







Daily CURRENT AFFAIRS

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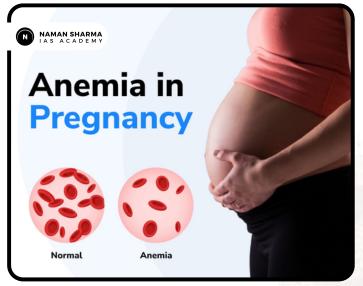


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Manage anaemia before pregnancy

Why in the news?

Anaemia is still a quiet public health crisis in India, especially in women of reproductive age. Most Indian women already experience anaemia of pregnancy, establishing a platform for complications in mother and child health.



This perspective corresponds to

Sustainable Development Goal 3 (good health and welfare) and the immediate need to meet the goal of the National Health Policy 2017, to reduce maternal mortality and improve birth outcomes. Push for Health as a basis for mothers' welfare now receives traction in India's policy and public health discourse.

Background

According to NFHS-5 (2019–21), anaemia is defined as a condition characterised by red blood cells or haemoglobin deficiency, affecting more than 57% of Indian women between the ages of 15-49. The condition often occurs unconsciously, because the symptoms -weakness, dizziness are wrong for everyday fatigue.

- Despite the improvement of mother's health indicators, such as the decline in maternal mortality rate (MMR) in 93 per 100,000 live births, an already existing anaemia weakens this progression.
- The risk of anaemia increases before and during pregnancy:
 - Before birth
 - Low birth weight
 - Pregnant
 - Postpartum bleeding
 - Intrauterine Growth Restriction (IUGR)
 - Newborn anaemia and neurodevelopmental delay

These complications contribute significantly to mortality and illness and illness. A reactive approach - dealing with and handling anaemia after pregnancy - is insufficient. Pro. The call for a paradigm change to Bellad's advanced perception is therefore both timely and necessary.

Features of Anaemia Management in India

Oral Iron-Folic Acid (IFA) Supplementation

- The Government of India promotes oral IFA tablets through the Intensified National Iron Plus Initiative (I-NIPI). Weekly IFA is provided to adolescents, and daily IFA to pregnant and lactating mothers.
 - Strength: Cost-effective, easily available
 - Limitation: Low adherence due to side effects such as nausea, constipation, and poor absorption evenous Ferric Carboxymaltose (IV)

Intravenous Ferric Carboxymaltose (IV FCM)

Prof. Bellad highlights IV FCM as a superior option for moderate to severe anaemia. Unlike oral IFA, IV FCM:



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- · Rapidly replenishes iron stores
- Bypasses gastrointestinal side effects
- Is unaffected by hepcidin, a hormone that inhibits iron absorption
- It is especially beneficial in late pregnancy or severe anaemia cases

Vitamin B12 and Folate Deficiency

Approximately 49% of women of reproductive age are deficient in Vitamin B12, a critical component for red blood cell formation and foetal neural development. Supplementing only iron ignores this essential link, especially in vegetarian populations.

 Combined Vitamin B12 + Folate + IV iron therapy is recommended to combat refractory anaemia.

Thyroid and Blood Sugar Screening

Undiagnosed hypothyroidism and gestational diabetes are often silent disruptors of maternal health. These disorders:

- Exacerbate anaemia
- Affect foetal growth
- Contribute to poor pregnancy outcomes

Hence, screening before conception can prevent complications and ensure timely interventions.

Community and Health Worker Role

ASHA and Anganwadi workers are vital conduits for implementing maternal and child health programmes. Integrating preconception counselling and anaemia screening into their existing framework can:

- Improve awareness
- Increase community trust
- Encourage timely check-ups

Advanced challenges in anaemia management

- Many Indian women do not seek health services until they become pregnant. The term pre -preperception -care is not yet mainstream. This ignorance provides lost opportunities for initial intervention.
- Systemic intervals in public health infrastructure: Despite large programs such as Janani Suraksha Yojana and Pochan Abhiyan, the health system rarely focuses on screening for pregnancy. Most interventions begin only after conception, when anaemia can already worsen.
- Supply chain and logistics: The availability of IV FCM, injectable vitamin B12 and clinical equipment (eg thyroid panel or serum ferritin test) is limited in rural areas. Inaccurate obstacles to poor storage and incompatible delivery.
- Obstacles and behavioural barriers:
 Even where grants are provided, due
 to side effects or cultural beliefs, non transport remains. Iron complement,
 pregnancy diets and use of
 multivitamins that interfere with
 multivitamins interfere with myths
 and clinical protocols around.

Way Forward: A Blueprint for Preconception Anaemia Control

The existing Reproductive, Maternal, Newborn, Child and Adolescent Health (RMNCH+A) strategy must expand to include routine anaemia screening for all women of reproductive age, not just the pregnant.



 Revamp IEC (Information, Education, Communication) Campaigns

A mass awareness drive using TV, radio, and social media should promote:

- Early anaemia detection
- Importance of folate and B12
- Role of family in supporting women's health
- Nutritional counselling and debunking of myths

Expand the Use of IV Iron and Injectable Nutrients
Government procurement systems should ensure the regular availability of IV FCM, injectable B12 and folate in public health centres. Priority should be given to:

- High-risk women (e.g., those with past pregnancy complications)
- Adolescents in tribal and backwards areas
- Women planning pregnancy in the next 6–12 months

Incentivise Preconception Health Check-ups: Much like the Incentive-Based Institutional Deliveries under Janani Suraksha Yojana, cash incentives or vouchers for preconception health visits can enhance uptake, especially among low-income families.

Digital Tracking and Health Records:

Use of Arogya Setu-type apps or cloudbased health IDs can help track anaemia status, iron therapy response, and follow-ups. These can also link with Mission Poshan 2.0 and Anaemia Mukt Bharat dashboards.



Research and Data Disaggregation: Current data lumps all anaemia cases together. We need disaggregated data on IDA, megaloblastic anaemia, B12/folate/thyroid-induced anaemia to tailor policies better. Indian Council of Medical Research (ICMR) and NITI Aayog should invest in longitudinal studies on preconception health outcomes.

- Train Healthcare Workers and Doctors: Primary care physicians, ASHA workers, and even private OB-GYNs must be trained to:
 - Counsel couples on preconception health
 - Identify multiple causes of anaemia
 - Switch to IV therapies where oral fails
 - Screen for thyroid and blood sugar abnormalities

Conclusion

Anaemia is not just a symptom; It is a systemic indicator of neglect, inequality and delayed intervention. Ensuring that a woman comes into pregnancy with optimal health is not a luxury; This is a duty of public health. The ripple effects field is long-term cognitive benefits for complications, healthy children, strong mothers and children.

Main question

Critically examine the systemic challenges and public health implications of undiagnosed anaemia among women of reproductive age in India. How can a shift to preconception health care transform maternal and child health outcomes?"

Q. About anaemia among women of reproductive age in India, consider the following statements:

1. Iron-deficiency anaemia is the only nutritional cause of anaemia during the preconception period.





2. Intravenous Ferric Carboxymaltose (IV FCM) is unaffected by hepcidin levels and can rapidly restore iron stores.
3. Vitamin B12 and thyroid hormone deficiencies, if left undiagnosed before conception, can both worsen anaemia and impair foetal development.
4. Oral Iron-Folic Acid (IFA) supplementation is universally well-tolerated and sufficient to treat moderate to severe anaemia in all women.

Which of the statements given above is/are correct?

A. 2 and 3 only B. 1, 2, and 4 only C. 1 and 3 only D. 2, 3, and 4 only

Correct Answer: A. 2 and 3 only

Explanation:

- Statement 1 Incorrect: Iron
 deficiency is not the only cause.
 Vitamin B12 deficiency and thyroid
 disorders (hypothyroidism) also
 contribute to anaemia.
- Statement 2 Correct: IV FCM bypasses the gastrointestinal tract and is not affected by hepcidin, unlike oral iron.
- Statement 3 Correct: Both B12 and thyroid hormone deficiencies can worsen anaemia and affect neurodevelopment of the foetus.
- Statement 4 Incorrect: Oral IFA is not universally well-tolerated and often leads to side effects like nausea and constipation; also, it may be insufficient for moderate to severe anaemia.





Coastline Paradox

The coastline paradox reveals more than a peculiar measurement challenge: it underscores how science evolves with better tools. India's expansion, beach and beach contradictions: Navigation of the geometry of the measurement



Why in the news

- In December 2024, the Union Home Ministry provided a striking announcement in the annual report 2023- 2024: India's coastline has increased from 7,516.6 km to 11,098.8 km, and the new figure is still being considered.
- This update provoked curiosity and debate, especially given some tectonic shift, regional connection or ocean exchange to physically replace the size or border of the Indian subcontinent.
- The clear growth lies in a geometric and cartographic phenomenon known as a "coastal contradiction" - a mathematical insight that suggests that a beach length can grow based on how the length of a beach is dramatically used.
- With high-resolution satellite data and increasing use of better geophysical technology, India's beach is now measured with maximum granularity, thus detecting their correct and accurate, sometimes lengthwise nature.

Background India's Coastline: Traditional Understanding

- For decades, India's coastline has been recognised as spanning 7,516.6 km, encompassing:
 - The mainland coastline (approximately 5,400 km),
 - The coastline of the Andaman & Nicobar Islands, and
- The Lakshadweep Islands.
 This figure, derived using relatively coarse mapping techniques in the 1970s, served as the standard in official documents, defence planning, environmental regulations, and disaster management protocols.

What Triggered the Change?

- No new land acquisition or geographical reconfiguration occurred.
- The change reflects a methodological revision - using highresolution remote sensing, GIS (Geographic Information Systems), and finer-scale measurements.
- The coastline paradox long a subject of mathematical and scientific curiosity - lies at the heart of this statistical transformation.

Challenges Arising from the New Measurement

Legal and Administrative Implications

- Coastal Regulation Zones (CRZ) are defined by high tide lines and distances from the coast. A longer, more detailed coastline could:
- Expand the scope of regulated zones, affecting land use and development.
- Causes disputes in defining jurisdiction between state and central agencies, or even district boundaries.



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 Impacts on Maritime Security and Surveillance

A longer coastline implies more area to monitor, especially in sensitive zones like:

- The Arabian Sea (Western Coast) with rising trafficking and infiltration concerns.
- The Bay of Bengal (Eastern Coast) is vulnerable to cyclones and illegal fishing.
- This could stretch the capacities of coastal security agencies, the Navy, and the Coast Guard.

Environmental Governance Complexity

- A longer coastline increases areas under ecological scrutiny, especially mangroves, estuaries, and turtle nesting sites.
- The implementation of Environmental Impact Assessments (EIA) for coastal projects becomes more complex.
- Monitoring sea-level rise, erosion, and habitat destruction becomes resource-intensive.

Planning and Infrastructure

- Coastal states like Tamil Nadu, Gujarat, Odisha, and Maharashtra may now need to revise:
- Port development plans.
- Blue economy strategies.
- Coastal tourism projects.
- Urban planning in coastal cities (e.g., Mumbai, Chennai, Kochi) may have to account for the revised coastline in hazard zonation.

Discrepancies in International Data

- India's revision may diverge from data held by international bodies like the United Nations and, World Bank.
- Cross-country comparisons (e.g., with Indonesia, Australia) on maritime length or EEZ may become contentious.

Way Forward

- Develop a Standardised Coastline Measurement Framework
- The Survey of India, in coordination with ISRO and the Ministry of Earth Sciences, should establish:
 - Unified measurement standard, defining which scale/resolution should be used.
 - Periodic re-measurement protocols to reflect environmental changes.

Update Coastal Governance Instruments

- Coastal Regulation Zone (CRZ)
 Notification, 2019 and Shoreline
 Management Guidelines should be revised to:
 - Reflect updated coastline measurements.
 - Account for micro-level ecosystems (mangroves, coral reefs, dunes).
 - Enhance Coastal Surveillance Infrastructure

Scale-up deployment:

- Integrated Coastal Surveillance System (ICSS).
- Automatic Identification Systems (AIS).
- Collaborate with fishermen communities as force multipliers.
- Use AI and geospatial analytics to manage longer coastline segments.
- Boost the Capacity of Coastal States



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Provide technical and financial support to coastal state governments to:

- Revise land records, disaster management plans, and infrastructure layouts.
- Develop real-time monitoring systems using drone and satellite data.
- Public Awareness and Education

Promote awareness:

- Policymakers: To understand that length changes are methodological, not geographical.
- General Public: To avoid myths around "coastline expansion."
- Students and Academia: Use the paradox to popularise fractal geometry, GIS, and environmental studies.
- Leverage New Data for Blue Economy Planning

Use updated coastline data to:

- Better map marine biodiversity hotspots.
- Plan sustainable fishing zones, marine protected areas (MPAs).
- Integrate with the SAGAR (Security and Growth for All in the Region) vision.

Conclusion

India's modified beach length is not a cartographic error or geographical mystery, but a mathematical truth that appears in the beach contradiction. In the world, depending on accurate geo-sustainable data, the way we measure it shapes our understanding of space, politics and even certainty.

SCO 173-174, Sector 17C Chandigarh An abstract mathematical curiosity acts as a fruit of coastal universal, which is a very real question with widespread implications for the environment, management, safety and development. Squeezing the beach not only corresponds to scientific accuracy, but also ensures that national planning lies in realism, not in old estimates.

The Coastline Paradox has recently gained renewed attention following the Union Home Ministry's report (2023–24), which revised India's coastline length from 7,516.6 km to 11,098.8 km. In this context, which of the following best captures the essence of the Coastline Paradox and its implications for national policy?

In light of the Union Home Ministry's 2023-24 report, which announced a revised length of India's coastline from 7,516.6 km to 11,098.8 km, consider the following statements about the Coastline Paradox and its implications:

- 1.The increase in India's coastline length indicates a tectonic expansion of the Indian landmass and necessitates a revision in India's Exclusive Economic Zone (EEZ) under UNCLOS.
- 2.The Coastline Paradox reveals that as the scale of measurement decreases, the measured length of the coastline increases due to its fractal-like geometry.
- 3. The revised coastline has no impact on India's internal administrative or legal frameworks, as Coastal Regulation Zones (CRZ) are fixed by international maritime boundaries.
- 4. High-resolution satellite imagery and fine-scale GIS tools can exacerbate cartographic discrepancies between domestic and international coastline databases.





Which of the statements given above is/are correct?

A. 1 and 3 only B. 2 and 4 only C. 2 only D. 1, 2 and 4 only

Correct Answer: B. 2 and 4 only

Explanation:

- Statement 1 is incorrect: The increase is due to a change in measurement methodology, not tectonic or geographical expansion, and does not directly necessitate a revision in EEZ boundaries under UNCLOS.
- Statement 2 is correct: This is the essence of the Coastline Paradox; the more granular the measurement, the longer the coastline appears.
- Statement 3 is incorrect: CRZs are defined with reference to the High Tide Line and coastline; hence, changes in measured coastline can affect legal and planning frameworks.
- Statement 4 is correct: India's new high-resolution mapping could diverge from older or coarser international datasets, potentially leading to discrepancies in cross-country comparisons.





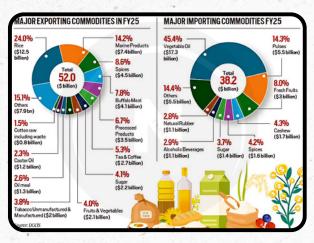
India's Record FY25 Export

Why is it in the News?

- India's total exports (goods + services) reached \$820.93 billion, with merchandise contributing \$437.42 billion and services \$383.51 billion.
- Imports surged by 6.85% to \$915.19 billion, widening the trade deficit to \$94.26 billion, up from \$78.39 billion in FY24.
- The trade-to-GDP ratio stood at a robust 41.4%, reflecting strong global engagement.
- However, agriculture critical employment sectorsaw export growth stagnate due to structural, policy, and environmental challenges.



In FY25, India achieved a milestone in its trade performance, with a record high export of \$820.93 billion, an increase of 6.5% from FY 2014. However, this performance was angry by the growing trade deficit and agricultural export growth, which increased by 2.3% annually despite the area of the area. Export growth outlines intensive integration into India's global economy, but it also highlights structural weaknesses, especially in agriculture.



Background: Agricultural Exports and Trade Policy in India

India's export policy has historically prioritised manufacturing and services. Agriculture, although pivotal for livelihoods, has been plagued by policy volatility, climate risks, and poor value addition.

- During FY05–14, agri-export growth averaged 20% annually.
- This slowed drastically to 2.3% in FY15–25, indicating stagnation.
- In contrast, processed foods and high-value items like seafood have shown potential, especially with access to developed markets.

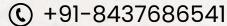
Metric	Fy 25	
Total export	\$820.93	
Merchandise export	\$437.42	
Service export	\$383.51	
Total import	\$915.91	
Merchandise import	\$720.24	
Service import	\$194.95	
Trade deficit	\$94.26	
Trade to GDP ratio	41.4%	

Why Did Agricultural Exports Lag Despite the Export Boom?

Frequent Export Restrictions:
 Government-imposed bans on rice, wheat, sugar, and onions disrupted international buyer confidence and supply chains.



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Global Price Fluctuations

- Commodity price volatility undermined India's export competitiveness.
- Despite lifting restrictions, rice export values fell due to lower global prices, not volume issues.
- Low Productivity and Innovation
- Stagnant yields, outdated farming techniques, and weak R&D hampered agri-export momentum.
- Growth dropped from 20% to 2.3% annually over the last two decades.

Environmental Challenges of Agri-Exports (Especially Rice)

Water Depletion

- Rice farming consumes 3,000-5,000 litres of water per kg.
- Punjab and similar regions face severe groundwater stress due to paddy cultivation.

Methane Emissions

- Flooded rice fields emit methane, a greenhouse gas with 25x the impact of CO₂.
- Southeast Asia's rice belts are major contributors to agriculturelinked emissions.

Soil and Water Pollution

- Excessive agrochemical use degrades soils and pollutes rivers.
- Example: Vietnam faces river salinisation and toxicity near paddy zones.

Trade Agreements: A Ray of Hope for Indian Agriculture

- Access to Stable High-Value Markets: Trade deals reduce overreliance on price-sensitive markets and open up demand from Indian diaspora-heavy regions.
 - Example: The India-UK FTA may boost Basmati rice, spices, and processed food exports.
- Processed and Value-Added Exports: Trade agreements reduce tariffs and enhance the competitiveness of agri-value chains.
 - Example: Ready-to-eat meals, seafood, and organic products may find better traction under FTAs.

Case Study: Rice Export Restrictions and Global Impact

Metric	FY 23	Fy 24	Change
Export	22.3 MT	16.3 MT	-27%
Export value	\$11.2 Billion	10.5 billion (est.)	-6%

- Price cushion prevented a proportionate fall in export value despite a major drop in volume.
- Global rice prices spiked, showing how Indian policies affect world markets.

Status of Edible Oil **Imports: Still a Major Drain**

- FY23 (Nov-Oct):
 - Imports: 16.5 MMT, a 17% rise, aided by reduced duties.
- FY24 (Nov-Oct):
- Slight decline to 15.96 MMT (-3.1%), helped by higher domestic production.



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India is still among the top three importers of edible oils globally, posing fiscal and food security risks.

Challenges in Reducing Edible Oil Imports

- Low Oilseed Productivity: Poor seed quality, inadequate irrigation, and limited extension services reduce vields.
- Post-Harvest Losses: Lack of cold chains and processing units leads to wastage and low farmer realisation.
- Policy Fragmentation: Frequent changes in MSP, duties, and trade policy reduce predictability for farmers and investors.

Way Forward

- Strengthen Oilseed Ecosystem: Scale up Oilseeds Production Mission with MSP, irrigation, and R&D. Promote drought-tolerant varieties and intercropping systems.
- Build Agro-Processing Capacity: Establish decentralised, modern processing hubs in key oilseed and rice belts. Encourage public-private partnerships for logistics and storage.
- Rationalise Export Policy: Ensure predictable export policies with buffer stocks to avoid knee-jerk bans. Implement a Commodity Export Stability Framework for rice and wheat.
- Leverage Trade Deals: Negotiate FTAs with a focus on agri-market access, sanitary standards, and geographical indications (GIs).
- Environmental and Climate Resilience: Invest in water-saving rice technologies (e.g., SRI method), methane-reduction farming, and organic practices. Support climatesmart farming via PM-PRANAM and Mission LiFE initiatives.

Conclusion

India's record export performance in FY25 reflects its growing global status, especially in the services and production sectors. However, this progress is constantly masking structural questions in agriculture, which should not be ignored. A strong, stable and climateflexible agricultural export can make this challenge feasible, supported by the ecosystem-smart business policy, permanent practice and value creation. Business is not just about the number it is a tool for inclusive rural development and economic flexibility.

Q.. "Despite achieving record exports in FY25, India's agricultural export growth remains sluggish. Discuss the reasons for this disparity and suggest a way forward to make agricultural exports more robust and sustainable." (250 words)

Q. Regarding India's agricultural export performance, which of the following statements best explains why India's agri-export growth remained sluggish despite overall export growth in FY25?

- 1. Export bans and restrictions on key commodities disrupted India's agriexport momentum.
- 2. India's agriculture sector lacks exposure to Free Trade Agreements (FTAs), limiting market diversification.
- 3. Global agricultural prices rose sharply in FY25, discouraging Indian exports.
- 4. Declining competitiveness due to stagnating productivity and a lack of agri-processing infrastructure hampered growth.



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Select the correct answer using the code below:

A. 1, 2 and 4 only B. 1, 3 and 4 only C. 2 and 4 only D. 1, 2, 3 and 4

Correct Answer: A. 1, 2 and 4 only

Explanation:

- Statement 1 Correct: India frequently imposed export bans and restrictions (e.g., on rice, sugar, and wheat) to manage domestic inflation. These policy fluctuations hurt export momentum.
- Statement 2 Correct: India's
 agriculture exports have limited
 exposure to stable, high-value FTA
 markets. New FTAs (like India-UK) may
 address this, but the lack so far has
 hampered diversification and
 competitiveness.
- Statement 3 Incorrect: The global prices of many agri-commodities did not rise sharply in FY25. Volatility and falling prices (especially in rice) reduced export value, not the other way around.
- Statement 4 Correct: Declining productivity, lack of investment in technology and processing, and stagnant value addition led to lower competitiveness in global agrimarkets.





India's digital diplomacy in Africa: A new chapter in South-South cooperation



Why in the news?

On May 25, the continent celebrated Africa Day, marking the anniversary of the establishment of an organisation of African unity in 1963. This year, Africa Day gave a deep significance to Indo-African conditions when New Delhi utilised digital diplomacy to create development participation in the continent quickly. India's support for Africa's digital

India's support for Africa's digital change matches the broad continental strategies of Africa, after South-South cooperation. With initiatives such as Aadhaar-based identification platforms, UPI-operated economic systems and Dixit, India appears as a strategic partner offering scalable, open-source source and inclusive digital public infrastructure (DPI) in African countries.

Background: The Rise of Africa's Digital Ambition

 Africa is undergoing a significant digital shift. Home to 1.4 billion people, with a median age of under 20, the continent is increasingly positioning digital technology as a central lever of socio-economic development.

This transition is informed by key challenges and aspirations:

- Overcoming legacy infrastructure gaps in education, health, banking, and governance.
- Leveraging the potential of the young, tech-savvy population for innovation and entrepreneurship.
- Building resilient and adaptive systems that can work in low-resource settings through mobile-first, opensource, and decentralised platforms.
- Against this backdrop, Africa's Digital Transformation Strategy for 2020– 2030, endorsed by the African Union, seeks to accelerate digital access, literacy, and inclusion across sectors. The strategy is backed by continental and regional coalitions such as:
- Smart Africa Alliance: A platform of 30+ countries working to harmonise digital policies and infrastructure.

GIGA Initiative: A collaboration with the UN to connect every school to the internet.

African Continental Free Trade Area (AfCFTA): Where digital trade and ecommerce are seen as key enablers of pan-African integration.





What is Africa's digital strategy? The digital transformation strategy of the African Union emphasises a vision:

- Rapid socio-economic development
- E-control platform for transparent and available service distribution.
- Telemedicine and e-learning solutions to bridge the access gap.
- National Digital Identification Program for Economic Inclusion and Civil Empowerment.
- Inclusive and permanent development: To ensure that no one is left behind.

Promote digital entrepreneurship among youth and women: To ensure that technologies comply with ownership and values in Africa, and reject the model that is required.

 Continental coordination: Adjusting national digital policies with platforms like Smart Africa. The difference between systems in activating boundary services. Collective purchases with global technical players on data management, standards and platform access. This is the place where India finds resonance - both as a digital success story and a development partner who understands the challenges in the global south.

How does India support Africa's digital change?

India's approach to digital cooperation with Africa lies in three main principles: strength, inclusion and partnership. Here are the most important columns:

Digital Public Infrastructure Sharing (DPI)

- India shares open open-source, scalable platform:
- Aadhaar for digital identification,
- UPI for interoperative payment,
- Dixit for digital learning material.

Example:

In 2024, Bank of Namibia signed an MOU with NPCI International, such as a UPI-like real-time payment system, which was based on India's experience with Fintech inclusion.

Technical Collaboration and Capacity Building India doesn't just export software—it partners for technical implementation and trains African professionals in deploying and managing these tools.

Example:

Togo collaborated with IIIT-Bangalore to build a digital ID system using the Modular Open Source Identity Platform (MOSIP) developed in India. Academic and Institutional Support: India supports human capital development by building institutional partnerships.

Example:

IIT Madras opened its first overseas campus in Zanzibar (Tanzania) in 2023. The campus offers degrees in AI and Data Science, focusing on digital skilling for African students. Tele-Education and Telemedicine Platforms: India pioneered the Pan-African e-Network (2009), providing satellite-based digital education and health consultations from top Indian institutions to 50+ African nations.

Example:

Real-time medical advice from AIIMS and educational lectures from IGNOU were beamed to classrooms and clinics across Africa.



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Example:

Ghana integrated its financial system with UPI to enable secure, low-cost, realtime payments, without dependency on Western payment gateways. Technical cooperation and capacity building India exports not only software, but it also serves as a partner for the technical implementation and training of African professionals.

How is India's digital diplomacy different?

- · India's digital connection to Africa varies rapidly from global powers such as the United States and China, both in philosophy and execution.
- Digital public goods model versus professional system
- India considers its platforms as regular, not objects.
- China's digital system is often linked with surveillance units and depends on Chinese technical companies. India's open sources DPIs such as Moscip, Beckan and Digilokar are independent and adaptable, which ensures digital sovereignty for other nations.

Co -development vs. Tech dumping

India creates the solutions and creates local capacity instead of selling the Turny system.

- Example: Instead of exporting technology only, India helps to adapt platforms for local languages, political needs and infrastructure realities.
- Non-qualified engagement India respects local priorities, unlike Western assistance that can provide political conditions or Chinese infrastructure that often leads to a debt trap.

• Example: Countries such as Zambia and Ghana chose Volunteer DPI in India due to strength and alignment, not because of geopolitical pressure or debt obligations.

What Challenges Block Africa's Digital Growth?

Despite its ambitions, Africa faces multiple hurdles in becoming a digitalfirst continent:

High Cost of Access

- Internet data remains prohibitively expensive.
- Devices like smartphones and laptops are out of reach for many.
- Example: In 2023, mobile data costs in some African countries exceeded 5% of monthly income, far above the UN-recommended threshold of 2%.

Digital Divide

- Urban areas dominate in terms of connectivity and services.
- Rural populations and women are disproportionately excluded.
- Example: Women in sub-Saharan Africa are 37% less likely than men to use mobile internet, deepening inequality.

Inadequate Energy Infrastructure Digital platforms depend on stable electricity, which remains patchy. **Example**: Countries like Nigeria face regular power outages, affecting internet access and data reliability.

Lack of Local Talent

- Africa needs a digitally skilled workforce.
- Most countries face a shortage of trained engineers, cybersecurity experts, and AI developers.



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Regulatory Fragmentation

· Lack of harmonised laws and standards across African nations delays cross-border digital services and trade.

Way Forward: Towards a **Resilient Digital Africa**

India and Africa can deepen their digital cooperation by focusing on the following areas:

Expand Affordable Access

- Invest in low-cost internet infrastructure.
- Subsidise digital devices for students, women, and rural communities.
- Encourage public-private partnerships for last-mile connectivity.

Strengthen Energy and **Digital Infrastructure**

- Integrate renewable energy with digital rollouts.
- Support solar-powered telecom towers and microgrids in rural regions.

Build Human Capital

- Scale up joint degree programs, online skilling courses, and digital fellowships.
- · Facilitate African student mobility to Indian institutions under Scholarship programs.

Develop Local Innovation Ecosystems

 Support African startups through funding, mentoring, and access to India's innovation networks like Startup India and Atal Innovation Mission.

 Encourage Indian tech companies to invest in Africa not as markets, but as partners in innovation.

Promote Digital Sovereignty

- Continue to offer DPI as Digital Public Goods.
- Assist African countries in drafting data protection, privacy, and cybersecurity laws based on global best practices.

Conclusion

India's digital diplomacy in Africa is not just a strategic manoeuvre, is a civilizational partnership rooted in shared development goals. By offering affordable, inclusive, and adaptable digital infrastructure, India is helping African countries craft their digital destiny.

Unlike Western or Chinese models that focus on profit or power, India's approach emphasises empowerment, equity, and empathy. On the occasion of Africa Day, it is this spirit of South-South collaboration that must guide the future of India-Africa ties, where digital bridges replace digital divides. and technology becomes the language of partnership, not patronage.

Discuss the significance of India's digital diplomacy in Africa. How is it distinct from the digital strategies of other major powers like the US and China? What challenges do African nations face in realising their digital ambitions, and how can India contribute to overcoming them? (250 words)

SCO 173-174, Sector 17C Chandigarh



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Q.1 About India's Digital Diplomacy in Africa, consider the following statements:

- 1. The Pan-African e-Network was launched in 2020 to provide telemedicine and tele-education support to African countries.
- 2.India's Modular Open-Source Identification Platform (MOSIP) has been adopted by some African countries for building digital identity systems.
- 3.UPI is a proprietary, closed-source platform exported by India to African nations under bilateral conditions.

Which of the above statements is/are correct?

A. 1 and 2 only B. 2 only C. 1 and 3 only D. 1, 2, and 3

Answer: B. 2 only

- Statement 1 is incorrect: Pan-African e-Network was launched in 2009, not 2020.
- Statement 2 is correct: MOSIP is being used by countries like Togo.
- Statement 3 is incorrect: UPI is an open-source digital public good, not proprietary.

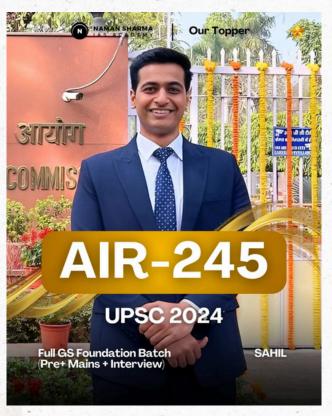
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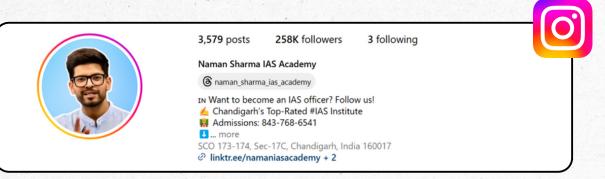
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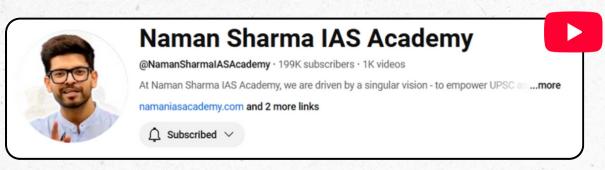


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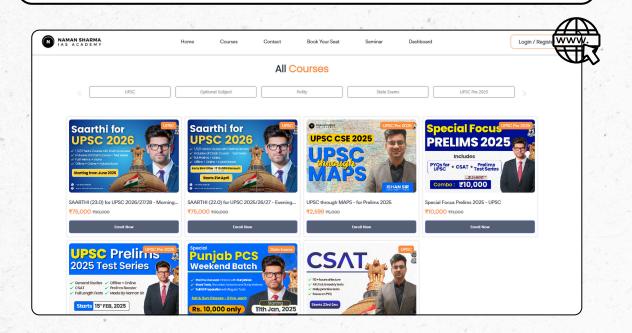






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