
Today's Prelims Topics

No Confidence Motion

Context

Odisha legislative speaker rejected no confidence motion against ruling government.

About No Confidence Motion

- A no-confidence motion is a parliamentary process that allows the opposition to **challenge** the government's **majority and ability to govern**.
- **Article 164(2)**: The Council of Ministers in a state is **collectively responsible to the Legislative Assembly**.
 - This means the Chief Minister and Council of Ministers must resign if they lose the confidence of the Assembly.
- **Procedure:**
 - **Initiation**: Any member of the Legislative Assembly can give written notice of the motion.
 - **Admissibility**: The Speaker admits the motion if it complies with rules of procedure (varies slightly by state, usually requires some minimum number of supporting members).
 - **Discussion & Voting**: Debate is scheduled by the Speaker.
 - Voting is done after discussion.
 - **Result**: If the **majority of members present and voting** support the motion, the Council of Ministers must resign.

Related Information:

- A motion of no confidence can be moved **only against the Council of Ministers** and not against an individual Minister.
- No-confidence motion doesn't require specifying reasons. Even if reasons are mentioned, they are not part of the motion itself.
- Applicable **only in Legislative Assembly (Vidhan Sabha)**, not in Legislative Council (Vidhan Parishad), since the executive is responsible only to the Assembly.
- **Minimum number of supporting members:**
 - **In Lok Sabha (Parliament):**
 - **Under Rule 198(1) of Lok Sabha Rules**: A No-Confidence Motion can be admitted only if **at least 50 members rise in support** of the motion when the Speaker calls for it.
 - **In State Legislative Assemblies**: Doesn't fix a number. Each **State Assembly has its own Rules of Procedure**.
 - E.g., In Odisha, a no-confidence motion requires at least 14 members to stand in support in the Assembly for it to be accepted.

Source: [The Hindu](#)

Pilgrimage Rejuvenation and Spiritual, Heritage Augmentation Drive (PRASHAD) Scheme

Context

The **Tripura Sundari Temple** is undergoing a major redevelopment under the central government's PRASHAD scheme.

More in News

- A key highlight of the sundari temple development is the creation of a **51 Shakti Peethas Park near the temple**, featuring **replicas of all 51 sacred sites**.

About PRASHAD Scheme

- Launched by the **Ministry of Tourism (2014-15)**.
- A **Central Sector Scheme** (100% financed by the Central Government).
- **Objective: Rejuvenation and spiritual augmentation** of important national and global pilgrimage destinations.
 - Creation **tourism-linked livelihoods** for local communities.
- Support for a wide range of developmental works such as:
 - Infrastructure creation and improvement,
 - Pilgrim facilities,
 - Heritage conservation,
 - Amenities that enhance overall tourism experience.
- **Project selection based on:**
 - Cultural significance,
 - Tourist footfall,
 - Development potential,
 - Balanced representation across states.

Since its launch, the PRASHAD scheme has steadily expanded its footprint across the country. As on August 2025, atleast 54 projects covering 28 states and union territories have been sanctioned, with approved assistance amounting to over ₹1,168 crore.

Source: **PIB**

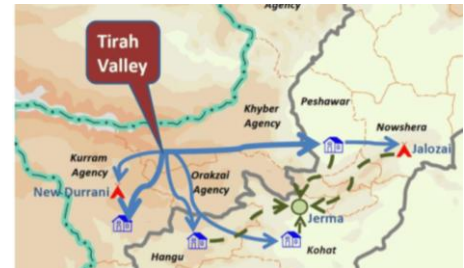
Tirah Valley

Context

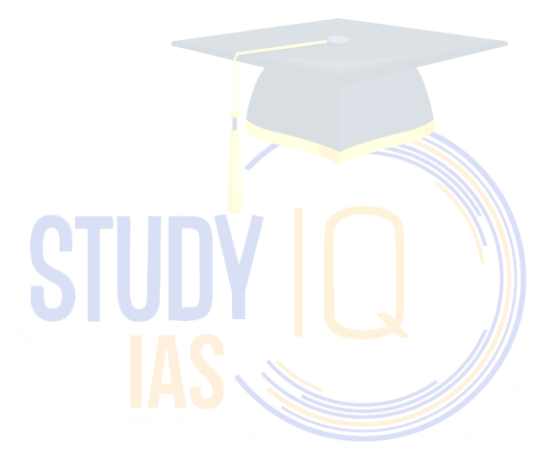
More than 20 people were killed and several homes destroyed in the Tirah Valley in an explosion.

About Tirah Valley

- A mountainous region in **Khyber Pakhtunkhwa (KP) province in Pakistan**.
- Located between the **Khyber Pass and Khanki Valley**, near the Afghan-Pakistan border.
- Ethnic groups in the region are predominantly **Pashtun tribes** — mainly Afridis and Orakzais.



Source: [Indian Express](#)



Fossil Fuels and Global Health: GCHA Report (2025)

Context

A new report by the Global Climate and Health Alliance (GCHA) titled ‘Cradle to Grave: The **Health Toll of Fossil Fuels** and the Imperative for a Just Transition’ released.

Health Impacts of Fossil Fuels

- **Particulate matter (PM_{2.5}, PM₁₀), SO₂, NO_x** cause asthma, chronic bronchitis, and lung damage.
- **Carbon monoxide (CO) and fine particles** increase risk of heart attacks, strokes, and high blood pressure.
- **Benzene, arsenic, and PAHs** lead to cancers like lung, skin, bladder, and blood cancers.
- **Mercury, lead, and manganese** damage the brain, causing memory loss, learning problems, and dementia.
- **Benzene, heavy metals, and toxic chemicals** cause infertility, birth defects, and miscarriages.
- **Cadmium, arsenic, and mercury** damage the kidneys and liver.
- **Toxins and heavy metals** weaken the immune system and cause anxiety, depression, and other mental health issues.

What are the Shortfalls

- In 2022, global fossil fuel subsidies reached **US\$7 trillion** (IMF), making coal, oil, and gas artificially cheap.
- Climate talks mainly target **CO₂ and methane**, while **toxic pollutants** like mercury, arsenic, and benzene that harm health are overlooked.
- **Over 3.3 lakh deaths in India (2020)** were linked to particulate matter from fossil fuel burning (Lancet).
- **Thousands of abandoned mines and wells** worldwide continue leaking toxins, but cleanup is underfunded.
- **Marginalised groups** (tribals, minorities, poor households) form “sacrifice zones,” bearing higher disease burden with **limited healthcare access**.
- Around **32 million people globally** work in fossil fuel industries (ILO), creating resistance to transition due to fear of job losses.
- In many developing countries, **health data gaps** exist due to industry control and lack of monitoring.
- Fossil fuel companies spend **billions on lobbying and advertising** (e.g., US oil & gas industry spent US\$124 million in lobbying in 2022) to delay clean energy policies.

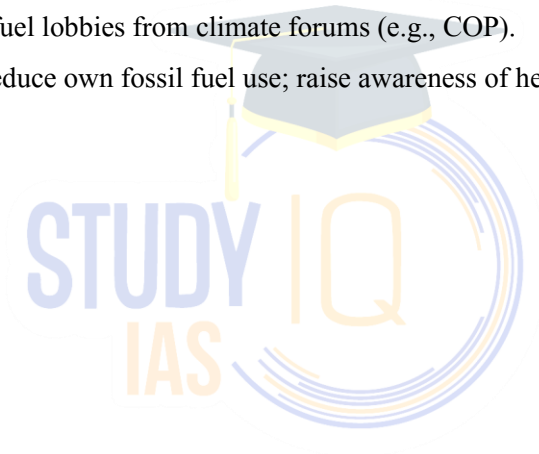
India Context

- In 2020, **3.3 lakh deaths in India** linked to particulate matter from fossil fuel combustion (Lancet).
- Eastern coast: compounded risks from **coal plants + frequent cyclones**.
- Rising cases of **cancer, chronic respiratory diseases** tied to air & water pollution.

Solutions

- **Phase out fossil fuels:** Halt new exploration, enforce pollution controls, remediate toxic sites.
- **Polluter Pays Principle:** Make fossil fuel companies bear healthcare and cleanup costs.
- **Equity Focus:** Transition must safeguard workers & vulnerable communities with healthcare, livelihood alternatives, and social protection.
- **Policy Measures:**
 - End fossil fuel subsidies.
 - Invest in renewable energy.
 - Ban fossil fuel advertising/sponsorships (like tobacco).
 - Exclude fossil fuel lobbies from climate forums (e.g., COP).
- **Health Sector Role:** Reduce own fossil fuel use; raise awareness of health risks.

Source: [The Hindu](#)



World's Largest Neutrino Detector Activated Underground

Context

China has officially launched the Jiangmen Underground Neutrino Observatory (Juno), now the world's most powerful and advanced facility for detecting neutrinos.

About JUNO

- Main goals:
 - To determine the **mass hierarchy** of neutrinos (which type is heavier/lighter).
 - To measure **neutrino oscillation frequency** (how neutrinos change from one type to another).
- JUNO is one of the world's largest liquid scintillator detectors, placed deep underground to shield from background radiation.

What is a Neutrino?

- A **neutrino** is a **subatomic particle**, often called a “ghost particle.”
- **Properties:**
 - No electric charge, almost zero size, and extremely tiny mass.
 - Travel at nearly the speed of light.
 - Pass through matter almost without interacting (billions pass through our body every second unnoticed).
- **Types:** Three flavors — **Electron neutrino, Muon neutrino, and Tau neutrino.**
- **Abundance:** Second-most abundant particle in the universe after photons (light particles).
- **Detection difficulty:** Interact only via the **weak nuclear force and gravity**, making them very hard to detect.

Other Major Neutrino Observatories

- **India-based Neutrino Observatory (INO):** Funded by DAE and DST; located in Bodi West Hills, Theni District, Tamil Nadu.
- **IceCube Neutrino Observatory:** Located at the South Pole; uses deep ice to study cosmic neutrinos.
- **China's TRIDENT:** A deep-sea neutrino telescope project.
- **US's DUNE:** Deep Underground Neutrino Experiment for advanced neutrino research.

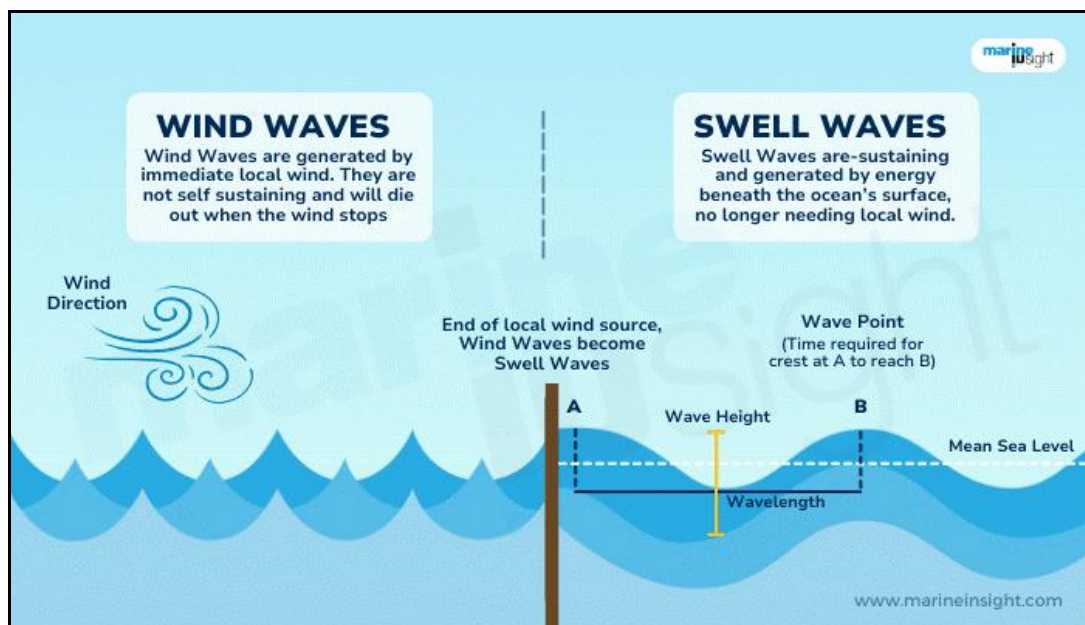
Source: [Sciencealert](#)

Swell Waves

Context

A new study shows Sri Lanka's landmass shields India's east coast from destructive Southern Ocean swell waves.

About Swell Waves



Formation:

- Swells are **generated** not by local winds but by **distant storms**, such as hurricanes or extended periods of strong gale winds.
- During these storms, a significant transfer of energy from the air to the water occurs, resulting in the creation of high waves.
- These waves can travel thousands of kilometres from the storm centre before reaching the coast.

Features:

- Swell waves exhibit a narrower range of frequencies and directions compared to locally generated wind waves due to the dispersion from their area of origin.
- Swells can move in directions independent of the wind direction, contrasting with a wind sea.
- Although typical swell wavelengths do not often exceed 150 metres, exceptionally severe storms can produce swells longer than 700 metres.
- Swells can arise without any local wind activity or precursors.

Related Information

- In India they are also known as **Kallakkadal waves**.

Source: [TOI](#)

Bodyguard Satellites

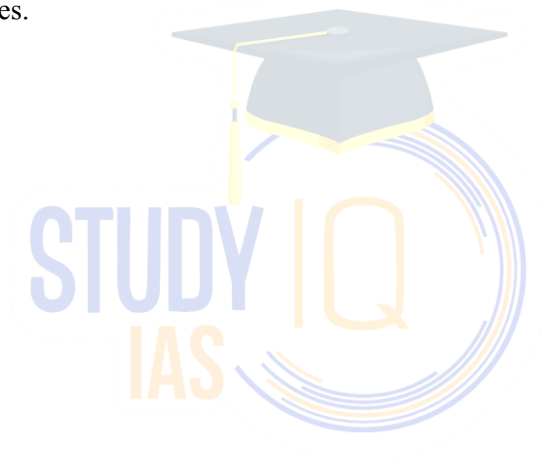
Context

India is planning to develop “**bodyguard satellites**” to protect its space assets, after a 2024 incident where a neighboring country’s satellite came within 1 km of an ISRO satellite.

What is a Bodyguard Satellite?

- A **bodyguard satellite** is a spacecraft designed to **protect other satellites** in orbit.
- Functions may include:
 - **Tracking and identifying threats** from nearby or hostile satellites.
 - **Countering attacks** such as jamming, laser dazzling, or physical collision.
 - **Providing early warning** through sensors like LiDAR (Light Detection and Ranging) to detect unusual approaches.
 - Assisting protected satellites to **reposition safely**.
- Essentially, it acts as a **shield or escort in space**, safeguarding critical communication, navigation, and surveillance satellites.

Source: [Economic Times](#)



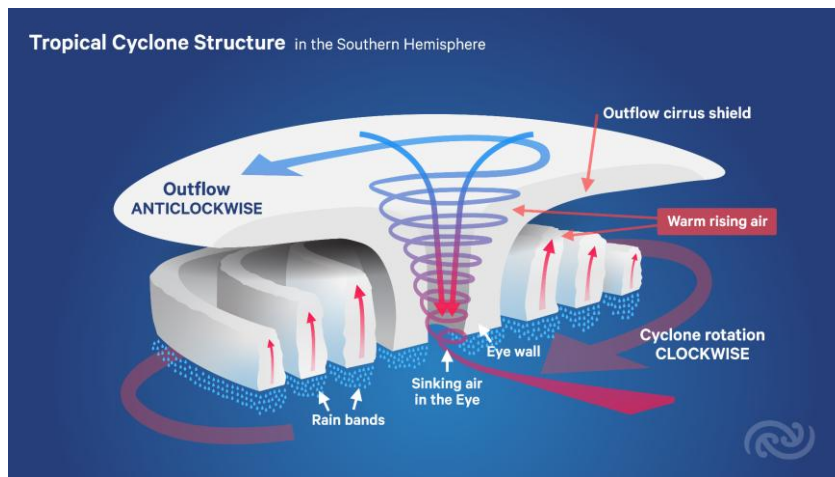
Typhoon Ragasa

Context

Super typhoon Ragasa is currently heading towards southern China's Guangdong province after Philippines.

What is Super Typhoon Ragasa?

- **Super Typhoon Ragasa** is a powerful tropical cyclone in the **West Pacific**, equivalent to a **Category 5 hurricane**, with sustained winds of around **230 km/h**.
- A **tropical cyclone** is a rapidly rotating storm system that forms over **warm tropical oceans**.
- It has a **low-pressure center (eye)**, strong winds, thunderstorms, and heavy rainfall.
- Energy is drawn from **warm ocean waters (above 26°C)**, making them more frequent in tropical and subtropical regions.



Related information

- **Typhoons** → West Pacific, close to places like China, Japan, and the Philippines.
 - A **typhoon** in the **Philippines** is referred to as “**Nando**”.
- **Hurricane** → In the **North Atlantic Ocean** and **eastern North Pacific Ocean**.
- **Cyclone** → In the **South Pacific Ocean** and **Indian Ocean**.
- **Willy-Willy** → Informal name used in **Australia** for severe tropical cyclones.

Source: [The Hindu](#)

Mains Topics

Multilateralism Under Stress: The U.S. Retreat, China's Rise, and India's Opportunity

Context

As the 80th UN General Assembly (2025) meets, U.S. President Donald Trump's fresh push against multilateral institutions and China's increasing influence at the UN highlight big shifts in global governance. For India, these changes bring both challenges and opportunities in shaping the future of multilateralism.

Multilateralism Under Test

- **Post-1945 order under strain:** The UN, WTO, and Bretton Woods institutions represented post-WWII consensus. Today, populist nationalism, great power rivalries, and financial crises threaten their legitimacy.
- **UN Security Council (UNSC) gridlock:** The UNSC is paralysed by U.S.-China and US -Russia veto wars, even on humanitarian matters.
- **Financial crunch in UN agencies:** Sharp decline in voluntary contributions, worsened by U.S. cuts, has led to stalled peacekeeping and humanitarian operations.
- **Stalled reforms:** Key reforms like **UNSC expansion** remain blocked due to geopolitical divisions.
- **Erosion of trust:** Global South perceives UN bodies as unrepresentative and dominated by major powers.

How the U.S. is Hurting Multilateralism

- **Retreat to sovereignty-first policy:** Trump has openly rejected "supra-nationalism," framing sovereignty as supreme in foreign policy.
- **Institutional exits:** U.S. has withdrawn from WHO, UNESCO, Human Rights Council, Paris Climate Agreement, and halted contributions to UNRWA (Palestinian refugees).
- **Funding cuts:** Over 80% reduction in U.S. contributions to peacekeeping, health, and climate operations.
- **Project 2025 playbook:** A conservative agenda to weaponise funding, oppose UN work on gender and climate, and even threaten U.S. exit from the UN.
- **Undermining global consensus:** By bypassing multilateral mechanisms, Washington promotes unilateral deals or coalitions of the willing, weakening legitimacy of global forums.

China Filling the Vacuum

- **Strategic positioning in UN agencies:** China actively places nationals in technical and administrative posts that shape global standards and decisions.
- **Agenda setting:** Promotes narratives like "Global Development Initiative," "Global Security Initiative," and "Global Civilisation Initiative", aligning UN work with its rise.
- **Belt and Road alignment:** Uses the UN to legitimise BRI-linked projects, particularly in Global

South.

- **Financial clout:** China contributes ~20% of UN regular budget (\$680 million), far exceeding India's contribution.
- **Indispensable actor:** While not yet replacing U.S. dominance, Beijing's activism has tilted debates in forums like Human Rights Council and FAO.

Challenges for India

Strategic and Security Challenges

- **West Asia instability:** U.S. retreat raises India's burden to protect its diaspora and oil supplies through chokepoints like Hormuz.
- **Chinese influence in UN:** Beijing's growing clout may constrain India on security, cyber, and Indo-Pacific issues.
- **UNSC reform blocked:** U.S.-China rivalry stalls expansion, hurting India's bid for permanent membership.

Economic Challenges

- **WTO weakening:** With U.S. disengagement and China's mercantilist influence, global trade rules risk being reshaped in ways that marginalise Indian exporters and hurt developing economies.
- **Climate finance gaps:** U.S. withdrawal from climate commitments (e.g., Loss and Damage Fund) leaves India and other developing countries facing greater adaptation costs with little external support.
- **Aid and development funding shortfall:** Reduced U.S. contributions to UN development programmes affect initiatives that India partners with in health, education, and sustainable development.

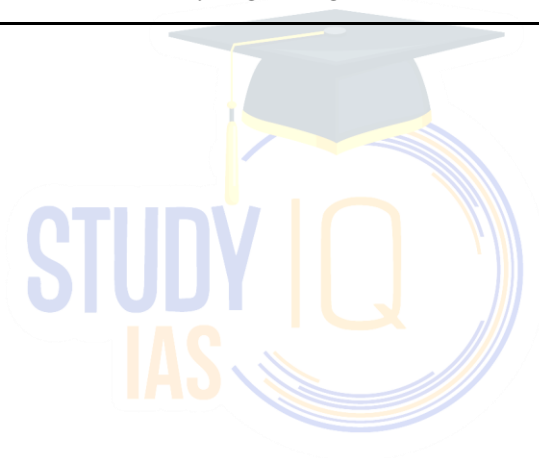
Diplomatic and Multilateral Challenges

- **Erosion of global consensus:** Gridlocked multilateralism makes it harder for India to mobilise Global South demands on issues like vaccine equity, food security, or digital governance.
- **Pressure to pick sides:** India faces **balancing dilemmas** between the U.S. and China - both of whom expect alignment in multilateral platforms.
- **Reduced legitimacy of multilateral platforms:** If the UN and WTO weaken, India loses forums where middle powers can constrain great powers and amplify their voice.

Opportunities for India

- **Middle power diplomacy:** With U.S. retreat and Chinese dominance contested, India can build coalitions of middle powers (EU, Japan, ASEAN, Africa).
- **Champion of Global South:** India can leverage its G-20 presidency legacy, SCO, BRICS, and IMEC (India-Middle East-Europe Corridor) to articulate South's priorities.
- **Focus on niche issues:** Global governance of AI, climate-health nexus, supply chain resilience are areas where India can lead.
- **Financial responsibility:** India must raise UN contributions (currently <1% of budget, \$38 million) to match its status as world's 4th largest economy.
- **Reform advocacy:** UNSC expansion remains blocked, but India should frame reforms in broader governance terms - budget rationalisation, accountability, decentralisation.
- **North-South Divide:** Global South is losing patience with Northern hypocrisy on climate finance and technology transfer. India can bridge divides.
- **India's credibility:** As a **net security provider** in the Indo-Pacific and champion of climate action (ISA, LiFE movement), India's credibility is growing.

Source: [Indian Express](#)



India's Semiconductor Ambition

Context

With a ₹76,000 crore outlay under the **India Semiconductor Mission (ISM)**, India seeks to become a global hub for semiconductor manufacturing and design. While fabrication remains resource-intensive, India's true strength lies in chip design and intellectual property, which must be leveraged to transform into a "product nation".

Current Status of India's Semiconductor Ecosystem

- **India Semiconductor Mission (ISM):** Approved in 2021 with ₹76,000 crore outlay to boost fabs, ATMP (Assembly, Testing, Marking & Packaging) units, and design capabilities.
- **Projects approved:** 10 major semiconductor and ATMP facilities across Gujarat, Uttar Pradesh, Punjab, Andhra Pradesh, Assam, and Odisha.
- **Design capacity:** India contributes ~20% of the global semiconductor design workforce, working for firms like Intel, Qualcomm, and NVIDIA.
- **Academic pipeline:** In 2021–22, 5.7 lakh students enrolled in electronics engineering courses. The Government's **Chips-to-Startup (C2S)** programme provides access to advanced design tools (EDA software).
- **Manufacturing Progress:** Micron's ₹22,500 crore ATP facility in Gujarat is under construction, set to start operations in 2024.
- **Global positioning:** India is a leading consumer of semiconductors (projected \$110 billion by 2030) but imports 100% of chips, mostly from Taiwan, South Korea, and China.

Strategic Importance of Semiconductors

- **Digital Sovereignty:** Chips power defence systems, satellites, AI, 5G, EVs, and critical infrastructure. Dependence on imports creates security vulnerabilities.
- **Economic Multiplier:** Semiconductors are the bedrock of modern electronics; the global chip market is expected to cross \$1 trillion by 2030.
- **Supply Chain Security:** The 2020 global chip shortage disrupted automobiles, smartphones, and electronics - exposing India's vulnerability.
- **Geopolitical leverage:** Nations with fab and design capacity wield strategic influence, as seen in Taiwan's centrality in U.S.- China tensions.
- **Employment generation:** The sector promises high-skill jobs in design, testing, R&D, and manufacturing.

Positive Impacts of Semiconductor Push on Indian Economy

- **Industrial base revival:** Strengthens electronics manufacturing ecosystem, from smartphones to EVs.
- **Atmanirbhar Bharat:** Reduces dependence on imported chips and enhances technological sovereignty.
- **High-value jobs:** Creates opportunities for engineers in design, fabrication, testing, and R&D.
- **Boost to exports:** Potential to make India a competitive exporter of chips and electronics.
- **Innovation ecosystem:** Encourages R&D, patents, and product design, shifting India from a service economy to a **product nation**.
- **Global positioning:** Enhances India's role in global value chains, attracting investments from U.S., Japan, Taiwan, and Europe.

Challenges facing India's Semiconductor Push

- **Fabrication hurdles:** Chip fabs require ultra-pure water, uninterrupted power, clean rooms, and heavy equipment - areas where India lags.
- **Capital intensity:** Setting up a fab costs **\$5–10 billion**; risk of low returns without sustained subsidies.
- **Overdependence on subsidies:** Critics (e.g., Raghuram Rajan) argue fabs may leave once subsidies end, raising sustainability concerns.
- **Weak industry-academia linkages:** Indian firms invest only 0.4% of revenues in R&D, far below U.S./Korea (~5–6%).
- **Hollowed-out electronics base:** Even basic components like fan controllers are imported; weak ancillary industries.
- **Global competition:** Taiwan, South Korea, and the U.S. dominate frontier chip nodes (3–7 nm). India is only beginning at legacy nodes (180 nm).
- **Skilling gaps:** Students lack industry exposure; few universities collaborate effectively with chipmakers.
- **Supply chain risks:** Heavy reliance on imports of machinery, chemicals, and gases required for fabs.

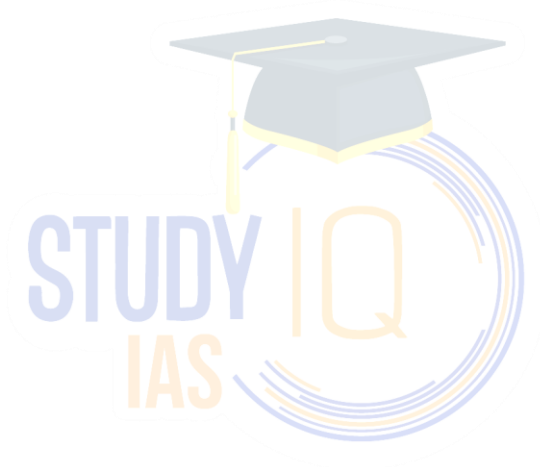
Way Forward

- **Prioritise Design and IP:** Focus on chip design and intellectual property creation where India already has strength.
- **Sustainable Incentives:** Link subsidies to performance, exports, and R&D investment, not just capex.
- **Industry-Academia Collaboration:** Incentivise firms to fund PhDs and collaborate on frontier research problems.
- **Develop Ancillary Ecosystem:** Promote domestic industries for components, testing tools, and raw materials.

- **Global Partnerships:** Collaborate with Taiwan, Japan, and USA for technology transfer, training, and R&D.
- **Invest in R&D:** Raise industry R&D investments from 0.4% to at least **2–3% of revenues** with tax incentives.
- **Skill Development:** Expand C2S and set up **semiconductor skill hubs** in Tier-2 cities.
- **Product Nation Mindset:** Encourage startups to build end-to-end electronics products and leverage India's design strength.

India has all the **ingredients - talent, demand, and policy push** to become a major semiconductor power. However, real success lies not merely in fabricating chips under subsidy-driven projects, but in **owning design, patents, and products** that capture the bulk of global value.

Source: [The Hindu](#)



Doctors at PHC level - Challenges & Way Forward

Context

Despite being the backbone of India's rural health system, PHC doctors face crushing workloads, administrative overload, and burnout, highlighting the urgent need to strengthen their support and working conditions.

Role of PHC Doctors

- **First Point of Contact:** PHC doctors are the first interface between the community and the health system, providing essential medical care to rural and peri-urban populations.
- **Population Coverage:** Each PHC covers ~30,000 people in rural areas, 20,000 in hilly/tribal areas, and ~50,000 in urban regions.
- **Beyond Clinical Work:** They conduct immunisation campaigns, school health programmes, disease surveillance, outbreak response, and health education sessions.
- **Community Engagement:** Participate in gram sabhas, Anganwadi visits, and inter-sectoral meetings, and mentor ASHA, ANM, and village health workers.
- **Programme Implementation:** Act as nodal officers for schemes like Rashtriya Bal Swasthya Karyakram, National Vector Borne Disease Control Programme, and maternal-child health missions.
- **Bridge Between Policy and People:** They operationalise national health policies at the grassroots, ensuring equitable access and preventive care.

Challenges Faced by PHC Doctors

- **Crushing Clinical Load:** On average, a PHC doctor sees ~100 outpatients daily; antenatal OPDs alone may bring ~100 pregnant women per day.
- **Multi-Specialty Burden:** Expected to handle emergencies across pediatrics, obstetrics, geriatrics, mental health, infectious diseases, and trauma without specialist support.
- **Administrative Overload:** Maintain **100+ registers** (OP, MCH, NCDs, drugs, sanitation) plus data entry into Ayushman Bharat Portal, UWIN etc. Often duplication of work.
- **Burnout and Fatigue:** Emotional exhaustion, detachment, and loss of motivation - recognised by WHO's ICD-11 as an occupational phenomenon.
- **Limited Learning Space:** Lack of time for research, upskilling, or continuous medical education despite being key contributors of health data.
- **Infrastructure Constraints:** Many PHCs lack proper equipment, medicines, or referral facilities, leaving doctors helpless in emergencies.

Issues in the PHC System in India

- **Understaffing:** WHO recommends **1 doctor per 1,000 population**; India still falls short, especially in rural areas.
- **Infrastructure Gaps:** Shortage of beds, labs, and referral linkages to higher care facilities.
- **Overemphasis on Targets:** Focus on programme-driven indicators often ignores quality of care and physician well-being.
- **Documentation vs. Care:** Digital health records (HMIS, IHIP) have added workload instead of easing it, with parallel paper and online entries.
- **Inadequate Incentives:** Salary and recognition are disproportionate to workload, discouraging doctors from rural postings.
- **Quality Over Checklists:** Even in states like **Tamil Nadu (650+ NQAS-certified PHCs in 2025)**, certification often stresses compliance over humane and sustainable care.

Way Forward

- **Reduce Documentation Burden:** Eliminate redundant registers, integrate platforms, and adopt automation & AI-based health records.
 - Models like the **U.S. 25 by 5 campaign** (cut clinician documentation time by 75%) can guide reforms.
- **Task Shifting:** Delegate non-clinical duties (data entry, logistics, IEC campaigns) to trained staff or **mid-level health workers**.
- **Strengthen Infrastructure:** Ensure functional labs, drug supply, telemedicine support, and emergency referral networks in every PHC.
- **Address Burnout:** Provide counselling, flexible hours, and rest periods; officially recognise burnout as a public health issue.
- **Incentivise Rural Postings:** Better remuneration, housing, career advancement, and academic opportunities for doctors serving in PHCs.
- **Community-Centric Governance:** Leverage panchayats, SHGs, and local volunteers for surveillance and awareness, reducing pressure on doctors.
- **Reframe Policy Focus:** Shift from a compliance-driven model (targets, checklists) to a facilitation model where systems enable doctors to deliver quality care.

Source: [The Hindu](#)