

Today's Prelims Topics

India State of Forest Report, 2023

Context

Recently, the Minister for Environment, Forest and Climate Change released the 'India State of Forest Report 2023.

Key stats of India State of Forest Report 2023 (ISFR 2023)

- Total Forest and Tree cover of the country - **8,27,357 sq km**. It is **25.17% of the geographical area of the country**.
 - Out of **25.17% - 21.76% is forest cover and 3.41%** is tree cover.
- **Top 3 states having largest forest and tree cover (Area Wise):** Madhya Pradesh, Arunachal Pradesh and Maharashtra.
- **Top 3 states having largest forest cover (area wise):** Madhya Pradesh, Arunachal Pradesh and Chhattisgarh.
- **Top 3 States having largest forest cover (% wise):** Lakshadweep (91.33%), Mizoram (85.34%) & Andaman & Nicobar Island (81.62 %).
- The present assessment has revealed that **19 states/UTs have above 33 percent of the geographical area under forest cover**.
 - Out of these, **8 states/UTs:** Mizoram, Lakshadweep, A & N Island, Arunachal Pradesh, Nagaland, Meghalaya, Tripura, and Manipur **have forest cover above 75%**.
- **The total mangrove cover in the country: 4,992 sq km.**
- **Total extent of Bamboo bearing area: 1,54,670sq km.**
 - As compared to the last assessment **there is an increase of 5,227 sq km in bamboo area.**
- **Total Carbon Stock in India's forest: 7,285.5 million tonnes.**
 - There is an **increase of 81.5 million tonnes in the carbon stock of the country as compared to the last assessment.**
- **Changes Compared to 2021 assessment:** Increase in Total Forest and Tree Cover: **+1,445 sq km.**
 - **States with Maximum Increase Forest and Tree Cover Increase (Top 4 States):** Chhattisgarh, UP, Odisha & Rajasthan.
 - **Top 3 states showing maximum increase in forest cover:** Mizoram, Gujarat & Odisha.

India State of Forest Report

- It is published by the **Forest Survey of India (FSI)** every **2 years**. (since 1987).
 - FSI is a government organization under MoEFCC that assesses and monitors India's forest resources. It was established in 1981 (**HQ - Dehradun, Uttarakhand**).
- The India State of Forest Report 2023 is **18th** such report in the series.
- The report contains information on **forest cover, tree cover, mangrove cover, growing stock, carbon stock in India's forests**, instances of forest fire, Agroforestry, etc.

UPSC PYQ

Q. Consider the following States: **(2019)**

1. Chhattisgarh
2. Madhya Pradesh
3. Maharashtra
4. Odisha

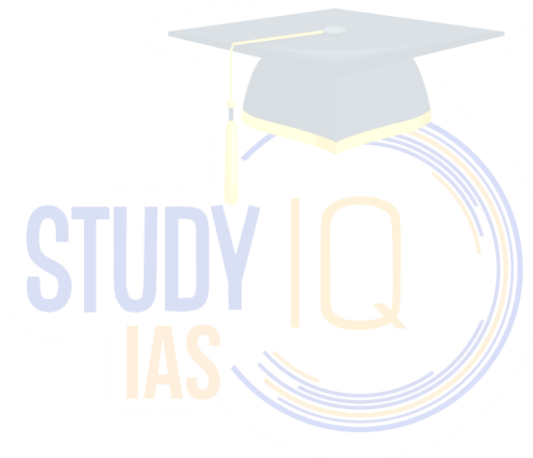
With reference to the State mentioned above, in terms of percentage of forest cover to the total area of State, which one of the following is the correct ascending order?

- (a) 2-3-1-4
- (b) 2-3-4-1
- (c) 3-2-4-1
- (d) 3-2-1-4

Answer: C

Source:

- [The Hindu - 25% of India's total area under green cover: report](#)



Telecommunications (Lawful Interception of Messages) Rules, 2024

Context

The Union Government notified the **Telecommunications (Procedures and Safeguards for Lawful Interception of Messages) Rules, 2024**. These rules **supersede Rule 419A** of the Indian Telegraph Rules, 1951.

About Telecommunications (Lawful Interception of Messages) Rules, 2024

- **Competent authorities for interception:**
 - **Union Level:** Union Home Secretary.
 - **State Level:** Secretary to the State Government in charge of the Home Department.
 - In **'unavoidable circumstances'**: An officer not below the rank of **Joint Secretary to the Union Government** can issue interception orders. (**Term unavoidable circumstances is not defined**).
- **Authorisation of Interception:** The Central Government may also authorise any law enforcement or security agency to intercept messages for reasons specified **under Section 20(2) of the Telecommunications Act, 2023**.
- **Orders in Remote Areas or Operational Reasons:** Following officers can issue interception orders:
 - **Central Level:** Head or second senior-most officer of the authorised agency.
 - **State Level:** Head or second senior-most officer (not below the rank of Inspector General of Police).
 - **These orders must:**
 - Be submitted to the competent authority within **3 working days**.
 - Be confirmed by the competent authority within **7 working days**.
 - **If not confirmed, interception must cease**, and messages intercepted cannot be used for any purpose, including court evidence.
- **Record Maintenance and Destruction:**
 - Records related to interception must be destroyed every **6 months** by the authorised agency and the review committee.
 - **Exception:** Records may be retained if required for functional purposes or court directions.
- **Oversight Mechanisms:** To ensure compliance, a high-level review committee will be established
 - **Central Oversight Committee:** Chaired by the **Cabinet Secretary**.
 - **Members:** Secretary of Legal Affairs & Secretary of Telecommunications.
 - **State-Level Committees:** Chaired by the **Chief Secretary**.
 - **Members:** Secretary Legal Affairs & Secretary to the State Government, **other than the Home Secretary**.

Indian Telegraph Rules, 1951

- **The Indian Telegraph Rules, 1951** were framed under the provisions of the **Indian Telegraph Act, 1885** to regulate and govern telecommunication services in India.
- **Rule 419A:** Provisions regarding lawful interception and monitoring of communication for security, investigation and public interest reasons.

Key Differences from Rule 419A of the Indian Telegraph Rules, 1951

- **Relaxation of Conditions for Interception:**
 - Previous rules allowed interception only in **emergent cases**.
 - The new rules allow interception in **remote areas or operational reasons**, even if the competent authority cannot issue orders immediately.
- **Limitations on Officers Authorised for Interception:**
 - Under Rule 419A, there was **no limit** on the number of Inspector General of Police (IGP)-rank officers at the State level authorised to intercept.
 - The new rules restrict authorisation to **only the head or second senior-most officer** of the agency.
- **Safeguard Against Unconfirmed Interceptions:**
 - Interceptions not confirmed within **7 days** cannot be used for any purpose, including as evidence in court.

Concerns Regarding the New Rules

- **Relaxation of 'Emergent Cases' Clause:** The requirement for interception in emergent cases has been relaxed. It will increase the **scope for misuse**.
- **Lack of Accountability for Misuse:** The rules do not specify punitive measures for agencies that misuse interception powers. Agencies can potentially abuse interception powers for **up to 7 days** before confirmation is required.
- **Ambiguity in Terms:** Terms such as '**unavoidable circumstances**' and '**operational reasons**' are not defined, leaving room for subjective interpretation.
- **Insufficient Checks on Authorised Agencies:** Absence of stringent checks increases the risk of overreach and violations of privacy rights.

Source:

- [The Hindu - What are the new interception rules and safeguards?](#)

Speed Gun

Context

To combat speeding vehicles, traffic police across India have increasingly adopted speed guns as a crucial enforcement tool to ensure road safety.

About Speed Gun

- It is a device to measure the speed of a moving object without having to be in contact with the object.
- It uses **electromagnetic radiation**, typically radio waves, which bounce off the object to calculate its speed using the Doppler effect.
- **Applications:**
 - Traffic monitoring by law enforcement.
 - Sports for tracking athlete performance.
 - Industrial uses requiring precise motion tracking.
- **How Speed Guns Work ?**
 - Speed guns **emit radio waves**, which are reflected by the moving object.
 - The frequency difference between the emitted and reflected waves is used to determine the speed of the object.
 - The speed is calculated using the formula: **(frequency difference * speed of light) / (2 * emitted frequency)**.
 - The speed of light in a medium is constant, allowing for accurate speed measurement over long distances.

Doppler Effect

- It refers to the change in frequency of waves due to the relative motion between the source and the observer.
- As a moving object approaches, the frequency of waves (like sound or light) increases, creating a higher pitch; as it moves away, the frequency decreases, resulting in a lower pitch.
- **E.g.** A train horn sounds higher-pitched as it approaches a platform and lower-pitched as it moves away.

Source:

- [The Hindu - The principle behind the working of a speed gun, used for motion tracking](#)

Starlink device usage in India despite being unapproved

Context

Recently **Starlink satellite antenna and router** were seized in Manipur. It has raised concerns over the misuse of satellite internet in India.

About Starlink

- Starlink is a **satellite-based internet service** developed by **SpaceX (founded by Elon Musk)**.
- It uses a constellation of **low Earth orbit (LEO) satellites** (orbiting at ~550 km) to deliver high-speed, low-latency broadband.
- It supports high data-rate activities like streaming, gaming and video calls, making it popular in: **Remote areas, Disaster zones & Locations with restricted internet access.**

What is Satellite Internet ?

- Satellite internet refers to a type of internet connection that uses satellites to provide broadband service.
- This technology enables users to access the internet from virtually anywhere, particularly in remote or underserved areas where traditional terrestrial internet infrastructure is lacking.
- Satellite internet works by transmitting data from a user's dish to a satellite in orbit, which then relays the information to a ground station connected to the internet backbone.

How Does Starlink Control Access?

- **Signal Encryption:** Prevents hacking or interception of satellite transmissions.
- **Geofencing:** Terminals are geographically restricted to areas authorized for service.
 - E.g. A Starlink device bought in the U.S. might not work in India unless its geographic location is reconfigured.
- **Challenges:**
 - Precise international border coverage is difficult due to:
 - Contested borders.
 - Satellites transmitting across moving boundaries.
 - Devices purchased abroad may bypass restrictions if not regulated.

Starlink's Regulatory Status in India

- **Unapproved Service:** Starlink has not received regulatory approval in India under the **Indian Wireless Act and Indian Telegraph Act**.
- **Legislation:** **Section 6 of the Indian Wireless Act** and **Section 20 of the Indian Telegraph Act** prohibit the use of satellite-based communication devices like Thuraya or Iridium phones without approval.
- **App Availability:** Despite bans, the Starlink app is downloadable in India, unlike restricted apps like TikTok.

Source:

- [The Hindu - Are Manipur militants using Starlink devices?](#)

SpaDeX

Context

Indian Space Research Organisation (ISRO) is preparing to launch a record 24 scientific experiments on board the POEM satellite under the **Spadex Mission**.

About SpaDeX (Space Docking Experiment)

- It is a new mission by ISRO aimed at demonstrating in-space docking and undocking of two satellites while in motion.
- It is made up of 2 small spacecraft - **Chaser & Target. (Launch Vehicle- PSLV C-60)**
- Both spacecraft will be launched **simultaneously but independently** into a **470-km wide circular orbit at 55° inclination** & With a **local time cycle of about 66 days**.
- **Stages:**
 - **Rendezvous** – Aligning orbits of 2 spacecraft
 - **Docking** – Connecting 2 spacecraft
 - **Undocking** – Disconnecting the 2 spacecraft.
- **Objectives:**
 - **Primary Objective - Docking Manoeuvre:** The satellites will demonstrate docking (joining) and undocking (separating) while in orbit.
 - **Secondary Objective - Electric Power Transfer:** Transfer of electric power between docked spacecraft. It is a critical technology for:
 - In-space robotics.
 - Composite spacecraft control.
 - Payload operations post-undocking.
- **Significance:** Important for the success of India's upcoming Bharatiya Antariksh Station (India's space station project).
- **About PSLV Orbital Experimental Module (POEM):**
 - POEM is a space platform that allows the scientific community to perform experiments in microgravity conditions in orbit.
 - It uses the spent fourth stage of the Polar Synchronous Launch Vehicle (PSLV) as an orbital platform.
 - **Important Experiments conducted on POEM in past:** Electric propulsion systems, devices for releasing satellites, and technology for tracking stars

Facts

- India will become the **4th country** in the world to have a space programme capable of docking in space. **(After Russia, USA & China)**

Source:

- [The Hindu - SpaDeX: meeting in space](#)

Govt. amends rule to restrict access to polling footage

Context

The Central Government recently **amended Rule 93 of the Conduct of Election Rules, 1961** to restrict public access to certain election-related documents.

About the Amendment

- **Modification in Rule - 93:**
 - **Previous Rule 93:** Allowed public access to all “papers” related to elections.
 - **Amended Rule 93:** Limits access to only those documents explicitly mentioned in the rules, excluding electronic records like CCTV footage, webcasting clips and video recordings.
 - **Nomination forms, results and election account statements remain accessible.**
- **Exceptions to the Amendment:**
 - **Candidates' Access to Documents:** The amendment **does not restrict access for candidates** in elections. Candidates still have the right to access all election-related documents, including **CCTV footage** and other electronic records, for their constituencies.
 - **Public Access to Documents:** For the general public, access to electronic records like CCTV footage is **limited** and can now only be obtained through **court intervention**.
- **EC's Justification for the Amendment:**
 - **Privacy and Security Concerns:** The ECI argued that sharing CCTV footage publicly could compromise the **secrecy of the vote**, especially in **sensitive areas** like **Jammu and Kashmir** or **naxal-affected regions**, where voter safety could be at risk.
 - **Misuse of Data:** There were concerns that such footage could be manipulated using **artificial intelligence** to create misleading narratives, which could undermine the integrity of the election process.

Source:

- [The Hindu - Govt. amends rule to restrict access to polling footage](#)

United Nations Internal Justice Council

Context

Former Supreme Court Judge Justice Madan B Lokur was recently appointed as the Chairperson of the United Nations Internal Justice Council.

About United Nations Internal Justice Council (IJC)

- IJC operates under the UN Secretary-General with oversight from the General Assembly.
- **Aim:** To strengthen the administration of justice within the UN by ensuring a fair and transparent system for dispute resolution among staff and management.
- **Powers and Functions:**
 - **Search for Judges:** Identifies and interviews candidates for vacancies in the **UN Dispute Tribunal (UNDT) and the UN Appeals Tribunal (UNAT)**.
 - **Recommendations:** Recommends two or three candidates for each vacancy to the General Assembly, ensuring geographical diversity.
 - **Oversight:** Provides inputs on the implementation of the justice system to the General Assembly.
- **Appointment of Chairperson:**
 - **Procedure:** The Chairperson is selected by consensus from **4** other members of the Council & Appointed officially by the **UN Secretary-General**.
 - **Term: 4 years (Justice Lokur's tenure will end in November, 2028).**

Source:

- [The Hindu - Madan Lokur is UN Internal Justice Council chief](#)

Denali Fault

Context

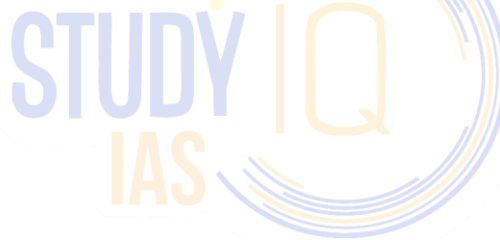
According to new research, three geologic sites **Clearwater Mountains, Kluane Lake and Coast Mountains** along the **Denali Fault** were once part of a **single geologic feature** that united two landmasses' millions of years ago.

About Denali Fault

- Denali fault is a major **intracontinental dextral (right lateral) strike-slip fault** located in the southern half of Alaska in the Alaska Range.
- It extends from northwestern British Columbia, Canada to the central region of the U.S. state of Alaska.
- It is located on the boundary between the **Pacific and North American tectonic plates**, where the Pacific Plate is subducting beneath the North American Plate
- **About Fault lines:**
 - A fault is a fracture or zone of fractures between two blocks of rock. It is a line on the surface of the Earth that marks where two sides of a fault meet.
 - Faults allow the blocks to move relative to each other. This movement may occur **rapidly, in the form of an earthquake - or may occur slowly, in the form of creep.**

Source:

- [The Hindu - Denali Fault tore apart ancient joining of landmasses](#)



Editorial Summary

Indian Navy's Undersea Warfare

Context

The Indian Navy commenced 2024 with significant advancements in its operational capabilities, particularly through Operation Sankalp.

Operation Sankalp

- Focus on ensuring shipping security from piracy and providing assistance to ships targeted by Houthis in areas like the Gulf of Aden, the Arabian Sea, and the waters off the east coast of Somalia.
- Reinforced India's status as a preferred security partner and first responder.
- **Milestones:**
 - Over 110 lives saved, including 45 Indian seafarers.
 - Escorting approximately 1.5 million tons of critical commodities.
 - Seizing over 3,000 kgs of narcotics.

Facts

US and other European Union countries operations to tackle the Houthi threat in the Red Sea **Operation Prosperity Guardian and Operation Aspides** respectively.

Other Key Developments in Undersea Warfare

- **Commissioning of INS Arighaat (August 2024):**
 - India's second indigenous nuclear-powered ballistic missile submarine (SSBN).
 - Enhances the third leg of India's nuclear triad.
 - Features:
 - Advanced sonar and propulsion systems.
 - Upgraded acoustic dampening.
 - Higher indigenous content compared to INS Arihant.
 - Successfully tested the K-4 submarine-launched ballistic missile (SLBM) with a 3,500 km range, placing most of China within striking distance.
- **Approval of Project-77 (P-77):**
 - Cabinet Committee on Security approved construction of two nuclear-powered attack submarines (SSNs).
 - Delivery of the first SSN by 2036-37 with over 90% indigenous content.
 - India becomes the only non-P5 nation to operate both SSBNs and SSNs.

Developments in Conventional Submarines

- **Project-75 (Scorpene Class Submarines):**
 - Sixth Scorpene boat, **INS Vaghsheer**, to be commissioned soon.
 - Plan to order three more Scorpene boats with 60% indigenous content.
- **Project-75(I) (AIP-Enabled Submarines):**

- Focus on Air Independent Propulsion (AIP) technology to increase non-nuclear boat efficacy.
- Collaboration with Spain (Navantia) and Germany (Thyssenkrupp Marine Systems - TKMS).
- Indigenous content expected to start at 45% for the first boat and rise to 60% by the sixth boat.
- **Approval of Unmanned Underwater Vehicles (UUVs):**
 - Development of 100-tonne UUVs at a cost of ₹2,500 crore.
 - Aim: Enhance undersea capabilities with cost-effective, strategic enablers.

Challenges in Modernization

- **Budgetary Constraints:** It hinders timely acquisitions and modernization efforts.
- **Excessive Time Delays:** Inefficiencies in specifying requirements, shortlisting manufacturers, and evaluating tenders.

Strategic Opportunities

- **Strategic Focus Areas:** Streamlined acquisition processes.
 - Balancing investments across undersea, surface, and aviation elements to create a robust blue-water navy.
- **Collaboration with Strategic Partners:**
 - Potential for enhanced cooperation with friendly maritime nations.
 - Alignment with India's vision of Security and Growth for All in the Region (SAGAR).
- **Promotion of a Free and Inclusive Indo-Pacific:** Focus on maritime stability to support India's growth and geopolitical goals.

Source: [The Hindu: Pointing the beacon at India's undersea warfare power](#)

The Global Warming Fight Has A Challenge For India

Context

- Global climate negotiations (such as COP 29, Azerbaijan) remain deadlocked while the planet continues to warm.
- There is an urgent need for emissions reduction to combat global warming.

Key Developments Affecting Emission Targets

- **Carbon Border Adjustment Mechanism (CBAM):** The European Union's CBAM is set to take effect in 2026.
 - It will impose customs duties on imports unless exporting countries raise their carbon taxes to match EU levels.
 - This mechanism is expected to exert significant pressure on countries like India and China to accelerate their transition towards cleaner energy sources.
- **Pressure for Peaking Emissions:** The G-7 Summit in Hiroshima and Apulia has urged major economies to commit to peaking emissions by 2025, referencing both China and India.
 - The urgency is compounded by the potential return of a Trump administration, which may withdraw the U.S. from climate agreements, complicating global efforts.

India's Current Status

- India's per capita electricity consumption is one-third of the global average.
- India's share of nuclear energy in electricity generation is just 3%.
- India has committed to achieving net-zero emissions by 2070, as stated at COP26 in Glasgow.

Global Efforts

- **Developed Nations:**
 - **United States:** 20% of electricity comes from nuclear power; pushing for a clean energy transition despite political uncertainty.
 - **France:** 70% of electricity generation relies on nuclear energy; actively expanding its capacity.
 - **EU:** Leading with CBAM and aggressive emission reduction goals.
- **China:** Plans to peak emissions by 2030, with significant investments in renewable and coal-based power to secure its energy needs during the transition.
- **Japan:** Committed to tripling nuclear energy capacity by 2050, overcoming past hesitations from the Fukushima disaster.

What are India's Development Roadblocks?

- **Energy Demand:** Growing electrification across sectors (e.g., transport, industry) will significantly increase demand.
 - **E.g.,** The Vivekananda International Foundation (VIF) Task Force estimates that India will require a minimum of 21,000 Terawatt hours (TWh) of electricity by 2070.

- The International Energy Agency (IEA) projects India's energy demand pegged at **3,400 TWh by 2040**, significantly lower than NITI Aayog's **6,200 TWh in 2020**.
 - Unrealistic projections could lead to energy deficits and slow growth.
 - **Technological Constraints:** Reliance on emerging technologies like hydrogen and small modular reactors, which are not yet commercially viable.
 - **Financial Burden:** The transition to clean energy requires \$15.5 trillion (renewable-heavy) or \$11.2 trillion (nuclear-heavy) by 2070. Current international climate financing commitments fall short.
 - This results in underutilisation of renewable energy and nuclear power compared to their potential.
 - **Land and Resource Limitations:** Renewable energy expansion requires 4,12,033 sq. km, far exceeding India's surplus land of 2,00,000 sq. km.
 - **DISCOM Health:** Poor financial health of electricity distribution companies (DISCOMs) hinders investments in clean energy.
- Nuclear vs. Renewable Energy**
Scalable and Firm Power: Unlike renewables, nuclear power provides a consistent energy output unaffected by weather conditions.
Land Efficiency: Nuclear plants require far less land compared to renewables. For example:
Renewable-heavy approach: Needs 4,12,033 sq. km.
Nuclear-heavy approach: Needs 1,83,565 sq. km.
Cost-Effectiveness: Nuclear power tariffs (₹3.80/unit) are lower than renewable energy with storage (₹4.95–₹7.5/unit).
- Recommendations for India**
- **Ramp Up Nuclear Energy:**
 - Public-private partnerships for scaling 700 MW–1,000 MW reactors.
 - Recognize nuclear energy as green energy to attract more financing.
 - **Strengthen Renewables with Storage:** Develop advanced storage solutions to overcome intermittency challenges of renewables.
 - **Policy Reforms:**
 - Improve DISCOM financial health through better tariffs and governance.
 - Build public and political consensus on tariff hikes to fund the energy transition.
 - **Enhance International Collaboration:**
 - Engage in joint ventures for nuclear and renewable energy projects.
 - Negotiate for equitable access to international climate finance and carbon space.

Source: [The Hindu: The global warming fight has a challenge for India](#)

Export can drive the growth

Context

In India consumption is subdued and private investment is weak. But exports could offer a way out.

More in News

- India's GDP is roughly \$4 trillion while global GDP is a little more than \$100 trillion.
- That means that India's share of the global economy is around 4%.
- But its share in global goods exports is much smaller, less than 2%.

Background of Slowdown in the Indian Economy

- **Decline in GDP Growth Rate:**
 - India's GDP growth has consistently declined in recent quarters, from over 8% in mid-2023 to less than 5.5% in September 2024.
 - High-frequency indicators confirm a slowdown, reflecting weaker economic momentum beyond statistical anomalies.
- **Subdued Consumption Demand:**
 - Urban consumption remains weak, dampening overall demand.
 - This slowdown impacts private investment, as industries face excess capacity utilization and hesitate to expand.
- **Weak Private Investment:**
 - Despite healthy corporate balance sheets, private investment remains short.
 - Lack of demand for additional production capacity discourages new investments.
- **Fiscal Constraints on Public Investment:**
 - Government spending has been a key driver of growth, but fiscal limits are nearing, restricting further expansion.
 - Persistent reliance on government-led demand is unsustainable.
- **Declining Foreign Direct Investment (FDI):**
 - FDI inflows stagnated at \$66 billion in 2023-24, with only a small proportion directed toward manufacturing.
 - Missed opportunities to capitalize on global supply chain shifts from China.

Why Export is a Way Out

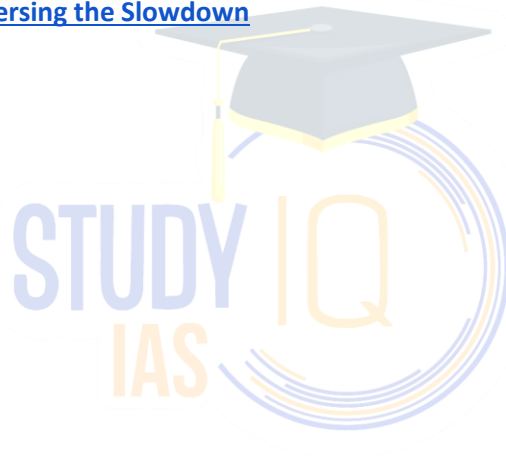
- **Potential Growth Through Exports**
 - A targeted increase in export share by 1 percentage point over five years could add 1% to annual GDP growth.
 - A 50% increase in export volumes implies substantial economic benefits and job creation.
- **Global Dynamics Favoring India**
 - Multinational corporations are shifting supply chains away from China, creating an opening for India.
 - India's demographic advantages and policy measures like the PLI scheme make it a strong contender for FDI.
- **Manufacturing as a Catalyst**
 - Attracting FDI in manufacturing could increase India's competitiveness in global markets.

- Export-oriented manufacturing has historically driven growth across Asia.

Policy Recommendations for Export-Led Growth

- **Consistent Trade Policy:**
 - Minimize tariff changes and avoid import/export bans.
 - Shift from protectionist policies to a free-trade mindset.
- **Improved Exchange Rate Management:** Allow exchange rates to reflect market dynamics to enhance export competitiveness.
- **Enhanced Ease of Doing Business:** Simplify regulatory frameworks to attract foreign and domestic investment.
- **Boost FDI in Manufacturing:**
 - Expand and streamline schemes like PLI.
 - Ensure infrastructure and skill development to support manufacturing growth.
- **Transparent and Predictable Policies:** Avoid policy flip-flops to instill confidence in investors and businesses.
- **Level Playing Field:** Equal opportunities for domestic and foreign firms to foster healthy competition.

Source: [Indian Express: Reversing the Slowdown](#)



Suggestions for Union Budget 2025-26 in Agriculture

Context

The upcoming Union Budget for 2025-26 presents an opportunity to address critical challenges in the agricultural sector, particularly in light of climate change and the need for sustainable practices.

Challenges in Indian Agriculture

- **Impact of Climate Change:** Temperatures in India have risen by 0.7°C since 1951.
 - July-September precipitation has declined by 6%, increasing risks to agricultural productivity.
- **Soil Health Issues:** Low organic carbon content and inadequate moisture retention in soils.
 - Current farming practices and imbalanced fertiliser usage exacerbate the problem.
- **Skewed Fertiliser Subsidy Policy:** Urea is heavily subsidised compared to other nutrients like phosphate (P) and potash (K), leading to overuse of nitrogen (N).
 - Micronutrients like iron, zinc, and boron are underutilized.
- **Pro-Consumer Bias in Food Policy:** Frequent export bans (on onions, wheat, sugar, and rice) and below-cost domestic market dumping by FCI harm farmers.
 - Economic cost of rice to FCI: ₹39/kg; sold in the open market at ₹29/kg.
- **Negative Producer Support Estimate (PSE):** India's PSE is -15.5%, indicating an "implicit tax" on farmers, compared to 14% support in China and OECD countries.

Key Suggestions for Agriculture Budget 2025-26

- **Increase Agri-R&D Spending:**
 - **Current allocation:** <0.5% of agri-GDP.
 - **Proposed:** Double to at least 1% of agri-GDP.
- **Promote Soil Health:**
 - Support practices that enhance organic carbon and moisture retention.
 - Emphasize balanced fertilisation (macronutrients and micronutrients).
- **Introduce a Direct Income Transfer Scheme:**
 - Based on per-hectare basis, using existing data (fertiliser sales, soil health cards, PM-KISAN).
 - Free fertiliser prices from controls to restore balance in N, P, K usage.
 - Promote technological innovations like nano-urea and nano-DAP.
 - **Benefits:**
 - Improve nutrient use efficiency.
 - Reduce environmental damage and plug leakages in subsidies.
 - Restore farmer trust through effective communication.
- **Learn from Milk Revolution:**
 - Milk: India's largest agri-commodity with 239 million tonnes production, surpassing the US (103 million tonnes).
 - Farmers receive 75-80% of consumer price in the milk value chain.
- **Revolutionise Fruits and Vegetables:**
 - Currently, farmers receive only ~33% of consumer price.
 - Establish a dedicated board like NDDB (National Dairy Development Board) for fruits and vegetables.

- Appoint a visionary leader akin to Verghese Kurien to drive reforms.
- **End Anti-Market Practices:**
 - Stop export controls, private stock limits, and futures bans.
 - Ensure market-driven pricing without excessive government intervention.
- **Encourage Long-Term Market Reforms:**
 - Move from pro-consumer bias to balanced farmer-consumer policy.
 - Facilitate open markets to enhance farmer incomes and stabilize supply.
- **Promote Sustainable Agriculture:**
 - Strengthen initiatives like the Natural Farming Mission.
 - Recognize that natural farming alone cannot feed a growing population (1.67 billion by 2050).
 - Combine biofertilisers with appropriate chemical fertilisers for sustainable productivity.

Source: [Indian Express: Farms as sites of Nurturing](#)

