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The Hindu Important News Articles & Editorial For UPSC CSE

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Page 01: GS 2 : International Relations/ Prelims

India and Morocco on September 22, 2025, signed a Memorandum of Understanding (MoU) on defence cooperation in Rabat, witnessed by Defence Minister Rajnath Singh and his Moroccan counterpart AbdeltifLoudiyi. The agreement marks a new phase in India's outreach to North Africa, reflecting the **Act West Policy** and the broader goal of diversifying strategic partnerships beyond South Asia and the Indo-Pacific.

Key Highlights of the MoU

- Establishes an **institutional framework** for defence ties.
- Areas of cooperation:
  - Defence industry collaboration
  - Joint military exercises and training
  - Maritime security and counter-terrorism
  - Cyber defence and peacekeeping operations
  - Military medicine and expert exchanges
- Announcement of a **new Defence Wing** at the Embassy of India in Rabat.
- Focus on **co-development and co-production** with Moroccan defence sector.
- Stress on **multilateral cooperation** in regional/global security challenges, including maritime coordination across the **Indian Ocean and Atlantic corridors**.

Static Context (Background Knowledge for UPSC)

1. **India–Morocco Relations**:
   - Established diplomatic relations in 1957.
   - Morocco has supported India on **Kashmir issue** at OIC.
   - India is Morocco's 2nd largest trading partner in Africa; major

India and Morocco sign defence cooperation MoU to boost strategic alliance

Saurabh Trivedi
NEW DELHI

Defence Minister Rajnath Singh and Morocco's Defence Minister Abdeltif Loudiyi after signing an MoU in Rabat on Monday. ANI

India and Morocco on Monday signed a Memorandum of Understanding (MoU) on defence cooperation in Rabat, with Defence Minister Rajnath Singh also announcing the opening of a new Defence Wing at the Embassy of India in the Moroccan capital.

According to the Defence Ministry, Mr. Singh and Morocco's Defence Minister Abdeltif Loudiyi held a bilateral meeting.

According to Ministry of Defence, the MoU establishes a robust institutional framework for expanding ties, paving the way for collaboration in defence industry, joint exercises, military training, and capacity building.

Both Ministers agreed to intensify defence industry cooperation under a comprehensive roadmap covering counter terrorism, maritime security, cyber defence, peacekeeping operations, military medicine, and expert exchanges.

To give momentum to these initiatives, Mr. Singh announced the opening of a new Defence Wing at the Embassy of India in Rabat. He underlined the maturity of India's defence industry, highlighting advanced capabilities in areas such as drones and counter-drone systems, and assured that Indian companies are well positioned to support Morocco's defence requirements.

The two leaders also stressed the importance of enhanced armed forces exchanges, specialised training programmes, and opportunities for co-development and co-production. They further emphasised the need for greater multilateral cooperation to address regional and global security challenges, welcoming closer coordination in maritime security across the Indian Ocean and Atlantic corridors, the Defence Ministry stated.

The Defence Minister extended an invitation to Mr. Loudiyi to visit India for further discussions. The meeting marks a significant milestone in the growing strategic convergence between India and Morocco, reinforcing their long-standing friendship and shared commitment to peace and stability.

imports include phosphates & fertilizers.
    - Growing cooperation in renewable energy, IT, education, and counter-terrorism.
2. **India's Africa Policy**:
    - Guided by the **India–Africa Forum Summit (IAFS)** mechanism (2008, 2011, 2015).
    - Emphasis on South–South cooperation, energy security, maritime security, and counter-terrorism.
    - Aligns with **SAGAR (Security and Growth for All in the Region)** vision, extending beyond Indian Ocean to Atlantic coast.
3. **Defence Diplomacy**:
    - India has signed defenceMoUs with countries in **Africa (Kenya, Nigeria, Mozambique, Seychelles)**.
    - Defence exports focus: drones, radar systems, coastal surveillance, small arms.
    - India aims to reach **₹35,000 crore defence exports target by 2025**.

Current Context & Strategic Importance

1. **For India**:
    - Expands strategic footprint in **North Africa & Atlantic region**, countering China's growing presence (e.g., Djibouti base).
    - Boosts India's image as a **defence supplier** in the Global South.
    - Provides a platform for **counter-terrorism cooperation** given Morocco's experience in de-radicalisation and intelligence-sharing.
    - Enhances maritime security cooperation, crucial for **sea lines of communication (SLOCs)** connecting Indian Ocean to Europe.
2. **For Morocco**:
    - Access to India's growing **defence technology & training infrastructure**.
    - Diversification of defence partners beyond the West (traditionally France, US).
    - Strategic leverage in Africa and the **Atlantic security architecture**.
3. **Global/Regional Implications**:
    - Adds momentum to **India–Africa partnership** in a multipolar order.
    - Contributes to stability in the **Western Indian Ocean & Atlantic maritime corridors**.
    - Symbolises**South–South defence cooperation**, complementing India's positioning as a "net security provider".

UPSC Prelims Pointers

- India–Morocco diplomatic ties: established in 1957.
- Morocco = major supplier of **phosphates** to India.
- Defence exports target = **₹35,000 crore by 2025**.
- Policy framework: **Act West Policy** + **SAGAR vision**.
- Location: Morocco controls the **Strait of Gibraltar** entry point (strategic maritime chokepoint).

Conclusion

The India–Morocco defenceMoU represents more than bilateral cooperation; it reflects **India's strategic intent to deepen its African engagement**, extend its influence into the **Atlantic corridor**, and establish itself as a reliable partner in the defence

sector. At a time of global power shifts and rising Chinese presence in Africa, such partnerships enhance India's **strategic depth, defence export potential, and diplomatic leverage**, reinforcing its vision of a secure and multipolar world order.

UPSC Prelims Practice Question

Ques: Which of the following is/are correct about India–Morocco relations?

1. Diplomatic relations were established in 1957.

2. Morocco is one of the largest suppliers of phosphates to India.

3. Morocco is located along the Strait of Hormuz.

Select the correct answer:

a) 1 and 2 only

b) 2 and 3 only

c) 1 and 3 only

d) 1, 2, and 3

Ans: a)

UPSC Mains Practice Question

Ques: Analyse the importance of defence cooperation with African nations in strengthening India's role as a net security provider in the Indian Ocean and beyond.**(250 Words)**

Page 06 : GS 3 : Science and Technology / Prelims

The Indian Navy is currently executing its **largest-ever shipbuilding programme**, with 54 vessels under construction across Indian shipyards. Ten of these are expected to be inducted by the end of 2025. This marks a strategic transition in India's maritime power — from dependence on foreign-built warships to becoming a **self-reliant builder's navy**, aligned with the **Atmanirbhar Bharat** and **SAGAR (Security and Growth for All in the Region)** visions.

Key Highlights from the News

- **54 vessels** under construction in Indian shipyards.
- **10 warships** to join fleet by December 2025.
- Navy aims for **200+ warships and submarines by 2035**; ~230 by 2037.
- Indigenous push: employment generation + strengthening domestic industry.
- **INS Tamal (2025)**: last major foreign-built warship (Russia); shift towards indigenous capacity.
- **INS Androth**: 2nd Anti-Submarine Warfare Shallow Water Craft (ASW-SWC) with **80% indigenous content**.
- India's role: **First responder** and **preferred security partner** in the IOR.

54 vessels are being built for Navy; 10 to join fleet this year

India has set a target of expanding naval strength to over 200 warships and submarines by 2035; exercise to enhance maritime security, build partner capabilities, promote regional cooperation

Saurabh Trivedi
NEW DELHI

The Indian Navy is undertaking its largest-ever shipbuilding programme, with 54 vessels currently under various stages of construction in Indian shipyards.

The initiative is central to India's long-term maritime strategy, aimed at safeguarding national interests, and countering regional challenges from China and Pakistan.

Positioned as a "first responder" and "preferred security partner" in the Indian Ocean Region (IOR), the Navy is advancing India's "SAGAR" (Security and Growth for All in the Region) vision. The shipbuilding exercise will strengthen the Navy in enhancing maritime security, build partners' capabilities, and promote regional cooperation.

According to senior officials, several ships are nearing delivery, with a few to be commissioned this year. All 54 vessels are expected to join the fleet by 2030.

India has set a target of expanding naval strength to over 200 warships and submarines by 2035, with the possibility of reaching 230 by 2037.

The indigenous drive is being powered by the government's Atmanirbhar Bharat initiative. Each project not only strengthens self-reliance in defence manufacturing, but also generates substantial employment across ancillary industries, an official said. "The Indian Navy has transformed from a 'Buyer's Navy' to a 'Builder's Navy', with significant number of warships under construction in Indian shipyards," the senior official noted. The Navy is also set to commission up to 10 domestically built warships by December 2025, marking one of the largest single-phase inductions in recent years.

Transition point

This year also marks a transition point in India's naval modernisation. On July 1, the Navy commissioned *INS Tamal*, a stealth multi-role frigate built in Russia – its last major warship constructed abroad. It was also the eighth *Krivak*-class frigate inducted over the past two decades.

At home, momentum in indigenous shipbuilding continues. The recent delivery of *INS Androth*, the second in a series of eight Anti-Submarine Warfare Shallow Water Craft (ASW-SWC) being built by Garden Reach Shipbuilders and Engineers (GRSE), Kolkata, underscores the progress. With more than 80% indigenous content, *Androth* stands as a testament to India's growing capabilities, said another senior official.

The Navy's expanding shipbuilding programme highlights not just an increase in fleet size, but a strategic leap towards achieving long-term maritime self-reliance.

Made in India: Officials say the Indian Navy has transformed from a 'Buyer's Navy' to a 'Builder's Navy', with significant number of warships under construction in Indian shipyards. PTI

Static Context

1. **India's Maritime Doctrine (2015)**: Calls for a strong, modern, and balanced naval force to secure SLOCs, deter threats, and project power.
2. **Blue Water Navy**: Indian Navy is transitioning from coastal defence to a blue-water capability (long-range power projection).
3. **SAGAR Vision**: India's strategic framework for the Indian Ocean Region (2015) → maritime security, economic cooperation, and regional stability.
4. **Shipbuilding Ecosystem**:
    - Major shipyards: Mazagon Dock Shipbuilders Ltd (MDL), Garden Reach Shipbuilders and Engineers (GRSE), Goa Shipyard Ltd (GSL), Hindustan Shipyard Ltd (HSL), Cochin Shipyard Ltd (CSL).
    - Indigenous warship classes: Shivalik-class frigates, Kolkata-class destroyers, Kamorta-class corvettes, Scorpene-class submarines (Kalvari), Aircraft Carrier **INS Vikrant (2022)**.

Current Context & Strategic Importance

For India's Security:

- Counters growing **Chinese naval presence** in the IOR (String of Pearls, Djibouti base, Hambantota).
- Enhances deterrence against Pakistan Navy.
- Secures **Sea Lines of Communication (SLOCs)** critical for India's energy imports and global trade.

For Diplomacy & Regional Role:

- Strengthens India's position as a **"net security provider"**.
- Builds partner capacity via joint exercises (MALABAR, Milan, Varuna, AUSINDEX, IBSAMAR).
- Enhances regional cooperation in **anti-piracy, disaster relief, and maritime domain awareness (MDA)**.

For Economy & Self-Reliance:

- Promotes **defence industrial ecosystem** through Atmanirbhar Bharat.
- Generates jobs in shipbuilding, steel, electronics, and ancillary sectors.
- Boosts India's defence export capacity.

UPSC Prelims Pointers

- **SAGAR Vision (2015)**→ "Security and Growth for All in the Region."
- INS Vikrant → India's first indigenously built aircraft carrier (2022, CSL Kochi).
- INS Androth→ 2nd ASW-SWC (80% indigenous).
- Indian Navy target → 200+ ships/submarines by **2035**.
- Transition: From "Buyer's Navy" → "Builder's Navy."

Conclusion

The Indian Navy's shipbuilding surge is not just about adding numbers but represents a **strategic shift towards maritime self-reliance**. By indigenously building advanced platforms, India is positioning itself as a **credible maritime power in the Indo-Pacific and IOR**, while reducing dependence on foreign suppliers. This transformation underscores India's ambition to safeguard national interests, counter regional threats, and emerge as a **net security provider and reliable partner** in an evolving multipolar order.

UPSC Prelims Practice Question

Ques: Q1. Consider the following statements about India's naval modernisation:

1. India has set a target of expanding its naval strength to over 200 warships and submarines by 2035.

2. INS Androth, recently delivered, is part of the Anti-Submarine Warfare Shallow Water Craft (ASW-SWC) series with more than 80% indigenous content.

3. INS Vikrant, India's first indigenously built aircraft carrier, was constructed at Mazagon Dock Shipbuilders Ltd, Mumbai.

Which of the statements given above is/are correct?

A. 1 and 2 only

B. 2 and 3 only

C. 1 and 3 only

D. 1, 2 and 3

Ans: (a)

UPSC Mains Practice Question

Ques: The Indian Navy's transformation from a 'Buyer's Navy' to a 'Builder's Navy' is central to India's self-reliance in defence manufacturing." Critically analyse. **(150 Words)**

Page 06 :GS 3 : Environment / Prelims

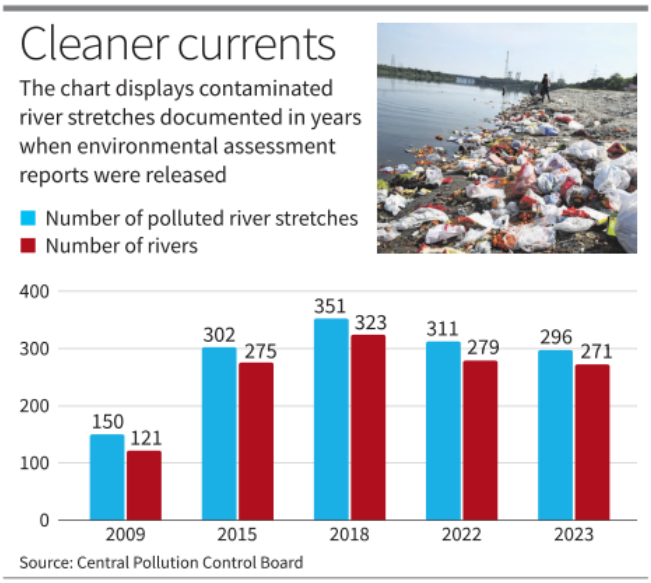
The **Central Pollution Control Board (CPCB)** in its 2023 report has noted a **slight reduction in polluted river sites**. The number of river stretches unfit for bathing decreased to **807 in 2023 from 815 in 2022**, with the number of **'Priority 1' (most polluted) stretches** also dropping from 45 to 37. While this indicates incremental progress, India continues to face significant challenges in **river pollution management**.

Number of polluted river sites are showing a slight reduction: CPCB

Jacob Koshy
NEW DELHI

The number of locations in Indian rivers unfit to bathe saw an incremental dip to 807 in 2023 from 815 in 2022, according to a report by the Central Pollution Control Board (CPCB) made public on Monday. There was, however, a reduction in the number of river locations considered "most polluted".

The agency monitors and compiles data in two-year phases on river health – specifically measuring a parameter called biological oxygen demand (BOD) of India's rivers. BOD is proxy for organic matter dissolved in water with a low number indicating a healthy river. A BOD greater than 3 milligrams per litre indicates rising pollution and is considered unfit for bathing.



Two continuous locations exceeding the criterion in a single river is counted as a 'polluted river stretch' (PRS).

PRS of rivers

In 2023, there were 296 PRS/locations found in 271 rivers. In 2022, there were 311 PRS/locations in 279 rivers.

Maharashtra (54) had the highest number of PRS or locations followed by Kerala (31), Madhya Pradesh and Manipur with 18 each, and Karnataka (14). However, Tamil Nadu, Uttar Pradesh and Uttarakhand had the highest number – five – of stretches or locations in 'Priority 1'.

In the 2022 assessment, Gujarat and Uttar Pradesh had the highest number of 'Priority 1' river stretches (6), Maharashtra had the highest number of polluted river stretches at 55, followed by Madhya Pradesh (19), Bihar (18), Kerala (18), Karnataka (17), and Uttar Pradesh (17).

PRS with a BOD exceeding 30 mg per litre are considered 'Priority 1', meaning, the most polluted and thus needing urgent remediation. In the latest assessment, the number of 'Priority 1' stretches reduced to 37 from 45 over the 2022 assessment.

The CPCB network monitors water quality at 4,736 locations across the country including rivers, lakes, creeks, drains and canals.

Key Findings of CPCB Report (2023)

- **Polluted River Stretches (PRS):**
  - 2023 →**296 PRS in 271 rivers**.
  - 2022 → 311 PRS in 279 rivers.
- **States with highest polluted stretches (PRS):**
  - Maharashtra → 54 (highest).
  - Kerala → 31.
  - Madhya Pradesh & Manipur → 18 each.
  - Karnataka → 14.
- **'Priority 1' stretches (BOD > 30 mg/litre):**
  - 2023 → 37 stretches.
  - 2022 → 45 stretches.
  - Highest → Tamil Nadu, Uttar Pradesh, Uttarakhand (5 each).
- **Monitoring network:** CPCB tracks water quality at **4,736 locations** (rivers, lakes, drains, canals).

Static Context

1. **BOD (Biological Oxygen Demand):**
   - Indicator of organic pollution.
   - **BOD > 3 mg/litre→ unsafe for bathing.**
   - **BOD > 30 mg/litre→ 'Priority 1' → urgent remediation needed.**
2. **Major Causes of River Pollution in India:**
   - Untreated sewage (accounts for ~70–80% of pollution load).
   - Industrial effluents.
   - Agricultural run-off (fertilizers, pesticides).
   - Encroachment, sand mining, solid waste dumping.
3. **Institutions & Laws:**
   - **CPCB** (set up under Water (Prevention & Control of Pollution) Act, 1974).
   - **National Green Tribunal (NGT)** monitors river pollution cases.
   - **National Mission for Clean Ganga (NMCG)** under NamamiGangeProgramme.

Current Context & Significance

- The decline in polluted river sites suggests **partial success of government programmes** like **NamamiGange, AMRUT 2.0, and sewage treatment infrastructure expansion**.
- However, **807 polluted stretches** still indicate that most Indian rivers remain **ecologically stressed**.
- River pollution directly affects **health (water-borne diseases), livelihoods (fisherfolk, farmers), and ecology (aquatic biodiversity)**.
- Clean rivers are crucial for India's **SDG commitments** (Goal 6: Clean Water and Sanitation).

UPSC Prelims Pointers

- CPCB established under **Water Act, 1974**.
- **BOD safe limit for bathing → 3 mg/litre**.
- **Priority 1 PRS → BOD > 30 mg/litre**.

- **States with highest polluted stretches (2023):** Maharashtra (54).
- Monitoring network: **4,736 locations**.

Conclusion

The marginal reduction in polluted river stretches signals **progress, but not transformation**. India's rivers remain under severe stress from sewage, industrial effluents, and poor enforcement of pollution norms. A multi-pronged approach combining **infrastructure (STPs), governance reforms, stricter enforcement, community participation, and river rejuvenation programmes** is needed to ensure India's rivers become truly fit for bathing, livelihoods, and ecological balance.

UPSC Prelims Practice Question

Ques: Consider the following statements about Biological Oxygen Demand (BOD):

1. It measures the amount of oxygen consumed by microorganisms in decomposing organic matter in water.

2. A high BOD value indicates healthier river water suitable for bathing.

3. In India, water with BOD above 3 mg/litre is considered unfit for bathing.

Which of the above statements is/are correct?

(a) 1 only

(b) 1 and 2 only

(c) 1 and 3 only

(d) 2 and 3 only

Ans :c)

UPSC Mains Practice Question

Ques: Despite multiple programmes, river pollution continues to plague India's water bodies. In the light of the CPCB's 2023 report on polluted river stretches, discuss the challenges in river pollution control and suggest measures for effective remediation. **(150 Words)**

Page : 08: GS 2 : Social Justice/ Prelims

Primary Health Centre (PHC) doctors are the **backbone of India's public health system**, delivering not only clinical care but also managing public health programmes, disease surveillance, and community-level interventions. A single PHC caters to 20,000–50,000 people depending on the geography. Despite their central role, **burnout, administrative overload, and systemic neglect** are undermining their ability to serve effectively.

PHC doctors — a case where the caregivers need care

Dr. A. Chandiran Joseph

is a postgraduate in Community Medicine, Chennai

Primary Health Centre (PHC) doctors form the unshakable foundation of the Indian public health system. They serve not merely as doctors but also as planners, coordinators and leaders. For millions in India's hinterlands, they are the only accessible face of medicine.

Their role extends far beyond clinical care – from public health programmes to disease surveillance. PHC doctors bridge the health system and the last person in a remote village. They stand at the intersection of community needs and policy intent, holding together a vast and fragile health-care network.

A PHC typically serves a diverse population of around 30,000 people, including women, children, the elderly with chronic illnesses, and other vulnerable groups. In hilly and tribal regions, it is around 20,000 people; in urban areas, it stretches to 50,000 people. With a modest team and finite resources, PHC doctors shoulder the care of entire communities. Their work draws upon the founding principles of primary health care: equitable access, community involvement, intersectoral coordination, and pragmatic use of technology, delivered not just in policy papers but in the actual lives of people.

Their responsibilities go well beyond the examination table. They coordinate immunisation campaigns, conduct door-to-door surveys, manage vector control, run school health programmes along with Medical Officers from the Rashtriya Bal Swasthya Karyakram (RBSK), and respond to field outbreaks. They organise health education sessions, engage in inter-sectoral meetings, and participate in gram sabhas to promote community health.

Visiting Anganwadis and sub-centres, mentoring Accredited Social Health Activists (ASHA), Auxiliary Nurse Midwives (ANM), and village health workers, conducting review meetings and audits are all a part of their daily rhythm. These are not checkboxes. They are the threads tying public health programmes to people, and keeping national health policies alive at the grass-root level.

Yet, these efforts are rarely acknowledged in workforce metrics or planning. While national programmes lean heavily on field-level execution, the pressure these duties place on already stretched personnel often goes unnoticed.

A crushing clinical load

On a busy day, a PHC doctor sees around 100 outpatients. In centres far away from a Basic/Comprehensive Emergency Obstetric and Newborn care (BEmONC/CEmONC) facility, nearly 100 pregnant women attend antenatal outpatient (OP) service on designated days. Each consultation is a race against time. In that brief time, they must listen with care, examine the patient thoroughly, arrive at a diagnosis, and offer the right treatment, without compromising clinical rigour or compassion. The burden of meeting programme-driven targets only intensifies the strain.

Any investment in public health must begin with those who make it work, but the system cannot be built with doctors who are fatigued

Unlike specialists focused on one domain, PHC doctors must stay updated across the entire medical spectrum – from newborn care to geriatrics, infectious diseases to mental health, and trauma and chronic illnesses – and are expected to treat emergencies of every specialty without having time to summon help. Added to this daily crush, they are expected to keep pace with updated treatment protocols, national guidelines and the steady churn of medical knowledge.

The space for learning or reflection has become a rarity, a quiet casualty of a system that never slows down. Hence, even simple research becomes a luxury, despite being the primary contributors of health data.

Administrative work, burnout

Perhaps the most overlooked burden is administrative work. What began as a support task has quietly grown into a parallel job. PHCs today maintain over 100 physical registers: outpatient records, maternal and child health, non-communicable diseases, drug inventory, and sanitation, among others.

To this, digital systems have been added: the Integrated Health Information Platform (IHIP), Population Health Registry (PHR), Ayushman Bharat Portal, Integrated Disease Surveillance Programme (IDSP), Health Management Information System (HMIS), and UWIN for immunisation. These were meant to streamline documentation. In reality, they have created duplication. Many doctors now enter the same data twice – on paper and electronically. The wrangle between digitisation and physical records is a false dichotomy; PHC doctors are made to juggle both, with neither system fully supporting them.

Support staff receive devices for data entry, but the need for parallel paper records persists. With limited assistance, physicians often stay late to complete documentation after their clinical duties. The second shift, filled with paperwork, has become routine. Ironically, those trained to treat are now consumed by computers.

The result of this multi-dimensional burden is a slow, invisible erosion: burnout. It is not a term widely used in the Indian public health context, but the signs are hard to miss.

The Lancet has termed physician burnout as a global public health crisis, marked by emotional exhaustion, detachment and a sense of futility. The International Classification of Diseases (ICD-11) issued by the World Health Organization (WHO) recognises it as an occupational phenomenon, underscoring the need for systemic, not just clinical, solutions. Dr. Vivek Murthy, former Surgeon General of the United States, wrote in *The New England Journal of Medicine* that burnout stems not just from long hours but from the growing gap between a health worker's calling and the system they are trapped in.

A meta-analysis in the WHO Bulletin found that in low- and middle-income countries, nearly one-third of primary care physicians report emotional exhaustion. In Saudi Arabia, a Ministry of Health study cited administrative overload as a key driver of burnout among PHC doctors.

The mismatch between expectations and systemic support is glaring. Physicians are tasked with delivering quality care, driving national programmes, and maintaining detailed documentation, with little staffing, compensation, or recognition.

Even in States such as Tamil Nadu, known for its commitment to primary care, where around 650 PHCs were National Quality Assurance Standards (NQAS) certified by January 2025, systemic stressors remain. Certification, though commendable, often emphasises checklists. True quality must mean care that is enabling, humane and sustainable.

What is needed is not just external validation, but internal reformation.

Rethinking the system

Strengthening primary care requires more than new buildings and names. It requires redesigning systems with empathy. Documentation must be meaningful. Redundant registers should go. Where possible, automation must replace manual entry. Non-clinical tasks must be delegated.

Global efforts offer direction. The 25 by 5 campaign, led by the U.S. National Library of Medicine and Columbia University, aims to reduce clinician documentation time by 75% by 2025. India must adopt similar, implementable goals.

The Bhore Committee rightly envisioned that primary health care must rest on preventive services and community involvement. Nearly eight decades on, PHCs remain central to that vision. But its flag bearers are caught in a web of tasks that the system was never designed to hold. We must shift from a culture of compliance to one of facilitation. Primary care must be supported by systems, not smothered by them.

Primary health care is the gateway to Universal Health Coverage (UHC), enshrined in Target 3.8 of the Sustainable Development Goals (SDG). It promises access to essential health services, safe medicines, and financial protection. Without strong PHCs, SDG 3, which aims to ensure health and well-being for all, will remain aspirational.

Any investment in public health must begin with those who make it work. A system cannot be built on the backs of fatigued doctors. Their physical and emotional well-being is not a fringe concern. It is the foundation. We must value not just what physicians do, but what they endure. Only then can we build a system that is not just responsive, but resilient.

India has the opportunity and the responsibility to reimagine primary care not as a cost centre, but as its most vital investment. If care is to be truly Ayushman, it must start with those who deliver it.

The views expressed are personal

Role & Responsibilities of PHC Doctors

- **Clinical Care:** Handle ~100 outpatients daily; manage emergencies, antenatal care, infectious & non-communicable diseases, geriatrics, and trauma.
- **Public Health Duties:**Immunisation, disease surveillance, school health programmes, outbreak response, vector control.
- **Community Engagement:** Health education, Gram Sabhas, mentoring ASHA/ANM/village workers, Anganwadi visits.
- **Administrative Burden:** Maintain 100+ registers + multiple digital platforms (IHIP, PHR, HMIS, IDSP, Ayushman Bharat portal).
- **Data & Research:** Contribute significantly to national health data but lack time/resources for research or training.

Challenges Faced by PHC Doctors

1. **Crushing Workload** – Dual burden of clinical and public health responsibilities.
2. **Administrative Overload** – Duplication of paper + digital records; inefficient IT systems.
3. **Burnout** – Recognised by **WHO ICD-11** as an occupational phenomenon; seen in ~1/3rd of primary care physicians in LMICs.
4. **Skill Expectation vs. Support** – Expected to manage across all specialties without adequate infrastructure or staff.
5. **Systemic Neglect** – Contributions often missing from workforce metrics and policy planning.

Static Context

- **Bhore Committee (1946):** Laid the foundation for PHC-based primary health care in India.
- **National Health Policy (2017):** Stresses strengthening primary care, integration with preventive health.
- **Ayushman Bharat (2018):** Introduced **Health and Wellness Centres (HWCs)** to upgrade PHCs.
- **SDG 3.8 (Universal Health Coverage):** Strong PHCs are essential for ensuring equitable, accessible healthcare.

Way Forward / Reforms Suggested

1. **Administrative Simplification:** Reduce redundant registers; integrate digital platforms into one.
2. **Task Shifting:** Delegate non-clinical duties to trained data-entry or administrative staff.
3. **Technology Use:** Automation in reporting; telemedicine to reduce patient load.
4. **Workforce Support:** Adequate staffing, continuous medical education, mental health support.
5. **Policy Shift:** From checklist-based certification (like NQAS) to genuine systemic facilitation.
6. **Global Best Practices:** Adopt models like the U.S. **"25 by 5 campaign"** (reduce clinician documentation by 75% by 2025).

UPSC Prelims Pointers

- **PHC Coverage:** 30,000 population in plains; 20,000 in hilly/tribal; 50,000 in urban.
- **Bhore Committee (1946):** Recommended 1 PHC for every 40,000 population.
- **WHO ICD-11:**Recognises burnout as an occupational phenomenon.
- **NQAS:** National Quality Assurance Standards for PHCs.
- **SDG 3.8:** Universal Health Coverage.

Conclusion

PHC doctors are not just medical practitioners but **leaders, coordinators, and the bridge between policy and people**. However, systemic neglect, overwork, and administrative overload risk eroding their effectiveness. For India to achieve **Universal Health Coverage and SDG-3**, reforms must focus on **strengthening PHCs and caring for caregivers themselves**. An empathetic, streamlined, and supportive system will ensure not only healthier doctors but also a healthier India.

UPSC Prelims Practice Question

Ques :Which of the following is recognised in WHO ICD-11 as an occupational phenomenon?

a) Compassion fatigue

b) Burnout

c) Occupational depression

d) Work-related anxiety

Ans: b)

UPSC Mains Practice Question

Ques: Primary Health Centre (PHC) doctors are the backbone of India's healthcare system, but they face multiple challenges. Discuss these challenges and suggest reforms to strengthen primary healthcare in India. **(150 Words)**

Page 10 :GS 2& 3 : International Relations& Agriculture/ Prelims

India and the U.S. have disagreements on agricultural trade, particularly corn. The U.S. seeks to export corn to India to supply feedstock for ethanol blending and livestock feed. India, however, has largely avoided U.S. corn imports due to **GM crop restrictions, domestic production growth, and political-economy concerns**. This issue is part of broader debates on **food security, self-reliance, and trade negotiations**.

Why is India not importing corn from the U.S.?

Has the ethanol blending of petrol increased demand for maize and corn? From which countries has India been importing maize? How different is the U.S's farming industry when compared to India? Why has China stopped importing soybeans from the U.S.? What is India's stance on U.S. corn?

EXPLAINER

M. Kalyanaraman

The story so far:

Among the key areas of disagreement between the U.S. and India regarding trade is a demand that India should import U.S. corn. U.S. Commerce Secretary Howard Lutnick has said that India has 1.4 billion people but does not import a single bushel of corn from the U.S. (25 kg approximately).

Does India import corn?

India's maize yield is quite poor and is below four tonnes per hectare whereas the world average is six tonnes. Despite that, India had been largely self-sufficient and has sometimes even exported maize, mainly for poultry and other livestock feed as well as for human consumption.

With the ramp up of ethanol blending of petrol, India has had to balance between its food needs and ethanol production. For instance, it has to decide between sugar manufacture versus diverting sugarcane products to ethanol production. Similarly, India has also had to ramp up maize feedstock for ethanol production. This Kharif-Rabi-Spring season, the maize crop is expected to supply some 10 to 12 million tonnes for ethanol production out of an overall 50 million tonnes production, says H.S. Jat, Director of the ICAR-Indian Institute of Maize Research in Ludhiana. He adds that there will not be any need to import maize this year given the bounty crop expected.

India has, however, been importing maize in recent times, apparently for ethanol. For instance, overall maize imports were some one million tonnes in 2024-25 (60% from Myanmar and much of the rest from Ukraine). This represents an almost eight times increase over the previous year.

India doesn't import U.S. corn, much of which is Genetically Modified (GM). India has allowed only GM cotton cultivation, with GM brinjal and mustard cultivation remaining in the investigation stage. Some critics say that fears over cultivating GM crops such as alleged toxicity and diseases will apply to imported GM corn produce as well if it enters the food chain.

Why does the U.S. want to export to India?

In India, farming is the occupation of the masses and is primarily targeted at removing hunger and enhancing nutrition. In the U.S., however, farming is essentially capitalist and characterised by high productivity (U.S. maize yield is three times that of India), very large land holdings (typically 500 acres per farming family or operation, as it's called there), and high levels of mechanisation since only a little more than three million people are engaged in the two million farming operations.

U.S. agriculture is largely a feedstock producer for massive agribusinesses. This is a sharp change from the era of the Great Depression when, as hunger mounted amidst high production, the U.S. government under President Franklin D. Roosevelt moved in to institute hunger-nutrition programs through food stamps to boost consumption and ensured subsidies to pay farmers for not producing. Another key government spend within the hunger-nutrition scheme that continues today is school lunch programmes.

The 1960s and 70s saw a strengthening of hunger-nutrition programs. However, a little later, the focus of U.S. agriculture again shifted towards making it increasingly capitalist, though the government steps in from time to time, such as during the recession of the late 2000s, to beef up the food stamps programme.

As the World Trade Organization rules began to be enforced that required U.S. and other developed nations to cut farm subsidies, there has been a bigger thrust towards capitalist farming. Huge payouts such as counter-cyclical payments to farmers and agribusinesses has led to the growth of giant agri-multinationals. The dominant crops in the U.S. are the cash crops of corn and soybean whereas fruits, vegetables and wheat that often go towards direct human consumption are considered "speciality" crops. Overproduction of cash crops is characteristic of U.S. farming and there is a constant need for expanding export markets. Out of a total 350 million tonnes of yearly corn production, some 45 million tonnes are exported.

Maize is only marginally consumed directly by the people in the U.S. but it feeds a range of industries such as the manufacturing of processed products like high fructose corn syrup; ethanol production; plastic-making; as well as animal feed. Corn is a key feed for massive Concentrated Animal Feeding Operations (CAFOs) that raise cattle in confined spaces for slaughter. CAFOs are essential to America's nearly 30-million-tonne meat production every year. The U.S. therefore is specifically eyeing ethanol blending in India for its corn exports.

What are the political stakes behind corn and soybean exports?

The corn belt is practically synonymous with the U.S. midwest region. So is soybean production. This region is the Republican heartland and the core of U.S. President Donald Trump's voter base. California is the base for speciality crops such as fruits and vegetables and a Democrat stronghold. In the U.S., Democrat-Republican differences run deep and echo not just in political and economic viewpoints but also in lifestyles, type of power plants, agriculture crop choices and so on.

With a good forecast for corn and soy crop this year, export markets are key to keeping the agribusiness chain well-oiled. Even during the Biden administration, corn lobbyists visited India to promote American corn for ethanol. Though there has been a move to increase interest in farm legislation for its impact on food consumption, agribusiness lobbying groups still heavily influence Congress and Senate decisions.

The U.S. election cycle kicks off with primaries in Iowa, a key corn-soy producing State in the midwest. Party candidates for the post of the President are decided through primaries that happen successively in various States. Iowa broadly decides the line-up if not the eventual winner, and therefore the corn lobby wields considerable power in U.S. politics.

Moreover, following the China-U.S. standoff, China has stopped buying soybean from the U.S. China, a major soy user, imports three-fifths of its needs and is turning to other producers such as Brazil. This year's soy crop in the U.S. has no orders from China. This has set off a crisis in midwestern States such as North Dakota.

What are the stakes for India?

Even if GM corn were safe, India's freezing of GM crop cultivation will make it politically difficult to import GM corn produce. Moreover, India will be wary considering what happened with Mexico.

Following the signing of the North American Free Trade Agreement in the 1990s, Mexico had to import massive amounts of cheap U.S. corn, which drove more than a million Mexican farmers out of business who then had to take up employment as workers in U.S. factories. Even now, Mexico continues to import nearly 25 million tonnes of U.S. corn despite concerns over GM crop.

U.S. corn price is just about 70% of Indian maize without taking into account shipping, marketing costs and business margins. This would be equivalent to dumping.

Also, India has built a maize ecosystem for ethanol, as Mr. Jat points out. Annual maize production has nearly doubled in the last two-three years. "Maize acreage this Kharif saw a 10.5 lakh hectare increase compared to last Kharif. We will be destroying the ecosystem if we commit to cheap maize imports, leading to much distress to new maize farmers," he said.

Bihar farmers have taken to maize and the State will go for elections soon. Allowing maize imports could play against the ruling Bharatiya Janata Party (BJP) there.

Further, importing feedstock for ethanol blending defeats a key purpose of the ethanol programme. Besides the potential to cut carbon emissions, ethanol-blended petrol serves to cut the oil import bill. Import substitution through ethanol blending of 20% of petrol can potentially prevent $10 billion of forex outgo every year, which could in turn go into the pockets of Indians including farmers.

Corn imports would defeat the purpose of India's ethanol blending programme.

THE GIST

- India has, however, been importing maize in recent times, apparently for ethanol. For instance, overall maize imports were some one million tonnes in 2024-25 (60% from Myanmar and much of the rest from Ukraine).
- India doesn't import U.S. corn, much of which is Genetically Modified (GM). India has allowed only GM cotton cultivation, with GM brinjal and mustard cultivation remaining in the investigation stage.
- Further, importing feedstock for ethanol blending defeats a key purpose of the ethanol programme. Besides the potential to cut carbon emissions, ethanol-blended petrol serves to cut the oil import bill.

Search for markets: A farmer dumps corn in a grain trailer as he harvests a field, near Clear Lake, Iowa in 2013. AP

India's Corn Situation

- **Domestic maize yield:** ~4 tonnes/hectare (below world avg. 6 tonnes).
- **Self-sufficiency:** India produces ~50 million tonnes per year; a small portion (10–12 million tonnes) is now diverted for ethanol blending.
- **Recent imports:** ~1 million tonnes in 2024–25, mostly from **Myanmar (60%) and Ukraine**, mainly for ethanol feedstock.
- **Ethanol programme:** India's ethanol blending (targeting 20% blending) requires maize feedstock. Importing U.S. corn could **undermine domestic maize farmers** and the ethanol ecosystem.

U.S. Corn Farming vs India

- **U.S. yield:** ~3x India's yield; highly mechanized, large-scale farms (~500 acres).
- **Primary use:** Feedstock for **ethanol, livestock feed, processed products**, not direct human consumption.
- **Export orientation:** Overproduction is exported globally (~45 million tonnes/year).
- **Political economy:** Corn belt in U.S. Midwest → crucial Republican stronghold; corn exports affect domestic politics.

Why India Avoids U.S. Corn

1. **GM Concerns:**
   - India only allows GM cotton; GM corn imports face regulatory and political hurdles.
   - Critics cite potential **toxicity and health risks**, similar to concerns with Mexico.
2. **Protecting Farmers & Domestic Market:**
   - Indian maize production has increased sharply; importing cheap U.S. corn (~70% of Indian price) would **undermine local farmers**, especially in maize-growing states like Bihar.
   - Election and political economy considerations reinforce domestic sourcing.
3. **Strategic & Economic Reasons:**
   - Ethanol blending reduces **oil imports and carbon footprint**; importing corn undermines self-reliance and **saves ~$10 billion/year in forex**.
   - Maintains control over **food vs fuel trade-offs**.
4. **Lessons from Global Experience:**
   - Mexico's experience with cheap U.S. corn imports caused **farmer distress and dependence**. India aims to avoid similar outcomes.

Current Global Context

- **China-U.S. tensions:** China has stopped importing U.S. soybeans; U.S. corn/soy faces oversupply, pushing U.S. lobbying for export markets like India.
- India's decision balances **food security, rural livelihoods, and ethanol programme goals**, while maintaining cautious trade diplomacy with the U.S.

PSC Prelims Pointers

- **India maize production:** ~50 million tonnes/year.
- **Ethanol feedstock from maize:** 10–12 million tonnes/year.

- **Major import sources:** Myanmar, Ukraine.

- **GM crop status in India:** Only cotton allowed; GM corn/mustard/brinjal restricted.
- **Ethanol blending target:** 20% of petrol.

Conclusion

India's decision not to import U.S. corn reflects a **strategic balance of self-reliance, food security, and domestic farmer welfare**. While the U.S. seeks export markets for its surplus GM corn, India prioritizes **building its domestic maize ecosystem for ethanol and livestock feed**, protecting farmers, and achieving energy security goals. This demonstrates India's cautious, **policy-driven approach to trade negotiations**, balancing global pressures with domestic imperatives.

UPSC Prelims Practice Question

Ques:Which of the following statements about maize (corn) production in India is correct?

A. India's maize yield is above the world average.

B. India imports most of its maize from the U.S.

C. India diverts part of maize production for ethanol blending.

D. India allows cultivation of GM maize.

Ans: C

UPSC Mains Practice Question

Ques: Examine the trade tensions between India and the U.S. over corn exports. How do domestic agriculture policies and global agribusiness interests influence bilateral trade negotiations?**(150 Words)**

Page : 08 Editorial Analysis

The growing relevance of traditional medicine

The World Health Organization (WHO) reports that traditional medicine is practised in 88% of its member-states – 170 out of 194 countries. For billions, particularly in low- and middle-income nations, it remains the primary form of health care due to accessibility and affordability considerations. Yet, its significance extends beyond treatment, supporting biodiversity conservation, nutrition security, and sustainable livelihoods.

Market projections underscore this growing acceptance. Analysts estimate that the global traditional medicine market will reach $583 billion by 2025, with annual growth rates of 10%-20%. China's traditional Chinese medicine sector is valued at $122.4 billion, Australia's herbal medicine industry at $3.97 billion, and India's Ayurveda, Yoga and Naturopathy, Unani, Siddha and Homoeopathy (AYUSH) sector at $43.4 billion.

This expansion reflects a fundamental shift in health-care philosophy – from reactive treatment models to proactive, preventive approaches that address root causes rather than symptoms alone.

India's Ayurvedic transformation

India's traditional medicine sector has witnessed remarkable transformation. The AYUSH industry, comprising over 92,000 micro, small and medium enterprises, has expanded nearly eight-fold in less than a decade. Manufacturing sector revenues have grown from ₹21,697 crore in 2014-15 to over ₹1.37 lakh crore currently, while the services sector has generated ₹1.67 lakh crore in revenue.

India now exports AYUSH and herbal products worth $1.54 billion to more than 150 countries, with Ayurveda gaining formal recognition as a medical system in several nations. This represents both economic opportunity and soft power projection on the global stage.

Prataprao Jadhav

is Union Minister of State (Independent Charge) for Ayurveda, Yoga and Naturopathy, Unani, Siddha and Homoeopathy (AYUSH) and Union Minister of State for Health and Family Welfare, Government of India

The ancient system can offer sustainable health-care solutions in an era of climate change and lifestyle diseases

The first comprehensive survey on AYUSH by the National Sample Survey Office (2022-23) revealed near-universal awareness – 95% in rural areas and 96% in urban centres. Over half the population reported using AYUSH systems in the preceding year, with Ayurveda emerging as the preferred choice for rejuvenation and preventive care.

Scientific validation, global expansion

India has invested significantly in research through institutions including the All India Institute of Ayurveda, the Institute of Teaching and Research in Ayurveda, the National Institute of Ayurveda, and the Central Council for Research in Ayurvedic Sciences.

These institutions focus on clinical validation, drug standardisation and developing integrative care models that combine traditional knowledge with modern medical practices.

India's global Ayurveda outreach has achieved unprecedented scale through the Ministry of AYUSH's International Cooperation Scheme. India has signed 25 bilateral agreements and 52 institutional partnerships, established 43 AYUSH Information Cells across 39 countries, and positioned 15 academic chairs in foreign universities.

The establishment of the WHO Global Traditional Medicine Centre in India represents a significant milestone. Supported by the Government of India, the centre aims to harness traditional medicine's potential through modern science, digital health and emerging technologies including artificial intelligence.

WHO's recent publication on AI integration in traditional medicine highlights how advanced technologies can strengthen clinical validation, enable big-data analytics, and enhance predictive care within Ayurveda and related systems.

The theme this year

Ayurveda's core philosophy of balance – between body and mind, humans and nature, consumption and conservation – offers relevant solutions for contemporary challenges. As the world grapples with lifestyle diseases and climate change, Ayurveda provides a framework that addresses both personal and planetary health.

The system's principles extend beyond human wellness to encompass veterinary care and plant health, embodying a holistic approach to nurturing all life forms. This comprehensive vision makes the theme for the year 2025, "Ayurveda for People & Planet", particularly timely (September 23 is observed as Ayurveda Day).

As India leads efforts to mainstream traditional medicine globally, the approach emphasises health care that is preventive, affordable, inclusive and sustainable. Ayurveda represents not merely a medical system but a wellness movement that bridges traditional knowledge with contemporary needs.

The convergence of ancient wisdom with modern science and technology positions traditional medicine systems to play an increasingly important role in global health architecture. Ayurveda Day this year serves as a reminder of the potential for traditional knowledge systems to contribute to a more balanced and sustainable future for people and the planet.

GS. Paper 02–Social Justice

UPSC Mains Practice Question: The growing relevance of traditional medicine in India reflects a shift towards preventive, sustainable, and inclusive healthcare. Critically analyse its significance and global potential. **(150 Words)**

Context :

Traditional medicine, encompassing Ayurveda, Yoga, Naturopathy, Unani, Siddha, and Homeopathy (AYUSH), is practised in **88% of WHO member-states**. For billions, particularly in low- and middle-income countries, it remains a **primary, accessible, and affordable health-care option**. Beyond treatment, traditional medicine supports **biodiversity conservation, nutrition security, and sustainable livelihoods**. India's efforts to mainstream AYUSH globally underscore the convergence of **ancient wisdom with modern science**.

Key Highlights

1. **Global Significance**
   - Global traditional medicine market projected to reach **$583 billion by 2025**, growing at 10–20% annually.
   - China: $122.4 billion (Traditional Chinese Medicine).
   - Australia: $3.97 billion (herbal medicine).
   - India: $43.4 billion (AYUSH sector).
2. **India's AYUSH Transformation**
   - Over **92,000 MSMEs** in the AYUSH sector.
   - Manufacturing revenues: ₹21,697 crore (2014-15) → ₹1.37 lakh crore (current).
   - Services sector revenue: ₹1.67 lakh crore.
   - Exports: $1.54 billion to 150+ countries.
   - **Public usage:** ~50% of population uses AYUSH; awareness: 95–96% (rural/urban).
3. **Scientific Validation and Global Outreach**
   - Key institutions: All India Institute of Ayurveda, National Institute of Ayurveda, Central Council for Research in Ayurvedic Sciences.
   - Focus: Clinical validation, drug standardisation, integrative care.
   - Global cooperation: 25 bilateral agreements, 52 institutional partnerships, 43 AYUSH Information Cells, 15 academic chairs abroad.
   - WHO Global Traditional Medicine Centre in India: integrates **AI, digital health, and predictive care**.
4. **Philosophy and Contemporary Relevance**
   - Core principle: **balance between body-mind, humans-nature, consumption-conservation**.
   - Addresses lifestyle diseases, planetary health, veterinary care, and plant health.
   - 2025 Ayurveda Day theme: **"Ayurveda for People & Planet"**.

Static Context

- **AYUSH Ministry:** Established 2014, responsible for promotion and regulation of traditional medicine.
- **Ayurveda:** Ancient Indian medical system focused on preventive, holistic health.
- **Sustainable Development Goals (SDGs):** Traditional medicine supports SDG 3 (Health & Well-being) and SDG 15 (Life on Land).
- **WHO Role:** Encourages integration of traditional medicine with modern healthcare, supports research and validation.

Current Context & Significance

- India is positioning **AYUSH as a tool of soft power and economic growth**.
- Integrating **AI and big-data analytics** enhances global credibility and modern relevance.
- Provides **preventive, inclusive, and affordable healthcare**, crucial for rural and urban populations.
- Aligns with India's vision of **healthcare for people and planet**, addressing lifestyle diseases and environmental challenges.

UPSC Prelims Pointers

- AYUSH = Ayurveda, Yoga & Naturopathy, Unani, Siddha, Homeopathy.

- AYUSH Ministry established in **2014**.
- Global traditional medicine coverage: **88% of WHO member-states**.
- India's AYUSH exports: **$1.54 billion**, 150+ countries.
- WHO Global Traditional Medicine Centre: Located in India, promotes **AI integration and clinical validation**.

Conclusion

Traditional medicine, particularly **Ayurveda**, represents a **holistic approach** integrating human wellness with environmental balance. With India's robust domestic growth, global outreach, and scientific validation efforts, AYUSH is emerging as both a **healthcare solution and strategic soft power tool**. The focus on preventive, affordable, and sustainable practices aligns with global health priorities, positioning India as a leader in **people- and planet-centric healthcare**.