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7 PM COMPILATION

July, 2023

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India's National Research Foundation (NRF): Needs, significance and challenges- Explained, pointwise

Introduction

The recent approval of the National Research Foundation (NRF) Bill by the Indian Union Cabinet marks a significant step towards boosting scientific research in the country. With a significant budget at its disposal, the NRF aims to tackle India's long-standing need to increase research and development investments and cultivate a robust research culture within higher educational institutions. While the initiative holds great potential, it also faces challenges including the need for equitable fund distribution, encouraging interdisciplinary collaborations, and ensuring international competitiveness.

What is (National Research Foundation) NRF?

It is modelled on the lines of the hugely successful National Science Foundation of the United States. It is designed to be an apex body for providing high-level strategic direction for scientific research in India. The body would be formed in accordance with the recommendations of the **National Education Policy (NEP).**

Aim: The primary aim of NRF is to foster a culture of research and innovation throughout India's universities, colleges, research institutions, and R&D laboratories. The NRF also aims to create a multidisciplinary approach, integrating various disciplines for a comprehensive and holistic advancement of scientific research.

Fund allocations: A total of Rs. 50,000 crores would be allocated over the span of five years (2023-28). Out of the allocated ₹50,000 crores, the government plans to raise **₹36,000 crores through investments from industries and philanthropists**, while the remaining amount will be funded by the government— **₹10,000 crores from the Centre and ₹4,000 crores through subsuming Science and Engineering Research Board (SERB) into the NRF**. Scientific research projects under the NRF would be funded by the DST and industry on a 50:50 basis.

Composition: The NRF would be administratively housed in the Department of Science and Technology (DST). It would have **a 16-member governing board** with two members from DST, five from industry, one from humanities and six experts who would be selected depending on the nature of the project being evaluated. **The Prime Minister will be the ex-officio president of the board** and the **Minister of Science and Technology, and the Minister of Education will be the ex-officio vice presidents.** The NRF's functioning will be **governed by an executive council chaired by the Principal Scientific Advisor to the government of India**.

What is the need for NRF?

Insufficient research funding: India's investment in research and development (R&D), as a percentage of GDP, has steadily dropped–from 0.84% in 2008 to about 0.69% in 2018; whereas it was 2.8% in the US, 2.1% in China, 4.3% in Israel and 4.2% in South Africa.

Low patents and publications: India lags in the number of patents and publications produced. According to the **World Intellectual Property Organisation (WIPO),** China made as many as 1.538 million patent applications (with just 10% being made by nonresident Chinese), the US made 605,571 patent applications, while India made a mere 45,057, of which over 70% were by non-resident Indians.

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Limited accessibility to research grants: Funding opportunities are often limited to established institutions and researchers, leaving those in peripheral areas underserved. For example, **according to DST officials, about 65 per cent of funds from SERB had been cornered by the IITs, and only 11 per cent flowed to projects in state universities.**

Fragmentation of research: Currently, research in India is largely fragmented with various institutions conducting studies in isolation, leading to inefficiencies and duplication of efforts.

Lower private sector contributions: About 56% of R&D spend comes from the government and 35% from the private sector. The profile in technologically advanced countries is different. R&D is led by the private sector, contributing as much as 88% in Israel.

Lack of focus on social sciences and humanities: Most of the research funding tends to gravitate towards natural sciences and engineering, while social sciences and humanities often receive less attention.

Read more: **How NRF aims to boost research in higher educational institutes**

What are the significances of NRF?

Democratisation of science funding: One of the key significances of the National Research Foundation (NRF) is the promised democratisation of science funding. The NRF plans to shift the emphasis of funding from elite institutions towards projects in peripheral, rural, and semi-urban areas.

Promotion of interdisciplinary research: The NRF intends to foster research not just in the natural sciences and engineering, but also in social sciences, arts, and humanities. It's a recognition of the importance of holistic and interdisciplinary approaches to addressing societal challenges. This is significant as it would promote more well-rounded and comprehensive research outputs.

Encouraging industry involvement in research: Of the estimated Rs 50,000 crore funding over the next five years, Rs 36,000 crore is expected to come from the industry. This indicates that the NRF is aiming to encourage more industry involvement in research. Collaborative efforts between academia, industry, and research institutions will lead to more pragmatic and impactful research, addressing real-world problems.

Mentorship for higher education institutions: The NRF is designed to foster a culture of research in universities and colleges across India. This will be achieved through funding, mentorship, and providing strategic direction to scientific research. The NRF aims to unite education and research, which have traditionally been separate domains in the Indian context.

Policy framework for increased R&D spending: The NRF will create a policy framework and regulatory processes to encourage increased spending by industry on R&D. In comparison to other countries, India's R&D spending is considerably low. The creation of NRF signals a step towards increasing India's investment in scientific research.

Addressing pressing societal challenges: A primary aim of the NRF is to find solutions to big problems facing Indian society like clean energy transition, climate change etc. By promoting research in various disciplines, the NRF hopes to stimulate innovation that will address societal challenges, thereby making India a frontrunner in research and innovation.

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What are the potential challenges faced by NRF?

Ensuring equitable funding distribution: One challenge for the NRF will be ensuring that funding is distributed equitably across institutions in various geographic locations, particularly in peripheral, rural, and semi-urban areas. **The historical trend of wealthier, more prestigious institutions like the IITs receiving the bulk of the available funding will be a difficult pattern to break.**

Integration of diverse research areas: The NRF has the ambitious goal of promoting research in not only natural sciences and engineering, but also in social sciences, arts, and humanities. It aims to encourage interdisciplinary research. **Balancing the interests, needs, and funding allocation across these diverse disciplines, each with their unique requirements, could pose a challenge to the NRF.**

Balancing public and private funding: While the NRF plans to draw substantial funding from the private industry, ensuring a balance between public and private interests in research could be a challenge. For example**, private industry may have commercial interests that might not always align with public good or scientific discovery**.

Managing the absorption of SERB: The NRF will also face the challenge of absorbing the Science and Engineering Research Board (SERB) without disrupting the ongoing projects and initiatives. This process would require careful planning and execution to ensure the continuity and efficiency of research funding.

What should be done?

Establish a fair and transparent evaluation system: To ensure equitable distribution of funds, NRF should establish a fair and transparent system for evaluating research proposals. This system should take into account the potential impact of the research, the capabilities of the research team, and the needs of the specific geographic area or community.

Foster interdisciplinary collaboration: This could involve creating funding opportunities specifically for interdisciplinary projects, providing resources to help researchers from different fields work together effectively, and organizing events or forums to facilitate cross-disciplinary communication.

Secure industry involvement: This could include demonstrating the potential returns on investment, offering opportunities for industry to influence research directions that align with their interests, and creating mechanisms for regular communication and feedback.

Ensure smooth transition for SERB: A transition plan should be made to ensure the smooth absorption of the Science and Engineering Research Board (SERB) into the NRF. This should ensure the continuity of ongoing projects and the retention of important institutional knowledge and expertise.

Promote international competitiveness: To achieve internationally competitive research, the NRF should invest in creating high-quality research environments, provide robust mentorship programs, and foster collaborations with international research entities. In addition, the NRF should track global research trends and standards to ensure that the research it supports is at the forefront of global scientific progress.

Strengthen university research capabilities: The NRF should prioritize building research capabilities within universities. This can be achieved by providing funding and resources to

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improve research facilities and infrastructure, encouraging the development of research-oriented curricula, and supporting faculty development programs focused on research.

Sources: **Pib**, **The Hindu**, **Hindustan Times**, Indian Express (**Article1**, **Article2**, **Article3**),**The Economic Times**, Deccan Herald (**Article1**, **Article2**), **The Times of India**

Criminalisation of politics: causes, impacts and solutions – Explained, pointwise

Introduction

Recently, the Association for Democratic Reforms (ADR) wrote to the Election Commission (ECI), seeking action against political parties that failed to publish details of criminal records of their candidates as per orders of the Supreme Court and the ECI. Activists and independent electoral watchdogs like ADR have been raising concerns over criminalisation of politics for a long time. The increasing trend of criminalisation of politics poses a significant threat to the democratic system.

A little background of the petition

In a petition filed by **Public Interest Foundation**, the Supreme Court in 2018, made it mandatory for political parties to widely publicize the details of criminal cases pending against their candidates.

Subsequently, in February 2020, while hearing a contempt petition regarding its 2018 order not being implemented, the court repeated that the parties would have to publish the details of candidates with pending criminal cases. It also added that they would have to include the reasons for selecting such a candidate.

However, an analysis of data by the ADR of Karnataka, Gujarat and Himachal Pradesh elections shows that the number of candidates with criminal antecedents has only increased from previous elections.

A petition filed by the ADR in 2022 in the Supreme Court sought contempt proceedings against various political leaders for not complying with earlier Supreme Court orders.

The Supreme Court, earlier in 2023, dismissed the petition and asked ADR to pursue the remedies before the EC. This led ADR to write the letter to ECI.

What is criminalisation of politics?

 "Criminalisation of politics" refers to the entry of criminals and corrupt individuals into the political system. These individuals then exploit their positions of power and influence to prioritize their personal agendas over the welfare of the nation and its people.

 Read more: **What is the criminalisation of politics?**

What are the recent trends?

Data by the ADR reveals that the number of candidates with criminal charges getting elected to Parliament has been on the rise since 2004.

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In 2004, around 24% of Members of Parliament (MPs) had pending criminal cases against them. By 2009, this percentage increased to 30%, followed by a further rise to 34% in 2014. In 2019, as many as 43% of MPs had criminal cases pending against them.

According to a recent report published by ADR, in the recently held Karnataka elections, approximately 45 per cent of the candidates had criminal cases registered against them. Nearly 30 per cent of these candidates were accused of grave offences, including rape and murder.

What are the causes of criminalisation of politics in India?

Attraction of the strongmen: Due to the government's failure to address the socio-economic and political concerns of the people, they are attracted towards people with a criminal image. These strongmen, who possess both power and wealth, are expected to fulfill the needs of the people.

Vote bank politics: Money and muscle power of criminals help political parties gain votes. Since, in India electoral politics is more about caste, ethnicity, religion and several other factors, candidates overcome the reputational loss due to criminal charges and come out as victorious in elections.

Black money in elections: Electoral politics is largely dependent on the money and the funding that it receives. Since candidates with criminal records often possess greater wealth, they ensure greater inflow in money, labour and other advantages that may help a party in successful campaign, and also possess greater 'winnability'. Researech suggests that a candidate with a tainted reputation is three times more likely to win an election than a candidate with a clean record.

Lack of Intra-party democracy: Political parties in India largely lack intra-party democracy and the decisions on candidature are largely taken by the elite leadership of the party. Thus, politicians with criminal records often escape the scrutiny by local workers and organisation of the party.

Lack of adequate deterrence: Due to the low levels of convictions of MPs and MLAs, and delays in trials, political parties are not deterred from giving tickets to criminals.

Loopholes in the functioning of Election Commission: The Election Commission has prescribed forms for the contestants of elections to disclose their property details, cases pending in courts, convictions etc. while filing their nomination papers. However, these steps have not been stringent enough to break the nexus between crime and politics.

What are the impacts of criminalisation of politics in India?

Undermines democracy: The foundation of a democracy is the trust between its citizens and those elected to govern on their behalf. When elected representatives have criminal backgrounds, it undermines this trust and erodes the credibility of the democratic system.

Poor governance: Individuals with criminal backgrounds often lack the skills, education, and understanding necessary to govern effectively. Their policies and decisions may be guided by their own personal interests rather than the interests of their constituents.

Cultivates culture of impunity: Criminalisation of politics can foster a culture of impunity where individuals believe they can commit crimes without facing consequences, which can lead to increased crime rates and a general lack of respect for the law.

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Encourages corruption: Politicians with criminal backgrounds are more likely to engage in corrupt practices, such as bribery, fraud, and embezzlement, further undermining the legitimacy of the government and public faith in it.

Impact on economic development: The chronic corruption and mismanagement associated with criminal politicians can deter both domestic and foreign investors, stymie economic growth, and exacerbate poverty and inequality.

Hampers social development: With corruption and self-interest driving policymaking, social development initiatives, such as health, education, and welfare programs, can be severely compromised, preventing the upliftment of disadvantaged groups.

Taints international reputation: The criminalisation of politics can damage India's reputation on the international stage, making it more difficult to engage in beneficial relationships with other countries and international organizations.

What are the initiatives taken so far to overcome the issue of the criminalisation of politics in India?

Constitutional initiative: Articles 84 and 173 deal with eligibility, whereas articles 102 and 191 deal with the disqualification of the House of Parliament and state legislative assemblies respectively.

Legislative initiative: Indian Penal Code: Chapter IX A of Indian Penal Code deals with offences relating to elections. There are nine portions in it. For crimes like bribery, improper influence, and impersonation during elections, it defines them and lays forth the associated penalties.

Representation of People Act (RPA), 1951: Section 8 of the Act lists certain offences which, if a person is convicted of any of them, disqualifies him from being elected, or continuing as, a Member of Parliament or Legislative Assembly.

A candidate for any National or State Assembly elections is required to furnish an affidavit, in the shape **of Form 26 appended to the Conduct of Election Rules, 1961**. Failure to furnish this information, concealment of information or giving of false information is an offence under **Section125A of the RPA**.

What are some of the landmark judgements on criminalisation of politics in India?

In Union of India (UOI) v. Association for Democratic Reforms and Anr, 2002, the SC held that every candidate, contesting an election to the Parliament, State Legislatures or Municipal Corporation, must declare their criminal records, financial records and educational qualifications along with their nomination paper.

In Ramesh Dalal vs. Union of India, 2005, the SC held that a sitting MP or MLA shall also be subject to **disqualification from contesting elections if he is convicted and sentenced to not less than 2 years of imprisonment by a court of law.**

The SC in **Public Interest Foundation vs Union of India** case**, 2018** had also directed political parties to publish online the pending criminal cases of their candidates. In this case, the court left the matter of disqualification of politicians carrying criminal charges against them to Parliament saying that the court cannot add to the grounds of disqualification.

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Order to establish Special Courts: Accordingly, the Union Government facilitated setting up of 12 Special Courts in States which had 65 and above pending cases, for expeditious trial of criminal cases involving MP/MLAs. Accordingly**, 12 Special Courts (02 in NCT of Delhi and 01 each in the state of UP, Bihar, WB, MP, Maharashtra, Karnataka, Andhra Pradesh, Telangana, Tamil Nadu and Kerala) were constituted.** Performance of these special courts is being monitored by the Hon'ble Supreme Court of India.

What are the various recommendations on de-criminalization of politics?

Read here: **Important Recommendations**

What should be done?

Legal reforms: The laws concerning the disqualification of candidates with criminal backgrounds need to be strengthened. For instance**, 2nd ARC recommended amending section 8 of RPA to disqualify all persons facing charges related to grave and heinous offences and corruption, where charges have been framed six months before the election**.

Time-bound justice delivery system: Fast tracking trials and expediting the judicial process through a time-bound justice delivery system will weed out the corrupt as well as criminal elements in the political system.

Pressure on political parties: Pressure must be exerted on political parties to make them accountable for their choices. Political parties must realise that they must follow the rule of law and that they are not above the law.

Strict enforcement of directives: The ECI needs to strictly enforce the directives of the Supreme Court. Parties that do not comply with these directives should face penalties, including fines, as suggested by the ADR. In extreme cases, non-compliant parties could be deregistered.

Internal democracy in political parties: Encouraging internal democracy within political parties can also help. When party members have a say in candidate selection, they are more likely to choose individuals of integrity.

Implementing recommendations of various committees: The recommendations of several committees, such as the **Vohra Committee (1993) and Goswami Committee** and law commission report (170 and 244 th), which have focused on tackling the criminalisation of politics, need to be fully implemented.

Use of technology: Technology can be harnessed to ensure speedy trials and provide easy access to information about candidates. For instance, online platforms could be used to maintain a publicly accessible database of the criminal records of all political candidates.

Sources: **ADR**, Indian Express (**Article1**, **Article2**),**Department of Justice**, **Free Press Journal**, **SCO**

Should India join NATO Plus? Explained, pointwise

Introduction

At the beginning of 2023, the U.S. Permanent Representative to NATO expressed openness to increased engagement with India. Subsequently, the U.S. House Select Committee on China

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proposed to enhance the deterrence of Taiwan by including India to strengthen NATO Plus. However, India rejected this idea. But as Prime Minister's visit to the U.S. approached, the U.S. Senate's India Caucus Co-Chairs announced their intention to introduce legislation granting India a "NATO plus five" defense status. Currently, U.S. lawmakers have stopped using "NATO Plus" phrase. Nevertheless, these recent developments have reignited discussions on whether India should form closer relations with NATO.

What is NATO and NATO Plus?

NATO is an intergovernmental military alliance comprising 31-member states, mainly from Europe and North America. It aims to ensure the freedom and security of its members through political and military cooperation.

NATO Plus includes five more member nations which are treaty allies of the US– namely: Australia, Japan, South Korea, New Zealand and Israel. It is a security arrangement that brings together NATO and five aligned nations to enhance global defence cooperation.

The term 'NATO Plus' is not officially recognised within NATO itself but has been used in discussions regarding the potential expansion of the alliance. Read more: NATO: Historical Context and its Role in Ukraine Conflict – Explained, pointwise

Why the US invited India to join NATO Plus?

The US aims to strengthen security cooperation with India based on their shared interest in countering Chinese dominance in the Indo-Pacific region. It believes that India should join NATO to safeguard its borders from China and enhance global security to counter Chinese aggression in the Indo-Pacific region.

The American strategic culture emphasizes treaty-bound alliances. By enhancing India's capabilities and promoting military-to-military cooperation, the U.S. hopes to establish a formalized relationship like the NATO framework.

Why India refused to join NATO Plus?

India maintains that it can handle any challenges posed by China independently.

The geographical barrier between India and China represented by the Himalayan region makes it currently impossible for India to join an alliance with NATO.

Also, China's current economic crisis, as evidenced by declining exports and imports, weakens the argument for joining NATO to counter Chinese aggression.

Why should India join NATO Plus?

Strengthened defence capabilities: As part of India's contacts with various stakeholders on various issues of mutual interests, India has already been in communication with NATO. It also has military exchanges with many NATO members, like the US, Britain, and France, in bilateral and minilateral formats. With increasing regional security challenges, joining the NATO Plus framework could enhance India's protection and deterrence against potential threats.

Access to high tech equipment: India could also gain access to advanced military technologies, intelligence-sharing platforms, and inter-operability with other member-states.

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Decline in India-Russia relations: The relationship has been on a decline despite the best efforts of India. The primary reason is Russia's recent choices and actions. Russia's economic stagnation, ambitions in its neighboring regions, closer ties with China, and its aggressive actions towards Ukraine have all made a strong Russia-India partnership less likely. The India-US relationship, on the other hand, have evolved into a strong partnership.

Chinese aggression: China's rise and its aggression has made a strong India-US partnership a necessity. If China continues with its assertive and aggressive foreign policy agenda against India, India should consider a pragmatic engagement with NATO.

India's Europe policy: The bureaucratisation of the relations and the lack of high-level political interest has prevented India from taking full advantage of a re-emerging Europe. In the last few years, Delhi has begun to develop an independent European policy. Engagement with NATO can become one important part of India's European strategy as the continent is searching for a new role in the Indo-Pacific.

Why should India not join NATO Plus?

Breaking India – Russia ties: If India joins NATO Plus, it will directly impact India's strong, ties with Russia. Russia has been useful to India in dealing with regional security challenges and, in moderating the stance of China. Even though Russia is getting over-dependent on China, post the war in Ukraine, it remains a valuable partner for India. Upsetting Russia would push it closer to China and Pakistan.

Strategic autonomy: India has traditionally maintained a policy of strategic autonomy, allowing it to engage with various nations and blocs based on its own interests. Joining NATO could potentially risk India's strategic autonomy, particularly concerning its nuclear arsenal. Being part of NATO would essentially mean that India will get dragged into America's conflicts.

Limiting freedom of action: A military framework will limit India's freedom of action and prevent it from pursuing an independent policy towards China. Joining the Taiwan strategy of the U.S. under NATO Plus will complicate India's security, with the possibility of further Chinese military build-up along the India-China border and frequent intrusion.

No real benefit: India may still enjoy tangible benefits of an ally of the US without binding itself in a treaty-based framework. For example, initiative on Critical and Emerging Technologies (iCET) has transformed defence industrial cooperation. India's status of a strategic partner and a major defence partner, but not a treaty ally, have not obstructed such an important deal. Additionally, neither does NATO Plus provide Article 5 protection that is available to NATO members, nor it is beneficial for achieving AatmaNirbhar Bharat.

Great-power aspirations: India is a middle power with great-power aspirations. It has been the leading voice for the Global South at world forums. A junior-partner status in an alliance would mean giving up its great-power aspirations. It would make it difficult for India to rise as the third pole.

US military base in India: Till now, India does not host any foreign military base on its land. But joining NATO Plus would mean the US will eventually have a military base in India as well. All other NATO plus members are hosting US military bases today.

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What should be the future course of action?

India should prioritize addressing regional security challenges such as border disputes, terrorism, and regional conflicts. While NATO has certain competencies to deal with such issues, its larger geopolitical agenda starting from Eurasia to the Indo-Pacific may divert resources and attention away from these pressing issues.

India should seek to profit from its status as a swing state amid great power rivalries. Though it has steadily intensified security and defence partnership with the US, it is under no obligation to take part in the security competition or any possible conflict over Taiwan.

For now, India's posturing through the Quadrilateral Security Dialogue (Quad) looks more promising than the NATO Plus as there is no mutual-defence pact like NATO. The group is meant to deepen economic, diplomatic and military ties among the members.

India should r**efrain from direct military involvement with NATO**. But a dialogue between India and NATO could facilitate productive exchanges as the two share similar values for a rules-based international world order.

Sources: The Hindu (**Article 1** and **Article 2**), **Indian Express**, **Deccan Herald**, **Firstpost, Mint**, **Wion**, **Observer Research Foundation**, **The Statesman**

Governance issues at Indian Startups: causes and impacts – Explained, pointwise

Introduction

India became the third-largest start-up ecosystem in the world after the US and China last year. Further, for the second time in a row, India topped China by creating 23 unicorns in 2022. At present, India, has more than 99,000 start-ups. However, the corporate governance issues faced by Byju's have raised significant concerns and highlighted a broader problem within India's startup ecosystem. Similar violations of corporate governance standards have also been reported in other Indian startups such as Mojocare, GoMechanic, and BharatPe. These incidents have highlighted the need for corporate governance and oversight in India's startup ecosystem.

What is a startup?

An entity is considered as a Startup in India if it fulfills the following criteria:

1. if the entity is less than 10 years old.
2. if the annual turnover is not more than 100 crores.
3. if the entity is involved in innovation or if it is a scalable business model with a high potential of employment generation or wealth creation.

What is corporate governance?

Corporate Governance refers to the **way in which companies are governed** and to what purpose. It identifies who has power and accountability, and who makes decisions.

Corporate governance is a toolkit that enables management and the board to deal more effectively with the challenges of running a company.

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Corporate governance ensures that businesses have a**ppropriate decision-making processes and controls** in place so that the interests of all stakeholders (shareholders, employees, suppliers, customers and the community) are balanced.

Read more: [What is the meaning of Corporate Governance?](#)

Why is corporate governance important for startups?

Startups usually want to focus on growth and **see corporate governance as a burden**. But sound governance is an enabler.

Corporate governance ensures that startups are operating in a **transparent and ethical** manner, which is important for **building trust** with investors, customers, and other stakeholders.

A good corporate governance framework and its implementation is important for the **long-term growth and sustainability** of Indian start-ups.

Startups that have good corporate governance are more likely to build a **stronger brand reputation**, attract **more financial resources** and **attract and retain top talent**.

Corporate governance also helps startups to **mitigate risks** and **ensure compliance** with regulatory requirements.

Why Indian startups are facing governance issues?

Founder's fault: With considerable capital inflows and rapid increase of startup ventures across sectors, India's startup ecosystem is **highly competitive**. This can influence some founders to overlook governance aspects. Also, first-time founders **don't have the required expertise** on corporate governance. Focus on governance can also **increase operational costs** which founders may not like. In certain cases, founders may engage in questionable acts due to a **lack of ethical standards** or a general disregard for the law.

Growth at all costs: VC-induced drive for fast growth is a major reason for the rise in corporate mis-governance cases in the start-up ecosystem. The **pressure to grow at all costs** forces the startups to **abandon the systems and processes** they may have set up for governance.

Fear of missing out: India's startup space saw funding of more than $131 billion between 2014-22. As global venture capital (VC) firms rushed to invest in promising Indian companies, there was a 'fear of missing out' among the investors. This made **due diligence less important and entering into a deal became more important.**

Exaggerated valuations: With the rise of start-ups and VCs encouraging start-ups to grow at any cost, company valuations have started exceeding fundamental values. People have started to give **more importance to company valuation than business processes**. Financial performance, particularly growth in revenues and related metrics, were drivers of company valuation and enabled companies to raise subsequent funding at ever-increasing valuations resulting in a direct impact on the incentives for wrongdoing.

Overestimation of the size of Indian Market: VCs and founders have overestimated the size of Total Addressable Market in India and **exaggerated the India opportunity** to their investors. But India is a **small market with limited merger and acquisition opportunities** which provide for large exits within seven years (the lifecycle of a fund within which founders are expected to

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give exits). The pressure to meet the expectations forces startups to adopt unprofessional practices.

Read more: Reality check for startups

How will governance issues impact the startup ecosystem in India?

Tighter regulations: The government makes many **exceptions** for and gives **concessions** to startups so they can contribute to the economy. However, if cases of financial and operational failure become more regular, the government and regulators may **start tightening the rules**, which will kill innovation.

Reduced investment: The startup ecosystem thrives on easy funding from foreign investors. But due to recent incidents of mis-governance, **investors may lose confidence** in an already challenging funding environment.

Distrust: The emerging distrust between investors and founders due to a few badly managed organisations has caused **litigations, layoffs, exiting directors, and forensic audits.** Founders are experiencing **longer due diligence processes**, and closing funding rounds is no longer as easy as it was in 2020 and 2021.

Growing Significance of Corporate Governance: Investors are increasingly looking at corporate governance practices while making investment decisions. This means that **startups with good governance practices are more likely to attract investments.**

What should be done to address governance issues at Indian startups?

Self-regulation: Clear norms of self-regulation are laid out in **'Start-Up Governance Playbook'** for every stage in startup growth. Startups should recognize the importance of corporate governance and every start-up must **follow the laid out self-regulation norms**. Also, the start-up community should **develop corporate governance standards** based on which auditors can transparently audit accounts and report malpractices.

Bring in the experts: A startup continues to be a founder-centric organization even after experiencing exponential growth. But start-up founders cannot be experts in every aspect of the business. VCs should bring in the relevant experts for various functions.

Building for long term: Founders should focus on building a sustainable business rather than building valuations for the short term.

Longer fund lifecycles: Building a sustainable business in India takes time but VC funds have seven-year lifecycles and push startups for exits within seven years. The fund lifecycles for India should be longer.

Sources: The Hindu Businessline (**Article 1** and **Article 2**), Mint (**Article 1** and **Article 2**), **Financial Express**, **Deccan Herald**, **New Indian Express.**

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India and SCO: relevance and challenges – Explained, pointwise

Introduction

India recently hosted the 23rd summit of the Shanghai Cooperation Organization (SCO) in a virtual format. This marked the first time India chaired the summit since becoming a full member of the organization in 2017. The theme for the summit was 'Towards a SECURE SCO', which is an acronym coined by the Indian PM. It stands for: S: Security, E: Economic development, C: Connectivity, U: Unity, R: Respect for sovereignty and territorial integrity, E: Environmental protection.

What is SCO?

The Shanghai Cooperation Organization (SCO) is an inter-governmental organization that was officially announced in Shanghai, China, on June 15, 2001.

It was formed by Kazakhstan, China, Kyrgyzstan, Russia, Tajikistan, and Uzbekistan.

Prior to Uzbekistan's inclusion, the other five countries were part of the 'Shanghai Five,' established in 1996 by China to address border security concerns with its neighboring nations.

Following Uzbekistan's membership in 2001, the body was renamed the Shanghai Cooperation Organization.

Read more: [Shanghai Cooperation Organization (SCO) – Explained, pointwise](#)

What are the highlights of the summit?

During the summit, Iran officially joined the SCO as the Ninth Member Country.

Member countries expressed the need for the establishment of a "more representative" and multipolar global order in global interest.

The issue of Afghanistan received widespread consensus.

Several agreements were signed, including the New Delhi Declaration, as well as two joint statements addressing the issues of countering radicalization and digital transformation.

Indicating a lack of consensus, India opted out of statements on economic cooperation and on China's Belt and Road Initiative (BRI).

Read more: [23rd SCO Summit – SCO calls for multipolar world order as Iran joins grouping](#)

Why SCO is relevant for India?

Strategic significance: The SCO platform is a key part of India's policy on multi-alignment and strategic autonomy, especially balancing India's widely perceived tilt towards the West**.** By engaging with the SCO, India can balance its relationships with other regional and global powers effectively. For example, India is also a part of QUAD, which is referred to as Asian-NATO by China. India's participation in SCO will balance this perspective.

Dealing With Pakistan & China: Within the SCO framework, India can better evaluate China's Belt and Road Initiative in the region. It is important for India to be an active participant,

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especially as Pakistan is a member. It would help in addressing challenges like terrorism originating from Pakistan and its efforts to prevent closer links between India and Central Asia.

Expanding footprint: SCO is expanding, which, again, increases its importance for India. Iran's acceptance as a permanent member is a significant geopolitical step. Having India's neighbours like Nepal and Sri Lanka as dialogue partners adds to the importance of the SCO platform.

Central Asia: As an emerging power, India must be involved in Eurasian geopolitics. India's economic rise gives make it a more attractive economic partner for Central Asian countries as they seek to reduce over-dependence on China. India is also pursuing regional connectivity projects linking it with landlocked Central Asia to access Central Asian markets and resources

Economic Potential: The SCO has the potential to create an economically constructive alliance. Member-countries make up 40 per cent of the world's population and 30 per cent of global output. With Iran, it will control 20 per cent of the world's oil reserves and about 44% of natural gas reserves.

What are the challenges facing SCO?

Decline of Russia: India's full membership into SCO was premised on the prime position of Russia in SCO. India trusted Russia to be able to help advance India's 'Connect Central Asia Policy'. But Russia's war in Ukraine is raising questions about its capacity to sustain primacy in its backyard as the Central Asian states are looking to reduce their reliance on Russia.

Gap between purpose and practice: The SCO advocates peaceful resolution of conflicts, respect for territorial integrity, counteracting terrorism, extremism and separatism in all its forms etc. But these norms are violated by China and Pakistan in their relations with India. Pakistan continues to nurture jihadi groups and promote terrorism against India, despite the Regional Anti-Terrorist Structure of the SCO.

Becoming China-centric: Shared borders, growing political importance, and rising regional security profile is increasing the prospects for China's emergence as the dominant force in central Asia. Most members of the group are recipients of infrastructure aid from China's BRI. The inclusion of Iran in the SCO is likely to further consolidate China's position within the orgnaisation as Iran has moved strategically closer to China in recent years.

Limited institutional capacity: The institutional capacity and decision-making processes of the SCO are comparatively weak. This pose challenges in effectively implementing agreements and responding to crises.

"Anti-West" forum: SCO is increasingly seen as an "anti-West" forum and entry of Iran in SCO has made the situation difficult for India. The expected induction of Belarus next year will only strengthen this image of the SCO.

What should be the future course of action?

Improving Connectivity with Central Asia: The lack of adequate connectivity with the Central Asia has been a major constraint for India. Iran's induction into SCO will help India build its connectivity strategy through Iran's Chabahar port, where it operates a terminal and through the International North South Transport Corridor that goes through Iran and Central Asia to Russia. This will also help India circumvent land-based trade through Pakistan.

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Counterterrorism and Security Cooperation: India should actively engage with SCO members to address shared security concerns, particularly in the areas of counterterrorism, countering extremism, and ensuring regional stability.

Protecting interests: India must protect its own interests amidst a rapidly changing regional power distribution in China's favour by actively participating in SCO to shape the organization's agenda and contribute to its decision-making processes.

Sources: Indian Express (**Article 1** and **Article 2**), The Hindu (**Article 1** and **Article 2**), **Business Standard, Outlook**

Internationalisation of the rupee: Explained, pointwise

Introduction

India is aiming to make the rupee a global currency. Recently, the Reserve Bank of India (RBI) released the report of Inter-Departmental Group (IDG) on Internationalisation of Indian Rupee, which has made several recommendations for internationalizing the rupee. The group was constituted by the RBI to review the current position of the rupee as an international currency and to frame a roadmap for internationalisation of the rupee. The recommendations are significant, considering the economic sanctions imposed by the US on Russia for invading Ukraine and the growing demand for dedollarization. Given Indian economy's status as one of the fastest-growing large economies and its ability to withstand challenges, the rupee has the potential to become an internationalized currency.

What is currency internationalisation?

Currency internationalization refers to the use of a country's currency outside its borders for transactions involving residents and non-residents.

An international currency performs all three functions of money. As a unit of account, it is used to **invoice foreign trade** and **denominate international financial instruments** by private actors and to express **exchange rate relationships** by government.

As a medium of exchange, it is used by private actors to **settle international economic transactions** or by governments for **exchange market intervention** and **balance of payments (BoP) financing**.

As a store of value, it acts as a **reserve currency** and at a private level, it is held as **capital assets**.

Internationalisation of the rupee involves promoting the rupee for **import and export trade** and then other **current account transactions** followed by its use in **capital account transactions.**

Currently, the US dollar, the Euro, the Japanese yen and the British pound are the leading reserve currencies in the world.

China's efforts to make its currency renminbi has met with only limited success so far.

What is the rationale for internationalisation of the rupee?

Increased linkages: Internationalisation of the currency is **closely interlinked with the nation's economic progress**. Economic growth and development over the past few decades have

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led to a g**reater integration** of the Indian economy with the global economy in terms of **trade and capital flows**. India's foreign exchange reserves have grown from USD 290.5 billion in August 2012 to USD 560.4 billion in August 2022. During this period, India's Foreign Direct Investment (FDI) has increased from 46.6 billion dollars to 84.8 billion dollars; imports have increased from 489.3 billion dollars to 612.6 billion dollars, and exports have grown from 306.0 billion dollars to 421.9 billion dollars. Therefore, the rupee has the potential to become an internationalized currency.

Declining share of the dollar: The international monetary and financial system has moved towards being **multipolar**. Various bilateral and regional economic cooperation agreements have emerged. The **share of the dollar in foreign exchange reserves of countries is steadily declining.** Other currencies are increasingly used in trade invoicing and settlement.

Geopolitical: In the wake of the **sanctions imposed on Russia**, many countries have become cautious of the potential costs if they are subjected to similar sanctions by the Western governments. China, Russia and a few other countries have become more vocal in questioning the US dollar-dominated global currency system.

What are the recommendations of RBI panel?

Short term recommendations

4. Designing a template and adopting a **standardised approach** for examining the proposals on bilateral and multilateral trade arrangements for invoicing, settlement and payment in the rupee and local currencies.
5. Making efforts to enable rupee as an **additional settlement currency in existing multilateral mechanisms** such as ACU.
6. Encouraging opening of rupee accounts for non-residents both in India and outside India.
7. **Integrating Indian payment systems** with other countries for cross-border transactions.
8. **Recalibrating the foreign portfolio investor** (FPI) regime and rationalizing/harmonizing the extant Know Your Customer (KYC) guidelines.

Medium term recommendations

9. A review of taxes on **Masala bonds**.
10. International use of **Real Time Gross Settlement (RTGS)** for cross border trade transactions and inclusion of rupee as a direct settlement currency in the Continuous Linked Settlement (CLS) system.
11. Examination of **taxation issues** in financial markets to harmonise tax regimes of India and other financial centres.

Long term recommendation

1. Efforts should be made for **inclusion of the rupee in IMF's** (International Monetary Fund) **SDR** (special drawing rights) basket.

What are the benefits?

For private sector

The benefits of currency internationalisation accrue largely to a country's private sector.

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Firstly, the internationalisation of currency **limits the exchange rate risks** for local exporters and importers. It is because domestic firms may be able to raise invoices and settle their exports/imports in their local currency. It shifts exchange rate risk to their foreign counterparts or customers.

Secondly, it permits domestic firms and financial institutions to **access international financial markets** without assuming exchange rate risk.

Thirdly, the internationalisation of domestic currency will offer **new profit opportunities** for domestic financial institutions to grow in the global financial market.

Lastly, it will reduce the **cost of doing business**. It will motivate the existing exporters to increase their exports and investors to invest more in the exporting businesses. New players will find it attractive to enter the exports market. Overall, it will have a positive impact on economic growth and **atmanirbhar Bharat** program of India.

For government

First, currency internationalization allows a country's government **to finance its budget deficit** by issuing domestic currency debt in international markets rather than issuing foreign currency instruments.

Second, it also allows a government to finance part of its **Current Account Deficit (CAD)** without using its official reserves. The current account deficit may also be financed by private capital flows from abroad, especially from the banking system, as financing in domestic currency becomes integrated globally.

Third, the internationalisation of a currency reduces the requirement for the authorities to maintain **large foreign exchange reserves** in foreign currencies to manage external vulnerabilities.

Fourth, it leads in **lowering the impact** of sudden stops and reversals of capital flows and enhances the ability to **repay external sovereign debt**.

As the international use of the rupee becomes significant, the bargaining power of Indian businesses would improve, adding weight to the Indian economy and enhancing India's global stature and respect.

What are the macroeconomic risks?

Internationalisation of a currency may result in a **potential increase in volatility of its exchange rate** in the initial stages. This would have monetary policy implications as the obligation of a country to supply its currency to meet the global demand may come in conflict with its domestic monetary policies, popularly known as the **Triffin dilemma**.

Also, it may **increase the impact of an external shock** due to the free flow of funds into and out of the country and from one currency to another.

Thus, it would make the conduct of monetary policy more complex.

What are the challenges?

International demand for the rupee is very low. The daily average share for the rupee in the global foreign exchange market is about 1.6%,

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The rupee is **not fully convertible** in the capital account and India's share of global exports of goods is just about 2%. This reduces the necessity for other countries to hold rupees.

What are the initiatives taken?

Indo-Nepal Remittance Facility Scheme: This Scheme was launched by the RBI in May 2008 as an option for cross-border remittances from India to Nepal. The Scheme leverages the NEFT ecosystem.

Bilateral Swap Arrangements (BSA): India currently has a BSA with Japan as a line of support in case of any balance of payments issue. Under the South Asian Association for Regional Cooperation (SAARC) swap agreement, the requesting central bank can make withdrawals in dollar, Euro and also in rupee.

Developments in the GIFT City: Gujarat International Finance Tec-City (GIFT City) was set up as India's first International Financial Service Centre (IFSC). It has the potential to develop as a international financial centre for Rupee products and more specifically Rupee derivatives, given the fact that the Rupee derivatives are among the most traded contracts globally.

Indo-Iran Agreement: An agreement was signed between India and Iran for undertaking eligible trade transactions using rupee.

Asian Clearing Union (ACU): RBI had proposed the use of local currencies of members for settlement of ACU transactions and inclusion of rupee as one of the settlement currencies under the ACU.

Rupee as a Designated Foreign Currency in Sri Lanka: This have paved the way for rupee-based bilateral trade between Sri Lanka and India.

Use of Indian Payment Infrastructure: RBI making efforts to increase the global outreach of the UPI system to facilitate cross-border transactions. Various other initiatives have also been undertaken to facilitate cross-border payments, especially personal remittances like the Money Transfer Service Scheme (MTSS).

Other initiatives: RBI has enabled external commercial borrowings in rupees. The recent Foreign Trade Policy (FTP) 2023, proposes invoicing, payment, and settlement of trade in Indian rupees. RBI has permitted rupee settlement of external trade through Special Rupee Vostro Accounts (SRVAs). A total of 18 countries have been allowed to open SRVAs. (A vostro account is held by a bank on behalf of a bank in another country).

What should be the future course of action?

The RBI should pursue a **deeper and more liquid rupee bond market** to enable foreign investors and Indian trade partners to have more investment options in rupees.

Indian exporters and importers should be **encouraged to invoice their transactions in rupee**. For this, the trade settlement formalities for rupee import/export transactions should be optimised.

Additional **currency swap agreements** (as with Sri Lanka) would further allow India to settle trade and investment transactions in rupees.

Tax incentives must be given to foreign businesses to utilise the rupee in operations in India.

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Efforts must be made to make the rupee an **official currency in international organisations**, thereby giving it a higher profile and acceptability.

The **Tarapore Committees**' (in 1997 and 2006) recommendations must be pursued including a push to reduce fiscal deficits lower than 3.5%, a reduction in gross inflation rate to 3%-5%, and a reduction in gross banking non-performing assets to less than 5%.

Gradually, the rupee must be made **more freely convertible.** This would allow foreign investors to easily buy and sell the rupee, enhancing its liquidity and making it more attractive.

Sources: [Indian Express](#), [The Hindu](#), [Livemint](#), [Business Standard,](#) [RBI report.](#)

Dark Patterns: Explained, pointwise

Introduction

Recently, The Ministry of Consumer Affairs, Food and Public Distribution has asked e-commerce companies to not use dark patterns on their platforms. Amid a rise in online shopping and an increase in the number of internet users, which is expected to touch 900 million by 2025, the dark pattern has caught the attention of the government. The digital space has become an integral part of the consumer's life, significantly influencing how they consume information, goods and services. With e-commerce and social commerce growing at very high-speed online consumer safety has become important.

What are dark patterns?

Harry Brignull coined the term 'dark pattern' in 2010 to describe **deceptive strategies used by websites or apps to deceive users.**

Dark patterns are also called deceptive patterns. These patterns are used for **intentionally manipulating or misleading users** to make certain choices or perform specific actions that may not be in their best interest.

These **unethical strategies** are designed to exploit certain **cognitive and behavioral biases** to persuade users into purchasing goods and services they would typically not pay for.

They **downgrade the user experience** to benefit the company implementing it.

What are the different types of dark patterns identified by Consumer Affairs Ministry?

The Consumer Affairs Ministry has identified nine types of dark patterns.

False Urgency: This tactic creates a sense of urgency or scarcity to pressure consumers into making a purchase or taking an action.

Basket Sneaking: Websites or apps use dark patterns to add additional products or services to the shopping cart without user consent.

Subscription Traps: This tactic makes it easy for consumers to sign up for a service but difficult for them to cancel it, often by hiding the cancellation option or requiring multiple steps.

Confirm Shaming: It involves guilt as a way to make consumers obey. It criticizes or attack consumers for not conforming to a particular belief or viewpoint.

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Forced Action: This involves forcing consumers into taking an action they may not want to take, such as signing up for a service to access content.

Nagging: It refers to persistent, repetitive and annoyingly constant criticism, complaints, requests for action.

Interface Interference: This tactic involves making it difficult for consumers to take certain actions, such as canceling a subscription or deleting an account.

Bait and Switch: This involves advertising one product or service but delivering another, often of lower quality.

Hidden Costs: This tactic involves hiding additional costs from consumers until they are already committed to making a purchase.

Disguised Ads: Disguised ads are advertisements that are designed to look like other types of content, such as news articles or user-generated content.

What are some examples of companies using dark patterns?

Instagram allows users to deactivate their account through the app, but they must visit the website if they want to delete the account.

Many websites and apps **trick their users into allowing them** to track their location or gather their data. For example, Instagram uses terms like 'activity' and 'personalised' instead of 'tracking' and 'targeting'.

Certain dating apps require the user to type the word 'delete' if they want to delete their account permanently. The pop-up showing 'yes' and 'no' options has been removed. In short, they have made it difficult to delete accounts by the user.

Why should dark patterns be cause for concern?

Harms to consumer autonomy: Dark patterns compromise consumers' personal autonomy because they lead consumers to make choices they may not otherwise have made. Dark patterns often provide the illusion of control rather than actual control to consumer.

Financial loss: Dark patterns such as basket sneaking, hidden costs, drip pricing or scarcity cues are aimed at getting consumers to buy something that they may not have needed. It leads to spending more than users may have otherwise intended to spend.

Privacy harms: Privacy-intrusive dark patterns like nagging and confirm shaming force consumers into accepting privacy-intrusive settings through repetitive requests and criticism for not conforming. Consequently, individuals may unintentionally disclose more personal data than intended, potentially exposing themselves to additional risks.

Psychological harm and time loss: The dark patterns cause psychological harm like emotional distress, such as frustration, feelings of shame and being tricked. The cognitive burden of unnecessarily spending energy or attention leads to time loss. Frustration and cognitive burden might result from repeatedly prompting the consumer to agree to certain settings (nagging).

Weaker or distorted competition: Firms employing dark patterns may obtain a competitive advantage over firms that do not employ dark patterns, without offering better quality goods or

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services. For example, they may be able to get more sales (through hidden costs), personal data (through privacy-intrusive defaults) or attention time (through addictive practices).

Trust erosion: Much of consumers' behaviour towards online businesses is based on trust. Dark patterns may instill a sense of distrust in online businesses that employ them. Over time, this erosion of trust may lead consumers to lose faith in markets.

What are the challenges in regulating dark patterns?

Presently, there are **no specific regulations** in place in most nations against dark patterns. **Consumer protection laws** and **data protection laws** are used to regulate dark patterns in various jurisdictions.

But the application of these laws is difficult in the **absence of a body of case law** (Dark patterns are a relatively recent phenomenon). The enforcement of these laws thus far has focused on a **limited number of commonly recognised dark patterns**. This indicates **potential gaps** in existing laws, available evidence, or enforcement capabilities.

Notably, certain dark patterns that lack clear deception may not fall within the scope of current general prohibitions on deceptive commercial practices.

Determining the legality of dark patterns can be a complex issue since it can be c**hallenging to differentiate between manipulation and fraudulent intent (which is illegal).** The question therefore remains over when a dark pattern will cross the threshold from controversial marketing technique to illegal practice.

What are the global actions taken against dark patterns?

Recently, regulators in jurisdictions such as the European Union, USA and UK have acted against dark patterns.

The **Competition and Markets Authority (CMA)** of the U.K. has listed different pressure-selling techniques that it believes violate consumer protection laws and for which actions will be taken.

In 2022, the **European Data Protection Board** released guidelines that gave designers and users of social media platforms practical guidance on how to spot and avoid dark patterns that are in violation of General Data Protection Regulation (GDPR) laws.

In 2021, California passed amendments to the **California Consumer Privacy Act,** banning dark patterns that made it difficult for consumers to exercise legal rights, like opting out of the sale of their data.

 In 2019, the UK issued a set of guidelines which prohibited companies from using dark patterns which influence underage users to have low privacy settings. These guidelines were later made enforceable under its Data Protection Act, 2018.

How do India is addressing dark patterns?

The Department of Consumer Affairs have written to major Indian online marketplaces warning them against engaging in unfair trade practice by implementing dark patterns in their user interfaces. Earlier, it held consultations with stakeholders on this issue.

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The government's position is that deceptive patterns that manipulate consumer choice and impede their right to be well informed, constitute **unfair practices** that are **prohibited under the Consumer Protection Act 2019.**

The department has started classifying complaints received on the **National Consumer Helpline** to compile information on dark patterns, which can be used by the Central Consumer Protection Authority to initiate action under the **Consumer Protection Act, 2019.**

The government has also set up a **task force** to prepare guidelines to protect consumers against dark patterns.

The **Advertising Standards Council of India (ASCI)**, an industry body, has come up with guidelines against the use of dark patterns.

What should be done?

Empowering users: Users must be educated on cognitive biases and the various methods utilized to influence choices. This will enhance their ability to avoid being deceived. They should also be equipped with tools and resources that allow them to make informed choices. This could include browser extensions, apps or plugins that detect and block dark patterns or platforms providing clearer and more accessible settings and privacy options. Users should also be encouraged to report cases of dark patterns they encounter, and the platforms should establish clear channels for users to provide feedback and report manipulative practices.

Industry self-regulation: Online platforms can establish ethical design guidelines that discourage the use of dark patterns. Encouraging responsible design practices and conducting independent audits can help identify and rectify dark pattern issues.

Robust legal mechanism: The government should set up strong legal mechanisms to specifically address dark patterns. New rules aimed against deceptive design practices should be introduced along with updated consumer protection laws and data protection legislation.

Sources: Indian Express, The Hindu, PIB (**Press release 1** and **Press release 2**), **OECD**

Open Market Sale Scheme: Significance and recent changes

Introduction

The Open Market Sale Scheme (OMSS) has been in the news recently. Apart from the distribution carried out under the National Food Security Act (NFSA), several states, including those governed by Opposition parties, have their own welfare schemes to provide subsidized or free grains to targeted segments of the population. For this, states rely on OMSS bulk sales for additional food grain procurement. However, the sudden changes to the scheme announced by the centre have drawn criticism from Opposition-ruled States such as Karnataka and Tamil Nadu.

What is OMSS and what are the objectives?

Open Market Sale Scheme (Domestic) [OMSS (D)] refers to **selling of food grains by Food Corporation of India (FCI) at a predetermined prices in the open market** from time to time.

Through the OMSS, the FCI sells excess food grains, particularly wheat and rice from the central pool, in the open market.

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This is done through **e–auctions**, allowing traders, bulk consumers, and retail chains, among others, to purchase these surplus stocks.

Usually, states are also allowed to procure food grains through the OMSS without participating in the auctions, for their needs beyond what they get from the central pool to distribute to NFSA beneficiaries.

FCI utilizes the OMSS (D) to sell surplus stocks from the Central Pool at predetermined prices to achieve following objectives:

- To enhance the supply of food grains during the lean season and deficit regions
- To moderate the open market prices
- To offload the excess stocks
- To reduce the carrying cost of food grains

What are the advantages of OMSS?

Price stabilization: The OMSS is essentially a measure to curb food grain inflation. For example, earlier in 2023, the prices of Wheat declined by 19 percent in a period of 45 days due to FCI's OMSS (D).

Reducing wastage: Every year, more than 1500 metric tonnes (MT) of food grains get wasted in FCI godowns, due to lack of storage facilities and unscientific methods of storing food grains. The scheme helps to prevent the wastage of excess food grains by offloading excess stocks in the open market.

Reduced carrying costs: A portion of the total food subsidy also goes towards meeting the carrying cost of the buffer stock as buffer subsidy. Timely OMSS reduces this cost by maintaining optimal buffer stocks.

What are the changes made to the OMSS?

The central government has made two major changes in the OMSS.

Firstly, the government has **restricted the quantity** that a single bidder can purchase in a single bid under the OMSS. Previously, buyers were allowed to buy a maximum quantity of 3,000 metric tonnes (MT) per bid. Now, it will range from 10-100 metric tonnes (MT).

Secondly, it has **discontinued the sale** of rice and wheat from the central pool under the OMSS to State governments.

What are the reasons for the changes?

For reducing bidding quantities:

The bidding quantities have been reduced to **accommodate more small and marginal buyers** and to ensure **wider reach** of the scheme.

The government has argued that it will allow the supplies to reach the general public immediately.

It is argued that by permitting smaller bids from small buyers, it will **foster competition** and break the monopolistic hold of bulk buyers.

Consequently, this is expected to **control retail prices** by encouraging more competitive bidding and ensuring a **fairer market environment**.

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For discontinuation of OMMS grains to the states:

The central government has given three reasons for the discontinuation of OMSS for State governments:

One, it claims that the OMSS can be more successful in curbing the inflationary trend in food grains if the grain is released through the market rather than through States/the PDS.

Two, the government argued that it needs to maintain adequate food grain stock in the central pool as it expects lower procurement this year. This is because the output of some crops has been hit due to adverse weather events like untimely rains and high temperatures.

Three, the central government has cited its obligation towards consumers who are not covered by the NFSA but are affected by fluctuations in retail prices of food grains. It argued that while the state governments will allocate food grains to the NFSA beneficiaries, as well as for beneficiaries of state-specific schemes, the interest of general consumers has been ignored.

What are the critical arguments against the government's actions?

Firstly, the critics argue that there is no difference in releasing the grain through the market or through the states. Price stabilization can happen in both cases. Also, there is concern that private traders who get OMSS rice at fixed prices will not pass on the benefits to consumers.

Secondly, the current buffer stock position is more than adequate. On average, for the past five years, stocks have been generally twice as high as the buffer stock norms.

Thirdly, if States are forced to go to the open market, rice and wheat prices are bound to go up. This will defeat the Centre's objective behind restrictions on quantity sold through OMSS.

What should be done?

Expansion and diversification of the PDS: The Centre and the States should focus more on making the Public Distribution System foolproof than on expanding existing schemes. The centre should update PDS coverage by using the projected population for 2023. At the all-India level, the under-coverage results in the exclusion of an estimated 113 million people. Besides inadequate coverage, in most States, the PDS does not provide nutritious food items such as pulses and oil.

Seek alternative sources: When it comes to implementing State schemes in the food sector, the States must identify their own sources, and in a cost-effective manner. For example, Odisha and Chhattisgarh procure food grains locally to add on to PDS coverage.

Cooperative federalism: The centre should grant more freedom to state governments to design their own food security system because the state government machinery knows better about the requirement of their local population.

Sources: The Hindu (**Article 1**, **Article 2** and **Article 3**) and **Indian Express**.

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[Yojana July 2023 Summary] Sahakar se Samridhi: From Planning to Realisation – Explained, pointwise

Introduction

For harnessing cooperation for prosperity and progress, Prime Minister Narendra Modi established the Ministry of Cooperation (MoC) as a separate administrative body in July 2021, with a call for "**Sahakar se Samriddhi**" (prosperity through cooperation). The ministry adopts a **Whole-of-Government approach** to effectively implement government initiatives. During the Amrit Kaal (2023-2047), India has the opportunity to emerge as one of the world's economic leaders by harnessing the power of cooperation.

What is the significance of cooperatives?

Cooperation, represented by the term "Sahakarya" means working together and **signifies team trusteeship**.

By adopting a cooperation-led economic model, India can foster **balanced regional development** and inspire **local entrepreneurs to have a global perspective**.

Cooperation serves as a powerful tool to attain **economic freedom, self-reliance, and social justice**.

Cooperatives, as community-level business organizations, have the potential to **generate and absorb social capital**.

Brief history of cooperatives

Throughout India's history, cooperation has been **deeply rooted** in its way of life, reflecting the core principle of **Vasudhaiva Kutumbakam**, which emphasizes the concept of the world as one family.

The cooperative movement in India initially emerged as a **relief-oriented effort** with the promulgation of the **Cooperative Credit Societies Act in 1904**, later amended in 1912. Its primary focus was on **mobilizing rural credit** and **providing financial assistance to farmers**.

However, with the recommendations by the **Maclagan Committee on Cooperation in India (1914-15),** the cooperative movement transformed from a relief-oriented approach to a more comprehensive agenda of **enhancing socio-economic welfare**.
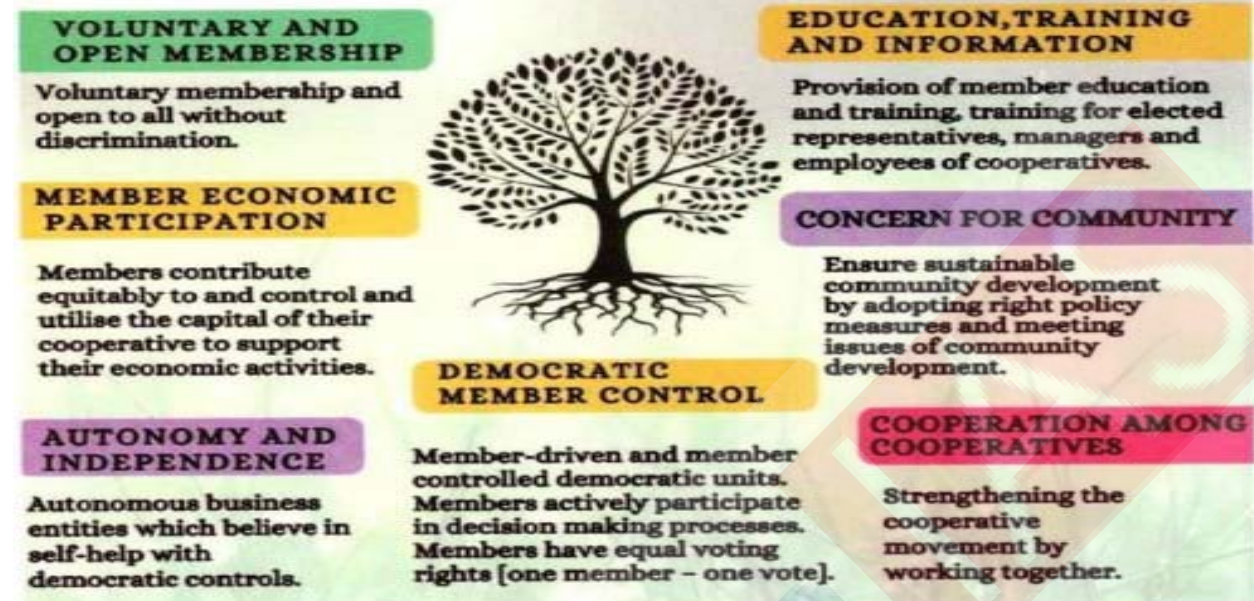
In post-independent India, cooperatives were acknowledged as essential **contributors to the country's development and progress** and were duly included in the **perspective plans** of the Government of India.

Today, India is home to 8.54 lakh cooperatives of which 80% are non-credit cooperatives, and 20% are credit cooperatives. Today, cooperatives have a presence in 98% of villages, with 29 crore members.

What are the cooperative principles?

Cooperatives are **people-centric** organizations as they operate with a focus on people rather than capital. They promote **collective cohesiveness, community business sense**, and **stronger social bonds** by adhering to the **seven golden principles of cooperation**.

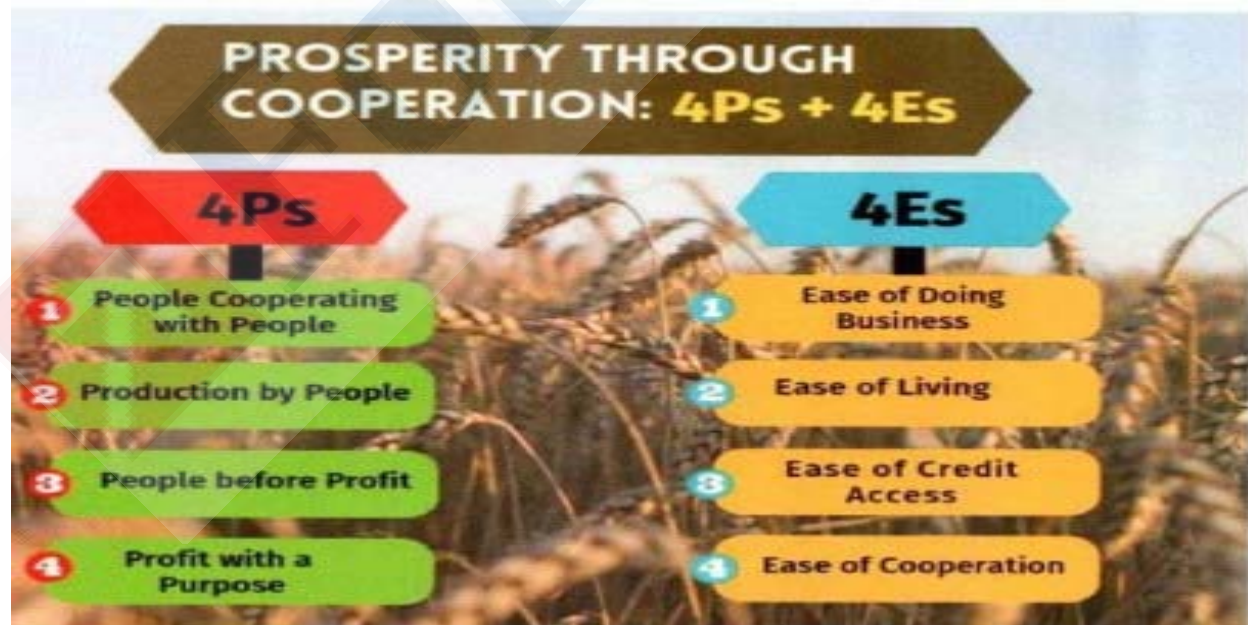Created with love ❤ by ForumIAS- the knowledge network for civil services.
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PRINCIPLES OF COOPERATION

VOLUNTARY AND OPEN MEMBERSHIP

Voluntary membership and open to all without discrimination.

MEMBER ECONOMIC PARTICIPATION

Members contribute equitably to and control and utilise the capital of their cooperative to support their economic activities.

AUTONOMY AND INDEPENDENCE

Autonomous business entities which believe in self-help with democratic controls.

DEMOCRATIC MEMBER CONTROL

Member-driven and member controlled democratic units. Members actively participate in decision making processes. Members have equal voting rights [one member – one vote].

EDUCATION, TRAINING AND INFORMATION

Provision of member education and training, training for elected representatives, managers and employees of cooperatives.

CONCERN FOR COMMUNITY

Ensure sustainable community development by adopting right policy measures and meeting issues of community development.

COOPERATION AMONG COOPERATIVES

Strengthening the cooperative movement by working together.

(Source: International Cooperative Alliance [Available at https://www.ica.coop/en/cooperatives/cooperative-identity])

Source: Yojana

Cooperation holds immense potential to ensure comprehensive economic growth. For example, Sardar Vallabh Bhai Patel, through Tribhuvandas Patel, sowed the seeds of **Anand Milk Union Limited (Amul).** It has now become a **global diary brand**.

Cooperatives' full potential as a business model for achieving inclusive development is yet to be fully harnessed. Addressing hurdles and challenges through appropriate policies and effective government interventions is necessary to unleash the complete potential of cooperatives. This can be done through **4 Ps and 4 Es framework** for attaining Sahakar se Samriddhi.

PROSPERITY THROUGH COOPERATION: 4Ps + 4Es

4Ps

1. People Cooperating with People
2. Production by People
3. People before Profit
4. Profit with a Purpose

4Es

1. Ease of Doing Business
2. Ease of Living
3. Ease of Credit Access
4. Ease of Cooperation

Source: Yojana

Commitment to cooperative movement

The government has decided to plan, prioritise and explore new emerging areas for cooperatives through the **'SQUAD' framework**:

S – Self-reliance (Atmanirbhar)

Q – Quality Performance

U – Unshakable Cooperative Movement

A – Accountability in Governance

D – Development through Modern Technology

To establish a **uniform legal and operational framework** for cooperative development, the Union Government collaborating with the States/UTs. To achieve this, the government is formulating an all-inclusive **National Cooperation Policy** through a committee (Chairman: Suresh Prabhu).

How model bye-laws will make PACS vibrant?

Model bye-laws for Primary Agricultural Credit Societies (PACS) have been formulated and shared with the States/UTs for their consideration and adoption.

These model bye-laws aim to **establish a dynamic and robust cooperative culture** at the grassroots level, fostering the development of multi-purpose and multi-dimensional cooperatives.

So far, **22 States/UTs have adopted the model bye-laws**. The model byelaws have the potential to enhance operational efficiency, transparency, and responsibility towards collective community development.

What are the other measures for PACS?

PACS and Large Area Multi-Purpose Societies (LAMPS) will provide more than 300 e-services to citizens as **common service centers (CSC).**

PACS will be **integrated with Farmer Producer Organisations (FPOs)** under the existing FPOs Scheme of the Ministry of Agriculture and Farmers Welfare. This would help PACS extend their scope of activities.

The PACS are now eligible to avail **licenses for Petrol/ Diesel dealerships** and **LPG distributorships**.

Developing National Database

MoC is developing a **cooperative database** which will store authentic and updated data on cooperatives of all sectors.

It will help stakeholders carry out data analytics, find gaps and support policy formulation.

What should be done to consolidate cooperative credit?

To strengthen the Long-Term (LT) cooperative credit structure, MoC is working on a project for the **computerisation of Agricultural and Rural Development Banks** (**ARDBs**).

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Computerisation of PCARDBs and State Cooperative Agriculture and Rural Development Banks (SCARDBs) will **remove issues, inadequacies, and inefficiencies in their operation and profitability**.

What steps are being taken for improving cooperative education and training?

The government is creating a **national cooperative university** for a comprehensive, integrated and standardised structure for cooperative teaching and training.

The university will also meet the demand for capacity building of the existing workforce while ensuring a local, adequate, and quality supply of trained workforce.

What should be the future course of action?

To realise the potential of cooperatives, primary cooperatives at the community-level must be empowered and revitalized as a priority.

Some issues require immediate attention. They are – (a) reduction in regional and sectoral imbalances in cooperative spread; (b) meeting regulatory complexities; (C) improving governance, leadership and operational systems; (d) ensuring professional management; (e) initiating structural reform measures, etc.

There should be collective efforts to ensure a uniform and quick spread of cooperatives across States/UTs.

The vision of Sahakar se Samriddhi will be realised in its true sense if cooperatives adhere to the core philosophy of the cooperative-based model of socio-economic progress.

Semiconductor manufacturing in India: significance and challenges – Explained, pointwise

Introduction

Recently, two important events happened in the context of India's semiconductor programme. **First** was the **withdrawal of Foxconn** from the $19.5 billion chip-making joint venture with Vedanta. While Foxconn has given no reason, it is a general belief that the inability of Vedanta to pay for acquiring the necessary technology for chipmaking played a key role in this exit. The second event was **Micron's recent announcement to invest $825 million** in a chip testing and packaging facility in India. These developments showcase the opportunities and challenges facing India's semiconductor programme.

What are the other developments in semiconductor industry of India?

Both Foxconn and Vedanta can set up a fabrication facility independently.

Also, ISMC, backed by Abu Dhabi-based Next Orbit and Israel's Tower Semiconductor, has submitted a proposal to set up fabrication facility in Karnataka. But it has asked the government not to consider its proposal due to a pending merger between Intel and Tower Semiconductor.

The other proposal is by Singapore-based IGSS Venture to set up fabrication facility in Tamil Nadu, is on hold.

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Why is the government encouraging semiconductor manufacturing in India?

India relies heavily on imports for its domestic requirements of semiconductors. This makes the country vulnerable to coercions and supply chain disruptions- especially as China dominates the global semiconductor space. Setting up domestic manufacturing units would help to **insulate India against future supply disruptions and achieve self-reliance.**

The inclusion of embedded instructions in semiconductor chips presents a potential security risk, as they can contain **malware that is challenging to identify**. Given the extensive utilization of semiconductor chips in vital sectors like defense and telecommunications, domestic chip manufacturing becomes strategically significant, offering an enhanced level of security.

Why is there a global race to diversify semiconductor supply chains?

As of now, chip manufacturing is **concentrated in a few countries**. For example, Taiwan produces over 60% of the world's semiconductors, and along with South Korea makes 100% of the most advanced chips (below 10 nanometers).

Also, the semiconductor industry experienced **significant supply shortages** during the **pandemic** due to disruptions in China's production.

Additionally, the ongoing **Russia-Ukraine conflict** resulted in another round of shortages, as Ukraine plays a critical role as a key supplier of neon, an essential input in semiconductor manufacturing.

The European Union and the United States has refused to sell advanced manufacturing equipment to China. In retaliation, China imposed export controls on crucial inputs such as gallium and germanium. This may lead to another potential round of shortages in the semiconductor industry.

Therefore, many countries are looking to diversify their supply chain.

What are the government initiatives for making India a semiconductor manufacturing hub?

The government has approved the **Semicon India programme** with a total outlay of **INR 76,000 crore** for the development of semiconductor and display manufacturing ecosystem in the country.

The programme has further been modified due to two reasons: a) the **aggressive incentives** offered by countries that already have established a semiconductor ecosystem b) **limited number of companies** owning the advanced technologies.

The modified programme aims to provide **financial support to companies** investing in semiconductors, display manufacturing and design ecosystem. This will pave the way for India's growing presence in the global electronics value chains.

Following schemes have also been introduced under the program:

'**Modified Scheme for setting up of Semiconductor Fabs in India'** for **attracting large investments** for setting up semiconductor wafer fabrication facilities in the country. The Scheme extends a fiscal support of 50% of the project cost on an equal footing basis for setting up of Silicon complementary metal-oxide semiconductor (CMOS) based Semiconductor fabrication in India.

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'**Modified Scheme for setting up of Compound Semiconductors / Silicon Photonics / Sensors Fab / Discrete Semiconductors Fab and Semiconductor Assembly, Testing, Marking and Packaging (ATMP) / OSAT facilities in India'** extends a fiscal support of 50% of the Capital Expenditure on an equal footing basis for setting up of production facilities in India. It covers production of semiconductor types other than CMOS based semiconductors and includes assembly, testing and packaging facilities.

'Semicon India Future Design: Design Linked Incentive (DLI) Scheme' offers financial incentives, design infrastructure support across various stages of development and deployment of semiconductor design. The scheme provides "**Product Design Linked Incentive**" and "**Deployment Linked Incentive**".

What are the opportunities of setting up semiconductor manufacturing facilities in India?

A large portion of semiconductor design engineers globally are either Indian or Indian Origin. India is already an **R&D hub for the semiconductor industry** with nearly 2,000 chips being designed per year and more than 20, 000 engineers working in various aspects of chip design and verification. These factors are expected to foster the growth of semiconductor manufacturing.

There is a **huge domestic market** for semiconductors which could exceed $60 billion by 2026. Growth of the semiconductor industry in India is expected to be driven by the increasing semiconductor content across consumer electronics and automobiles including EVs and, increasing demand for smartphones. The number of smartphones in India is projected to reach a billion by 2026.

Many companies may still be interested in setting up semiconductor fab in India due to the **government's $10 billion incentive package** for semiconductor manufacturing.

Moreover, many global players are supporting India's efforts in this area because they are looking to diversify their semiconductor supply chains. As the **US has restricted its firms and its allies from assisting the Chinese production** of **16 nanometers or smaller chips,** advanced smartphones could not be produced in China anymore. This provides opportunities for India.

What are the challenges for India?

Semiconductors manufacturing is a very **complex and technology-intensive** sector with huge capital investments, high risk, long gestation and payback periods, and rapid changes in technology. These require significant and sustained investments. Also, chip manufacturers require a huge scale to be cost effective. This means **large investments, often in the $20 billion range**.

Additionally, developing an **ecosystem for chip manufacturing in a greenfield location** is a major challenge. It requires suitable infrastructure like availability of uninterrupted power, huge quantities of clean water and requires setting up expensive water purification facilities. Hundreds of chemicals and gases are also required for chip fabrication.

Semiconductors have a **small freight-to-price ratio** and a **zero-custom duty** regime under the **Information Technology Agreement, 1996.** Therefore**,** the location of raw material or sales market is meaningless due to low transportation cost. This facilitates concentration of production in a few countries where ecosystem for semiconductor manufacturing is already well established.

High-end chip manufacturing requires **sophisticated technology,** which very few corporations possess. Moreover, since such chips are considered **dual-use technology** (can be used for

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civilian and military purposes)**,** countries can place curbs on their export as the US and the Netherlands have done. Recently, the Netherlands restricted export of advanced semiconductor equipment.

What are the different stages of chip making and how can India succeed at each stage?

Chip design: It accounts for 15-20% of supply chain value. The US is the leader, followed by Japan, China, and the UK. Based on its electronics, computer-aided design and simulation design expertise, India can enter this space in **collaboration with lead firms** like Mentor Graphics, Cadence Design etc.

Chip fabrication: It accounts for 35-40% of supply chain value. Chip making is a complex and multi-step process involving etching, doping, and assembling silicon wafers. India **must not manufacture low nanometer (nm) chips.** This is because the investment required to produce them may exceed $20 billion with no guarantee of outcome. Also, the US has committed over $50 billion in subsidies for local fabricators producing high-end chips, which will result in surplus capacity in low nm chip manufacturing. Therefore, India should **focus on low-end fabs (more than 100 nm chips)** that account for most volume and require lesser investment.

Assembly testing and packaging: The segment accounts for 15-20% of supply chain value. China, Taiwan, South Korea, and Singapore are key competitors. India can **offer better prices due to its already existing cheaper expertise.**

Distribution: This segment accounts for 5-10% of supply chain value. The US, Canada, China, and Taiwan are key players. Micron collaboration may help India to participate in this segment as it is the **logical next step to the ATP segment.**

End use: This accounts for 15-20% of supply chain value. India, a large manufacturer of smartphones, automobiles, laptops etc., can **incentivize local manufacturers** to use chips assembled in India. This is a ready and waiting segment.

What should be done?

India should persevere on this path despite the challenges. It took Taiwan decades to become a semiconductor giant, starting with the transfer of American technology in the 1970s and gradually building its expertise and infrastructure.

The Indian government should **address domestic gaps** in nurturing a semiconductor ecosystem to attract investors and technology providers. It should **focus on assembly, packaging, and testing** of semiconductors to develop the necessary expertise and systems for chip manufacturing. India should also **prioritize the development of its expertise in chip design**.

The chip industry is highly competitive, and companies are hesitant to share their intellectual properties (IPs) with new entrants. Hence, **partnering with an established technology partner** that holds the necessary IPs is necessary. **Incentives should be specifically directed towards fostering collaborations** with established value chain partners.

India should remain focused on semiconductor manufacturing due to its strategic importance, which will significantly impact **future geoeconomics and geopolitics**. But it may have to reset the timelines and review its policy to attract another round of proposals.

Sources: Times of India (**Article 1** and **Article 2**) and **Business Standard**

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Extreme rainfall events and urban floods: Explained, pointwise

Introduction

Recently, heavy rainfall in parts of North India led to extensive flooding, impacting major cities such as Delhi, Gurugram, Patiala, Ludhiana and Jalandhar. Urban floods have now become a widespread occurrence across the nation, affecting numerous mega and metropolitan cities in India on an almost annual basis. While climate change and global warming are often cited as major causes of urban floods, several other factors also contribute to the problem.

What caused the recent episode of heavy rainfall?

Recent weather conditions which triggered heavy rains in Northwest India and the Himalayas were like those which caused **2013 Uttarakhand floods**.

First, an **active monsoon** with strong winds in the lower atmosphere, brought moisture into the region from the Bay of Bengal or the Arabian Sea.

Second, a **large-scale atmospheric forcing** (a dynamic process that forces the air to rise) occurred. Outflows in the upper layers of the atmosphere moved eastward through mid-latitude troughs (Western Disturbance). These troughs can also direct the flow of moisture towards the Himalaya.

Third, **deep convection** was triggered by orographic uplift due to the steep terrain of the Himalaya.

Thus, an interaction between a western disturbance and active monsoon, combined with the topography of the Himalayas led to extremely heavy rainfall over Himachal Pradesh, Uttarakhand, Punjab and Haryana

Excess rainfall over Northwest India is also related with the **warm Arabian Sea** (warmed by about 1.5 degrees Celsius since January) which has infused excess moisture over North-Northwest India

Why are extreme rainfall events increasing?

A study on the 2013 floods in Uttarakhand identified the Himalayan region is conducive to formation of deep, **intense convective clouds**. Instances of such deep convection have increased over time mainly due to **climate change**. Warmer temperatures lead to increased evaporation, which leads to more moisture in the atmosphere. This extra moisture leads to heavy rainfall when weather systems interact with the steep topography of the region.

Human influence is causing the Arctic to warm and sea ice to shrink. There is increasing evidence that **Arctic warming** impacts monsoon climate through mid-latitude circulation. Observations and models suggest that due to Arctic warming, the frequency of occurrence of deep mid-latitude troughs is likely to increase.

Due to climate change, hilly areas and surroundings like the Himalayan foothills or the Western Ghats are more vulnerable to heavy rains and landslides. Because of global warming, there's **extra moisture** in the atmosphere which is **lifted orographically** and comes down as heavy rains.

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Changes in land use and land cover also appear to be reasons for the increase in extreme monsoon rainfall, especially its intensity.

The IPCC's scenarios for climate change indicate that these trends will continue. Multi-day flood events are projected to increase faster than single-day events in the future.

What are the other causes of recurrent urban flooding?

Urban planning: According to a NITI Aayog report titled 'Reforms in Urban Planning Capability in India', 65% of the urban settlements do not have any master plan. As a result, there are fragmented interventions, disorderly constructions and urban sprawl, all of which can worsen problems like urban flooding.

Urban governance: On the governance front, municipal administrations have disregarded unauthorized construction. They also failed to prevent encroachments, particularly on water bodies and allowed construction in low-lying areas without adequate mitigation measures. Failure to stop indiscriminate disposal of solid waste and illegal dumping of construction debris also adds to the problem.

Encroachment of water bodies: Water bodies such as wetlands, marshes, lakes, riverbeds and their floodplains act as natural rainwater sinks and buffers against floods. Their encroachment due to rapid and unplanned urbanisation has limited their ability to perform this vital function.

Deforestation in the catchment area: The catchment regions of rivers and their tributaries have seen uncontrolled deforestation and degradation of vegetation. This has increased soil erosion and siltation which has increased the load of sediments in riverbeds and reduced their water-carrying capacity. The discharge of waste into the rivers has added to this problem.

Storm water drains: In many urban localities, there is absence of storm water drains. At places where a storm water drainage network exists, it was planned several decades ago and thus inadequate to handle increasing instances of extreme rainfall. For example, Delhi's storm water drainage network can carry a maximum of 50 mm of rainfall in 24 hours but recently, the city recently saw rainfall of 153 mm in a day. Poor maintenance of existing storm water drains due to incompetent municipal administration leads to their clogging with mud and material which further compounds the problem.

What are the steps taken by the government?

The National Disaster Management Authority (NDMA) has issued the **National Guidelines on Urban Flood Disaster Management.** The guidelines are comprehensive and identify the institutional framework required for improving flood resilience through better flood disaster management.

A **National Disaster Management Plan** has been developed. The plan has a special section on **urban flood disaster risk reduction**.

A **standard operating procedure (SOP) for urban flooding** was also brought out by the Ministry of Housing and Urban Affairs. The SOP identified the objectives, mitigation strategies for urban flooding, nodal agencies for early warning, city-level action plans including the establishment of the emergency operations center and other related measures including reporting formats.

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Also, the Ministry of Housing and Urban Affairs has released the **first dedicated stormwater drainage manual.** The manual has taken inspiration from established international codes of practice and has been modified to suit the local conditions.

The government has also launched schemes like Atal Mission for Rejuvenation and Urban Transformation (**AMRUT**), National Heritage City Development and Augmentation Yojana (**HRIDAY**) and **Smart Cities Mission** for capacity building of urban local bodies.

What should be done?

Resilient design in urban planning: This should involve restoring traditional water bodies, revitalizing lakes, building artificial lakes, and developing green infrastructure such as rain gardens. These measures will enhance permeability, create open spaces, and effectively manage stormwater runoff. Rainwater harvesting in parks and open spaces will act as sponges and reduce flooding.

Comprehensive stormwater drainage master plan: Cities should have separate stormwater and sewage drains. Master plans should be developed for all urban settlements keeping in mind the city's land use patterns and drainage infrastructure. Encroachment of stormwater drains should be stopped, and they should be solely used carrying excess rainwater.

Assess flood-carrying capacity of Indian cities and prepare urban flood risk database: This assessment would involve evaluating the ability of cities to manage flooding by examining the level of inundation during different intensities and durations of precipitation. This information would aid in fine-tuning forecasting models, allowing for timely issuance of early warnings and alerts based on specific regional thresholds.

Governance measures: There should be regulated real-estate growth with proper implementation of land use planning and zoning regulations. For example, areas prone to flash floods can be designated as non-residential or restricted areas.

Restoration of ecosystems: Ecosystems, such as forests and wetlands, should be protected and restored so that they can act as a natural buffer, absorbing rainfall and reducing runoff.

NDMA guidelines: The recommendations made by the NDMA guidelines should be implemented.

Sources: Indian Express, **Times of India**, **Hindustan Times** and **Deccan Herald**.

[Yojana July 2023 Summary] Strategic diversification of cooperatives and business competitiveness – Explained, pointwise

Introduction

The Indian cooperative movement started in the late 19th century and made significant progress until the 1970s. However, certain challenges such as accountability and governance issues, internal vested interests, lack of coordination, political interference, and limited diversification began to hinder its growth. As a result, policymakers and planners gradually shifted their focus away from cooperation-led socio-economic development. Recognizing the untapped potential of the cooperative sector, the Ministry of Cooperation was established with a renewed focus on promoting cooperative activities at the grassroots level. It is crucial to empower cooperatives to compete on an equal footing with corporate businesses. To ensure their continued relevance and

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competitiveness, cooperatives at all levels, ranging from community-based to national, must pursue strategic business diversification.

Why must Cooperatives pursue strategic business diversification?

Cooperatives are a type of business organization, and like any other business, they need to expand their customer base and explore new markets to remain **commercially viable**.

Cooperatives need to diversify to ensure their long-term viability and growth. If a business doesn't diversify, it can become **stagnant**, which hinders its future growth.

Strategic diversification keeps businesses **relevant in the market** by forcing them to discover unmet customer needs and identify new, untapped markets. This enables businesses to generate **long-term profits and wealth.**

By strategically diversifying their operations, cooperatives can expand their customer base, decrease reliance on specific markets, and enhance their ability to **meet the needs of their members**.

How should cooperatives formulate diversification strategies?

In this context, strategy refers to the **stated visions and missions** of an organization. Strategic decisions are typically aligned with these visions and missions.

Cooperatives should **establish clear vision and mission statements**. These statements define the objectives and purposes for which the cooperatives are formed. This information can help develop tactics for diversification of their businesses.

Following five steps are involved in strategy formulation:

Firstly, a cooperative need to **determine the specific goals** it wants to achieve and identify the different purposes behind those goals. This clarity is crucial for outlining and accomplishing the objectives of the cooperative.

Secondly, it is necessary to acquire a **practical understanding of the ground situation**. This should be followed by an assessment of the internal and external environment, which involves conducting a Strengths, Weaknesses, Opportunities, and Threats (SWOT) analysis.

Thirdly, **formulate a strategy** for achievement of goals through reflection, prioritization, and the development of decision-making options. Alternative options should then be assessed to determine the most suitable strategy.

Fourthly, the individual responsible for its execution should be entrusted with the available and allocated resources, personnel, and the necessary means to achieve the goals of the strategy. Their role is to implement the chosen course of action, mobilize resources, and identify tactics for successful strategy implementation.

Finally, it is important to **monitor the strategy** according to the agreed timeline or verification process. This involves conducting mid-term or periodic reviews to evaluate the success of the interventions and taking corrective actions if needed.

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What are different strategic diversification strategies for cooperatives and examples of successful diversification by cooperatives?

Product Diversification: Cooperatives can diversify their product/service offerings to meet the needs of new markets or due to changes in customer tastes and preferences. For example, **Amul** – introduced ice creams and other frozen milk confectionaries in 1996, to diversify its businesses.

Geographic Diversification: Cooperatives expand their range of products to access new markets and cater to the needs of different customers. For instance, the Karnataka Milk Federation's milk brand called '**Nandini Goodlife**' is now available in various states of India through prominent retailers.

Service Diversification: Cooperatives go beyond their primary products and services to provide new offerings that fulfill the needs of their members and customers. For instance, the **Anjarakandi Urban Cooperative Bank** in Kerala not only offers banking services but also sells coconut-based products like copra, coconut water, and coconut milk/oil.

Joint Ventures: Cooperatives have the option to establish Joint Ventures (JVs) by combining resources and expertise. For instance, the **Indian Farmers Fertiliser Cooperative Limited (IFFCO)**, collaborated with Spain's Con gelados De Navarra to establish a food processing plant in Ludhiana, Punjab.

Vertical Integration: Cooperatives can vertically integrate their operations by incorporating upstream or downstream activities related to their current operations. For instance, **Amreli District Cooperative Milk Producers Union** entered into a joint venture with IFFCO Kisan Sanchar to supply high-quality animal feed.

Horizontal Integration: Cooperatives can horizontally integrate their operations by merging with or acquiring other cooperatives or companies within the same industry. This consolidation can lead to the realization of economies of scale, offering numerous advantages to their customers and stakeholders. For instance, **Ceritrum Finance Ltd**., a Non-Bank Finance Company (NBFC) based in Mumbai, acquired the Punjab and Maharashtra Cooperative Bank to access the markets served by the bank.

How can cooperatives multiply profits through business diversification? A Case study.

Sittilingi Organic Farmers Association (SOFA) was formed as a cooperative society in 2004 in the tribal village of Sittilingi in Dharmapuri district of Tamil Nadu.

With over 500 members, each having a minimum landholding of 2.5 acres, the cooperative **cultivates a variety of millets and cash crops** including cotton, turmeric, sugarcane, groundnut, and vegetables.

SOFA ensures the financial and economic viability of its member farmers by advising them on crop production based on market demand and ensuring crop diversification among members.

The cooperative has **diversified into food processing through the production and marketing of millet-based cookies, health-mixes, roasted powders, papads, and other products**.

In addition, SOFA has expanded into **ancillary agri-business activities**, such as organic fertilizers, and operates plant nurseries and bio-compost units.

These endeavors collectively yield an **annual turnover of Rs 25 lakh** for the cooperative.

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What should be done?

To achieve a competitive advantage for cooperatives through strategic diversification, the Ministry of Cooperation must undertake a **thorough analysis of their strengths, mission, and values.**

Active involvement and support from members must be sought throughout the process of strategic management.

Cooperatives should capitalize on their distinctive strengths and capabilities and align diversification opportunities with their mission and values to achieve growth and gain a competitive advantage in new markets and product lines.

Chandrayaan-3: How its different and its significance – Explained, pointwise

Introduction

Recently, India's third moon mission, Chandrayaan-3, was successfully launched onboard a Launch Vehicle Mark-3 (LVM-3) rocket from the Satish Dhawan Space Centre in Sriharikota. This is India's second attempt at soft-landing on the lunar surface after the failure of previous attempt, Chandrayaan-2, in 2019. So far, only three countries, the U.S., Russia and China, have successfully soft-landed on the moon. Chandrayaan-3 seeks to study moonquakes, composition of lunar surface and atmosphere, understand Earth's life-like elements, how heat passes through the lunar surface and plasma environment on the Moon. The mission will demonstrate Indian Space Research Organization's (ISRO) ability of soft landing on lunar surface and roving on the lunar terrain. It is expected to be supportive to ISRO's future interplanetary missions.

Read More: **What is Chandrayaan-3?**

How does the Chandrayaan-3 compare with 2019's Chandrayaan-2 and why does it have a higher probability of success?

While the mission objectives remain the same, unlike Chandrayaan-2, which consisted of a lander, rover, and orbiter, Chandrayaan-3 will launch with **only a lander and a rover**, utilizing the existing orbiter from Chandrayaan-2 for communication and terrain mapping purposes.

ISRO adopted a "**failure-based design**" for Chandrayaan-3 instead of a "success-based design" used of Chandrayaan-2. It means that ISRO's focus during the Chandrayaan-3 mission was on identifying potential failure points and implementing safeguards to ensure a successful landing.

Learning from its Chandrayaan-2 failure, ISRO has **implemented several improvements** in Chandrayaan-3 to ensure success this time. Some of them are as following:

Landing area: The landing area has been expanded. Instead of trying to reach a specific 500m x 500m patch for landing as targeted by Chandrayaan-2, the current mission has been given instructions to land safely anywhere in a **4km x 2.4km area**.

Strengthened legs: The legs of Chandrayaan-3 Lander have been strengthened to ensure that it would be able to land, and stabilise, even at a speed of 108 km/hour.

More fuel: The Chandrayaan-3 Lander is carrying more fuel than Chandrayaan-2 to enhance the Lander's capability to make a last-minute change in its landing site, if the need arises.

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Solar panels: The Chandrayaan-3 Lander has solar panels on four sides, instead of only two in Chandrayaan-2. This design modification enables the lander to continue harnessing solar power even if it lands in an incorrect orientation or experiences tumbling.

More instruments: Chandrayaan-3 incorporates additional navigational and guidance instruments to continuously monitor the speed of the lander and making any required corrections.

Updated software: Significant upgrades have been made to the hazard detection and avoidance camera, processing algorithm, and navigation and guidance software of Chandrayaan-3. Multiple layers of redundancies have been implemented to guarantee that alternative systems are available in case of any failure or malfunction.

Multiple stress tests: The Lander has been subjected to multiple stress tests and experiments. ISRO created several kinds of test beds at one of its facilities to simulate lunar landing conditions.

How is Chandrayaan-3 different from other moon missions?

Chandrayaan-3 is different from other moon mission as it will be the **world's first mission to try to soft-land near the lunar south pole.**

All the previous spacecraft have landed a few degrees latitude north or south in the lunar equatorial region as it is **easier and safer to land near the equator**.

The surface near the **lunar equator is even and smooth**, with lesser hills or craters. Also, **abundant sunlight** offers regular supply of energy to solar-powered instruments.

The polar regions of the moon have **numerous craters** and many regions near lunar poles are characterized by lack of sunlight and extremely low temperatures, reaching below minus 230 degrees Celsius. The **absence of sunlight** and **extremely low temperatures** pose obstacles for instrument operation.

Why ISRO wants to explore the Moon's south pole

Unexplored region: The challenging conditions of the polar regions on the moon have discouraged exploration, but evidence from various Orbiter missions suggests these areas hold significant potential for exploration. For example, the 2008 Chandrayaan-1 mission indicated the presence of substantial amounts of ice molecules in the deep craters of this region.

Insights into early history of Solar System: Also, the extreme cold temperatures in the polar regions of the moon preserves objects as they remain frozen and undergo minimal change over time. As a result, the rocks and soil found in the Moon's north and south poles have the potential to offer valuable insights into the early stages of the Solar System.

Presence of water: The Moon's minimal axial tilt of 1.5 degrees results in certain craters near the lunar north and south poles never receiving direct sunlight. These specific areas are referred to as Permanently Shadowed Regions (PSRs). According to a 2019 NASA report, water can potentially persist for extended durations in PSRs, as certain areas maintain sufficiently low temperatures to keep water stable at the surface.

What is the significance of the mission?

Gaganyaan: With a **human-rated** (thorough process to safely design, build and launch a crewed spacecraft) Launch Vehicle Mark (LVM) to be used for the upcoming Gaganyaan mission, the

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LVM-3's successful launch of the Chandrayaan-3 has gained significance, as it has further **enhanced the reliability of the launch vehicle**.

Shift in India's space programme: The Chandrayaan and Mangalyaan signal a **shift in strategy**. Earlier, ISRO seemed focussed on **utilitarian objectives** like enabling telecommunications, telemedicine and tele-education, broadcasting, or setting up remote sensing satellites. But **space and planetary exploration** is becoming a priority now.

Future space exploration: The ability to make a **soft landing** on a planetary body is a **crucial technology** which can impact IRSO's ability to carry out, or participate in, other scientific missions to the moon. The US **Artemis programme** significantly expands the scale of future exploration. In the future, there is a likelihood of discontinuing the International Space Station, leading several nations, including the US, to explore the construction of more permanent structures on the lunar surface. India aspires to become a significant partner in these endeavors.

Boost to the Indian space-tech ecosystem: The successful launch of Chandrayaan-3 could **bolster investor confidence** and **attract more private investment** in space technology. This development will promote cost-efficient and highly reliable space-grade hardware provided by the Indian space industry for this mission. Moreover, it validates India's industry as a potential supplier for lunar programs undertaken by other countries.

Conclusion

As ISRO gets into scientific space exploration, it will most likely also face **greater scrutiny** and demands for **accountability** because space exploration has gained significant strategic, economic, and even military dimensions. It offers tangible power advantages, which is evident by the fact that major global powers are also leading space-faring nations. Hence, ISRO should swiftly progress in this new phase.

Moreover, the **future of space exploration will heavily rely on collaboration**, as the envisioned missions and infrastructure necessitate capabilities beyond the reach of any single country. However, collaborations will only be established with partners who can add value to the partnership.

India has the potential to exert a **significant influence on global space policy** and should actively pursue the establishment of a regional space alliance, such as an Asian Space Agency, to enhance collective bargaining power and become a formidable force in the field. While prioritizing the peaceful use of outer space, India must also remain cautious of the potential militarization of space. However, becoming a space power is a crucial initial step, and Chandrayaan-3 can propel India closer to achieving this goal.

Sources: The Hindu (A**rticle 1** and **Article 2**), Indian Express (**Article 1**, **Article 2** , **Article 3** and **Article 4**), Times of India (**Article 1** and **Article 2**)

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India-France relations: significance and challenges – Explained, pointwise

Introduction

Recently, Prime Minister Narendra Modi visited France on the 25th anniversary of the India-France strategic partnership. The visit was special as the Prime Minister was invited to be the chief guest at the Bastille Day parade. The visit concluded with the signing of several agreements and a series of defense deals. The two countries also outlined a roadmap for the next 25 years of India-France ties (Horizon 2047) which herald a new phase in India's relations with France.

What are outcomes of the Indian PM's recent visit?

"Horizon 2047" agreement was signed. It included the strategic road map for the next 25 years. It has three pillars — 1) Partnership for security and sovereignty 2) Partnership for the planet and 3) Partnership for the people.

This agreement includes a variety of fields of cooperation i.e., defence, space, nuclear energy, climate change and green transitions as well as education and people-to-people ties. Through this roadmap, the India-France Strategic Partnership will further diversify into new areas of cooperation while also deepening existing programmes of shared interest.

A roadmap to cooperate in the Indo-Pacific region was also released. The agreement includes military and naval exchanges and a trilateral development fund to help countries in the Indo-Pacific region.

Under defence cooperation, Safran, the French company and the DRDO (Defence Research and Development Organisation) will jointly develop jet engines for the advanced medium combat aircraft. Submarines are proposed to be jointly built by Mazagon Dock Shipbuilders and the Naval Group of France.

A brief background of India-France relations

India and France have **traditionally close and friendly relations.** In 1998, the two countries entered into a Strategic Partnership which is symbolic of their **convergence of views** on a range of international issues apart from a close and growing bilateral relationship.

The areas of **defence & security cooperation, space cooperation and civil nuclear cooperation** constitute the principal pillars of our Strategic Partnership. Apart from these, India and France are increasingly engaged in new areas of cooperation such as **maritime security in the Indo Pacific region, counter terrorism, climate change, renewable energy and sustainable growth and development** among others.

India and France support a **multi-polar world order**. France has continued to support India's claim for permanent membership of the United Nations Security Council and the reforms of the United Nations. France's support was vital in India's accession to the Missile Technology Control Regime (MTCR), Wassenaar Arrangement (WA) and Australia Group (AG). France continues to support India's bid for accession to the Nuclear Suppliers Group (NSG).

India and France have consistently **condemned terrorism** and have resolved to work together for adoption of the Comprehensive Convention on International Terrorism (CCIT) in the UN.

India and France also have a **robust economic partnership**. French businesses and industry have forged linkages with the Indian economy and contribute significantly to India's goal to

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become an Atmanirbhar Bharat. There are over 1000 French businesses in India in different sectors. France is the 7th largest foreign investor in India representing 2 % of the total FDI inflows into India (2020).

What is the significance of the India and France relations?

Strategic autonomy: France-India strategic relationship is built on a respect for each other's strategic autonomy. For example, unlike other European countries, France has avoided any comment on India's internal affairs or its foreign policy choices, like Russia's war in Ukraine.

On the other hand, India also avoided any mention of the violence in France after the killing of a teenager belonging to the Algerian immigrant community.

Both countries are happy with their bilateral relations and show no desire to pull the other into a coalition, grouping or alliance the other is a part of.

French support after nuclear tests: In 1974, and in 1998, France did not join the western push to sanction India for its nuclear tests either; it even stepped in with uranium supplies to power the Tarapur reactors.

Strategic partnership: Franco-Indian strategic partnership comes at the top in comparison to 30 strategic partnerships with various countries. It has remained strong during difficult or good times.

Franco-Indian strategic partnership covers all dimensions of a full spectrum partnerships, like defence, space, climate change, critical technologies and people-to-people ties.

After the recent visit, Franco-Indian defence ties has developed from a mere buyer-seller model to that of jointly designing, developing and co-producing.

Indo-pacific: France maintains a notable presence as a resident power in the Indo-Pacific region, with overseas territories such as La Reunion, New Caledonia, and French Polynesia, and military bases in the area.

Joint exercises between the two countries, use of French military bases by Indian forces and achieving real-time maritime domain awareness in the Indian Ocean are of paramount importance for India.

China: India can counter China in the maritime space with the active support of France along with Quad partners.

Russia: Gradually France is replacing Russia as a major defense partner of India. Major reasons behind gradual shift in Russia- India defence relations are: First, after invasion of Ukraine, Russia is facing many internal and external challenges. Second, Russia is moving increasingly close towards China.

Technological assistance: The collaboration between India and France in domains such as supercomputing, cloud computing, artificial intelligence, and quantum technologies holds significant importance for India's future and has the potential to shape the course of their relationship for the next 25 years.

Horizon 2047 agreement is an indication that France understands that no global problem can be tackled meaningfully without India's participation. France is also determined to support India's candidature for permanent membership of the UN Security Council

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What are challenges in India-France relationship?

The **Rafale deal** did not find mention in the joint communiqué, issued after the Paris summit between Mr Modi and French President Emmanuel Macron. Reference to the construction of three more **Scorpene submarines** was dropped from a later version of the bilateral statement "Horizon 2047".

The French President signaled his country's discomfort with the United States' China containment policy with a state visit to Beijing. Also, France's stand on China's BRI contrasts with that of India. Therefore, France **might not be a reliable partner in case of confrontation China.**

Seven years after a Memorandum of Understanding (MoU) was signed between India and France for setting up the world's largest **nuclear power plant at Jaitapur** (Maharashtra), the project has not seen much progress.

France is strong enough to have something to offer on the diplomatic, military, space, and nuclear sectors to India, but **not strong enough to shape international order, norms, or rules, or to balance China** if tensions escalate. While India holds significance for France, particularly in trade and defense cooperation, it may not be considered the foremost partner when addressing critical challenges such as Russian aggression or terrorism in Africa.

France's GDP is almost equal to that of India's, but **bilateral trade remains far below potential**. Trade with France constitutes only 1.41% of India's total international trade.

Conclusion

The divergence between India and France on the **war in Ukraine** has not endangered the development of their bilateral ties. This is because of the trust developed between the two countries over the last 25 years and **mutual understanding** of each other's positions on the subject

France and India are making strategic commitments to each other for the long term. These two middle powers share a **similar worldview**. Both nations pursue independent foreign policies and value strategic autonomy, as they believe it will empower them to influence a multipolar world. Importantly, both countries recognize that their collective efforts will significantly enhance the likelihood of achieving this goal.

Sources: [The Hindu](#), Indian Express ([Article 1](#) and [Article 2](#)) and [Business Standard](#)

WTO reforms and India: Explained, pointwise

Introduction

During Prime Minister Narendra Modi's official state visit to the U.S., a significant outcome was the resolution of six long-standing trade disputes at the World Trade Organization (WTO). This achievement was unprecedented and stands as a remarkable example of bilateral cooperation between India and the U.S. to settle disputes in various sectors.

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What were the disputes that were settled?

India's National Solar Mission: The mission was challenged for the domestic content requirements with the U.S. seeking authorisation from the WTO's Dispute Settlement Body for trade retaliation, which India contested. India also contested certain sub-federal renewable energy schemes in the U.S. and won the case. However, over time, some of these schemes expired or were modified, making enforcement of the WTO panel ruling challenging. The dispute was set to reach the Appellate Body, where it could have remained unresolved for an extended period of time.

India's foreign trade policy schemes: India also settled disputes related to some of its foreign trade policy schemes, including the special economic zone (SEZ) and export-oriented unit schemes.

Section 232 tariffs: Two ongoing disputes involving the controversial Section 232 tariffs imposed by the U.S. on steel and aluminium were also resolved. (Section 232 of the Trade Expansion Act of 1962 authorizes the President of the United States, through tariffs or other means, to adjust the imports of goods or materials from other countries if it deems the quantity or circumstances surrounding those imports to threaten national security.) The U.S. will consider exclusions from Section 232 measures with approval rates for Indian steel and aluminium products, while India will remove retaliatory duties on certain U.S. agricultural imports.

Read more: [Dispute Settlement System of the WTO](#)

What are the other disputes involving India at WTO?

Tariff treatment on ICT goods (India v/s Japan, EU): India has moved the WTO Appellate Body against a WTO panel ruling that said its import duties on some information and technology products are inconsistent with global trade norms.

Measures concerning sugar & sugarcane (India v/s Guatemala, Brazil, Australia): India had also appealed against a ruling of WTO's panel which said that the country's domestic support measures for sugar and sugarcane are inconsistent with global trade norms. Currently, India is in negotiations with Brazil to resolve the dispute.

Peace Clause: Recently, during the special session of the agriculture committee of the WTO, India urged the body to find a permanent solution to the issue of farm subsidies and public stockholding for food security. Any alternative plan has to be better, and more practical, than the present Peace Clause-based interim arrangement.

Why does the WTO need to be reformed?

Special and Differential Treatment (S&DT): As WTO members are from different income levels, S&DT ensures a balance between developed and developing countries by providing concessions in enforcement and compliance with rules. But there are no clear criteria for defining developing countries.

While the UN criteria is used for categorizing Least Developed Countries, developing countries are defined based on 'self-declaration'. This provision has been misused by some high-income countries like S Korea in the past and China in the present.

Rule Making Through Consensus: The WTO governance model of 'Consensus' decision making has often resulted in deadlocks due to wide differences between developed and developing

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countries. This has not only reduced the effectiveness of WTO as a forum for trade cooperation but also resulted in repercussions like members shifting to bilateral and regional trade cooperation and the rising significance of Plurilateral Agreements.

Transparency and Monitoring: Members' notifications is the main information used by WTO for deliberations in WTO committees and councils. These notifications are submitted by member countries and provide essential information about their trade policies, measures, and other relevant developments that may have an impact on international trade.

However, there are often coverage gaps in these notifications. Some member countries may not fully comply with the notification requirements, leading to incomplete or delayed information. These gaps can pose challenges for the WTO's decision-making processes.

Dispute Settlement: Adjudication of trade conflicts is an important function of WTO. This determines the sanctity of negotiated agreements and thereby influences future negotiations as well. Although there are criticisms on jurisdictional parameters, the non-functioning of Appellate Body since 2019 is a hurdle that needs to be overcome.

Shift to Plurilateral Agreements: There has been a shift towards plurilateral agreements like the TPP Agreement. Plurilateral Agreements favor developed countries more as they are able to push their interests (developing countries have less negotiating power) unlike WTO where all agreements happen through consensus.

'Most favoured nation' status: Under this principle, a country must give the same treatment to all other trade partners who are members of the WTO. This can lead to a price war which can hurt domestic industries as the country is not able to protect domestic industry from the cheaper imports.

What reforms has India suggested?

India has recently issued a comprehensive proposal called "**30 For 30**", a member-led effort to bring at least 30 operational improvements to the WTO before the Organization completes 30 years, i.e., by 1 January 2025."

The proposal aims to improve the functioning of various bodies/committees of the WTO to bring about efficiency and effectiveness.

India has suggested **34 operational changes** including a year-long cooling-off period before hiring a diplomat in any role in the organisation, resolving old issues before picking up new ones, and a time-bound work programme to make dispute settlement more accessible for developing countries.

Implementing the suggested incremental changes could be done swiftly since they involve **straightforward measures to enhance the operational efficiency of the organization.** Developing a shared understanding among members regarding these proposals would be relatively simple due to their nature.

What has been the contribution of the WTO?

Dispute resolution: As trade expands in volume, in the numbers of products traded, and in the numbers of countries and companies trading, there is a greater chance that disputes will arise. The WTO system helps resolve these disputes peacefully and constructively.

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Voice to smaller countries: The WTO does reduce some inequalities, giving smaller countries more voice, and at the same time freeing the major powers from the complexity of having to negotiate trade agreements with each of their numerous trading partners.

Reduced costs: The WTO's global system lowers trade barriers through negotiation and applies the principle of non-discrimination. The result is reduced costs of production (because imports used in production are cheaper) and reduced prices of finished goods and services, and ultimately a lower cost of living.

Way Forward

Issues like Environment, labour laws need to be put on hold at the moment. More essential issues relevant to the interests of the developing countries, like unresolved issues on Agriculture etc. need to be resolved first.

While the plurilateral approach is a welcome development for rulemaking, there is a need to develop a multilateral governance framework for plurilateral agreements. This governance framework should include key principles of non-discrimination, transparency, and inclusivity.

 Sources: [The Hindu](#)

Enforcement Directorate: Significance and Criticisms – Explained, pointwise

Introduction

The Enforcement Directorate (ED) has been criticized for taking on roles similar to a policing agency and has faced accusations of targeting political opponents of the government. Recently, the Supreme Court has invalidated the third extension of tenure given by the government to the Director of Enforcement Directorate. The judgement has brought back the issue of ED's functioning into public debate.

Read more: **[Supreme Court asks ED chief to quit; but upholds amendments](#)**

About the Enforcement Directorate

ED is a multi-disciplinary organization mandated with investigation of offences of money laundering and violations of foreign exchange laws. It is a non-statutory body under the Department of Revenue, Ministry of Finance.

The statutory functions of the agency include enforcement of following Acts:

1. **The Prevention of Money Laundering Act, 2002 (PMLA):**ED has been given the responsibility to enforce the provisions of the PMLA. It conducts investigation to trace the assets derived from proceeds of crime and ensures prosecution of the offenders and confiscation of the property by the Special court.
2. **The Foreign Exchange Management Act, 1999 (FEMA):**The ED has been entrusted with the responsibility of investigating suspected violations of foreign exchange laws and regulations. Additionally, it has the authority to adjudicate cases and impose penalties on those found to have contravened these laws.
3. **The Fugitive Economic Offenders Act, 2018 (FEOA):** Under this law, the agency is mandated to seize the properties of fugitive economic offenders who have fled from India to evade arrest.

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4. **Sponsoring agency under COFEPOSA:** Under the Conservation of Foreign Exchange and Prevention of Smuggling Activities Act, 1974 (COFEPOSA), the ED is empowered to sponsor cases of preventive detention regarding contraventions of FEMA.

How has the ED evolved with time?

The ED was founded as "**Enforcement Unit**" within the Department of Economic Affairs of Ministry of Finance in 1956. It was renamed as "Enforcement Directorate" in 1957.

It originally handled Exchange Control Laws violations under the **Foreign Exchange Regulation Act, 1947 (FERA '47)**. Under this act, the ED had the power to arrest for FERA violations, but the scope of powers was limited as the ED's domain was largely limited to the corporate world.

The administrative control of the ED was transferred from the Department of Economic Affairs to the Department of Revenue in 1960.

The nature of ED changed as India changed. In the **pre-liberalisation era**, the laws driving ED were "**regulation**" laws whereas **post-liberalisation**, those became "**management**" laws. For example, FERA 1973 [which replaced FERA 1947 became the Foreign Exchange Management Act, 1999 (FEMA).

Under FEMA, 1999, ED lost its power to arrest people or take them into custody as forex violations amounted to civil offenses, compoundable after payment of a fine.

ED's **powers increased significantly after the enactment of PMLA, 2002** because the act re-empowered ED with the powers of criminal prosecution. The 2009 and 2013 amendments widened the scope of PMLA and provided further powers to the ED.

Recent expansion of powers

In 2022, the Centre has amended a **2006 notification** to list 16 entities which will have to mandatorily share information with the Enforcement Directorate (ED) under **Section 66** of the PMLA. Among these are the National Investigation Agency (NIA), the Competition Commission of India (CCI), the Serious Fraud Investigation Office (SFIO), and State Police Divisions. This has further widened ED's powers.

Again, in 2022, the **Supreme Court upheld the amendments** made to the PMLA through Finance Acts. It gives the ED virtually unchecked powers of summons, arrest, and raids, and makes bail nearly impossible while shifting the burden of proof of innocence on to the accused rather than the prosecution.

How ED is different from other policing agencies?

Predicate offence: A predicate offence (a crime that is a component of a more serious crime) is essential to charge someone of money laundering. The investigation and prosecution of the predicate offence is done typically by the Central Bureau of Investigation (CBI) or the State Police while the ED investigates the money laundering aspects.

Inquiry is not investigation: Section 50 of the PMLA provides powers of a civil court to the ED authorities for summoning persons suspected of money laundering and recording statements. However, the Supreme Court held in **Vijay Madanlal Choudhary v. Union of India** (2022) that ED authorities are not police officers and an inquiry under the Section 50 of the PMLA is not 'investigation' in strict sense of the term for initiating prosecution.

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Other differences: In court, any statement given by an accused to the police is not admissible as evidence, but a statement made to an ED authority is considered admissible. While the accused can access a copy of the First Information Report (FIR), the Enforcement Case Information Report (ECIR) is rarely made available to them.

What is the significance of ED?

Economic crimes are far more serious than crimes against individuals as they injure the economic and social fabric of society. Therefore, these crimes should be dealt with differently and the consequences for the offender should be severe. The role of ED becomes important in this context. The agency is tasked with enforcing economic laws and combating economic crimes in India, like money laundering, foreign exchange violations and financial fraud.

Corruption, especially in the higher echelons, increases inequality, decreases popular accountability and political responsiveness. It damages the health of the economy and makes foreign businesses and investors shy away. The ED contributes to the fight against corruption by investigating the money laundering aspects.

What are the criticisms of ED?

Wide powers: The ED has a set of powers that even CBI or state police forces don't have. Some of these powers are: 1) Statement before ED is admissible in court as evidence. 2) All offences under PMLA are non-bailable. 3) The burden of proof is on the accused. Critics argue that these wide powers are liable to be misused.

Transparency: There is a lack of transparency in the way the ED functions. It is not known how the ED chooses its cases and what is the basis of picking a particular case. Also, ECIR, the equivalent of FIR, is considered an internal document and not given to the accused.

Use of PMLA for ordinary crimes: There have been allegations that the PMLA has been invoked in the investigation of ordinary crimes, leading to the attachment of assets of innocent individuals by the authorities.

Low conviction rates: Since 2005, the ED has registered 5,906 cases but disposed only of 25 cases, a mere 0.42% of the total cases.

Political bias: Critics often allege that the government is weaponising the ED by silence its critics, especially against the opposition leaders. A report published in The Indian Express in 2022 found that close to 85% of the cases involving politicians were registered against those from the opposition.

Way forward

While the ED possesses substantial powers under PMLA, it is essential to ensure they are not misused against political opponents. Investigations should not be employed as a means of punishment, and efforts should be made to expedite case resolutions to achieve swift trials and convictions.

The ED must demonstrate fairness and impartiality by putting more facts in the public domain to show that its actions are justified and command credibility among the public.

The agency can be made an autonomous body to enhance its independence and improve the ED's image as a reputed agency against economic offenses in our country.

Sources: The Hindu (**Article 1** and **Article 2**)

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National Multidimensional Poverty Index: Explained, pointwise

Introduction

India has made significant progress in reducing multidimensional poverty. According to the National Multidimensional Poverty Index: A Progress Review 2023, prepared by the NITI Aayog, the share of the population classified as multidimensionally poor declined by almost 10 per cent between 2015-16 and 2019-21. In absolute terms, 135 million people are estimated to have exited multidimensional poverty during this period. The national MPI (Multidimensional Poverty Index) is a vital indicator in measuring the progress towards Sustainable Development Goals, which include reducing the proportion of people living in poverty by half "in all its dimensions" (**SDG 1.2**). The second edition of MPI is based on the National Family Health Survey (2019-21) but it doesn't capture the impact of the pandemic.

What is multidimensional poverty?

Historically, poverty estimation was done by mainly focusing on one-dimensional measures – usually based on **income**. However, there was criticism that monetary and consumption-based poverty measures fail to capture the impact of lack of other non-monetary factors on standard of living.

It has been recognized that **poverty has multiple dimensions** that affect individuals' experiences and quality of life. Qualitative aspects of life such as access to basic services like water and sanitation that may not be directly related to household income, constitute an important part of poverty measurement.

This realization has led to a growing consensus that **non-monetary measures must complement monetary measures**, and that income is only one aspect of well-being and not its sole determinant. Multidimensional poverty includes the **various deprivations experienced by poor people** in their daily lives – such as poor health, lack of education etc.

Niti Aayog's national Multidimensional Poverty Index is based on the global Multidimensional Poverty Index. It captures overlapping deprivations in three equally weighted dimensions – **health, education, and living standards**. While the global MPI considers 10 indicators across health, education, and living standards, Niti Aayog's national MPI adds two more indicators to the list – **maternal health and bank account**.

How is it different from normal measures of poverty?

Simple headcount ratios or poverty rates **do not provide any insights on the depth of poverty**.

It is possible that while the number of poor individuals captured by the headcount ratio reduces, the **poorest may, in fact, get even poorer.** Alternatively, gains among the poor may be completely missed unless they cross the 'poverty line' or exit poverty.

To address this, the MPI presents not just the **extent of poverty** (the headcount ratio), but also the **depth of poverty** captured by the 'MPI value'.

What are the findings of Niti Aayog on multi-dimensional poverty in India?

All 12 indicators saw improvement. India's national **MPI value has nearly halved** from 0.117 to 0.066.

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The proportion of population in multidimensional poverty reduced from 24.85 per cent to 14.96 per cent between 2015-16 and 2019-21.

This **reduction of 9.89 percentage points** indicates that about **135.5 million (13.5 crore) people have been pulled out of poverty** during this five-year period.

Read more: **What are the key findings of the National Multidimensional Poverty Index 2023?**

Does the Global MPI report corroborate Niti Aayog report?

Findings from the UNDP's Global MPI report released earlier corroborate the Niti Aayog report.

The UNDP report noted the following:

5. **415 million poor people moved out of poverty** from 2005/2006 to 2019/2021.
6. **Incidence fell from 55.1 percent to 16.4 percent**.
7. **Deprivation in all indicators declined**.
8. The **poorest states and groups**, including children and people in disadvantaged caste groups, had the **fastest absolute progress.**

What are the government initiatives for elimination of multidimensional poverty and how effective have they been?

The Government focused on improving access to sanitation, nutrition, cooking fuel, financial inclusion, drinking water, and electricity.

Initiatives such as **Swachh Bharat Mission (SBM)** and **Jal Jeevan Mission (JJM)** have improved sanitation across the country. This led to an almost **22 percentage points** improvement in sanitation deprivations.

The provision of subsidized cooking fuel through the **Pradhan Mantri Ujjwala Yojana (PMUY)** led to about **15 percentage points** improvement in cooking fuel deprivations.

Flagship programs like the **Poshan Abhiyan** and **Anemia Mukt Bharat** have contributed to reduced deprivations in health.

Initiatives like **Saubhagya, Pradhan Mantri Awas Yojana (PMAY), Pradhan Mantri Jan Dhan Yojana (PMJDY),** and **Samagra Shiksha** have also played a role in significantly reducing multidimensional poverty in the country.

What are the remaining challenges in tackling multi dimension poverty?

Health: Within the health category, three sub-indicators — nutrition, child and adolescent mortality, and maternal health — showed only moderate improvement. **Nutrition deprivation** decreased by 6 per cent, **maternal health deprivation** improved by 3.3 per cent, and **child and adolescent mortality deprivation** declined by only 0.6 per cent. Lack of proper nutrition contributed nearly one-third to India's MPI.

Standard of living: While there has been a significant improvement in access to **cooking fuel**, still close to 44 per cent of India's population is still deprived of it. Similarly, while **sanitation** has improved, more than 30 per cent of the population is deprived when it comes to sanitation services. **Access to housing** also saw only marginal improvement. More than 41 per cent Indians still did not have access to housing.

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Education: Though schooling years are considered, the **quality of education** in many Indian schools remains unsatisfactory. Also, insufficient years of school education contributed about 17 percent to the total national MPI, and less-than-desired school attendance contributed 9 per cent to the index.

Rural-urban divide: Although rural areas witnessed the fastest decline in poverty, there continues to be a **major disparity** between the number of people in poverty in rural and urban areas. While the incidence of multidimensional poverty is close to 20 percent in rural areas, the incidence in urban areas is a little more than 5 per cent.

What should be done?

The findings should be utilized by States and Union Territories to i**dentify and enhance initiatives that have facilitated progress**. This will aid in evaluating the advancements in vulnerable regions and identifying specific areas that demand targeted policy interventions to further accelerate development.

An analysis shows that the **biggest improvements were made in fields of mission-mode state action** like sanitation (SBM) and access to cooking fuel (PMUY). Similar programmes should also be launched for other indicators, especially for improving nutrition and the quality of school education.

One crucial factor hindering India's development is the scarcity of quality jobs for its growing workforce. While the government plays a vital role in offering public goods like sanitation, enhancing job opportunities enables individuals to allocate more resources to nutrition, health, and education. Therefore, alongside reinforcing the provision of public goods, policymakers should prioritize the **enhancement of job prospects**.

The progress made so far should not make policymakers complacent as India continues to face a significant number of people living in multidimensional poverty. Therefore, **continued attention and efforts are required**.

   Sources: [The Hindu Businessline](#), [Indian Express,](#) [Niti Aayog Report](#), [PIB](#), [Business Standard](#)

[Kurukshetra June 2023 Summary] Technologies for sustainable agriculture development- Explained, pointwise

Introduction

Traditional agricultural practices in India are frequently unsustainable and car negatively affect the environment and human health. Sustainable agricultural practices are required to ensure the long-term viability of agriculture in India. Farmers can develop sustainable farming systems by adopting advanced technologies.

Trends in Indian Agriculture

Agriculture accounts for **18.29 percent of Gross Value Added** (16.5 percent at current prices according to Ministry of Agriculture) in 2019-20 but still employs **45.6 percent of the workforce.** This indicates that a significant portion of the Indian population relies on agriculture for their livelihoods.

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But the percentage of the **population employed in agriculture has gradually declined over the years** as the country has diversified its economy and developed other sectors, such as services and manufacturing.

According to the World Bank, as **of 2020, 42.1 percent** of the Indian population was employed in agriculture. **In 2000, 60.5 percent** of the population was employed in agriculture. This shows a significant shift away from agriculture in recent years.

While the agriculture sector's contribution to India's per capita GDP has declined over time, it remains an **essential sector of the economy, particularly regarding employment and livelihoods**.

What is sustainable agriculture?

Sustainable agriculture is an approach to farming that considers the **well-being of the soil, environment, and local communities in the long run.**

Its primary goal is to **address the increasing food demand without compromising natural resources** for future generations.

Sustainable agriculture ensures the production of food, fiber, and other agricultural products while safeguarding the environment, public health, human communities, and animal welfare.

It emphasizes the **conservation and regeneration of essential natural resources** like soil, water, and air to benefit future generations.

Why is sustainable agriculture important for India?

India has made significant progress in increasing agricultural output, but there is still considerable work ahead to fully adopt and implement sustainable agricultural practices.

One of the most significant challenges confronting Indian farmers is **declining soil fertility** due to the excessive use of chemical fertilisers, pesticides, and intensive farming practices.

Adopting sustainable agriculture practices in India is critical for the **long-term sustainability** of the agriculture sector.

What are the government initiatives for the agriculture sector?

The Government of India has introduced various initiatives, such as the **Pradhan Mantri Fasal Bima Yojana**, **Pradhan Mantri Krishi Sinchayee Yojana**, **the Soil Health Card Scheme** and the **National Agriculture Market (e NAM)** platform, for the development of the agriculture sector.

These initiatives are aimed at **enhancing farmer productivity, mitigating risks, improving agricultural practices and increasing income levels** in the country.

Among these initiatives, the **Pradhan Mantri Fasal Bima Yojana (PMFBY)** is significant as It offers farmers a comprehensive risk management solution with a uniform and affordable premium rate nationwide. The scheme receives around 5.5 crore farmer applications every year.

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What are some technologies for sustainable farming?

Precision Farming: It involves sensors, GPS mapping, and data analytics to monitor and optimise crop performance. By using precision farming techniques, farmers can reduce the use of fertilisers and pesticides, improve water management, and increase yields.

Agroforestry: Agroforestry is a land-use integrated management system that combines trees and shrubs with crops and livestock to create a more sustainable and productive farming system. This approach can provide various benefits, including soil conservation, biodiversity conservation, and carbon sequestration.

Vertical Farming: It cultivates crops in stacked layers, usually under controlled conditions. Vertical farming can potentially increase local food production while reducing water consumption and optimising resource utilization. This makes it an appealing option for Indian urban agriculture. This method can reduce the need for pesticides and herbicides while increasing crop yields and lowering transportation costs.

Hydroponics: It involves growing plants in nutrient-rich water without soil. Hydroponics allows for efficient water and nutrient use, year-round cultivation, and reduced dependence on traditional agricultural practices. This approach can increase yields and can potentially revolutionize food production, especially in urban areas with limited space and resources.

Renewable Energy-based: Renewable energy technologies like solar and wind power, can be used to power farming operations. This approach can reduce greenhouse gas emissions and dependence on fossil fuels.

Robotics and Automation-based: Robotics and automation technologies can help reduce labour costs, improve crop yields, and reduce the use of fertilizers and pesticides.

What are the gaps in adopting sustainable agriculture?

Lack of Awareness and knowledge: It is one of the main barriers to adopting sustainable agricultural practices. Many farmers must know the benefits of sustainable agriculture practices or how to implement them effectively for widespread use of these technologies.

Limited Access to Finance: Sustainable agriculture practices often require significant infrastructure and technology investments. However, many small and marginal farmers need more access to finance to make these investments.

Inadequate Policy and Regulatory Framework: Adopting sustainable agriculture practices is not always supported by India's policy and the regulatory framework. For example, farmers may need more incentives to adopt sustainable practices, or regulations may prohibit certain sustainable practices. The National Mission for Sustainable Agriculture receives only 0.8 percent of the Ministry of Agriculture and Farmers Welfare (MOAFW) budget.

Limited Research and Development: There is a need for more research and development in sustainable agriculture practices that are appropriate for the Indian context. There is also a need for more investment in disseminating research findings and developing extension services to help farmers adopt these practices.

Lack of Infrastructure and Technical Support: Adopting sustainable agriculture practices often requires significant infrastructure and technical support, particularly in remote rural areas.

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Low Productivity: The yield per hectare for most of the crops in India is significantly lower than the global average. This is a significant impediment to agricultural growth and development.

Fragmented Landholdings: The average landholding size in India is small, which makes it difficult for farmers to adopt modern farming techniques and technologies. Fragmented landholdings also make it difficult for farmers to access credit and other support services.

Lack of Market Access: Many farmers are forced to sell their produce to intermediaries at low prices, as they cannot access direct markets.

Inadequate Infrastructure: Inadequate infrastructure, such as rural roads, storage facilities, and cold chains, is a significant challenge for the agriculture sector in India.

Climate Change: Climate change poses significant challenges to the agriculture sector in India, particularly in terms of water availability, pest and disease management, and crop yields. The changing weather patterns, including erratic rainfall and rising temperatures, affect crop productivity and increase farmers' vulnerability. Women are particularly susceptible. The Global Food Security Index (GFSI) score for sustainability and adaptation decreases as gender inequality increases.

What has the government done to improve dissemination of technological information to farmers?

According to a survey conducted by the National Sample Survey Organization, **only 6% of farmers in India have access to information on modern agricultural practices**.

To address this issue, the government has launched several initiatives, such as **the Kisan Call Centre and the mKisan portal.**

The Kisan Call Centre had received **over 21 million calls** from farmers across India, indicating the importance of such initiatives in improving the dissemination of technological information to farmers.

Some agri tech startup case studies

AgriApp Technologies Pvt. Ltd works on **precision and predictive agriculture** while building a strong Agri-Ecosystem to benefit farmers, the economy and ecology. AgriApp works to fill the gap between farmers and the right kind of strategic information, thus making the farmers ready for high-efficiency technology-enabled agriculture production and marketing.

Khetee promotes **agroecological farming** through the **agroforestry model**. Khetee has created a unique fellowship programme for farmers and aspiring farmers to help them build agroecological model farms. Khetee organises training programmes for farmers regularly to help them build their capacity in regenerative farming.

Aumsat provides **precision-driven, satellite-based, AI-enabled hydrological analysis** for locating, predicting, and forecasting groundwater resources, saving cost economically and logistically by 75 percent.

Pudhuvai Green Gas Chemicals Fertilisers Private Limited is an innovative Bioenergy startup that specializes in **manufacturing organic waste agri-raw materials**. Through their unique process, they produce methane and hydrogen as valuable by-products, which are utilized as environmentally friendly green fuels.

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Sense it Out is a deep-tech startup that focuses on providing **technology-driven solutions to address targeted climate change challenges** in the agriculture sector. Their product, SICCA (Sensor-based Intelligent Crop Centric Automation), leverages indigenously developed sensor technology to makes irrigation management more competent, reliable, and efficient.

Conclusion

A **multifaceted approach** will be necessary to close gaps in India's agricultural sector, necessitating investments in R&D, regulatory and policy reforms, and creating infrastructure and extension services to encourage adopting sustainable agricultural practices. **Technology must be implemented with other sustainable farming practices** to achieve sustainable farming systems.

Farmers in India have adopted various sustainable agricultural practices to ensure agriculture's long-term sustainability like crop rotation and organic farming. Furthermore, improved crop varieties, rainwater harvesting, and drip irrigation systems are examples of sustainable agricultural practices in India.

Despite adopting sustainable farming practices in India, **the country faces numerous challenges** in ensuring long-term sustainability. For example, indiscriminate pesticide and fertiliser use persists in many parts of the country, resulting in soil degradation and water pollution. Furthermore, climate change poses a significant threat to India's agricultural sustainability.

Sustainable agriculture practices have the potential to boost agricultural productivity, reduce production costs, and enhance the quality of crops. It may also promote the production of healthier and safer foods, which is beneficial to public health.

Internet Shutdowns in India: Explained, pointwise

Introduction

Recently, the nation was shaken by a viral video depicting sexual violence by a mob in Manipur, which emerged on the internet more than two months after the incident. During this period an Internet shutdown has continued in the state. Several experts argue that the internet shutdown has hidden the violence occurring in Manipur. As per media report India had maximum number of internet shutdowns and has emerged as the internet shutdown capital of the world. While reasons cited for these shutdowns include controlling hate speech, misinformation, and harmful content, state governments have ordered them for various reasons, including routine policing and administrative purposes, such as preventing cheating in exams and addressing local crime. Given these circumstances, a more thorough examination of the issue of internet shutdowns becomes imperative.

What are the legal provisions for internet shutdown?

Until 2017, India did not have a codified law to order internet shutdowns. The power to do so was vested in district magistrates under **Section 144 of the Code of Criminal Procedure**.

Section 5 of the Indian Telegraph Act of 1885 can be interpreted broadly to mean that the government has the power to impose internet shutdowns.

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In 2017, **Temporary Suspension of Telecom Services (Public Emergency or Public Safety) rules, 2017** to order internet shutdowns were introduced under the Act. These rules stated that internet shutdowns can now only be ordered by the **home secretary of the union or state governments.**

Under the 2017 rules, shutdowns could be ordered where "**necessary**" or "**unavoidable**", during a "**public emergency**" or in the "**interest of public safety**".

What does the Supreme Court say on internet shutdown?

In 2020, the Supreme Court, in the landmark judgement in the **Anuradha Bhasin versus Union of India** case, provided a detailed set of guidelines to regulate internet shutdown orders.

The Court held that freedom of speech and expression and freedom of trade and commerce through the medium of the internet are **constitutionally protected rights under Articles 19(1)(a) and Articles 19(1)(g).**

The apex court ruled that an **indefinite suspension of internet services would be illegal** and that orders for internet shutdown must satisfy the tests of **necessity** and **proportionality**.

The Court held that though the **Government was empowered to impose a complete internet shutdown**, any **order imposing such restrictions had to be made public** and was subject to **judicial review.**

Because of this judgment, the 2017 rules were revised in 2020, making it obligatory that any **suspension order issued must not remain in effect for more than 15 days**. Furthermore, **all such orders must be made public.**

What are the concerns with the 2017 rules on internet shutdown?

Conflict of interest: According to the rules, the oversight of internet suspension is assigned to the Review Committee, which consists entirely of executive members. This arrangement creates a conflict of interest because it concentrates the authorization, conduct, and review functions within a single arm of the government machinery.

Toothless committee: The Review Committee is empowered to only to "record its findings" but not set aside an illegal suspension order, thus making it a toothless committee.

Unreasonable timeline: The Review Committee is given five days for the review. This is not reasonable since most internet shutdowns run for less than five days.

Grounds for suspension of telecom services: Under the 2017 Rules, telecom/internet shutdowns may be ordered on grounds of public emergency and public safety. But public emergency and public safety have not been defined in the 1885 Act or the 2017 Rules.

What are the impacts of internet shutdown?

Impact on Human Rights: Internet shutdowns have deep implications on various human rights, with the most immediate impact being on **freedom of expression and access to information**. These rights serve as cornerstones of free and democratic societies, and they are crucial for the holistic development of individuals.

Economic impact: The frequent internet shutdowns are harming sectors primarily dependent on internet services such as e-commerce, tourism, and I.T. services. Shutdowns may lead to the

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disruption of financial transactions, commerce, industry, labour markets and the availability of platforms for the delivery of services. Moreover, shutdowns create a climate of uncertainty for investment, which can prove disastrous for companies and for start-up ecosystems.

According to data from **Top10VPN**, the total economic impact of internet shutdowns in India has reached Rs 2,091 crore in just the first half of 2023. In contrast, the total cost of internet shutdowns for all of 2022 was Rs 1,510 crore.

Disproportionate impact on marginalized communities: According to a joint report by Human Rights Watch and Internet Freedom Foundation, marginalized communities have become particularly vulnerable during internet shutdowns. This is because under "Digital India", **internet has become essential for access to government welfare schemes** for social protection, including NREGA, and public distribution system under the Food Security Act, and for e-governance in rural areas. For example, ration shops now require internet for Aadhaar authentication before providing subsidized food grains under the National Food Security Act.

Social impacts: It becomes harder for citizens to **contact family members** and friends in other parts of the country, or in other countries. The efforts of first responders and **healthcare providers** can also be hindered if a shutdown prevents their ability to effectively coordinate and communicate in the event of an emergency or natural disaster.

Political impacts: Governments frequently resort to internet shutdowns as a means to stifle dissent, control information, and restrict political opposition. Additionally, shutdowns profoundly impact the work of the media and journalists.

Misinformation: Experts believe that in the absence of credible information sources like news outlets, rumours can actually end up spreading even more during internet shutdowns. For example, without access to the internet to verify facts, Manipur has seen widespread rumours, hate-mongering, and fake news.

What should be done?

The **Standing Committee on Communications and Information Technology** has made several recommendations in this regard. Some of them are:

Clear parameters must be established to define what constitutes a public emergency and public safety. Additionally, an effective mechanism should be implemented to evaluate the merit of an internet shutdown.

The **review committees should be made more inclusive** by including non-official members such as retired judges and public members.

Internet shutdowns in their current form prohibit access to all types of information and services on the internet. The government should formulate a policy to **selectively restrict the use of certain services** instead of banning the internet as a whole. This will ensure minimum inconvenience to the general public and at the same time, meet objectives such as curbing misinformation.

A study should be conducted on the impacts of internet shutdowns and **their effectiveness in dealing with public safety and public emergencies**. The government should also conduct a study analysing internet shutdown rules in other democratic countries and **adopt best global practices** that suit the specific context of India.

Sources: PRS, HRW, ORF

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Standing Committee on Statistics (SCoS): Explained, pointwise

Introduction

The Ministry of Statistics and Programme Implementation has formed a new Standing Committee on Statistics (SCoS) to advise on official data generated by the National Statistical Office (NSO). This panel will be chaired by former National Statistical Commission chief and India's first Chief Statistician Pronab Sen. The new panel will replace the Standing Committee on Economic Statistics that was formed in 2019 to advise on economic data.

About India's statistical system

The Statistical System of India has been **shaped by the constitutional division of subjects** into the Union list, State list, and Concurrent list. The collection of statistics relating to any subject is generally the responsibility of the department concerned. Several union/state government entities, therefore, have full-fledged statistical divisions or cells.

The **Ministry of Statistics and Programme Implementation (MoSPI)** came into existence as an Independent Ministry in 1999 after the merger of the Department of Statistics and the Department of Programme Implementation.

The Ministry has two wings, one relating to Statistics and the other Programme Implementation.

The **National Statistical Office (NSO)** was created in 2019 by merging the National Sample Survey Office (NSSO) and the Central Statistical Office (CSO).

The NSO is the **nodal agency** for planning and facilitating the integrated development of the national statistical system.

Besides these two wings, there is the **National Statistical Commission** (NSC) created through a government resolution on the recommendations of the **Rangarajan Commission**, which reviewed the Indian Statistical System in 2001. The NSC was constituted with a **mandate to evolve policies, priorities and standards in statistical matters.**

What are the legal provisions for data collection in India?

The legal framework for data collection in India mainly consists of two laws: **Census Act, 1948** and **Collection of Statistics Act, 2008.**

Census Act, 1948: The **Population Census**, which is a Union subject, is conducted under the Census Act, 1948. The Act has been further amended vide the Census (Amendment) Act 1993.

Collection of Statistics Act, 2008: The 2008 Act facilitates the collection of statistics related to social, economic, demographic, scientific and environmental aspects, by central, state and local governments.

Why are statistics important?

Enhance commerce and **citizen welfare:** Government statistics are essential for a democratic government and are used to **enhance commerce** and **citizen welfare.** Statistical agencies provide accurate, timely, and credible information, which informs current and future policies.

Information: A government must be aware of the **demographics** of the people it governs. Statistics are a crucial instrument for researching and comprehending a nation's **economic**

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issues. Statistics aid in the analysis of economic issues including production, consumption, price, income distribution, population, unemployment, and poverty by bringing a quantitative component to qualitative claims.

Public policy: Statistics plays a key role in **planning, monitoring and evaluation of socio-economic policies and improving governance**. Availability of good data during the implementation process ensures the effective control on delivery of various public services and thus results in good governance. Statistics on infrastructure, health, educational facilities and socio-economic conditions of society are **essential to cater to the needs of planning and policy formulation**.

The importance of statistics has been growing rapidly with the greater integration and inter-dependence of world economies.

How is the Standing Committee on Statistics (SCoS) different from the Standing Committee on Economic Statistics?

As the new panel will replace the Standing Committee on Economic Statistics, a brief comparison between the two becomes necessary.

Mandate:

The Standing Committee on Economic Statistics was mandated to **review the framework for economic indicators** such as those pertaining to the industrial and services sectors, along with labour force statistics.

This meant its **focus was limited** to reviewing high-frequency data like the Index of Industrial Production (IIP) and the Consumer Price Index (CPI), apart from surveys and enumerations like the Economic Census, Annual Survey of Industries and the Periodic Labour Force Survey.

The Standing Committee on Statistics has **a broader mandate to review the framework and results of all surveys conducted under the National Statistical Office (NSO).** It can provide guidance to the Ministry not only on existing surveys and data sets but also to identify areas with data gaps. Furthermore, the committee is tasked with proposing solutions to fill these gaps and conducting pilot surveys and studies to refine new methodologies for obtaining more accurate and comprehensive data.

Composition:

The Standing Committee on Economic Statistics had 28 members which made reaching consensus difficult. Currently, the Standing Committee on Statistics is composed of **14 members**, including four non-official members, 9 official members, and a member secretary. The committee can have a total of 16 members, with the possibility of extending this number based on future requirements.

What is the need for the new Standing Committee on Statistics?

Survey design: Recently, members of the Economic Advisory Council to the Prime Minister have critiqued India's statistical machinery. Its chairperson Bibek Debroy has highlighted the **lack of expertise in survey design** within the Indian Statistical Service.

Data quality: In recent years, there have been concerns about the credibility of certain data from the National Sample Survey Office (NSSO), particularly regarding the various household surveys.

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Even high-ranking government officials have raised questions about their methodology and findings. In 2019, the government decided to **discard the results of two significant NSSO household surveys** related to employment and consumption expenditure levels in Indian households conducted in 2017-18, due to data quality issues.

Data divorced from ground realities: Due to the lack of updated data from a recent Household Consumption Expenditure Survey (HCES), **India is currently using the 2011-12 figures** for essential economic indicators like retail inflation, GDP, and poverty rates. However, these numbers do not accurately reflect the present-day ground realities.

What are the functions of the Standing Committee on Statistics (SCoS)?

The committee's terms of reference include **reviewing the current framework** and **addressing any issues raised regarding subject, results, and methodology.**

It will also **provide advice on survey methodology**, such as sampling frame and design, and **finalize the tabulation plan of surveys**.

It will **provide guidance for conducting pilot surveys and pre-testing**, if necessary, before finalizing data collection schedules.

It will also **provide guidance on studying and exploring the availability of administrative statistics** related to surveys, as well as **identifying data gaps** and additional requirements.

The committee can also offer **technical guidance to central and state-level agencies** for surveys involving participation from states.

The committee will help finalize survey results, but the **National Statistical Commission** will have the ultimate authority to approve the publication of those results.

How can the SCoS bridge the trust deficit surrounding official data?

The new panel will help the Ministry **to address issues related to the results and methodology of surveys** which are raised from time to time.

Given the continuous evolution of survey design and features, the panel can **raise awareness among data users** regarding the intricacies involved. This effort aims to promote a better understanding and interpretation of the numbers, leading to more informed and reliable data utilization.

The SCoS is anticipated to have a vital role in resolving data quality issues and restoring confidence in India's official statistics by **aiding the NSO in finalizing survey results**.

What should be done?

To address the existing trust deficit, the SCoS can take the lead in cultivating a **culture of data trustworthiness**. This can be achieved by promoting open dialogue, addressing concerns, and embracing diverse perspectives, all of which will contribute to enhancing the credibility of India's statistical system.

Regular and timely surveys focusing on poverty, growth, employment, and unemployment estimates should be conducted, maintaining the highest standards of quality.

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A new **statistical reforms commission** can be set up to address systemic problems such as the perceived lack of independence of the NSO, instances of government wanting to control the data narrative and the lack of financial and human resources.

Conclusion

The establishment of the Standing Committee on Statistics (SCoS) offers a significant chance to rejuvenate India's statistical system. The SCoS can effectively bridge the trust gap between data users and official statistics by prioritizing transparent communication. Ensuring data credibility through independent assessments by the National Statistical Commission will empower the government to make well-informed decisions.

Sources: The Hindu (**Article 1**, **Article 2** and **Article 3**), **Indian Express**, **MOSPI**

India Sri Lanka relations: Explained, pointwise

Introduction

Recently, President Ranil Wickremesinghe of Sri Lanka visited India. This was his first foreign visit since assuming the office a year ago in the midst of civic chaos fueled by economic crisis. During the visit, the two nations announced an economic-partnership vision that underscores India's commitment to ensure a prosperous Sri Lanka as key to regional stability.

What is the highlight of the visit?

The highlight of the visit was a joint statement on economic cooperation titled "**Promoting Connectivity, Catalysing Prosperity: India-Sri Lanka Economic Partnership Vision**" which lays out the vision in five areas: maritime connectivity, air connectivity, energy and power connectivity, trade, economic and financial connectivity and people-to-people connectivity.

Maritime and air connectivity: new investments will be made in developing ports and airports in Sri Lanka, resuming ferry services. Flight networks to connect Tamil Nadu and Sri Lanka's Northern and Eastern Provinces will be expanded too.

Energy and power connectivity: A major surge in energy connectivity will include developing renewable energy, wind and solar plants in Sri Lanka.

Trade connectivity: India and Sri Lanka will increase trade, and India will continue support for Sri Lanka's economy. A memorandum of understanding was signed to operationalise UPI digital payments in Sri Lanka and to designate the Indian Rupee as currency for trade.

People-to-people connectivity: The two countries also agreed to explore ways of enhancing tourism and cultural and religious travel, and educational collaboration.

About India Sri Lanka relations

Historical and cultural relations: India and Sri Lanka have a shared legacy of historical, cultural, religious, spiritual and linguistic ties that is more than 2,500 years old. Buddhism is one of the strongest pillars connecting the two nations and civilizations from the time of the Great Indian Emperor Ashoka.

Commercial Relations: India and Sri Lanka enjoy a vibrant and growing economic and commercial partnership, which has witnessed considerable expansion over the years. The entry

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into force of the India-Sri Lanka Free Trade Agreement (ISFTA) in 2000 contributed significantly towards the expansion of trade between the two countries. India has traditionally been among Sri Lanka's largest trade partners and Sri Lanka remains among the largest trade partners of India in the SAARC. India was Sri Lanka's largest trading partner with an overall bilateral trade of USD 5.5 billion in 2022.

India is also one of the largest contributors to Foreign Direct Investment in Sri Lanka. According to the Central bank of Sri Lanka, the total FDI from India so far exceeds US$ 2.2 billion. In 2021, India was the largest source of FDI which amounted to US$ 142 million.

Development Cooperation: Sri Lanka is one of India's major development partners and this partnership has been an important pillar of bilateral ties between the two countries over the years. With grants alone amounting to around USD 570 million, the overall commitment by India is more than USD 3.5 billion. Demand-driven and people-centric nature of India's development partnership with Sri Lanka have been the cornerstone of this relationship. Grant projects cut across sectors such as education, health, livelihood, housing, industrial development etc.

Maritime Security: The SLINEX naval exercises have become one of the most visible manifestations of Indo-Sri Lanka cooperation in maritime security. Sri Lanka is a part of India's regional maritime security architecture with Sri Lankan coastal surveillance radars being integrated to the International Fusion Center – Indian Ocean Region (IFC-IOR) at Gurugram in India.

What is the strategic significance of Sri Lanka?

Strategic location: Sri Lanka is strategically located in the Indian Ocean. The East-West maritime route passing around the island state carries around two-thirds of the world's oil and half of the world's container transportation.

Maritime security: Also, Sri Lanka is home to ports that have the potential to become important maritime hubs in the Indian Ocean. The potential of Sri Lanka to ensure maritime security and trade and in securing the strategic Sea Lanes of Communication adds to its significance in the region.

Maintenance of stability, peace and security: In recent years, there has been a noticeable rise in Chinese influence within the country, particularly evident through China's Belt and Road Initiative. China has established terminals in both the Port of Colombo and the Port of Hambantota. Given the rivalry and problems between India and China and India's desire to maintain stability, peace and security in the region, Sri Lanka becomes even more important.

Is Sri Lankan economic crisis an opportunity for India?

Last year, Sri Lanka went through its gravest economic crisis since gaining independence in 1948. In this severe crisis,

India as a good neighbor, and following its '**neighbourhood first' policy**, had extended financial assistance to the tune of **USD 4 billion**. Also, India strongly supported Sri Lanka's debt restructuring plan at the International Monetary Fund.

This has generated a lot of **good will** and radically **improved India's bargaining power** with Sri Lanka. India's efforts have also resulted in some tangible outcomes.

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For example, India signed a deal with Sri Lanka to develop Trincomalee oil tank farm. India has sought such a deal for decades. India's National Thermal Power Corporation is also going to develop a 100-megawatt power plant in Sampur, a strategic point at the Trincomalee's natural harbour. Also, Sri Lanka cancelled a Chinese company's licence to build a micro electricity grid close to India.

However, it would be **unrealistic to assume that Indian assistance alone would automatically bring Sri Lanka under Indian influence.**

Nevertheless, India must continue to provide as much assistance to Sri Lanka as possible to deal with the present economic crisis, because **prolonged instability in the country will have a spill-over effect on India** too.

What are the challenges in India Sri Lanka relations?

Fishing disputes: Despite reaching an agreement 47 years ago through the 1974 Indo-Lanka Maritime Boundary Agreement, India and Sri Lanka have not yet resolved their maritime dispute. Indian fishermen continue to cross the maritime border into Sri Lanka in the Palk Strait, resulting in encounters with the Sri Lankan Navy, leading to tensions and assaults.

Tamil issue: There is concern regarding Sri Lanka's lack of measurable progress in fulfilling its commitment to finding a political solution to the Tamil issue. The Tamil community in Sri Lanka has been demanding the implementation of the **13th Amendment** that provides for devolution of power to it.

Chinese influence in Sri Lanka: China has used its geoeconomics to achieve its geopolitical objectives in Sri Lanka. This has resulted in strategic land acquisitions, which could easily transform into a civil-military operation. China also enjoys significant domestic political influence amongst the political parties in Sri Lanka.

Conclusion

India's relationship with Sri Lanka is framed within India's "**Neighbourhood First" policy** and **"SAGAR"** framework. The India-Sri Lanka relationship is multi-dimensional and deeply rooted in historical ties. Recently, a transactional economic aspect has been introduced to the relationship, which is expected to reduce Colombo's reliance on Beijing. This development is also likely to positively influence India's security considerations in the Indian Ocean region.

Sources: Indian Express, The Hindu

Resurgence of Inflation: Explained, pointwise

Introduction

India went through a significant inflationary phase last year. Prices of food, especially tomatoes and cereals, are rising again. Recent inflation figures have also raised concerns regarding the resurgence of high inflation.

What are the recent trends in inflation?

The recent Consumer Price Index (CPI) data shows a rise in inflation with June's CPI reaching a three-month high of 4.81 percent. But it is still below RBI's upper tolerance limit of 6 percent.

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Food prices are leading this surge, especially in the food and beverages sector, which makes up almost 46% of the CPI's weight.

The food price inflation was broad-based with 10 of the 12 sub-groups witnessing year-on-year increases.

Specifically, cereals witnessed a 12.7 percent price gain, eggs rose by 7 percent, dairy by 8.56 percent, pulses by 10.5 percent, and spices by a sharp 19 percent.

Vegetable prices rose significantly in June, with tomatoes increasing by 64% from May.

What are the signs of resurgence of high inflation?

The year-on-year price rise happened in spite of a high base (June 2022 saw inflation at 7.01 percent) which is a clear sign of resurgence of high inflation.

Another sign is core inflation. It is calculated by excluding the more volatile components like food and fuel from CPI. It remained at 5.16 percent, barely moving from May's 5.17 percent.

What are the reasons for the recent inflationary trend?

Erratic weather conditions: While the late arrival of the monsoon led to a large rain deficit till mid-June, heavy rains since the last week of June have caused significant damage to crops, primarily in Punjab and Haryana.

Weight of food and beverages in the CPI basket: This weight currently is 45.9 percent, and food alone is 39 percent. This is outdated and based on the 2011 consumption survey. Also, as per **Engel's law,** with rising per capita income, people will spend less on food. Therefore, with the old weights, there is overestimation of CPI inflation.

Disease and Feed Costs: Milk production faced challenges from rising feed costs and lumpy skin disease.

Reduced Production: Tur inflation soared because of lower acreage and production. Weather conditions might further reduce pulse outputs in regions that depend on rainfall.

What are the government policies to control inflation?

Inflation is a complex phenomenon caused by several factors such as demand-pull factors, cost push factors and structural factors. Therefore, a mix of macro-economic policies are needed to manage the inflation in the economy.

Following are some policies governments use to deal with inflation:

Monetary Policy:

Limiting the money supply may help reduce inflation since the money supply and inflation are closely linked.

In 2016, Parliament amended the RBI Act, 1934 to change the monetary policy, and introduce an inflation targeting framework.

As per the new framework, the central government, in consultation with RBI sets: (i) an inflation target, and (ii) an upper and lower tolerance level for retail inflation. The target has been set at 4%, with an upper tolerance limit of 6% and a lower tolerance limit of 2%.

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RBI adjusts its policy instruments, mainly the repo rate, to achieve this target.

Repo rate is the interest rate at which the RBI lends money to the banks. As such, it changes the interest rates in the whole economy.

Fiscal Policy:

The government can manage inflation through public expenditure and taxation.

The government can reduce inflation by raising the tax rates and thereby decreasing expenditure, demand, and inflationary pressures.

When inflation is high, the government reduces public expenditure. Decline in public expenditure affects private investment and results in decline of aggregate demand.

Other Measures:

Price controls: Under the Essential Commodity Act 1955, the government can declare a commodity as an essential commodity to ensure supplies to people at fair prices.

Export policy: The government can temporarily ban the export of certain items to improve their supply in the domestic market. The government also imposes Minimum Export Price (MIP) to discourage exports of commodities to ensure their availability in the domestic markets. Governments also allow duty-free imports of certain items to improve domestic supply.

Check over Speculation and Hoarding: The Prevention of Black Marketing and Maintenance of Supplies of Essential Commodities Act, 1980 allows for detention of persons engaged in activities like hoarding, creating artificial scarcities of essential commodities in the market and rigging up of the prices.

Ban on Futures Trading of Commodities: To reduce speculation – driven appreciation in prices, the government often bans futures trading of the commodities.

What are the recent government initiatives?

The government has recently banned the export of non-basmati white rice.

Earlier, the government banned the export of wheat and introduced stocking limits.

The government has directed two cooperatives — National Cooperative Consumers' Federation of India (NCCF) and National Agricultural Cooperative Marketing Federation of India (NAFED) — to sell tomatoes.

How effective are the policies to control inflation?

Monetary policy: Monetary policy is effective in controlling inflation when there is excess demand, and the economy is overheating (demand-pull inflation). Higher interest rates lower inflation because loans become costlier.

But in India's case it is the supply costs and bottlenecks that have created inflation (cost-push inflation). In such a scenario monetary policy is not very effective in taming inflation. In fact, a tighter monetary policy drags down GDP and pushes people out of employment, harming the real economy.

Fiscal policy: If government spending and taxation are used to enhance the productive capacity and efficiency of the economy, they can help mitigate cost-push inflation. Investments in

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infrastructure, education, and technology can improve productivity and reduce inflationary pressures.

Reducing government expenditure during periods of high inflation can help to dampen demand pressures in the economy, as less money is pumped into circulation.

Export Bans and Stocking Limits: India banned wheat exports in May 2022 and imposed stocking limits on traders. An export ban was also placed on white rice. Policymakers are using older strategies from the 1960s, which might not be suitable for current market dynamics. For example, despite the wheat export ban and stocking limits, wheat inflation is at 12.37 percent.

But the ban on rice exports may bring relief to Indian consumers because a shortfall in production is expected. Due to extreme flooding in the north and relatively poor rainfall elsewhere, rice sowing has declined this year.

What alternative measures should be taken?

Adjust Import Duties: Import duties on items like wheat should be reduced as cheaper imports can help control domestic prices.

Release Excess Stocks: The government holds more than 40 million tonnes of rice, much above the buffer stock norms of 13.5 MT. This excess stock should be unloaded by Food Corporation of India in the open market at reasonable prices.

Update the CPI Basket Weights: The weight of food and beverages in the CPI basket should be adjusted to reflect current realities as the weights are based on the 2011 consumption survey.

Enhance Processing Capacity: About 10-15 percent of perishable items like tomatoes and onions should be processed. The availability of alternatives like tomato paste and onion powder will help to stabilize prices.

Conclusion

Fiscal policy and monetary policy must work in tandem and be well-coordinated because sometimes one policy alone might not be sufficient to manage inflation effectively. These two policy tools are the primary components of a country's macroeconomic policy framework, and their combined efforts can help achieve stable economic growth and price stability.

Sources: The Hindu, Indian Express

[Kurukshetra July 2023 Summary] Dryland Farming: Explained, pointwise

Introduction

India's unique geographical location results in diverse climatic conditions, leading to distinct farming systems and cropping patterns in various agro-climatic zones across the country. One of these practices is dryland farming, which has gained importance due to global warming and climate change. Dryland farming has become a prominent approach to ensure sustainable food security, especially with a growing population and mounting pressure on natural resources.

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What are the characteristics and challenges of dryland farming in India?

Dryland farming involves cultivating crops without or with very limited irrigation, relying primarily on natural rainfall.

Rainfall: These regions experience low, erratic and unevenly distributed rainfall, ranging from 375 mm to 1125 mm, making them less productive and economically fragile.

The distribution of rainfall during the crop period is often uneven. Crops may receive excessive rain when it is not needed and insufficient rain when they require it the most.

Late arrival of the monsoon delays crop sowing, resulting in poor yields. In contrast, if monsoon rains recede early, the crops face drought-like conditions during critical growth stages, leading to reduced crop yields.

Soils: Dryland areas typically have poor and degraded soils with low water retention capabilities and various nutrient deficiencies such as nitrogen and phosphorus deficiencies.

The weak soil structure and depleting groundwater tables make these areas more susceptible to drought and drought-like conditions.

Temperature: Huge variations in temperature affect crop growth and yields and deteriorate quality of produce in most cases.

Landholdings: Landholdings are generally small (less than two hectares), fragmented, and scattered, which makes farming less remunerative and difficult.

What is the difference between dry farming, dryland farming and rainfed farming?

Dry farming: Dry farming is practiced in areas where the annual rainfall is less than 750 mm and the crop growing season is less than 200 days. It is generally practiced in arid regions of the country.

Dryland farming: Cultivation receiving rainfall in the range of 750 mm to 1150 mm is known as `dryland farming'. Crops in semi-arid regions of the country are included under this category.

Rainfed farming: Rainfed farming is practiced without irrigation in areas receiving rainfall in the range of around 1150 mm. Most of its cultivation area fails in the humid and sub-humid regions of the country.

In these regions, **irrigation facilities are absent, and even protective or life-saving irrigation is not feasible.**

What is the contribution of dryland Farming?

Major dry farming crops include **millets, oilseeds, pulses, maize, cereals, and cotton**.

Almost **80 per cent of Sorghum** (Jowar) and Maize, **90 per cent of Pearl millet** (Bajra), **75 per cent of oilseeds**, and approximately **95 per cent of pulses** are obtained from dryland agriculture.

Contributions to wheat and rice production are also important, because **33 per cent of wheat and 66 per cent of rice** are still rainfed.

Drylands also contribute more than **70 per cent cotton** to textile industries.

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Despite struggling with issues of scanty resources, environmental stress, and low productivity, dryland agriculture is producing nearly **44 per cent of the total food grains** in the country.

What are the areas under dryland farming?

Out of the 141 million hectares of estimated net sown area in the country, close to 80 million hectares is under dryland farming. As per estimates, **nearly 40 per cent of the net sown area** in India will remain rainfed even after realizing the full potential of irrigation.

Dryland agriculture area in India includes the following:

9. Northwestern Rajasthan
10. The plateau region of central India
11. The alluvial plains of Ganga¬Yamuna river basin
12. The central highlands of Gujarat, Maharashtra, and Madhya Pradesh
13. The rain shadow regions of Western Ghats in Maharashtra
14. The Deccan Plateau of Andhra Pradesh
15. The Tamil Nadu highlands

A recent report of the **National Rainfed Area Authority** (2020) identified and categorised 670 districts on an all-India basis as very high rainfed, high rainfed, medium rainfed and low rainfed.

It was found that 11 states have a high share of rainfed areas. These states are Andhra Pradesh, Bihar, Chhattisgarh, Gujarat, Karnataka, Madhya Pradesh, Maharashtra, Odisha, Rajasthan, Tamil Nadu, and Uttar Pradesh.

What are the strategies for development of dryland farming?

Selecting an **appropriate cropping system** tailored to the area is a crucial strategy, which becomes more profitable with effective management of sowing time.

Employing **proper tillage, fertilizer management, weed control, and implementing plant protection measures** also play essential roles in boosting productivity.

The use of **drought-tolerant crop varieties** is another important technique, as these varieties can endure prolonged periods of drought more effectively than other types.

Soil condition can be Improved planting **cover crops** (planted to cover the soil, not for harvesting). They can reduce erosion, improve soil health, enhance water availability, and help control pests and diseases. Cover crops also increase resilience to drought conditions and erratic rainfall.

Mulching is a common dryland technique to conserve moisture in the soil by preventing evaporation.

What are the government initiatives for dryland farming?

In the 1950s, the Government realised the significance of dryland agriculture and decided to improve stability and productivity of drylands through **research and development (R&D) efforts**. Various R&D centres at different dryland locations started work for developing appropriate soil and water conservation practices.

In 1970, the Indian Council of Agricultural Research (ICAR) initiated the **All India Coordinated Research Project for Dryland Agriculture (AICRPDA)** in Hyderabad, establishing 23

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collaborating centers across the nation. It marked the start of location specific adaptive research in dryland agriculture.

In 1985, ICAR established **Central Research Institute for Dryland Agriculture (CRIDA)** at Hyderabad to further strengthen basic and adaptive research. CRIDA has successfully developed a large number of technologies in rainwater management, watershed development, soil health management, cropping systems, etc.

The ICAR launched a flagship network project called the **National Innovations in Climate Resilient Agriculture (NICRA)**, primarily to develop and promote climate-resilient technologies in agriculture with a special focus on rainfed regions.

The NICRA project has developed several climate-resilient technologies which include climate resilient varieties of different crops, resilient intercropping systems, crop diversification with alternate crops, agro-forestry systems, in-situ moisture conservation, farm pond, integrated framing systems, etc.

The Government is also implementing a scheme on rainfed area development under the **National Mission for Sustainable Agriculture.** The scheme focuses on integrated farming systems for enhancing productivity and minimising risks associated with climatic variability.

Schemes such as **Per Drop More Crop**, **Soil Health Card** and **Paramparagat Krishi Vikas Yojana** are also contributing to the improvement of dryland agriculture.

What should be the future course of action?

There is a vast scope to **increase the productivity** of dryland agriculture from the current average of **1.2 tonnes per hectare to 2.0 tonnes per hectare**. This potential can be achieved by inclusion of new technologies, diversification of crops, adoption of drought-tolerant varieties, and implementation of moisture retention techniques.

CRIDA has developed **'The Vision 2050'**, which outlines the future scenario. As per the vision, cutting edge technologies such as **remote sensing** and **GIS** applications should be exploited for natural resource characterisation and land-use planning.

Nanotechnology based products and processes should also be developed for application in dryland agriculture.

Location-specific research and its efficient delivery should be guiding principles to bring sustainability to the dryland agriculture system. The primary focus may be laid on rainwater harvesting and soil health management.

Integrated farming modules for different production environments must be attempted on a priority basis for the risk-proofing of small and marginal farmers.

Small farm mechanisation needs early attention and addressal due to an acute shortage of labour for agricultural operations.

To enhance productivity and profitability in dryland areas, the promotion of **solar power** and other renewable energy sources, along with the adoption of **precision agriculture**, is essential.

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Conclusion

Despite numerous constraints, dryland farming can be successful by considering local climate and soil conditions, selecting appropriate crops, and utilizing suitable technologies. By adopting an integrated farming model, dryland farmers have the potential to cultivate multiple crops within a single season, incorporating horticultural or livestock elements for added benefits.

Forest (Conservation) Amendment Bill, 2023: Explained, pointwise

Introduction

Recently, the Lok Sabha passed the Forest (Conservation) Amendment Bill, 2023 after the Joint Committee on the Forest (JPC) cleared all proposed amendments. The Bill seeks to amend the Forest Conservation Act (FCA), 1980.

What is the need for the amendments?

Different interpretations: In the **Godavarman case (1996),** the Supreme Court expanded the definition of forests to encompass not only lands officially recorded as forests in government records but also areas which look like forest in their dictionary meaning. However, this led to complications as many of these lands were already being utilized for non-forestry purposes like settlements, institutions, and roads. As a result, there arose different interpretations of how the provisions of the FCA applied to different categories of lands, including recorded forest lands, private forest lands, and plantations.

For example, approximately 30 resorts in Karnataka became a subject of dispute between the state's revenue and forest authorities due to conflicting views on whether the land they were utilizing was classified as forest land or not.

Delay in Approval Process: The existing Forest Conservation Act requires consent from numerous authorities at the state and national levels before engaging in any non-forest activity in an area designated as 'forest.' This approval process was very difficult and challenging. It took almost a year even for minor requests like building access paths on the designated forest land.

Creation of additional carbon sink: Due to apprehensions that plantations on the lands of individuals and organizations can attract the FCA, the afforestation and plantation of trees outside forests is not getting desired impetus. This is becoming a hindrance in enhancing green cover to fulfil the Nationally Determined Contribution targets of creating additional carbon sink of 2.5 to 3.0 billion tons of CO_2 equivalent.

Security Infrastructure: The strategic and security related projects of national importance need to be fast-tracked. This will ensure development of vital security infrastructures, especially along the international border areas such as Line of Actual Control (LAC), Line of Control (LoC), as also in the notified Left-Wing Extremism areas. Small establishments, habitations on the side of roads/railways also need to be facilitated by providing them access and connectivity to main arterial roads and other public utilities.

New challenges: Following the enactment of the FCA, several new challenges have arisen concerning ecological, social, and environmental developments. These challenges include mitigating the impact of climate change, meeting the national targets of achieving Net Zero

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Emissions by 2070, and maintaining or enhancing the forest carbon stock. Consequently, it is imperative to incorporate these issues within the scope of the Act.

What are the key features of the Forest (Conservation) Amendment Bill?

Name: The Bill renames the parent legislation, the FCA, to Van (Sanrakshan Evam Samvardhan) Adhiniyam, which translates to Forest (Conservation and Augmentation) Act. The new name reflects a new focus on afforestation and reforestation activities.

Preamble: The bill inserts a Preamble in the FCA to express a commitment to achieving net zero emissions by 2070, creating a carbon sink, increasing forest cover, and improving the livelihoods of forest-dependent communities.

Read more: [**What are the key provisions of the Forest (Conservation) Amendment Bill, 2023?**](#)

What are the positive aspects of the Forest (Conservation) Amendment Bill?

Agro-forestry: The Bill encourages private forests and agro-forestry projects because these would not be considered forests in the traditional sense. These projects would be exempt from the provisions of the FCA. That would ensure that farmers or owners of these private forests can harvest their lands, for commercial or other uses, without the need for acquiring forest clearance. This could potentially result in a major growth in agro-forestry projects and a significant increase in forest cover, which will help India in achieving its international commitment (NDC) and 33 percent forest cover.

Elimination of ambiguities: Removal of uncertainties in the applicability of FCA will facilitate the decisions making process on the proposals involving non-forestry use of forest land by the authorities.

Better forest management: The inclusion of additional activities such as forestry activities in the Bill, such as creating infrastructure for frontline forest staff, will facilitate a swift response to natural hazards in forested areas. Currently, the lack of enabling provisions in the FCA makes it challenging to establish essential infrastructure in forest regions. This impacts various forestry operations, regeneration efforts, monitoring, supervision, and forest fire prevention. By introducing these provisions, the bill seeks to improve forest management and conservation.

What are the concerns with the Forest (Conservation) Amendment Bill?

Restricting Supreme Court's judgement: The Bill will impose significant limitations on the application of the landmark Godavarman judgment of 1996, which broadened the scope of the 1980 FCA. The proposed amendment now narrows the Act's coverage to only legally notified forests and forests recorded in government records on or after October 25, 1980. This change could potentially impact approximately 28% of India's forest cover, covering nearly 2,00,000 square kilometers. These forests include forests of exceptional ecological value, including the Unclassed Forests in Nagaland, which have not been officially recorded or designated as forests until now.

States may now be free to allow the destruction of Unclassed forests for construction and development. Consequently, this amendment may have implications for ecologically significant areas, such as the large portions of the Aravalli Hills in the Delhi National Capital Region.

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Exclusion of fragile ecosystems: By exempting the requirement for forest clearances for security-related infrastructure within 100 km of international borders, the Bill excludes some of India's most delicate ecosystems. These include globally recognized biodiversity hotspots such as the forests of northeastern India and high-altitude Himalayan forests and meadows.

Exemptions: The Bill includes exemptions for construction projects like zoos, safari parks, and eco-tourism facilities. However, these artificially created green areas differ significantly from natural ecosystems, which offer various ecosystem services.

Moreover, the Bill grants the Union government unrestricted powers to specify 'any desired use' beyond the original or amended FCA's specified purposes. This raises concerns about potential exploitation of forest resources without adequate environmental scrutiny.

Disenfranchising forest people: The Bill does not mention the Scheduled Tribes and Other Traditional Forest-dwellers (Recognition of Forest Rights) Act, 2006. Consequently, the exclusion of certain forest areas and the simplified diversion process might lead to the removal of the requirement to consult forest people's institutions (gram sabhas).

If India is to meet its net zero carbon commitments and increase forest cover, it would require the participation of forest people. For example, in Nepal, the handing over of forests to local community forest user groups helped the country increase its forest cover from 26% to 45% over just three decades.

What should be the way forward?

Complete ground surveys: Rather than restricting the scope of the Forest Conservation Act, there should be a concerted effort to prioritize the completion of the demarcation process for unrecorded forests. This approach would ensure that these forests are properly recognized and safeguarded under the existing legislation.

Balance development and conservation: There should be a careful balance between development projects and forest conservation. Compensatory afforestation should be carried out on non-forest land or degraded forest land, rather than promoting plantations over natural forests.

Indigenous and forest community rights: The rights of indigenous and forest communities should be respected, and their consent sought when it comes to the diversion of forest land. Their livelihoods and dependence on forests should be considered in decision-making processes.

Sources: The Hindu, Indian Express (**Article 1** and **Article 2**), **PIB**

Circular Economy in India: Explained, pointwise

Introduction

Recently, under India's G 20 presidency, the Resource Efficiency and Circular Economy Industry Coalition (RECEIC) was launched. It is a first-of-its-kind initiative aimed at promoting resource efficiency and circular economy practices with participation from 39 global companies. Resource efficiency and circular economy are powerful strategies to minimise dependence on natural resources, reduce waste and encourage sustainable design practices. Recognising the need to switch from the 'take-make-dispose' (linear economy) to 'reduce-reuse-recycle' (circular economy)

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model, India has prioritised 'Resource Efficiency and Circular Economy' as one of the three core themes for deliberations in the G-20 forum. In this context, it is important to understand India's current position, challenges in adopting circular economy and steps taken by the government to achieve circular economy.

Read more: Circular Economy: Meaning, Benefits and Opportunities

What is India's current position in terms of circular economy?

India's current economic model is largely linear, where resources are extracted, processed, and transformed into products that are sold to consumers.

From 1970 to 2015, India witnessed a six-fold increase in its annual material consumption, from 1.18 billion tonnes to 7 billion tonnes. This figure is expected to double to 14.2 billion tonnes by 2030. This material consumption is supported by a high speed of resource extraction. India's resource extraction is 1,580 tonnes/acre, which is 251% higher than the world average of 450 tonnes/acre.

Only about 20 per cent goods are recycled in India and after use, the products are discarded, leading to a significant amount of waste generation. According to the Central Pollution Control Board (CPCB), India generates over 62 million tonnes of waste every year, and this is expected to increase to 165 million tonnes by 2030. Most of this waste is disposed of in landfills or dumped in open spaces, leading to environmental degradation and health hazards.

What are the challenges in India in achieving the vision of a circular economy?

Lack of awareness and understanding: There is a lack of awareness and understanding among businesses, policymakers, and consumers about the benefits of circular economy and the need to transition towards it.

Limited infrastructure: India has limited infrastructure for waste management and recycling, which makes it difficult to implement circular economy practices.

Inefficient waste collection and segregation: In many parts of India, waste collection and segregation are inefficient, which hinders the recycling process and leads to the disposal of valuable resources.

Limited availability of recycled materials: There is a limited availability of recycled materials in India, which makes it difficult for businesses to incorporate recycled materials into their production processes.

Lack of incentives: In a circular economy, businesses need to redesign their products, services, and business models to use resources more efficiently, reduce waste, and minimize environmental impact. However, this transition can be costly and time-consuming, and without incentives, businesses may prioritize short-term profits over long-term sustainability goals. This can hinder the adoption of circular practices. There is a lack of adequate incentives for businesses to adopt circular economy practices.

Limited research and development: There is limited research and development in the field of circular economy, which hinders the development of new technologies and solutions for recycling and waste management.

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Lack of multi-stakeholder level understanding: There is an absence of a multi-stakeholder level understanding of the circular economy. A circular economy requires a collective effort from all stakeholders to create systemic change in the way goods and services are designed, produced, consumed, and disposed. The absence of a multi-stakeholder approach can limit knowledge sharing and exchange of best practices.

What are the steps taken by the government for India's transition to a circular economy?

National Resource Efficiency Policy (NREP): The NREP was launched in 2019 with the objective of promoting sustainable production and consumption patterns, enhancing resource efficiency, and reducing the environmental impact of economic activities. The policy includes measures to encourage the adoption of circular business models, such as product-as-a-service, leasing, and sharing, and promotes the use of recycled materials.

Extended Producer Responsibility (EPR): EPR is a regulatory framework that makes manufacturers and producers responsible for the post-consumer waste generated by their products. The EPR framework encourages producers to adopt sustainable product design practices, increase the use of recycled materials, and support waste management and recycling initiatives. The government has formulated the **Battery Waste Management Rules 2022, Plastic Waste Management Rules** as amended in 2022, **e-Waste Management Rules 2022** in this context.

Swachh Bharat Mission (SBM): The Swachh Bharat Mission was launched in 2014 with the objective of promoting cleanliness, hygiene, and waste management. The mission includes initiatives to promote waste segregation, recycling, and composting, and aims to make India a "zero-waste" country. A reduction in waste generation is central to the goal of a circular economy.

Atal Innovation Mission: The Atal Innovation Mission was launched in 2016 to promote innovation and entrepreneurship in India. The mission includes initiatives to support the development of circular business models and encourage the adoption of sustainable technologies.

Bio-Economy and Biofuels: The **Pradhan Mantri JI-VAN Yojana** provides financial support to integrated bio-ethanol projects to set up second generation (2G) ethanol projects. The government has also made it mandatory for coal-burning thermal power plants to use a 5% blend of biomass pellets along with coal. The **Galvanizing Organic Bio-Agro Resources (GOBAR) Dhan scheme** was launched to convert cattle dung and other organic waste into compost, biogas, and biofuels to promote sustainable agriculture and reduce pollution. The **Sustainable Alternative Towards Affordable Transportation (SATAT) Scheme** was launched in 2018 to promote the use of Compressed BioGas (CBG) as an alternative green transportation fuel.

Financial Incentives: The government has implemented various financial incentives to encourage the adoption of circular business models and promote sustainable consumption patterns. These incentives include tax benefits, subsidies, and low interest loans to the recycling industry.

What should be done to achieve the vision of a circular economy?

Develop a comprehensive circular economy policy: India needs to create a policy framework that outlines the goals, strategies, and mechanisms to transition towards a circular economy. This policy should be based on extensive research and stakeholder consultations to ensure that it is effective and feasible.

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Promote waste reduction and management: India needs to focus on reducing waste generation and managing waste more efficiently. This could include measures such as promoting recycling, composting, and waste-to-energy conversion.

Encourage sustainable production and consumption: India should encourage the production and consumption of sustainable products and services that are designed to be reused, repaired, or recycled. This could be achieved through measures such as tax incentives, product labeling, and awareness campaigns.

Develop circular business models: India should encourage businesses to adopt circular business models, such as product-as-a-service, leasing, and sharing. This could help reduce resource consumption and waste generation, while also creating new business opportunities.

Invest in innovation and technology: India should invest in innovation and technology to develop new circular solutions, such as advance recycling technologies, sustainable materials, and renewable energy sources.

Collaborate with stakeholders: India should collaborate with various stakeholders, including government agencies, businesses, NGOs, and consumers, to create a shared vision and work towards a common goal of circular economy.

Conclusion

The transition to a circular economy is expected to provide numerous benefits to India, ranging from environmental conservation to economic growth and job creation. The circular economy's emphasis on reducing waste generation, promoting local production and resource optimization, and reducing greenhouse gas emissions aligns with India's commitments to sustainable development and climate change mitigation. Therefore, India must take proactive steps to accelerate the transition to a circular economy, including investing in infrastructure, encouraging innovation and technology development, and building public awareness and support for a circular economy.

Sources: **The Hindu**, EAC-PM (**Document 1** and **Document 2**)

Tiger conservation in India: Explained, pointwise

Introduction

Recently, the government has released detailed report of All India Tiger Estimation -2022 and final report of 5th cycle of Management Effectiveness Evaluation of Tiger Reserves on the occasion of International Tiger Day (29th July). These reports highlight the success of tiger conservation efforts in India.

What are the key findings of All India Tiger Estimation -2022?

The upper limit of the tiger population is estimated to be **3925** and the average number is 3682 tigers, reflecting an **annual growth rate of 6.1% per annum**.

India currently harbors almost **75% of the world's wild tiger population**.

Central India and the Shivalik Hills and Gangetic Plains witnessed a notable increase in tiger population, particularly in the states of Madhya Pradesh, Uttarakhand, and Maharashtra.

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However, certain regions, such as the **Western Ghats, experienced localized declines**.

The largest tiger population of 785 is in Madhya Pradesh, followed by Karnataka (563) & Uttarakhand (560), and Maharashtra (444).

The tiger abundance within the Tiger Reserve is highest in Corbett (260), followed by Bandipur (150), Nagarhole (141), Bandhavgarh (135), Dudhwa (135).

Approximately **35% of the tiger reserves urgently require enhanced protection measures,** habitat restoration, ungulate augmentation, and subsequent tiger reintroduction.

Final Report of 5th cycle of Management Effectiveness Evaluation of Tiger Reserves

About Management Effectiveness Evaluation

Management Effectiveness Evaluation (MEE) is adopted from the framework of the **International Union for Conservation of Nature and Natural Resources (IUCN) World Commission on Protected Areas**.

MEE is an important tool to assist and improve the management of Tiger Reserves and their associated landscape connectivity.

51 out of 53 Tiger Reserves have been independently evaluated through the MEE process in the fifth cycle in 2022.

For the assessment of the MEE Framework, **33 criteria** have been developed and a percentage rating was calculated for each Tiger Reserve from the scores of all 33 criteria/indicators.

Key findings

The results indicate an overall **mean score of 78.01% for 51 Tiger Reserves**.

A total of **12 Tiger Reserves have achieved 'Excellent'' category** (rating greater than or equal to 90 percent).

21 Tiger Reserves were in 'Very Good' category (75-89 percent rating).

13 Tiger Reserves achieved 'Good' category (60-74 percent rating).

5 Tiger Reserves were in 'Fair' category (50-59 percent rating).

What is Project Tiger and National Tiger Conservation Authority (NTCA)?

Project Tiger was **launched in 1973** to promote conservation of the tiger. It came at a time when the population of tigers in India was rapidly dwindling, due to unfettered hunting and habitat loss.

Project Tiger is an ongoing **Centrally Sponsored Scheme** of the Ministry of Environment, Forests and Climate Change providing central assistance to the tiger States for tiger conservation in designated tiger reserves.

The National Tiger Conservation Authority (NTCA) is a **statutory body** of the Ministry, with an overarching supervisory / coordination role, performing functions as provided in the Wildlife (Protection) Act, 1972.

Read more: What are the government initiatives focused on improving the tiger population in India?

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What are the achievements of Project Tiger?

Population increase: In 1970s, the tiger population was estimated to be around 1800. Project Tiger started in 1973 with 268 tigers. Now, the tiger population is estimated to be 3925.

Expansion of Tiger reserves: The initial number of 9 tiger reserves across 18,278 sq km of land in 1973 has now expanded to 53 tiger reserves cumulatively protecting an area of 75,796.83 sq km, approximately 2.3 per cent of the country's geographical area.

Protecting other species: The ban on hunting to protect tigers resulted in the population of numerous other animals experiencing an increase.

Why tigers should be conserved?

Preserving the ecosystem: The tiger plays a pivotal role in the health and diversity of an ecosystem. It is a top predator who keeps the population of wild ungulates in check, thereby maintaining the balance between herbivores and the vegetation upon which they feed. Therefore, the presence of tigers in the forest is an indicator of the well-being of the ecosystem.

Protecting water sources: Tiger habitats overlap with important watersheds. Protecting these tiger forests is the most cost-effective way to prevent droughts, reduce flooding, and limit the impacts of climate change. For example, the 51st Tiger Reserve, Srivilliputhur Megamalai, in southern India will safeguard more than 1,000 sq km of key river habitat.

Protecting tigers also protects other species: Tiger-protected areas save other species as well. For example, Manas Tiger Reserve in Assam also support the pygmy hog and the Bengal florican. Without tigers, these and many more species would not be as well protected.

Read more: **What is the significance of conserving the tiger population?**

What are the threats to tiger conservation?

Climate change-related impacts on habitats and the loss of the quality of forests over time is one of the challenges in tiger conversation. Out of the approximately 400,000 square kilometers of forests in tiger states, only one-third are in relatively healthier condition.

Illegal wildlife trade: Even though poaching is illegal, the demand for tiger products remains high, and poachers continue to kill tigers for profit.

Habitat and loss of prey species: Large-scale habitat Degradation and dwindling prey populations are the major long-term threats to the existence of tigers in the country. Although extensive habitat is available in some landscapes, agriculture, clearing of forests for development – especially road and rail networks, hydel projects are forcing tigers into small and scattered islands of remaining habitat. Tigers need large territories. And along with habitat, tigers have also suffered a severe loss of natural prey populations in key habitats.

Region wise threats

Wildlife habitats in the **Central Indian region** face various threats, including habitat encroachment, illegal hunting, conflicts with humans, unregulated cattle grazing, excessive harvesting of non-timber forest products, forest fires, mining, and expanding infrastructure.

North Eastern Hills and Brahmaputra region is currently facing several threats such as habitat loss, poaching, and human-wildlife conflict.

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In the **Sundarbans,** the tiger population and landscape are both threatened by biotic interference in the form of forest exploration, fishing, palm and timber extraction, and the expansion of waterways.

What should be the way ahead for tiger conservation?

A **landscape approach** is required to protect the entire landscape. Landscape planning emphasises on corridors which allow free movement for dispersing tigers, equal protection to tigers living outside tiger reserves, habitat improvement outside tiger reserves to improve availability of food, water and cover for tiger and its prey base.

Illegal trade of tiger organs needs a **coordination** among forests, customs, postal and police departments and paramilitary forces like ITBP, SSB and BSF to curb internal and border transaction of tiger organs.

Special engagements with CITES, IUCN and Traffic are needed to monitor factors responsible for demand of tiger organs, identify hot spots and nexus operating outside Indian borders. Strong surveillance, intelligence gathering and coordination among national and international agencies would ensure a safe journey for tiger conservation in India.

Estimation of carrying capacity of tiger reserves should be priority for coming years to assess an optimum level of tiger population a reserve can sustain. Translocation of excess animals can be carried out to tiger deficit reserves to further strengthen tiger population. Sariska Tiger Reserve in Rajasthan, Panna Tiger Reserve in Madhya Pradesh and Rajaji Tiger reserve in Uttarakhand are doing well with their translocated population of tiger.

Conclusion

The increase in the tiger population is a positive sign, but we must not become complacent and there is a need to continue our efforts to ensure the survival of this magnificent animal and safeguard our forested ecosystems in their entirety. Tigers are not just a part of India's wildlife heritage but also a symbol of the country's ecological richness and economic well-being.

To ensure the long-term survival of tigers in India, a multi-faceted approach is needed, including protecting and expanding tiger habitats, preserving population connectivity, minimizing human-tiger conflicts, and combating threats like habitat loss, poaching, and illegal trade. It's important to restore habitats, increase ungulate populations, and plan reintroduction of tigers in low density areas to tackle conflict issues. The involvement of various stakeholders, such as governments, NGOs, local communities, and businesses, is crucial.

Sources: PIB (**Press release 1** and **Press release 2**), **Status of Tigers 2022 report**

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