerala (Zone VII), Chhattisgarh, Maharashtra, Madhya Pradesh (Zone V), Odisha, Jharkhand, Bihar, Uttar Pradesh, West Bengal (Zone III).

About Pusa DST Rice 1

- It was developed from **MTU1010 and is a 'salinity tension tolerant'**
- When cultivated in areas that have a national average of salinity, the new variety produced 66% additional yield than MTU1010. Similarly, in alkaline conditions, the new variety gave 66% more yield than its original and under 'salinity tension' conditions, the yield of the new variety was 30.36%.

Technique involved

- These new varieties were developed using genome-editing technology based on CRISPR-Cas, which makes precise changes in the organism's genetic material without adding foreign DNA.

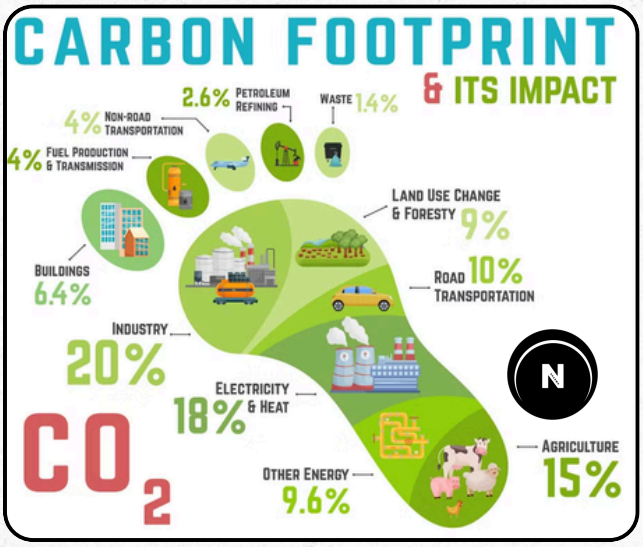
Not a GM Crop

Current genome technology involves using living organisms from native crop species **(known as SDN 1 and SDN2 types of genome editing)** to enhance productivity and achieve desired results, rather than incorporating alien organisms or bacteria.

- The two new varieties incorporate no foreign DNA, s**o they are not genetically modified (GM).**

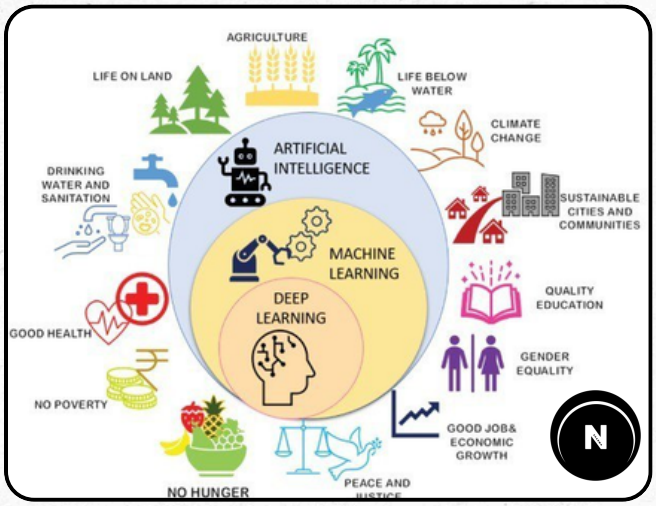
Hence, these varieties are exempt from the biosafety regulations outlined in Rules 7-11 of the 1989 Environment (Protection) Act. **(Rules 7-11 of the Environment (Protection) Act, 1989, primarily regulate the manufacture, use, import, export,** and storage of hazardous microorganisms and genetically engineered organisms or cells. These rules are in addition to the main **Environment (Protection) Act, 1986**. They address the need for careful supervision and control over activities involving **genetic engineering to ensure public health and environmental safety.**

Redrawing the not-so-pretty energy footprint of AI



- The rapid growth of Generative Artificial Intelligence has revolutionised numerous sectors, making once-difficult creative and analytical tasks incredibly simple and fast. Tools such as Chatgpt-4o can, for instance, generate detailed, Studio Ghibli-inspired portraits within seconds, opening up new horizons for creators and businesses alike. Sam Altman, CEO of Openai, highlighted this issue in a candid remark: It's super fun seeing people love images in Chatgpt, but our GPUS are melting.

- As AI adoption continues to surge, concerns about its environmental footprint become increasingly urgent, raising critical questions about how to reconcile technological progress with sustainable practice.



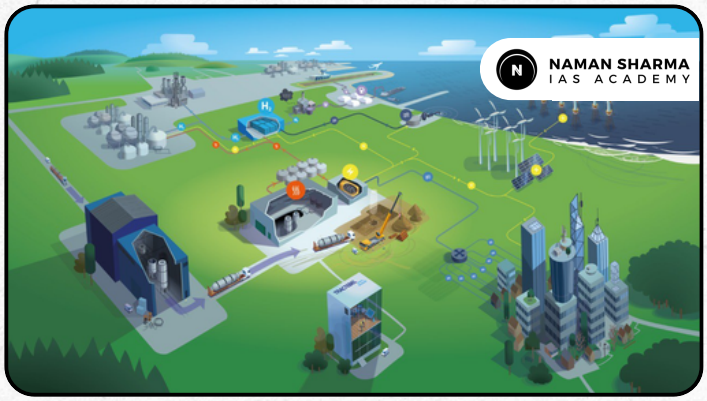
Environmental Impact

- AI's environmental footprint extends beyond its operational phase. The training of large AI models is particularly resource-intensive.For instance, training a single large-scale AI model, whether a conversational tool like Chatgpt or a visual generator like Midjourney, can emit as much carbon dioxide as five cars running continuously throughout their lifespans.
- These emissions arise from the vast computational processes involved in teaching AI to recognise patterns, understand language, and generate creative outputs.

Small Modular Reactors

What are SMRs?

Small Modular Reactors (SMRs) are a new generation of nuclear reactors designed to be compact, flexible, and scalable.



- Unlike traditional nuclear plants, which are large, expensive, and require extensive infrastructure, SMRs are built in modular units that can be assembled off-site and transported to their final location.

Advantages of SMRs

- Continuous, Zero-Carbon Energy: Unlike renewable sources such as wind and solar, which are subject to weather variability, SMRs provide a constant and reliable power supply, ensuring 24/7 availability of clean energy.

- **Faster and Cost-Effective Deployment:** Their modular design allows for faster construction and lower upfront costs compared to conventional nuclear power plants, enabling quicker response to growing energy demands.

- **Enhanced Safety Features:** SMRs are equipped with passive safety systems that rely on natural processes (like convection and gravity) to cool the reactor core in emergencies, minimising the risk of accidents and making them safer than traditional nuclear reactors.

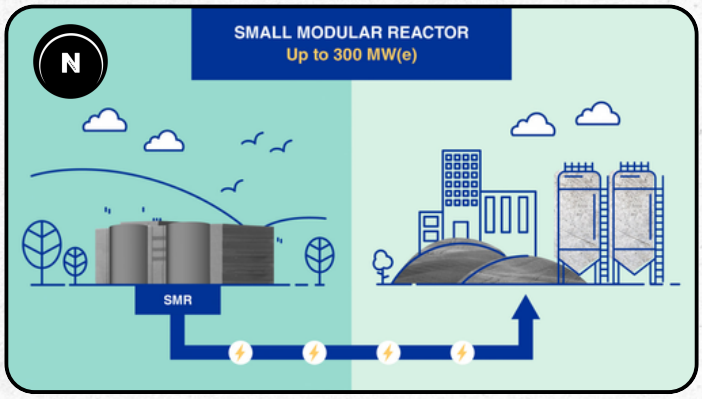
- **Adaptability:** SMRs can be deployed in a variety of settings, from urban centres to remote locations, facilitating decentralised energy production. This decentralisation enhances grid resilience and reduces the risk of widespread outages.

Challenges of SMR

- **Regulatory and Policy Barriers**Developing a comprehensive regulatory framework that ensures safety, effective waste management, and public trust is critical. Policymakers will need to navigate complex technical and social issues to secure widespread acceptance.

- **High Initial Investment:** Although SMRs promise lower long-term costs, the initial investment remains significant. This financial barrier could delay widespread adoption, especially in developing countries. In India's context, while these challenges are real, there are promising signs . Estimates suggest that once operational, the cost of electricity from SMRs could fall from **₹10.3 to ₹5 per kWh,** making it competitive with or even cheaper than current average electricity costs. One of the most effective initial steps toward mitigating AI's environmental impact is **greater transparency from companies operating in this sector.**

- Just as existing laws mandate data privacy disclosures, similar regulations should require AI companies to publish detailed reports on their energy usage.



- Total Energy Consumption: Detailed metrics on how much electricity their AI tools consume, both during model training and in **day-to-day operations.**
- Sources of Energy: Information on whether their electricity is sourced from renewable, nuclear, or fossil fuel-based energy. Such transparency will empower regulators, researchers, and the public to hold companies accountable and encourage innovation toward more energy-efficient AI models.

CONCLUSION

- The future of AI is undeniably bright, but its sustainability hinges on addressing its environmental impact.
- To ensure that AI continues to thrive without depleting planetary resources, a multifaceted strategy is required.
- Public-private partnerships offer a promising pathway, allowing governments and industry leaders to collaborate on the development of SMRS and other sustainable energy sources.

KALESHWARAM LIFT IRRIGATION PROJECT

The National Dam Safety Authority (NDSA) has found serious structural damage in Telangana's Kaleshwaram Lift Irrigation Project (KLIP) barrages, recommending urgent repairs and a complete safety review.

National Dam Safety Authority
Ministry of Jal Shakti, Government of India

What is NDSA?

- The National Dam Safety Authority (NDSA) is a statutory regulatory body established under Section 8(1) of the National Dam Safety Act, 2021. It was created by the Central Government to institutionalise dam safety and oversee compliance with safety standards across India.

Headquarters: New Delhi

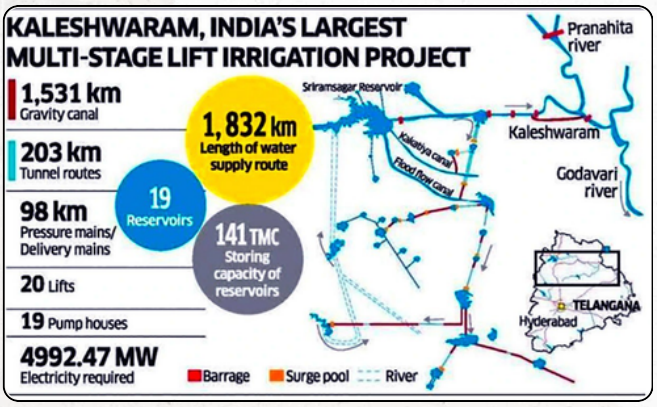
Functions of NDSA:

Dam Regulation: Formulates national policies for the design, construction, maintenance, and operation of dams.

- **Dispute Resolution:** Mediates conflicts between State Dam Safety Organisations (SDSOs) or between SDSOs and dam owners.
- **Inspection & Oversight:** Conducts periodic safety inspections, especially for specified large dams.
- **Disaster Preparedness:** Develops and monitors emergency action plans to respond to dam-related hazards.
- **Public Awareness:** Leads national campaigns to build awareness on dam safety, flood risks, and community preparedness.
- **Technical Support:** Provides capacity building, research, and guidelines for dam design and hydrological safety.

About Kaleshwaram Lift Irrigation Project (KLIP)

KLIP is the world's largest multi-stage lift irrigation project, aimed at diverting water from the Godavari River to drought-prone regions of Telangana.



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The project aims to irrigate 45 lakh acres, supply drinking water to Hyderabad, and support industrial use. It plans to lift 240 TMC of water, with **195 TMC from Medigadda, 20 TMC from Sripada Yellampalli, and 25 TMC from groundwater.**

The infrastructure includes **7 links, 28 packages, a 500 km span, 1,800+ km canal network, 20** reservoirs, and **Asia's largest pump house at Ramadugu.**

Issues with the Project

- In October 2023, Pillar No. 20 of the Medigadda barrage sank, causing flood-related damages.NDSA's April 2024 report identified structural distress in all 3 barrages (Medigadda, Annaram, Sundilla) due to poor design, lack of geotechnical studies, and inadequate safety protocols.
- Overloading of barrages (10 TMC water stored instead of 2 TMC) caused foundation damage. The state incurs ₹16,000 crore annually in loan and interest repayments, despite the project being criticised as a "man-made disaster."

About the Kaleshwaram Lift Irrigation Project (KLIP) and the role of the National Dam Safety Authority (NDSA), consider the following statements:

1. KLIP relies entirely on surface water from the Godavari River, with no planned extraction from groundwater sources.
2. Structural failures in KLIP barrages were partly due to deviations from safe storage capacities, as highlighted by the NDSA.
3. NDSA functions as both a regulatory and dispute resolution authority under a statutory framework.
4. The Medigadda barrage incident in 2023 was caused by an earthquake-induced foundation shift, as confirmed by the NDSA.

Which of the statements given above are correct?
A. 1 and 4 only
B. 2 and 3 only
C. 1, 2 and 3 only
D. 2, 3 and 4 only

Answer: B. 2 and 3 only

Explanation:

- Statement 1 – Incorrect: KLIP does not rely entirely on surface water; 25 TMC is planned from groundwater sources.
- Statement 2 – Correct: Overloading of the barrages (e.g., storing 10 TMC instead of the designed 2 TMC) led to foundation damage, as reported by the NDSA.

- **Statement 3 – Correct:** NDSA is a statutory authority (under the National Dam Safety Act, 2021) that serves both regulatory and dispute resolution functions.
- Statement 4 – Incorrect: The NDSA attributed the Medigadda failure to design flaws and lack of geotechnical studies, not to an earthquake.

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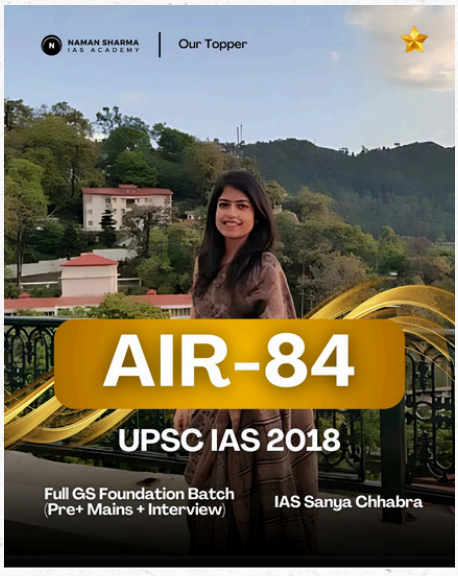

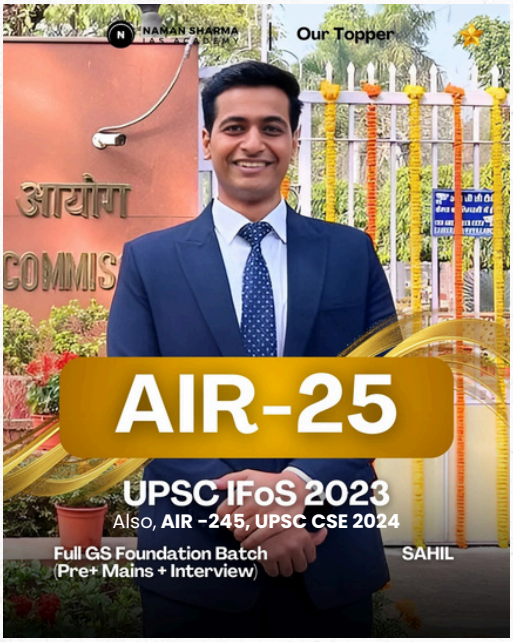

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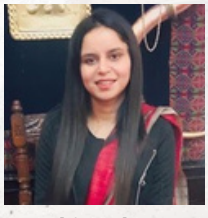

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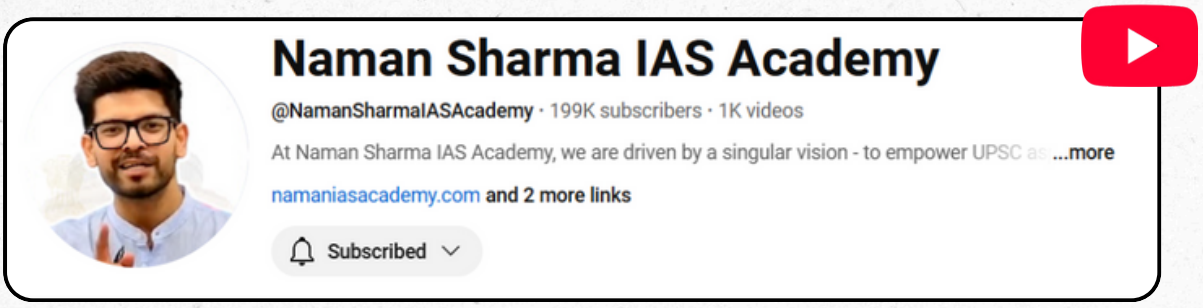

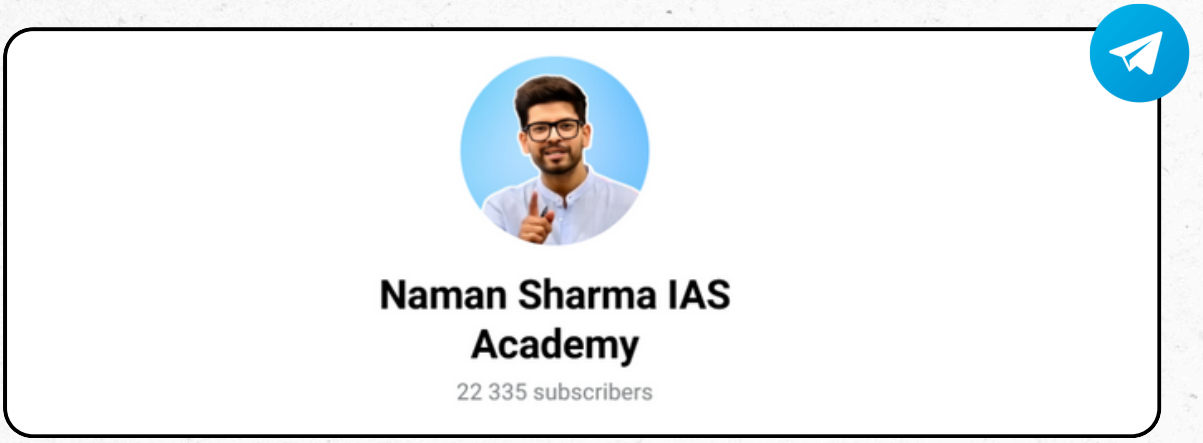

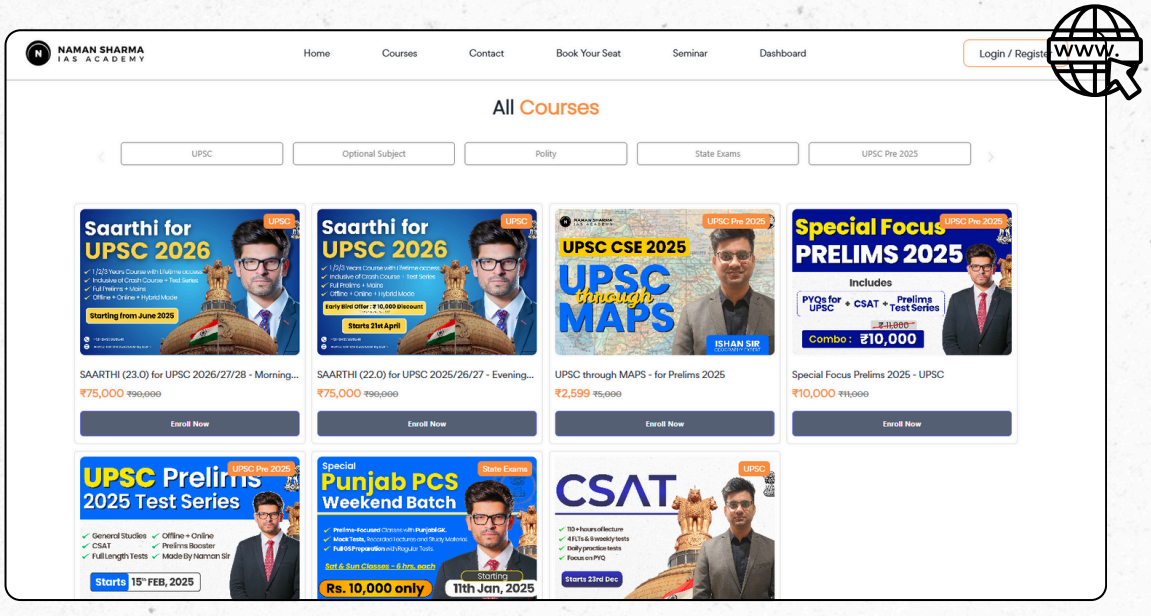

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