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THE HINDU NEWSPAPER

17 SEPTEMBER 2026

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GS Paper 1: Society		17 September 2026
TOPICS COVERED		
17S9	'Census Town' definition is outdated: Ministry to panel 'जनगणना नगर' की परिभाषा पुरानी हो चुकी है: मंत्रालय ने समिति से कहा	
17S9	Same-sex partner can be made nominee for medical decisions, Centre tells HC केंद्र ने HC को बताया: समान-लिंगी साथी को चिकित्सकीय निर्णयों के लिए नामित व्यक्ति बनाया जा सकता है	
17S9	India remains at 131st rank in global gender parity index भारत वैश्विक लैंगिक समानता सूचकांक में 131वें स्थान पर बरकरार	



‘Census Town’ definition is outdated: Ministry to panel

Housing and Urban Affairs Ministry says the four-decade-old definition ignores economic change, regional diversity, and peri-urban growth; RGI has decided to continue with it despite objections

GS I: Society

Sobhana K. Nair
NEW DELHI

The four-decade-old criteria used to classify Census Towns will not be able to capture the actual scale of urbanisation in India, the Housing and Urban Affairs Ministry told a parliamentary committee, arguing that the present rigid definition, which the Registrar-General of India (RGI) has decided to continue with despite the Ministry's objections, does not account for economic and spatial transformations.

A draft report, "Census Criteria for Defining Urban Areas", was discussed by the Parliamentary Standing Committee on Housing and Urban Affairs, headed by TDP MP Magunta Sreenivasulu Reddy, on Wednesday. The Ministry, while depositing before the panel, said the old "rural-urban" binary was outdated and inadequate because of the diversity and complexity of economic activity.

The Economic Advisory Council to the Prime Minister (EAC-PM) argues that



Taking count: The Registrar-General of India has said that it was too late to alter the framework for Census 2027. FILE PHOTO

the country's urbanisation level could have been as high as 63% in 2015 based on satellite data – more than double the official Census 2011 estimate of 31%. According to the 2011 Census, out of the total population of 121 crore, around 83.3 crore Indians or nearly 68.8% of people live in rural areas, while 37.7 crore people or 31.2% of the population reside in urban areas

A Census Town is defined as a village with a minimum population of 5,000, at least 75% of the male working population

engaged in non-agricultural pursuits, and a population density of at least 400 persons per sq. km. The definition has remained unchanged since 1981.

Male bias questioned

In a communication to the RGI in February 2024, the Ministry had flagged several issues with the continued use of the 1981 definition. It objected to uniform national thresholds, saying they disadvantaged hilly and northeastern States. The Ministry also questioned the "male bias", where only the male work-

ing population was being used as a parameter to define a town. The female workforce participation should also be utilised, it said.

The Ministry also said population density was calculated using administrative boundaries rather than built-up areas, resulting in misclassification of settlements. It proposed greater use of satellite imagery and suggested a "transitional areas" category to better capture rapidly urbanising regions.

The Ministry further argued that the binary rural-urban classification overlooked peri-urban settlements and growth corridors that functioned like urban areas. It said the current system, based on data from the previous Census, could lead to both exclusion and inclusion errors. However, the RGI maintained that it was too late to alter the framework for Census 2027, as enumeration blocks, boundaries, training and field deployment depending on the rural-urban classification being finalised in advance.

17S9. 'Census Town' definition is outdated: Ministry to panel

‘जनगणना नगर’ की परिभाषा पुरानी हो चुकी है: मंत्रालय ने समिति से कहा

- The four-decade-old criteria used to classify **Census Towns** will not be able to capture the actual scale of **urbanisation in India**, the **Housing and Urban Affairs Ministry** told a parliamentary committee, arguing that the present rigid definition, which the Registrar General of India (RGI) has decided to continue with despite the Ministry's objections, does not account for **economic and spatial transformations**.

जनगणना नगरों को वर्गीकृत करने के लिए उपयोग किए जाने वाले चार दशक पुराने मानदंड **भारत में**

शहरीकरण के वास्तविक स्तर को दर्ज करने में सक्षम नहीं होंगे, आवास और शहरी कार्य मंत्रालय ने एक

संसदीय समिति को बताया, और तर्क दिया कि वर्तमान कठोर परिभाषा, जिसे मंत्रालय की आपत्तियों के बावजूद भारत के रजिस्ट्रार जनरल (RGI) ने जारी रखने का निर्णय लिया है, **आर्थिक और स्थानिक परिवर्तनों** को ध्यान में नहीं रखती।

- The **Economic Advisory Council to the Prime Minister (EAC-PM)** argues that the country's urbanisation level could have been as high as **63% in 2015** based on satellite data — more than double the official Census 2011 estimate of 31%.



प्रधानमंत्री की आर्थिक सलाहकार परिषद (EAC-PM) का तर्क है कि उपग्रह आँकड़ों के आधार पर देश का शहरीकरण स्तर 2015 में 63% तक हो सकता था — जो 2011 की आधिकारिक जनगणना के 31% के अनुमान से दोगुने से भी अधिक है।

- According to the 2011 Census, out of the total population of 121 crore, around 83.3 crore Indians or nearly 68.8% of people live in rural areas, while 37.7 crore people or 31.2% of the population reside in urban areas.

2011 की जनगणना के अनुसार, 121 करोड़ की कुल आबादी में से लगभग 83.3 करोड़ भारतीय या करीब 68.8% लोग ग्रामीण क्षेत्रों में रहते हैं, जबकि 37.7 करोड़ लोग या 31.2% आबादी शहरी क्षेत्रों में निवास करती है।

- A Census Town is defined as a village with a minimum population of 5,000, at least 75% of the male working population engaged in non-agricultural pursuits, and a population density of at least 400 persons per sq. km.

जनगणना नगर की परिभाषा ऐसे गाँव के रूप में की जाती है जिसकी न्यूनतम आबादी 5,000 हो, जिसकी कम-से-कम 75% पुरुष कार्यशील आबादी गैर-कृषि गतिविधियों में संलग्न हो और जिसका जनसंख्या घनत्व कम-से-कम 400 व्यक्ति प्रति वर्ग किमी हो।

- The definition has remained unchanged since 1981.
- यह परिभाषा 1981 से अपरिवर्तित है।

Male bias questioned

पुरुष-आधारित पक्षपात पर सवाल

- In a communication to the RGI in February 2024, the Ministry had flagged several issues with the continued use of the 1981 definition.

फरवरी 2024 में RGI को भेजे गए एक पत्र में मंत्रालय ने 1981 की परिभाषा के निरंतर उपयोग को लेकर कई मुद्दे उठाए थे।

- It objected to uniform national thresholds, saying they disadvantaged hilly and northeastern States.

मंत्रालय ने समान राष्ट्रीय सीमाओं पर आपत्ति जताते हुए कहा कि इससे पर्वतीय और पूर्वोत्तर राज्यों को नुकसान होता है।

- The Ministry also questioned the “male bias”, where only the male working population was being used as a parameter to define a town.

मंत्रालय ने “पुरुष-आधारित पक्षपात” पर भी सवाल उठाया, जिसमें किसी नगर को परिभाषित करने के लिए केवल पुरुष कार्यशील आबादी को एक मानदंड के रूप में इस्तेमाल किया जा रहा था।

- The female workforce participation should also be utilised, it said.

मंत्रालय ने कहा कि महिला श्रमबल भागीदारी का भी उपयोग किया जाना चाहिए।

- The Ministry also said population density was calculated using administrative boundaries rather than built-up areas, resulting in misclassification of settlements.

मंत्रालय ने यह भी कहा कि जनसंख्या घनत्व की गणना निर्मित क्षेत्रों के बजाय प्रशासनिक सीमाओं का उपयोग करके की जाती है, जिसके परिणामस्वरूप बस्तियों का गलत वर्गीकरण होता है।

- It proposed greater use of satellite imagery and suggested a “transitional areas” category to better capture rapidly urbanising regions.

मंत्रालय ने उपग्रह चित्रों के अधिक उपयोग का प्रस्ताव रखा और तेजी से शहरीकरण वाले क्षेत्रों को बेहतर ढंग से दर्ज करने के लिए “संक्रमणकालीन क्षेत्रों” की एक श्रेणी का सुझाव दिया।

- The Ministry further argued that the binary rural-urban classification overlooked peri-urban settlements and growth corridors that functioned like urban areas.

मंत्रालय ने आगे तर्क दिया कि द्विआधारी ग्रामीण-शहरी वर्गीकरण ने उपनगरीय बस्तियों और ऐसे विकास गलियारों की अनदेखी की जो शहरी क्षेत्रों की तरह कार्य करते हैं।



- It said the **current system**, based on data from the previous Census, could lead to both **exclusion and inclusion errors**.
मंत्रालय ने कहा कि पिछली जनगणना के आँकड़ों पर आधारित वर्तमान प्रणाली से **बहिष्करण और समावेशन संबंधी त्रुटियाँ**, दोनों हो सकती हैं।
- However, the **RGI maintained that it was too late to alter the framework for Census 2027**, as enumeration blocks, boundaries, training and field deployment depending on the rural-urban classification being finalised in advance.
हालाँकि, RGI ने कहा कि **जनगणना 2027** के लिए रूपरेखा में बदलाव करने में अब बहुत देर हो चुकी है, क्योंकि गणना खंड, सीमाएँ, प्रशिक्षण और क्षेत्रीय तैनाती ग्रामीण-शहरी वर्गीकरण के पहले से अंतिम रूप दिए जाने पर निर्भर हैं।

Same-sex partner can be made nominee for medical decisions, Centre tells HC

GS I: Society
The Hindu Bureau
NEW DELHI

The Centre has told the Delhi High Court that an adult can nominate a partner, including one in a non-heterosexual relationship, to make medical decisions if they become incapacitated, potentially opening the way for same-sex partners to act for each other despite existing rules not clearly recognising such arrangements.

India remains at 131st rank in global gender parity index

GS I: Society
Press Trust of India
NEW DELHI/GENEVA

India retained the 131st rank on the Global Gender Gap Index 2026 released by the World Economic Forum on Wednesday, with Iceland, Finland and Norway maintaining their top three slots respectively.

The 14 countries ranked below than India on the index include Papua New Guinea, Kuwait, Oman, Qatar, Tajikistan, Saudi Arabia, Egypt, Morocco, Mali, Algeria, and Congo.

Chad was the lowest-ranked country in the index, with Iran and Pakistan joining it in the bottom three.

For India, the progress towards gender parity stood at 64.5%, below the global average. While India's score improved slightly over the last year, its global ranking remained unchanged at 131st.

Govt. says such a nomination could be subject to applicable law and appropriate safeguards

lived together in Delhi since 2018.

Responding to her plea, the Union Ministry of Health and Family Welfare and the National Medical Commission said that allowing a competent adult to nominate a partner, including one in a same-sex relationship, to take medical decisions in the event of incapacity was "substantially capable of being accommodated within the existing legal and ethical framework".

"Permitting a competent adult to nominate his/her partner, including a partner in a non-heterosexual/same-sex relationship,

to take medical decisions on his/her behalf in the event of incapacity would constitute a logical and tailored extension of the same principle," the affidavit said. It added that such a nomination could be subject to appropriate safeguards and the applicable law.

It further submitted that where a competent adult has nominated or otherwise authorised their partner to act on their behalf in the event of incapacity, "there appears to be no medical or ethical rationale for excluding such person merely on account of the sex, gender or sexual orientation of the partners or because their union does not fall within the conventional understanding of marriage..."

The petition is likely to come up for hearing on Thursday.

जिससे मौजूदा नियमों द्वारा ऐसी व्यवस्थाओं को स्पष्ट रूप से मान्यता न दिए जाने के बावजूद समान-लिंगी साथी एक-दूसरे की ओर से कार्य कर सकने का मार्ग खुल सकता है।

- The submission comes in a case filed by **Arshiya Takkar**, who has been in a relationship with her partner since 2015 and married her in New Zealand in 2023.

यह पक्ष अरशिया टक्कर द्वारा दायर एक मामले में प्रस्तुत किया गया है, जो 2015 से अपने साथी के साथ संबंध में हैं और उन्होंने 2023 में न्यूजीलैंड में उनसे विवाह किया था।

- Her plea highlighted that **in the event of a medical emergency, she could be left without any legal mechanism to make critical decisions for her partner, despite the couple having lived together in Delhi since 2018.**

उनकी याचिका में इस बात पर प्रकाश डाला गया कि **चिकित्सकीय आपातस्थिति** की स्थिति में उनके पास अपने साथी के लिए महत्वपूर्ण निर्णय लेने का कोई कानूनी तंत्र नहीं रह सकता है, जबकि यह दंपति 2018 से दिल्ली में साथ रह रहा है।

17S9. Same-sex partner can be made nominee for medical decisions, Centre tells HC

केंद्र ने HC को बताया: समान-लिंगी साथी को चिकित्सकीय निर्णयों के लिए नामित व्यक्ति बनाया जा सकता है

- The Centre has told the Delhi High Court that an adult can nominate a **partner**, including one in a **non-heterosexual relationship**, to make medical decisions if they become incapacitated, potentially opening the way for same-sex partners to act for each other despite existing rules not clearly recognising such arrangements.

केंद्र ने दिल्ली उच्च न्यायालय को बताया है कि कोई वयस्क अपने साथी, जिसमें विषमलैंगिक संबंध वाला साथी भी शामिल है, को अपनी ओर से चिकित्सकीय निर्णय लेने के लिए नामित कर सकता है, यदि वह स्वयं निर्णय लेने में अक्षम हो जाए,

- Responding to her plea, the **Union Ministry of Health and Family Welfare** and the **National Medical Commission** said that allowing a competent adult to nominate a partner, including one in a same-sex relationship, to take medical decisions in the event of incapacity was “substantially capable of being accommodated within the existing legal and ethical framework”.

उनकी याचिका के जवाब में केंद्रीय स्वास्थ्य एवं परिवार कल्याण मंत्रालय और राष्ट्रीय चिकित्सा आयोग ने कहा कि किसी सक्षम वयस्क को, जिसमें समान-लिंगी संबंध वाला साथी भी शामिल है, अक्षमता की स्थिति में चिकित्सकीय निर्णय लेने के लिए साथी को नामित करने की अनुमति देना “मौजूदा कानूनी और नैतिक ढाँचे के भीतर पर्याप्त रूप से समाहित किया जा सकता है।”

17S9. India remains at 131st rank in global gender parity index

भारत वैश्विक लैंगिक समानता सूचकांक में 131वें स्थान पर बरकरार

- India retained the **131st rank on the Global Gender Gap Index 2026** released by the World Economic Forum on Wednesday, with **Iceland, Finland and Norway maintaining their top three slots respectively**.

भारत ने बुधवार को विश्व आर्थिक मंच द्वारा जारी **Global Gender Gap Index 2026** में **131वाँ स्थान** बरकरार रखा, जबकि आइसलैंड, फिनलैंड और नॉर्वे ने क्रमशः शीर्ष तीन स्थान बनाए रखे।

- The **14 countries ranked below India on the index include Papua New Guinea, Kuwait, Oman, Qatar, Tajikistan, Saudi Arabia, Egypt, Morocco, Mali, Algeria, and Congo**.

सूचकांक में भारत से नीचे स्थान पाने वाले 14 देशों में पापुआ न्यू गिनी, कुवैत, ओमान, कतर, ताजिकिस्तान, सऊदी अरब, मिस्र, मोरक्को, माली, अल्जीरिया और कांगो शामिल हैं।

- Chad was the lowest ranked country in the index, with Iran and Pakistan joining it in the bottom three.**

चाड सूचकांक में सबसे निचले स्थान पर रहने वाला देश था, जबकि ईरान और पाकिस्तान उसके साथ निचले तीन देशों में शामिल थे।

- For India, the **progress towards gender parity stood at 64.5%**, below the global average. भारत के लिए **लैंगिक समानता** की दिशा में प्रगति **64.5%** रही, जो वैश्विक औसत से कम है।

- While India's score improved slightly over the last year, its global ranking remained unchanged at 131st.**

हालाँकि पिछले वर्ष की तुलना में भारत के स्कोर में मामूली सुधार हुआ, लेकिन उसकी वैश्विक रैंकिंग **131वें स्थान** पर अपरिवर्तित रही।

Global Gender Gap Index

- The **Global Gender Gap Index (GGGI)** is published by the **World Economic Forum (WEF)** as part of its annual **Global Gender Gap Report**.
- The Index was introduced in **2006** to systematically measure the gap between women and men across major dimensions of society and the economy.
- The **Global Gender Gap Report 2026**, published on **16 September 2026**, is the **20th edition** of the report.
- The 2026 Index covers **145 economies**. The WEF also uses a constant sample of **97 economies** that have appeared in every edition since 2006 to examine long-term trends.



- The Index is essentially a measure of **gender parity rather than a country's absolute level of development**.

- In simple terms, it asks whether women and men have comparable access to opportunities and outcomes in areas such as employment, education, health and political decision-making.

Four Dimensions of the Index

- **Economic Participation and Opportunity** examines gender differences in areas such as labour-force participation, income, professional and technical employment, and senior economic positions.
- **Educational Attainment** examines gender gaps in literacy and enrolment at different levels of education.
- **Health and Survival** examines gender differences through indicators relating to the sex ratio at birth and healthy life expectancy.
- **Political Empowerment** examines the representation of women relative to men in Parliament, ministerial positions and years served as head of state during the reference period.

These four dimensions have remained at the core of the Index since its introduction in **2006**.

How to Understand the Score

- The Global Gender Gap Index is expressed on a **0 to 1 scale**.
- A score approaching **1** represents greater gender parity, while a score approaching **0** represents a larger gender gap.
- WEF commonly expresses the score as the **percentage of the gender gap that has been closed**.
- Therefore, India's 2026 score of **0.645 or 64.5%** means that, according to the WEF methodology, India has closed approximately **64.5% of its measured gender gap**.
- It should **not** be interpreted as meaning that “64.5% of Indian women are equal to men” or that women have achieved “64.5% development”.
- It is a **relative gender-gap measure**, not an absolute measure of women's welfare or development.

India: Global Gender Gap Index 2026

- **India's Rank: 131st out of 145 economies.**
- **India's Score: 0.645, or 64.5% gender gap closed.**
- India **retained the 131st rank** that it held in the 2025 edition.
- However, India's absolute score improved marginally from **64.4% in 2025 to 64.5% in 2026**.

- Since the first edition in **2006**, India's overall gender-parity score has improved by approximately **4.3 percentage points**.
- According to WEF, much of India's long-term improvement has been concentrated in **Educational Attainment**.

India: 2025 versus 2026

Indicator	2025	2026
India's Global Rank	131st	131st
Economies covered	148	145
Overall Score	64.4%	64.5%
Economic Participation and Opportunity	40.7%	41.2%
Educational Attainment	97.1%	96.6%
Health and Survival	Improved in 2025	95.6%
Political Empowerment	Declined in 2025	24.5%

The WEF's 2025 report placed India **131st among 148 economies**, with **64.4%** of its gender gap closed. India's rank therefore remained unchanged in 2026 even though the number of economies included in the Index changed.

India's Performance across the Four Dimensions in 2026

Economic Participation and Opportunity

- India's gender-parity score under **Economic Participation and Opportunity** is **41.2%** in 2026.
- This represents an improvement of approximately **0.5 percentage points** over the 2025 score of **40.7%**.
- However, India's 2026 performance remains below its best recorded score of **44.6% in 2013**.
- India's economic parity has improved by only around **1.5 percentage points since 2006**, demonstrating that progress in this dimension has been relatively limited over the longer period.
- Gender parity among **professional and technical workers** increased substantially from **26.6% in 2006 to 49.9% in 2026**.
- Gender parity among **legislators, senior officials and managers** improved by around 10 percentage points compared with 2006, but remained low at **13.1% in 2026**.
- Gender parity in **labour-force participation** stood at **44.1% in 2026**.

Simple Example

If women's and men's participation in employment were identical, the labour-force participation



component would be at or close to parity.

A score substantially below parity indicates that women's participation remains lower relative to men's participation.

Thus, India's challenge is not merely educating women but also translating improvements in education into **employment, earnings and positions of economic decision-making**.

Educational Attainment

- India achieved a gender-parity score of **96.6%** in Educational Attainment in 2026.
- This was slightly lower than the **97.1%** recorded in 2025.
- India maintained **full gender parity in secondary and tertiary enrolment** according to the indicators used by WEF.
- India was also close to parity in primary education enrolment.
- However, **adult literacy parity stood at 82.5%**, making literacy an important remaining educational gender gap.
- Despite the year-on-year decline, adult literacy parity has improved considerably over the longer term, rising from **65.2% in 2006 to 82.5% in 2026**.

Society Perspective

India's performance illustrates an important distinction between **access to education** and broader gender equality.

A society may move close to parity in school and university enrolment while still having substantial differences between women and men in employment, earnings, leadership and political representation.

Therefore, **educational parity does not automatically produce economic or political parity**.

Health and Survival

- India's **Health and Survival score is 95.6% in 2026**.
- India's performance on this dimension improved compared with the previous edition.
- WEF assesses this dimension principally through **sex ratio at birth** and **healthy life expectancy**.
- Despite an improving trajectory since 2017, India's gender parity in the **sex ratio at birth** remained nearly one percentage point below its 2006 level in the 2026 Index.

Why is the Sex Ratio Important from a Society Perspective?



The sex ratio at birth can reflect deep-rooted social factors such as **son preference and gender discrimination**.

Therefore, improvements in education alone do not necessarily eliminate entrenched social attitudes concerning the relative preference for male and female children.

Political Empowerment

- India's **Political Empowerment score is 24.5% in 2026**.
- India ranks **67th globally** on the Political Empowerment subindex.
- Interestingly, Political Empowerment is India's **highest-ranked subindex in terms of global rank**, although its absolute parity score remains relatively low.
- India's political parity has improved by only around **1.8 percentage points since 2006**.
- Gender parity in parliamentary representation stood at **16.1% in 2026**.
- This represents an improvement of approximately **7 percentage points compared with 2006**.
- Gender parity at the ministerial level stood at only **5.9% in 2026**.
- This is considerably below India's highest recorded ministerial parity score of **30% in 2019**.

Head-of-State Indicator

- The WEF's Political Empowerment methodology also considers the number of years during the preceding **50-year reference period** in which a woman served as head of state relative to a man.
- India's score on this indicator was **40.7% in 2026**.
- India's historically significant periods of female national leadership contribute to this indicator.
- However, because the measure uses a **rolling 50-year period**, older periods of female leadership gradually move outside the reference window. This helps explain why a country's score on this indicator can decline even without a contemporary institutional change.

India's Twenty-Year Trend

- India's overall gender-parity score has improved by approximately **4.3 percentage points between 2006 and 2026**.
- The strongest long-term improvement has occurred in **Educational Attainment**.
- Educational parity improved by approximately **14.7 percentage points** over the twenty-year period.



- Adult literacy parity improved by approximately **17.4 percentage points**.
- Economic parity improved by only approximately **1.5 percentage points**.
- Political Empowerment recorded an overall improvement of only approximately **1.8 percentage points**.
- These trends indicate an important social-development challenge: **progress in women's education has not been matched by equivalent progress in economic participation and political representation**.

Global Gender Gap Index 2026: Global Picture

- The world as a whole had closed **69.2% of the gender gap in 2026** across the 145 economies covered.
- Among the constant sample of 97 economies covered since 2006, gender parity improved by approximately **5.2 percentage points** over twenty years and reached **69.4% in 2026**.
- Based on the current collective rate of progress for the comparable cohort, WEF estimates that global gender parity remains approximately **120 years away**.
- **No economy achieved complete gender parity in 2026.**

Top Performers in 2026

- **Iceland ranked 1st**, closing **93.0%** of its gender gap.
- **Finland ranked 2nd**, with **87.2%**.
- **Norway ranked 3rd**, with **85.7%**.
- **Namibia ranked 4th**, with **84.5%**, making it the highest-ranked Sub-Saharan African economy.
- **United Kingdom ranked 5th**, with **84.2%**.
- Iceland remained the **only economy to have closed more than 90% of its measured gender gap** in 2026.
- Iceland has held the **first position continuously since the 2009 edition**.

Southern Asia in Global Gender Gap Index 2026

- WEF classifies India within **Southern Asia**.
- Southern Asia had closed **64.5%** of its overall gender gap in 2026.



- The region ranked **7th among the eight geographical regions** assessed by WEF.
- The regional score declined marginally by approximately **0.1 percentage points** compared with 2025.
- Since 2006, Southern Asia has improved its overall gender-parity score by approximately **4.8 percentage points**.
- At its current rate of progress, WEF estimates that Southern Asia would require approximately **149 years** to reach complete gender parity.

Southern Asia's Major Challenge

- The region performs particularly weakly in **Economic Participation and Opportunity**, where only **40.9% of the gender gap had been closed** in 2026.
- In contrast, Southern Asia had closed **95.7%** of its Health and Survival gap.
- It had closed **25.4%** of the Political Empowerment gap.

Important Conceptual Clarification

- The **Global Gender Gap Index** should not be confused with a women's development index.
- A relatively wealthy country does not automatically receive a high score merely because its citizens have high incomes.
- The methodology focuses primarily on the **gap between women and men**.
- For example, if educational outcomes are relatively modest for both sexes but the difference between women and men is very small, the gender-parity score can still be relatively high.
- Conversely, a country can have comparatively high levels of education or income but still perform poorly on the Gender Gap Index if women remain substantially behind men.
- Therefore, remember the key expression:

Global Gender Gap Index = Gender parity or relative gap between women and men, not the absolute level of women's development.

WORLD ECONOMIC FORUM (WEF)

- The **World Economic Forum (WEF)** is an **international advocacy non-governmental organization and think tank**, based in **Cologne, Canton of Geneva, Switzerland**.
- It was **founded on 24 January 1971** by **German engineer Klaus Schwab**.
- The foundation's stated mission is **"improving the state of the world by engaging business, political, academic, and other leaders of society to shape global, regional, and industry agendas"**.
- The foundation is mostly funded by its **1,000 member multi-national companies**.
- The WEF is mostly known for its **annual meeting** at the end of **January in Davos**, a mountain resort in the **canton of Graubünden**, in the **eastern Alps region of Switzerland**.



- The meeting brings together some **3,000 paying members and selected participants** – among whom are **investors, business leaders, political leaders, economists, celebrities and journalists** – for up to **five days** to discuss **global issues** across **500 sessions**.
- Aside from Davos, the organization **convenes regional conferences**, it **produces a series of reports, engages its members in sector-specific initiatives** and **provides a platform for leaders** from selected stakeholder groups to **collaborate on projects and initiatives**.
- The **World Economic Forum** and its **annual meeting in Davos** have received **criticism** over the years, including allegations of the organization's **corporate capture of global and democratic institutions, institutional whitewashing initiatives, the public cost of security, the organization's tax-exempt status, unclear decision processes and membership criteria, a lack of financial transparency, and the environmental footprint** of its annual meetings.

Research Reports

- In particular, "**Strategic Insight Teams**" focus on producing reports of relevance in the fields of **competitiveness, global risks, and scenario thinking**.
- The "**Competitiveness Team**" produces a range of **annual economic reports** (first published in brackets):
- The **Global Competitiveness Report (1979)** measured **competitiveness** of countries and economies.
- The **Global Information Technology Report (2001)** assessed their **competitiveness** based on their **IT readiness**.
- The **Global Gender Gap Report** examined **critical areas of inequality** between **men and women**.
- The **Global Risks Report (2006)** assessed **key global risks**.
- The **Global Travel and Tourism Report (2007)** measured **travel and tourism competitiveness**.
- The **Financial Development Report (2008)** aimed to provide a **comprehensive means** for countries to establish **benchmarks** for various aspects of their **financial systems** and establish **priorities for improvement**.
- The **Global Enabling Trade Report (2008)** presented a **cross-country analysis** of the large number of **measures facilitating trade** among nations.
- The "**Risk Response Network**" produces a **yearly report** assessing **risks** which are:
 - deemed to be within the **scope** of these teams,
 - have **cross-industry relevance**,
 - are **uncertain**,
 - have the **potential to cause upwards of US\$10 billion in economic damage**,
 - have the **potential to cause major human suffering**,
 - and which **require a multi-stakeholder approach for mitigation**.
- In **2020**, the forum published a report entitled **Nature Risk Rising: Why the Crisis Engulfing Nature Matters for Business and the Economy**.

GS Paper 1: Geography	17 September 2026
TOPICS COVERED	
17S9 Quiz	

Answers to September 10 quiz:

- Continent hosting vast majority of world's glacial ice – **Ans: Antarctica**
- Warm continent that last had glaciers 19,000 years ago – **Ans:**

- The **ice sheet covers about 98% of Antarctica** and reaches several kilometres in thickness in some regions.

17S9. Quiz

1. Continent Hosting the Vast Majority of the World's Glacial Ice

- **Antarctica contains approximately 90% of the world's ice and nearly 70% of its freshwater.**
- Most Antarctic ice forms a vast continental ice sheet rather than isolated mountain glaciers.



- It is divided into the **East Antarctic Ice Sheet, West Antarctic Ice Sheet and Antarctic Peninsula ice masses**.
- Complete melting of Antarctic land ice would raise global sea level by roughly **58 metres**, although such melting would require a very long period.

2. Warm Continent That Last Had Glaciers About 19,000 Years Ago

- Australia is presently the only continent without active glaciers, although seasonal snow occurs in its highlands.
- During the **Last Glacial Maximum**, approximately 26,000–19,000 years ago, colder conditions supported glaciers in the **Snowy Mountains** of mainland Australia and the highlands of Tasmania.
- Glaciation** was most extensive in Tasmania, where ice caps developed over the Central Plateau and West Coast Ranges.
- Valley and cirque glaciers also formed around surrounding mountains.
- Subsequent climatic warming caused these glaciers to retreat completely, leaving landforms such as **cirques, moraines and glacial valleys** as geological evidence.

GS Paper II: International Relations		17 September 2026
TOPICS COVERED		
17S9	New Delhi rejects Pak.-China Boundary Joint Commission नई दिल्ली ने पाक-चीन सीमा संयुक्त आयोग को खारिज किया	

New Delhi rejects Pak.-China Boundary Joint Commission

GS II: IR
 Press Trust of India
 NEW DELHI

India on Wednesday rejected the Boundary Joint Commission set up by Pakistan and China, saying that the body has no legal basis to decide on arrangements related to Indian territory under illegal occupation.

New Delhi's reaction came following the first meeting of the Pakistan-China Boundary Joint Commission in Islamabad. India has been maintaining that Pakistan's handing over of certain territories such as Shaksgam Valley to China in 1963 is illegal and unacceptable.

It has also opposed the China-Pakistan Economic

Corridor as part of it passes through Pakistan-occupied Kashmir (PoK).

"Our position on this matter is clear and consistent. There is no boundary between Pakistan and China. We reject the so-called Joint Commission, which is without any legal basis," External Affairs Ministry spokesman Randhir Jaiswal said on the Pakistan-China Boundary Joint Commission. The entire Union Territories of Jammu and Kashmir and Ladakh "have been, are and will always remain integral and inalienable parts of India", he said. He said that India has never recognised the so-called 'China-Pakistan Boundary Agreement' of 1963.

17S9. New Delhi rejects Pak.-China Boundary Joint Commission नई दिल्ली ने पाक-चीन सीमा संयुक्त आयोग को खारिज किया

India on Wednesday rejected the Boundary Joint Commission set up by Pakistan and China, saying that the body has no legal basis to decide on arrangements related to Indian territory under illegal occupation.

भारत ने बुधवार को पाकिस्तान और चीन द्वारा गठित सीमा संयुक्त आयोग (Boundary Joint Commission) को खारिज करते हुए कहा कि अवैध कब्जे वाले भारतीय क्षेत्र से संबंधित व्यवस्थाओं पर निर्णय लेने के लिए इस निकाय का कोई कानूनी आधार नहीं है।

New Delhi's reaction came following the first meeting of the Pakistan-China Boundary Joint Commission in Islamabad.

नई दिल्ली की यह प्रतिक्रिया इस्लामाबाद में पाकिस्तान-चीन सीमा संयुक्त आयोग की पहली बैठक के बाद आई।

India has been maintaining that Pakistan's handing over of certain territories such as Shaksgam Valley to China in 1963 is illegal and unacceptable.

भारत का लगातार यह कहना रहा है कि 1963 में शक्सगाम घाटी (Shaksgam Valley) जैसे कुछ क्षेत्रों को पाकिस्तान द्वारा चीन को

सौंपना अवैध और अस्वीकार्य है।

- It has also opposed the **China-Pakistan Economic Corridor** as part of it passes through Pakistan-occupied Kashmir (PoK).



भारत ने चीन-पाकिस्तान आर्थिक गलियारे (China-Pakistan Economic Corridor) का भी विरोध किया है, क्योंकि इसका एक हिस्सा पाकिस्तान अधिकृत कश्मीर (PoK) से होकर गुजरता है।

GS Paper III: Economy		17 September 2026
TOPICS COVERED		
17S9	EPFO wage ceiling raised from ₹15,000 to ₹25,000 a month EPFO की वेतन सीमा ₹15,000 से बढ़ाकर ₹25,000 प्रति माह की गई	
17S9	Mining amendment is unfair to States खनन संशोधन राज्यों के लिए अनुचित है	
17S9	What lies beyond India's E20 push भारत के E20 अभियान से आगे क्या है	
17S9	Ahead of festive season, BIS raises gold hallmarking fee त्योहारी सीजन से पहले, BIS ने सोने की हॉलमार्किंग शुल्क में वृद्धि की	
17S9	Why private banks stand to gain from the MDR charge MDR शुल्क से निजी बैंकों को लाभ होने की संभावना क्यों है	
17S9	FCNR(B) deposits saved India from a BoP deficit in July FCNR(B) जमा ने जुलाई में भारत को BoP घाटे से बचाया	
17S9	Govt. lifts registration rule for small exporters in a bid to ease compliance burden अनुपालन का बोझ कम करने के प्रयास में सरकार ने छोटे निर्यातकों के लिए पंजीकरण नियम हटाया	
17S9	RBI absorbs ₹2.9 lakh cr. to suck excess liquidity अतिरिक्त तरलता को अवशोषित करने के लिए RBI ने ₹2.9 लाख करोड़ सोखे	
17S9	Too much, too soon: reforms can come at a cost बहुत अधिक, बहुत जल्द: सुधारों की कीमत चुकानी पड़ सकती है	



EPFO wage ceiling raised from ₹15,000 to ₹25,000 a month

CS II: Economy

The Hindu Bureau
NEW DELHI

The Union Cabinet on Wednesday approved raising the wage ceiling for mandatory coverage under the Employees' Provident Fund Organisation (EPFO) from ₹15,000 to ₹25,000 a month, Information and Broadcasting Minister Ashwini Vaishnaw said while briefing reporters after a Cabinet meeting.

The new ceiling will be implemented from September 17, coinciding with Vishwakarma Jayanti. Employers' organisations welcomed the announcement and sought the Centre's help to implement it, while trade unions described the increase as "too little and too late".

In a press release, the Union government said the decision is expected to bring more than 51 lakh additional employees within the ambit of mandatory EPFO coverage.

The decision will also expand access to provident fund savings, pension protection under the Employees' Pension Scheme (EPS) and insurance protection under the Employees' Deposit Linked Insurance Scheme (EDLI), a statement read.

The annual government outgo is estimated at about ₹11,339 crore, against the existing annual budgetary support of about ₹10,250 crore. The contributions of employees and employers towards EPS will also go up as per the new ceiling.

Later, speaking to presspersons at his official residence, Union Labour Minister Mansukh Mandaviya said ₹23,000 is the average salary in private establishments, according to a government survey.

"More workers will get benefits of pension, death insurance and better interest for their savings as the EPFO expands its coverage," he said.

Mr. Mandaviya said employers' contribution will go up by ₹600 per employee, while employees' contribution towards the EPS will also rise to about ₹2,082.5 a month — 8.33% of



the new ₹25,000 ceiling — from the present amount of ₹1,250. He added that from 51 lakh to up to one crore workers will get the benefit of the decision.

"Too little, too late"

All India Trade Union Congress general secretary Amarjeet Kaur said the decision is too little and too late. "The last time the ceiling was increased was in 2014. Considering the inflation, it should have been at least ₹30,000. The employees may see that their take-home salary will decrease. So the government must ensure that the employers are paying their share in a transparent manner, rather than making it part of the cost of the company and shifting the burden to employees," she said.

National chairman of the Association of Indian Entrepreneurs (AIE) K.E. Raghunathan said the EPFO's software must be upgraded to handle the additional volume of subscribers. "Employers, especially MSMEs, would find it very tough to absorb the additional strain on their outflow, especially when most of them are struggling to make a profit. This should not discourage them from formal employment and instead go for gig working arrangements. The Government of India must absorb this increase for two years in the case of MSMEs," he said.

Indian Staffing Federation executive director Suchita Dutta said the decision is a structural gain for formalisation.

17S9. EPFO wage ceiling raised from ₹15,000 to ₹25,000 a month

EPFO की वेतन सीमा ₹15,000 से बढ़ाकर ₹25,000 प्रति माह की गई

- The Union Cabinet on Wednesday approved raising the **wage ceiling for mandatory coverage under the Employees' Provident Fund Organisation (EPFO)** from ₹15,000 to ₹25,000 a month, Information and Broadcasting Minister Ashwini Vaishnaw said while briefing reporters after a Cabinet meeting.

केंद्रीय मंत्रिमंडल ने बुधवार को कर्मचारी भविष्य निधि संगठन (EPFO) के तहत अनिवार्य कवरेज के लिए वेतन सीमा को ₹15,000 से बढ़ाकर ₹25,000 प्रति माह करने को मंजूरी दी, सूचना एवं प्रसारण मंत्री अश्विनी वैष्णव ने मंत्रिमंडल की बैठक के बाद संवाददाताओं को जानकारी देते हुए यह बताया।

- The **new ceiling will be implemented from September 17, coinciding with Vishwakarma Jayanti.**

नई सीमा 17 सितंबर से लागू की जाएगी, जो विश्वकर्मा जयंती के साथ coinciding है।

- The decision will also expand **access to provident fund savings, pension protection under the Employees' Pension Scheme (EPS) and insurance protection under the Employees' Deposit Linked Insurance Scheme (EDLI)**, a statement read.

एक बयान में कहा गया कि इस निर्णय से भविष्य निधि बचत, कर्मचारी पेंशन योजना (EPS) के तहत पेंशन सुरक्षा और कर्मचारी जमा संबद्ध बीमा योजना (EDLI) के तहत बीमा सुरक्षा तक पहुंच का भी विस्तार होगा।

- Later, speaking to press persons at his official residence, Union Labour Minister Mansukh Mandaviya said **₹23,000 is the average salary in private establishments**, according to a government survey.

बाद में अपने आधिकारिक आवास पर संवाददाताओं से बात करते हुए केंद्रीय श्रम मंत्री मनसुख मांडविया ने कहा कि सरकारी सर्वेक्षण के अनुसार निजी प्रतिष्ठानों में औसत वेतन ₹23,000 है।

- Mr. Mandaviya said **employers' contribution will go up by ₹600 per employee, while employees' contribution towards the EPS will also rise to about ₹2,082.5 a month — 8.33% of the new ₹25,000 ceiling — from the present amount of ₹1,250.**

श्री मांडविया ने कहा कि नियोक्ताओं का योगदान प्रति कर्मचारी ₹600 बढ़ जाएगा, जबकि EPS में कर्मचारियों का योगदान भी वर्तमान ₹1,250 से बढ़कर लगभग ₹2,082.5 प्रति माह हो जाएगा — जो नई ₹25,000 की सीमा का 8.33% है।



Mining amendment is unfair to States

GS III: Economy

India's mineral wealth is not evenly spread across the country. States such as Odisha, Jharkhand, Chhattisgarh, and Karnataka possess enormous reserves of coal, iron ore, and other minerals that feed industries across India. While mining brings in investment and employment, it also leaves the host State to deal with challenges such as the resettlement of displaced groups; environmental damage; pressure on public infrastructure; and the long-term consequences of extracting minerals that can never be replaced.

That is why the Mines and Minerals (Development and Regulation) Amendment Act (MMDR), 2026 deserves closer attention. At the heart of the amendment is Section 9D which restricts State Governments from imposing taxes, cesses or other levies on mineral rights or mineral-bearing land except in accordance with conditions prescribed by the Central government. The Centre says the measure is intended to create a predictable tax environment, prevent excessive levies, and to encourage long-term investment in mining. There is an understandable economic argument behind that objective. Mining projects involve enormous investments and operate over decades; investors need to know that the financial rules will not change unpredictably from one year to another. However, this logic has been contested by the States.

The real question is not merely whether States will continue receiving the royalty, the auction premium and other



Ashok Kumar Panda

Senior Advocate



Aniruddha Purushotham

Advocate

A State that bears the infrastructural and social consequences of mineral extraction must retain a meaningful stake in the economic value generated from its natural resources

revenues they receive today. The Centre claims that 90% of mining sector revenue accrues to the States and that this will continue. The larger concern is about what States may be prevented from earning tomorrow.

A mineral-rich State possesses a natural economic advantage. Ordinarily, one would expect it to have some ability to use that advantage to raise resources for its own development. Section 9D substantially reduces that freedom by making future State levies related to minerals dependent upon a framework controlled by the Centre. This matters enormously for States whose budgets are closely connected with mining. NITI Aayog's Fiscal Health Index has highlighted the strong performance of Odisha and Chhattisgarh in mobilising revenue and has specifically recognised the role played by mining receipts. In Odisha, mining has accounted for a large proportion of the State's non-tax revenue. Mineral producing districts often require greater public expenditure because they bear the costs of mining.

The federal problem

The constitutional issue is equally significant. The Constitution gives States the power to tax mineral rights under Entry 50 of the State List, although Parliament can impose limitations on that power through laws relating to mineral development. States also possess a separate constitutional power to tax lands and buildings under Entry 49 of the State List.

In 2024, a nine-judge Bench of the Supreme Court in *Mineral Area Development Authority vs. Steel Authority*

of India held, among other things, that royalty payable on minerals is not a tax. It also recognised the States' legislative power to tax mineral rights and held that mineral-bearing land can fall within the States' taxation power over land. The 2026 Amendment risks rendering the impact of this judgment nugatory.

While Entry 50 permits Parliament to place limitations upon State taxation on mineral rights, Section 9D of the amending statute goes further by extending its restriction to taxes or levies on mineral-bearing lands. That is likely to raise an important debate: how far can a Central law dealing with mineral development restrict a State's exclusive power to tax land? The issue is larger than mining policy alone. It concerns the relationship between the Union and the States.

India's federal system cannot function effectively if States have responsibilities without financial capacity. A State that bears the infrastructural and social consequences of mineral extraction must retain a meaningful stake in the economic value generated from its natural resources. Uniformity may make taxation more predictable, but predictability should not come at the cost of narrowing the fiscal choices available to States.

The debate over the MMDR Amendment should therefore not be reduced to a contest between promoting investment and imposing taxes. The minerals beneath a State's soil may serve the entire country, but the costs of extracting them are felt most directly by the people who live above them.

17S9. Mining amendment is unfair to States

खनन संशोधन राज्यों के लिए अनुचित है

- India's mineral wealth is not evenly spread across the country.
भारत की खनिज संपदा पूरे देश में समान रूप से वितरित नहीं है।
- States such as **Odisha, Jharkhand, Chhattisgarh, and Karnataka** possess enormous reserves of coal, iron ore, and other minerals that feed industries across India.
Odisha, Jharkhand, Chhattisgarh और Karnataka जैसे राज्यों में कोयला, लौह अयस्क और अन्य खनिजों के विशाल भंडार हैं, जो पूरे भारत के उद्योगों की आवश्यकताओं को पूरा करते हैं।
- While mining brings in investment and employment, it also leaves the host State to deal with challenges such as the resettlement of displaced groups; environmental damage; pressure on public infrastructure; and the long-term consequences of extracting minerals that can never be replaced.
जहाँ खनन निवेश और रोजगार लाता है, वहीं मेजबान राज्य को विस्थापित समूहों के पुनर्वास, पर्यावरणीय क्षति, सार्वजनिक अवसंरचना पर दबाव और ऐसे खनिजों के निष्कर्षण के दीर्घकालिक परिणामों जैसी चुनौतियों से भी निपटना पड़ता है, जिन्हें कभी प्रतिस्थापित नहीं किया जा सकता।
- That is why the Mines and Minerals (Development and Regulation) Amendment Act (MMDR), 2026 deserves closer attention.
इसीलिए **Mines and Minerals (Development and Regulation) Amendment Act (MMDR), 2026** पर अधिक गहन ध्यान दिए जाने की आवश्यकता है।
- At the heart of the amendment is **Section 9D which restricts State Governments from imposing taxes, cesses or other levies on mineral rights or mineral-bearing land except in accordance with conditions prescribed by the Central government.**
इस संशोधन के केंद्र में **Section 9D** है, जो राज्य सरकारों को **खनिज अधिकारों या खनिज-युक्त भूमि पर कर, उपकर या अन्य अधिरोपण** लगाने से तब तक रोकता है, जब तक वे केंद्र सरकार द्वारा निर्धारित शर्तों के अनुरूप न हों।
- The Centre says the measure is intended to create a predictable tax environment, prevent excessive levies, and to encourage long-term investment in mining.
केंद्र का कहना है कि इस उपाय का उद्देश्य **पूर्वानुमेय कर वातावरण** तैयार करना, अत्यधिक अधिरोपण को रोकना और खनन में दीर्घकालिक निवेश को प्रोत्साहित करना है।
- There is an understandable economic argument behind that objective.
इस उद्देश्य के पीछे एक समझने योग्य आर्थिक तर्क है।
- Mining projects involve enormous investments and operate over decades; investors need to know that the financial rules will not change unpredictably from one year to another.
खनन परियोजनाओं में भारी निवेश होता है और वे दशकों तक संचालित होती हैं; निवेशकों को यह जानना आवश्यक है कि **वित्तीय नियम** एक वर्ष से दूसरे वर्ष में अप्रत्याशित रूप से नहीं बदलेंगे।
- However, this logic has been contested by the States.
हालाँकि, इस तर्क को राज्यों ने चुनौती दी है।
- The real question is not merely whether States will continue receiving the royalty, the auction premium and other revenues they receive today.
वास्तविक प्रश्न केवल यह नहीं है कि क्या राज्यों को आज मिलने वाली रॉयल्टी, नीलामी प्रीमियम और अन्य राजस्व मिलते रहेंगे।
- The Centre claims that 90% of mining sector revenue accrues to the States and that this will continue.
केंद्र का दावा है कि **खनन क्षेत्र के राजस्व का 90% राज्यों को प्राप्त होता है** और यह व्यवस्था जारी रहेगी।
- The larger concern is about what States may be prevented from earning tomorrow.
बड़ी चिंता इस बात को लेकर है कि **भविष्य में राज्यों को क्या अर्जित करने से रोका जा सकता है**।
- A mineral-rich State possesses a natural economic advantage.
खनिज-संपन्न राज्य के पास एक प्राकृतिक आर्थिक लाभ होता है।
- Ordinarily, one would expect it to have some ability to use that advantage to raise resources for its own development.

सामान्यतः यह अपेक्षा की जाती है कि उसके पास इस लाभ का उपयोग अपने विकास के लिए संसाधन जुटाने की कुछ क्षमता हो।

- Section 9D substantially reduces that freedom by making future State levies related to minerals dependent upon a framework controlled by the Centre.

Section 9D इस स्वतंत्रता को काफी हद तक कम करता है, क्योंकि यह भविष्य में खनिजों से संबंधित राज्य के अधिरोपणों को केंद्र द्वारा नियंत्रित ढाँचे पर निर्भर बनाता है।

- This matters enormously for States whose budgets are closely connected with mining. यह उन राज्यों के लिए अत्यंत महत्वपूर्ण है जिनके बजट खनन से निकटता से जुड़े हैं।
- NITI Aayog's Fiscal Health Index has highlighted the strong performance of Odisha and Chhattisgarh in mobilising revenue and has specifically recognised the role played by mining receipts.

NITI Aayog के Fiscal Health Index ने राजस्व जुटाने में Odisha और Chhattisgarh के मजबूत प्रदर्शन को रेखांकित किया है और खनन से प्राप्तियों की भूमिका को विशेष रूप से मान्यता दी है।

- In Odisha, mining has accounted for a large proportion of the State's non-tax revenue. Odisha में खनन राज्य के गैर-कर राजस्व के एक बड़े हिस्से का स्रोत रहा है।
- Mineral producing districts often require greater public expenditure because they bear the costs of mining.

खनिज उत्पादक जिलों को अक्सर अधिक सार्वजनिक व्यय की आवश्यकता होती है, क्योंकि वे खनन की लागतों का भार वहन करते हैं।

The federal problem संघीय समस्या

- The constitutional issue is equally significant. संवैधानिक मुद्दा भी उतना ही महत्वपूर्ण है।
- The Constitution gives States the power to tax mineral rights under Entry 50 of the State List, although Parliament can impose limitations on that power through laws relating to mineral development. संविधान State List की Entry 50 के तहत राज्यों को खनिज अधिकारों पर कर लगाने की शक्ति देता है, यद्यपि संसद खनिज विकास से संबंधित कानूनों के माध्यम से इस शक्ति पर सीमाएँ लगा सकती है।
- States also possess a separate constitutional power to tax lands and buildings under Entry 49 of the State List. राज्यों के पास State List की Entry 49 के तहत भूमि और भवनों पर कर लगाने की अलग संवैधानिक शक्ति भी है।
- In 2024, a nine-judge Bench of the Supreme Court in Mineral Area Development Authority vs. Steel Authority of India held, among other things, that royalty payable on minerals is not a tax. 2024 में Mineral Area Development Authority vs. Steel Authority of India मामले में Supreme Court की नौ-न्यायाधीशों की पीठ ने अन्य बातों के साथ यह निर्णय दिया कि खनिजों पर देय रॉयल्टी कर नहीं है।
- It also recognised the States' legislative power to tax mineral rights and held that mineral-bearing land can fall within the States' taxation power over land. इसने खनिज अधिकारों पर कर लगाने की राज्यों की विधायी शक्ति को भी मान्यता दी और कहा कि खनिज-युक्त भूमि राज्यों की भूमि पर कर लगाने की शक्ति के अंतर्गत आ सकती है।
- The 2026 Amendment risks rendering the impact of this judgment nugatory. 2026 का संशोधन इस निर्णय के प्रभाव को निष्प्रभावी करने का जोखिम पैदा करता है।
- While Entry 50 permits Parliament to place limitations upon State taxation on mineral rights, Section 9D of the amending statute goes further by extending its restriction to taxes or levies on mineral-bearing lands. जहाँ Entry 50 संसद को खनिज अधिकारों पर राज्य के कराधान पर सीमाएँ लगाने की अनुमति देती है, वहीं



संशोधन अधिनियम की Section 9D खनिज-युक्त भूमि पर करों या अधिरोपणों तक अपना प्रतिबंध विस्तारित करके इससे आगे जाती है।

- That is likely to raise an important debate: how far can a Central law dealing with mineral development restrict a State's exclusive power to tax land?
इससे एक महत्वपूर्ण बहस उठने की संभावना है: खनिज विकास से संबंधित कोई केंद्रीय कानून भूमि पर कर लगाने की राज्य की विशिष्ट शक्ति को किस सीमा तक प्रतिबंधित कर सकता है?
- Uniformity may make taxation more predictable, but predictability should not come at the cost of narrowing the fiscal choices available to States.
एकरूपता कराधान को अधिक पूर्वानुमेय बना सकती है, लेकिन पूर्वानुमेयता की कीमत राज्यों के लिए उपलब्ध राजकोषीय विकल्पों को सीमित करना नहीं होनी चाहिए।

PATRIOTIC IAS



What lies beyond India's E20 push

The E20 blends promised savings were offset by lower mileage, with consumers spending an estimated ₹88,234 cr. extra over the last three years; its benefits for emissions and forex savings are uncertain, as higher fuel consumption can raise emissions while diverting crops to ethanol can affect food security and exports

ECONOMIC NOTES

Rohit Azad
Shouvik Chakraborty
Indranil Chowdhury

A litre of E20 petrol consists of 80% motor gasoline and 20% anhydrous ethanol. According to a press release by the Ministry of Petroleum and Natural Gas, India first introduced it on February 6, 2023, when public sector oil marketing companies (OMCs) began selling it at select outlets across the country.

E20 promise
E20 has been scaled up this year because of rising crude prices resulting from unilateral American aggression against Iran and the closure of the Strait of Hormuz in response. The government has made three broad claims in favour of using the E20 blend – savings for the consumer, lower carbon emissions, and forex savings. However, if the E20 blend reduces mileage, these claims may not hold. That the loss in mileage is real was accepted in a written reply to the Lok Sabha by Road Transport and Highways Minister Nitin Gadkari, who stated that E20 reduces fuel economy by “2% to 6% depending on vehicle category and vintage,” citing a joint ARAI-SIAM-IOCL study. There is also anecdotal evidence from many car users, especially those using cars of vintage 2022 or earlier, that E20 has brought mileage down, perhaps by far more than 6%, as well as caused damage to their engines and oil tanks. It is difficult to quantify the possible engine damage this blend may cause, but these three claims are empirically verifiable.

Has it saved Indians some cash?
The first claim is that since the E20 blend uses less crude, which is expensive, and more ethanol, which is cheaper, a higher share of ethanol will save Indians money. This, it is claimed, would also help keep inflation in check. But what this claim does not take into account is the loss in mileage (km/litre) that a higher ethanol blend leads to. Since ethanol releases less energy per litre burnt than pure gasoline, there is a consequent loss of mileage per litre, especially in engines that are not compatible with the E20 blend.

Let us say E10 blend petrol used to cost ₹100, and E20 was introduced while keeping prices the same, which is what happened.

Consider an average mileage of 15 km/litre for a standard car running on the E10 blend. If there is a 6% loss in mileage with E20, the car would now need 1.06 litres to travel those 15 km. This means shelling out ₹106 instead of ₹100 for the same distance travelled. Aggregate this over many customers and many kilometres, and you get the loss that households have to bear. The greater the loss in mileage, the greater the cost to the household would be.

An extensive report prepared by The Reporters Collective and authored by Ayushi Kar shows that, instead of savings, the households had to spend extra as a result of this loss in mileage. **Chart 1** shows that over the last three years, Indian consumers had to shell out an additional ₹88,234 crore, with the burden rising every year. If the defence is that prices would have been much higher had the E10 blend continued, there are other ways in which prices could be kept under check, at least in the short run.

The question of emissions
On the face of it, E20 is definitely a

India's changing fuel mix



BOX 1: Emissions calculations for 15 kms travelled by an average Indian car

	E10	E20
Emissions*	2.32 KgCO ₂ /ltr	2.23 KgCO ₂ /ltr
WITH 6% LOSS OF MILEAGE		
Petrol needed	1 ltr	1.06 ltr
Emissions	2.32 KgCO ₂ (A)	2.23 x 1.06 = 2.37 KgCO ₂ (B)
Excess Emissions if using E20		0.05 KgCO ₂ (B-A) = 50 gCO ₂

*Note: 1. Emissions data has been taken from the Federal Register EPA, which reports E10 emissions to be 8.78 kgCO₂/gallon and pure ethanol's 5.75 kgCO₂/gallon. 1 gallon = 3.79 ltr
2. We calculate the implicit emissions from 100% gasoline, which is 8.12 kgCO₂/gallon, and use that to generate E20 emissions.

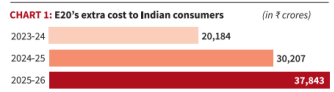
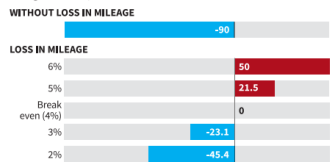


Chart: Ayushi Kar (2027) "In 3 years, Indian motorists paid ₹88,234 crore extra fuel Modi gov't's Great Ethanol Experiment"; Reporters Collective

CHART 2: Do the CO₂ emissions decline with E20?
(Difference in emissions between E20 and E10 in gCO₂ per 15 km of an average Indian car)



See box 1 for details
Chart: Authors' calculations | Source: Federal Register, EPA

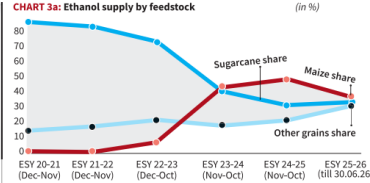
cleaner fuel simply because less carbon is embodied per litre of ethanol (**Box 1**). But, as we saw above, with a loss in mileage, the same 15 km now requires 1.06 litres of petrol, which means emissions could be higher for the same distance travelled. Box 1 shows the difference in emissions if there is such a loss in mileage.

In Chart 2, we present the rise or fall in emissions using this calculation for the entire range of mileage losses given by the Minister. The calculations show that emissions would rise (red bars), rather than fall, if the loss in mileage is in the range of 4% to 6%. Emissions fall only if the loss in mileage is less than 4%. To be sure, overall emissions per km would depend on the mix of cars of different vintages running on Indian roads. For newer cars compatible with E20, emissions are likely to decline. For older cars, on the other hand, emissions would be greater, depending on the extent of the loss in mileage. Thus, average emissions per km would depend on the weights of different vintage cars.

E20 and foreign exchange
Any substitution away from crude will indeed save India foreign exchange since oil constitutes a significant part of the import bill.

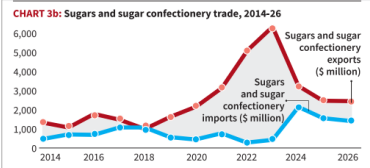
However, the position needs to be more nuanced. First, a fall in mileage may

E20 promises savings and lower emissions, but mileage losses and crop diversion could offset some of its gains



ESY is Ethanol Supply Year. ESY definitions change over time: Dec-Nov for ESY20-21 and ESY21-22; Dec-Oct for ESY22-23; and Nov-Oct for ESY23-24 onward. The ESY25-26 column is a part-year figure, up to 30.06.2026

Source: Authors' calculations. Ministry of Petroleum and Natural Gas, Government of India, Rajya Sabha Unstarred Question no – 1729, Answered on – 03/08/2026



Data for HS Code 17 - Sugars & sugar confectionery - have been used for this chart
Source: Authors' calculations. Ministry of Commerce and Industry, Government of India. Frequency is Annual, ending in "March" of each year

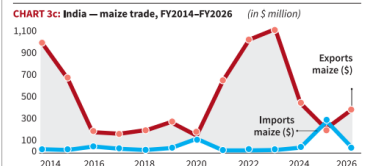


Chart: Authors' calculations. The 8-digit HS code for maize until 2020 was 100591000 and for maize seed was 10051000, respectively. Since 2021, the codes for different maize product categories have been 10059011, 10059019, 10059020, 10059021, and 10059029. The code for maize seed remains the same. Frequency is Annual, ending in "March" of each year.
Source: Ministry of Commerce and Industry, Govt

share as a source of ethanol production, export earnings have similarly plummeted over the last couple of years (Chart 3(c)). India was a net importer last year.

So, even in the narrow sense of improving forex earnings, the E20 policy may not have been entirely successful.

The cost beyond the pump
To keep prices under control when crude prices rise, a countercyclical indirect tax policy could be introduced to insulate consumers, something that the government itself was doing until the Bengal elections were over.

As the Chief Economic Adviser (CEA) himself has argued, consumers should, at the very least, be given a choice between E10 and E20 instead of forcing a fleet of vehicles – cars and motorcycles – that are not ready for E20 to use it.

The government should also develop reliable and subsidised public transport with last-mile connectivity, along with cycling and walking options. All of these would reduce the need for cars and motorcycles, and hence emissions and pollution.

(The authors are a part of the DevMac (Development Macroeconomics) network, which seeks pluralism in Economics; Additionally, Shouvik Chakraborty is Research Associate Professor at the Political Economy Research Institute, Amherst, U.S.)

17S9. What lies beyond India's E20 push

भारत के E20 अभियान से आगे क्या है

- A litre of E20 petrol consists of 80% motor gasoline and 20% anhydrous ethanol.
एक लीटर E20 पेट्रोल में 80% मोटर गैसोलीन और 20% निर्जल एथेनॉल होता है।
- According to a press release by the Ministry of Petroleum and Natural Gas, India first introduced it on February 6, 2023, when public sector oil marketing companies (OMCs) began selling it at select outlets across the country.

Ministry of Petroleum and Natural Gas द्वारा जारी एक प्रेस विज्ञप्ति के अनुसार, भारत ने इसे पहली बार 6 फरवरी, 2023 को शुरू किया, जब सार्वजनिक क्षेत्र की oil marketing companies (OMCs) ने देशभर के चुनिंदा आउटलेट्स पर इसकी बिक्री शुरू की।

E20 promise

E20 का वादा

- The government has made three broad claims in favour of using the E20 blend — savings for the consumer, lower carbon emissions, and forex savings.
सरकार ने E20 मिश्रण के उपयोग के पक्ष में तीन व्यापक दावे किए हैं — उपभोक्ता के लिए बचत, कम कार्बन उत्सर्जन, और विदेशी मुद्रा की बचत।
- However, if the E20 blend reduces mileage, these claims may not hold.
हालाँकि, यदि E20 मिश्रण माइलेज को कम करता है, तो ये दावे सही साबित नहीं हो सकते।
- That the loss in mileage is real was accepted in a written reply to the Lok Sabha by Road Transport and Highways Minister Nitin Gadkari, who stated that E20 reduces fuel economy by “2% to 6% depending on vehicle category and vintage,” citing a joint ARAI-SIAM-IOCL study. यह स्वीकार किया गया है कि माइलेज में कमी वास्तविक है, जब Road Transport and Highways Minister Nitin Gadkari ने लोकसभा में दिए गए एक लिखित उत्तर में कहा कि ARAI-SIAM-IOCL के संयुक्त अध्ययन के अनुसार, E20 से वाहन की श्रेणी और निर्माण-वर्ष के आधार पर ईंधन दक्षता में “2% से 6%” की कमी आती है।
- There is also anecdotal evidence from many car users, especially those using cars of vintage 2022 or earlier, that E20 has brought mileage down, perhaps by far more than 6%, as well as caused damage to their engines and oil tanks.
कई कार उपयोगकर्ताओं, विशेषकर 2022 या उससे पहले निर्मित कारों का उपयोग करने वालों से प्राप्त अनुभवजन्य जानकारी भी है कि E20 ने माइलेज को कम किया है, संभवतः 6% से भी कहीं अधिक, तथा उनके इंजनों और तेल टैंकों को भी नुकसान पहुँचाया है।

Has it saved Indians some cash?

क्या इससे भारतीयों के कुछ पैसे बचे हैं?

- This, it is claimed, would also help keep inflation in check.
दावा किया जाता है कि इससे महँगाई को नियंत्रित रखने में भी मदद मिलेगी।
- But what this claim does not take into account is the loss in mileage (km/litre) that a higher ethanol blend leads to.
लेकिन यह दावा उस माइलेज (किमी/लीटर) में कमी को ध्यान में नहीं रखता, जो एथेनॉल के अधिक मिश्रण से होती है।
- Since ethanol releases less energy per litre burnt than pure gasoline, there is a consequent loss of mileage per litre, especially in engines that are not compatible with the E20 blend. चूँकि शुद्ध गैसोलीन की तुलना में एथेनॉल के प्रति लीटर दहन से कम ऊर्जा प्राप्त होती है, इसलिए प्रति लीटर माइलेज में कमी आती है, विशेषकर उन इंजनों में जो E20 मिश्रण के अनुकूल नहीं हैं।
- This means shelling out ₹106 instead of ₹100 for the same distance travelled.
इसका अर्थ है कि समान दूरी तय करने के लिए ₹100 के बजाय ₹106 खर्च करने होंगे।
- Aggregate this over many customers and many kilometres, and you get the loss that households have to bear.
इसे बड़ी संख्या में उपभोक्ताओं और बड़ी संख्या में तय की गई किलोमीटरों पर लागू करने पर वह नुकसान सामने आता है जिसे परिवारों को वहन करना पड़ता है।
- The greater the loss in mileage, the greater the cost to the household would be.
माइलेज में कमी जितनी अधिक होगी, परिवार पर लागत का बोझ उतना ही अधिक होगा।

- An extensive report prepared by The Reporters Collective and authored by Ayushi Kar shows that, instead of savings, the households had to spend extra as a result of this loss in mileage. The Reporters Collective द्वारा तैयार और Ayushi Kar द्वारा लिखित एक विस्तृत रिपोर्ट दर्शाती है कि बचत होने के बजाय, माइलेज में इस कमी के कारण परिवारों को अतिरिक्त खर्च करना पड़ा।
- Chart 1 shows that over the last three years, Indian consumers had to shell out an additional ₹88,234 crore, with the burden rising every year. Chart 1 दर्शाता है कि पिछले तीन वर्षों में भारतीय उपभोक्ताओं को अतिरिक्त ₹88,234 करोड़ खर्च करने पड़े, और यह बोझ हर वर्ष बढ़ता गया।
- First, a fall in mileage may at least partially cancel out the advantage of the blend as far as forex savings are concerned. पहला, माइलेज में कमी विदेशी मुद्रा की बचत के संदर्भ में मिश्रण से मिलने वाले लाभ को कम-से-कम आंशिक रूप से समाप्त कर सकती है।
- Second, the ethanol required for E20 blending needs diversion of crops and grains in favour of ethanol production. दूसरा, E20 मिश्रण के लिए आवश्यक एथेनॉल हेतु फसलों और अनाज को एथेनॉल उत्पादन की ओर मोड़ना पड़ता है।
- The diversion of food grains for fuel has serious implications for food security. खाद्यान्न को ईंधन के लिए मोड़ने के खाद्य सुरक्षा पर गंभीर प्रभाव पड़ते हैं।
- Since E20 blending is here to stay, this is more of a long-term adjustment in the supply of such crops and grains. चूँकि E20 मिश्रण अब जारी रहने वाला है, इसलिए यह ऐसी फसलों और अनाज की आपूर्ति में अधिकतर दीर्घकालिक समायोजन का प्रश्न है।
- A demand-production mismatch for an agricultural commodity will either be met by rising prices, cross-border trade management, or both. किसी कृषि वस्तु में मांग-उत्पादन असंतुलन की पूर्ति या तो बढ़ती कीमतों, सीमा-पार व्यापार के प्रबंधन, या दोनों के माध्यम से होगी।
- The resulting fall in exports, or increase in imports, or both, represents a loss of foreign exchange, undermining the very purpose that initiated the policy shift. इसके परिणामस्वरूप निर्यात में कमी, आयात में वृद्धि या दोनों से विदेशी मुद्रा का नुकसान होगा, जिससे उस नीति परिवर्तन का मूल उद्देश्य ही कमजोर हो जाएगा जिसके कारण यह बदलाव शुरू किया गया था।
- While India has gradually shifted away from sugarcane to maize, both crops have been affected by this policy. भारत ने धीरे-धीरे गन्ने से हटकर मक्के की ओर रुख किया है, लेकिन दोनों फसलें इस नीति से प्रभावित हुई हैं।
- In the case of sugar, the government had to ban exports in 2023 as well as this year, amid rising domestic demand because of ethanol diversion. चीनी के मामले में, एथेनॉल के लिए इसके उपयोग को मोड़े जाने के कारण बढ़ती घरेलू मांग के बीच सरकार को 2023 में और इस वर्ष भी निर्यात पर प्रतिबंध लगाना पड़ा।
- This led to a drastic fall in India's dollar earnings from sugar exports (Chart 3(b)). इससे भारत की चीनी निर्यात से डॉलर आय में भारी गिरावट आई (Chart 3(b))।



GS III: Economy

Ahead of festive season, BIS raises gold hallmarking fee

The Bureau of Indian Standards (BIS) has revised hallmarking charges for gold and silver articles, raising the fee for gold to ₹75 from ₹45, while retaining the charge for silver at ₹35, with immediate effect ahead of the festive season. The increase has been notified through the BIS (Hallmarking) Amendment Regulations, 2026. Jewellers are required to pay a hallmarking fee of ₹75 per article, subject to a minimum charge of ₹200 per consignment. PTI

आभूषण विक्रेताओं (Jewellers) को प्रति वस्तु ₹75 का हॉलमार्किंग शुल्क देना होगा, जो प्रति खेप न्यूनतम ₹200 के शुल्क के अधीन होगा।

17S9. Ahead of festive season, BIS raises gold hallmarking fee

त्योहारी सीजन से पहले, BIS ने सोने की हॉलमार्किंग शुल्क में वृद्धि की

- The **Bureau of Indian Standards (BIS)** has revised hallmarking charges for gold and silver articles, raising the fee for gold to ₹75 from ₹45, while retaining the charge for silver at ₹35, with immediate effect ahead of the festive season.

भारतीय मानक ब्यूरो (BIS) ने सोने और चांदी की वस्तुओं के हॉलमार्किंग शुल्क में संशोधन किया है, जिसके तहत त्योहारी सीजन से पहले तत्काल प्रभाव से सोने का शुल्क ₹45 से बढ़ाकर ₹75 कर दिया गया है, जबकि चांदी के लिए शुल्क ₹35 पर बरकरार रखा गया है।

- The increase has been notified through the **BIS (Hallmarking) Amendment Regulations, 2026**.

इस वृद्धि को **BIS (Hallmarking) Amendment**

Regulations, 2026 के माध्यम से अधिसूचित किया गया है।

- Jewellers are required to pay a hallmarking fee of ₹75 per article, subject to a minimum charge of ₹200 per consignment.



Why private banks stand to gain from the MDR charge

The Hindu analysed data from the NPCI to find out how much money can be made from the Merchant Discount Rate charge on UPI transactions and who stands to benefit the most from it

GS III: Economy

T.C.A. Sharad Raghavan
NEW DELHI

The new Merchant Discount Rate (MDR) on UPI will affect a tiny proportion of UPI users, and benefit a small number of banks – predominantly private ones like Yes Bank – and a few UPI apps such as Walmart-owned PhonePe, and Google Pay, National Payments Corporation of India (NPCI) data showed.

The NPCI has said that starting October 15, 2026, an MDR of 0.4% will be charged on UPI payments of ₹2,000 or more made to mid and large merchants.

This will mean that only about 2.5% of UPI transactions by volume will face the charge. All Person-to-Person (P2P) transactions will remain free of charge, regardless of the amount being transferred. Further, payments to merchants up to ₹2,000 will remain free of MDR.

In addition, the NPCI has mandated that small merchants including street vendors receiving up to ₹1 lakh per month through UPI QR codes under the Person-to-Person-Merchant (P2PM) category will also be exempt from MDR.

Transactions of ₹2,000 or more in essential and thin-margin sectors, such as railways, telecommunications, insurance, fuel, and agricultural inputs, will attract a flat MDR of ₹5 per transaction. Further, capital market transac-

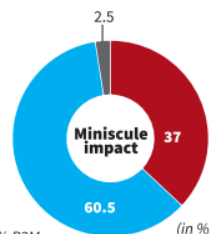
Trailing transactions

The data were sourced from the National Payments Corporation of India



Only person-to-merchant payments above ₹2,000 will attract Merchant Discount Rates (MDR)

Note: Even within the 2.5% P2M transactions above ₹2,000, payments to small merchants are exempt



Only one-fifth of the value of all transactions will yield Merchant Discount Rates

The chart shows shares (%) in the value of total UPI transactions in August 2026



Person to person (P2P) Person to merchant (P2M below 2,000) P2M above 2,000

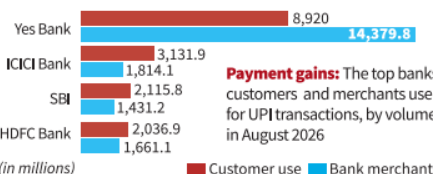
The MDR at 0.4% on P2M transactions above ₹2,000, transactions will result in a maximum revenue of ₹2,400 crore per month based on current trends. Even within this upper limit, since there are exemptions for small merchants, sectoral caps, and a flat rate included in the mechanism, actual revenues will likely be lower

The chart shows each payment player's share (%) in the MDR that is collected.

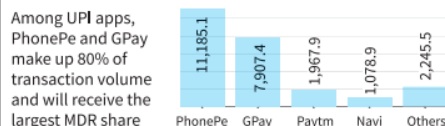


The biggest share of MDR goes to the customer's or payer's bank. The 2nd-highest goes to the merchant's bank, followed by the UPI apps, and other payment processors.

Customer's bank Merchant's bank UPI app Payment service provider



(in millions) Customer use Bank merchants



Among UPI apps, PhonePe and GPay make up 80% of transaction volume and will receive the largest MDR share

tions such as payments to mutual funds, stockbrokers, dealers, and for equities will attract an MDR of 0.02%, capped at ₹300 per transaction.

The transactions that will face MDR account for only about 20% of the value of all UPI transactions done. So, at the maximum, this will result in about ₹2,400 crore of revenue generated per month.

Of the MDR that is collected, the biggest share goes to the customer's or payer's bank. The second-highest share goes to the merchant's bank, followed by the UPI apps, and other payment processors.

Among the banks that customers seem to use for UPI payments, Yes Bank emerges as the leader by a huge margin, followed by ICICI Bank. Even among

the banks used by merchants to receive UPI payments, Yes Bank is far and away the favourite followed by Axis Bank, ICICI Bank, and HDFC Bank.

Of the UPI apps that people use, PhonePe and Google Pay together account for nearly 80% of the volume of transactions, which means they will receive the largest chunk of MDR collected.

17S9. Why private banks stand to gain from the MDR charge

MDR शुल्क से निजी बैंकों को लाभ होने की संभावना क्यों है

- This will mean that only about 2.5% of UPI transactions by volume will face the charge. इसका अर्थ है कि मात्रा के आधार पर केवल लगभग 2.5% UPI लेन-देन पर यह शुल्क लगेगा।
- All Person-to-Person (P2P) transactions will remain free of charge, regardless of the amount being transferred.

सभी व्यक्ति-से-व्यक्ति (P2P) लेन-देन हस्तांतरित की जाने वाली राशि की परवाह किए बिना शुल्क-मुक्त रहेंगे।

- Further, payments to merchants up to ₹2,000 will remain free of MDR. इसके अलावा, ₹2,000 तक के व्यापारियों को किए जाने वाले भुगतान MDR से मुक्त रहेंगे।
- In addition, the NPCI has mandated that **small merchants** including street vendors receiving up to ₹1 lakh per month through UPI QR codes under the **Person-to-Person-Merchant (P2PM)** category will also be exempt from MDR. इसके अतिरिक्त, NPCI ने अनिवार्य किया है कि **छोटे व्यापारी**, जिनमें **व्यक्ति-से-व्यापारी (P2PM)** श्रेणी के अंतर्गत UPI QR कोड के माध्यम से प्रति माह ₹1 लाख तक प्राप्त करने वाले रेहड़ी-पटरी विक्रेता भी शामिल हैं, MDR से मुक्त रहेंगे।
- **Transactions of ₹2,000 or more in essential and thin-margin sectors, such as railways, telecommunications, insurance, fuel, and agricultural inputs, will attract a flat MDR of ₹5 per transaction.** रेलवे, दूरसंचार, बीमा, ईंधन और कृषि आदानों जैसे आवश्यक और कम-मार्जिन वाले क्षेत्रों में ₹2,000 या उससे अधिक के लेन-देन पर **प्रति लेन-देन ₹5 का निश्चित MDR** लगेगा।
- **Further, capital market transactions** such as payments to mutual funds, stockbrokers, dealers, and for equities will attract an **MDR of 0.02%, capped at ₹300 per transaction.** इसके अलावा, **पूंजी बाजार के लेन-देन**, जैसे म्यूचुअल फंड, स्टॉक ब्रोकरों, डीलरों और इक्विटी के लिए किए जाने वाले भुगतान पर **0.02% का MDR**, अधिकतम ₹300 प्रति लेन-देन की सीमा के साथ, लगेगा।
- **The transactions that will face MDR account for only about 20% of the value of all UPI transactions done.** जिन लेन-देन पर MDR लगेगा, उनका हिस्सा किए गए सभी UPI लेन-देन के कुल मूल्य का केवल लगभग 20% है।
- **So, at the maximum, this will result in about ₹2,400 crore of revenue generated per month.** इसलिए, अधिकतम स्थिति में इससे प्रति माह लगभग **₹2,400 करोड़ का राजस्व** उत्पन्न होगा।
- Of the MDR that is collected, the biggest share goes to the **customer's or payer's bank.** एकत्र किए गए MDR में सबसे बड़ा हिस्सा **ग्राहक या भुगतानकर्ता के बैंक** को जाता है।
- The **second highest share goes to the merchant's bank**, followed by the UPI apps, and other payment processors. दूसरा सबसे बड़ा हिस्सा **व्यापारी के बैंक** को जाता है, इसके बाद UPI ऐप्स और अन्य भुगतान प्रोसेसर आते हैं।
- **Among the banks that customers seem to use for UPI payments, Yes Bank emerges as the leader by a huge margin, followed by ICICI Bank.** UPI भुगतान के लिए ग्राहकों द्वारा उपयोग किए जाने वाले बैंकों में **Yes Bank** बहुत बड़े अंतर से सबसे आगे है, जिसके बाद ICICI Bank का स्थान है।
- Even among the banks used by merchants to receive UPI payments, **Yes Bank** is far and away the favourite followed by Axis Bank, ICICI Bank, and HDFC Bank. UPI भुगतान प्राप्त करने के लिए व्यापारियों द्वारा उपयोग किए जाने वाले बैंकों में भी **Yes Bank** सबसे पसंदीदा बैंक है, जिसके बाद Axis Bank, ICICI Bank और HDFC Bank का स्थान है।
- **Of the UPI apps that people use, PhonePe and Google Pay together account for nearly 80% of the volume of transactions, which means they will receive the largest chunk of MDR collected.** लोगों द्वारा उपयोग किए जाने वाले UPI ऐप्स में **PhonePe और Google Pay** मिलकर लेन-देन की मात्रा का लगभग 80% हिस्सा रखते हैं, जिसका अर्थ है कि एकत्र किए गए MDR का सबसे बड़ा हिस्सा इन्हें प्राप्त होगा।



FCNR(B) deposits saved India from a BoP deficit in July

GS III: Economy

Ashokamithran T.
MUMBAI

India's balance of payments (BoP) received a significant boost in July 2026 as non-resident Indian (NRI) deposits under the FCNR(B) scheme surged to \$33.5 billion, accounting for a substantial share of the country's capital account surplus during the month.

The capital account surplus widened to \$27.7 billion in July 2026, nearly eight times the \$3.5 billion recorded in July 2025. Dollar denominated bank deposits from NRIs contributed to most of this.

Without the RBI's special scheme, NRI deposits would have remained at their usual monthly level of \$1 billion. Combined with a \$15 billion outflow in other bank capital, this would have pushed the capital account into a \$4.8 billion deficit. When added to the \$7 billion current account deficit, India's overall BoP would have faced an \$11.8 billion deficit, which would have marked the third month of deficit had it not been for FCNR

(B) deposits.

RBI's special deposit scheme attracted \$127 billion in NRI deposits, with more than 26% of the inflows recorded in July 2026. This helped keep the capital account in a \$27.7 billion surplus and the overall BoP at a \$20.8 billion surplus during the reporting month.

"FCNR(B) inflows and more of External Commercial Borrowings (ECB) inflows for a few more months kept the current month and the whole fiscal year comfortable for the balance of payment. This can be a one time comfort and may not be available next year," said Madan Sabnavis, Chief Economist of Bank of Baroda.

Focussing on FDI is the crux and FII outflows should slow down and turn positive for the capital account to be in a self-sustaining surplus, he said. Given the global conditions, it may be difficult for significant inflows of FII or FDI to come in. This can mean a continued pressure on the foreign exchange reserves, Mr. Sabnavis added.

17S9. FCNR(B) deposits saved India from a BoP deficit in July

FCNR(B) जमा ने जुलाई में भारत को BoP घाटे से बचाया

- India's **balance of payments (BoP)** received a significant boost in July 2026 as **non-resident Indian (NRI) deposits** under the **FCNR(B) scheme** surged to \$33.5 billion, accounting for a substantial share of the country's **capital account surplus** during the month.

भारत के भुगतान संतुलन (BoP) को जुलाई 2026 में महत्वपूर्ण बढ़ावा मिला, क्योंकि **FCNR(B) योजना** के तहत **अनिवासी भारतीय (NRI) जमा** बढ़कर \$33.5 बिलियन हो गया, जिसने उस महीने देश के पूंजी खाता अधिशेष में एक महत्वपूर्ण योगदान दिया।

- The **capital account surplus** widened to \$27.7 billion in July 2026, nearly eight times the \$3.5 billion recorded in July 2025.

जुलाई 2026 में पूंजी खाता अधिशेष बढ़कर \$27.7 बिलियन हो गया, जो जुलाई 2025 में दर्ज \$3.5 बिलियन से लगभग आठ गुना अधिक था।



Govt. lifts registration rule for small exporters in a bid to ease compliance burden

GS III: Economy

The Hindu Bureau
NEW DELHI

The Government has exempted small exporters from having to officially register, in a bid to reduce compliance burden and facilitate exports via post, courier and other emerging channels, the Ministry of Commerce and Industry announced on Wednesday.

“The Government has introduced a de minimis exemption from the requirement of Registration-cum-Membership Certificate (RCMC) or Certificate of Registration for small-value export consignments up to ₹3 lakh,” the Ministry said in a release.

“The measure is aimed



The move may cover a substantial number of small-value transactions.

at reducing the compliance burden for new and small exporters and facilitating exports through Postal, Courier and other emerging channels,” it added.

According to the data presented by the government covering 2021-22 to 2025-26, low-value exports

account for a significant share of shipping bills but a very small proportion of the overall export value.

“Consignments up to \$3,000, for instance, account for 43% of shipping bills but only 0.86% of India’s total merchandise export value,” the Centre said. “The exemption is therefore expected to cover a substantial number of small-value export transactions while having only a marginal impact on the overall value of exports.”

Prior to this change, exporters had to obtain an RCMC or Certificate of Registration from the relevant export promotion council or the commodity board.

17S9. Govt. lifts registration rule for small exporters in a bid to ease compliance burden

अनुपालन का बोझ कम करने के प्रयास में सरकार ने छोटे निर्यातकों के लिए पंजीकरण नियम हटाया

- The Government has exempted **small exporters** from having to officially register, in a bid to **reduce compliance burden** and facilitate exports via post, courier and other emerging channels, the Ministry of Commerce and Industry announced on Wednesday.

सरकार ने छोटे निर्यातकों को आधिकारिक रूप से पंजीकरण कराने की अनिवार्यता से छूट दी है, जिसका उद्देश्य अनुपालन के बोझ को कम करना और डाक, कूरियर तथा अन्य उभरते माध्यमों से निर्यात को सुगम बनाना है, वाणिज्य एवं उद्योग मंत्रालय ने बुधवार को इसकी घोषणा की।

- “The Government has introduced a **de minimis exemption** from the requirement of **Registration cum-Membership Certificate (RCMC) or Certificate of Registration** for small value export consignments up to ₹3 lakh,” the Ministry said in a release.

मंत्रालय ने एक विज्ञप्ति में कहा, “सरकार ने ₹3 लाख तक के कम मूल्य वाले निर्यात खेपों के लिए पंजीकरण-



सह-सदस्यता प्रमाणपत्र (RCMC) या पंजीकरण प्रमाणपत्र की आवश्यकता से न्यूनतम सीमा वाली छूट (de minimis exemption) शुरू की है।”

- “Consignments up to \$3,000, for instance, account for 43% of shipping bills but only 0.86% of India’s total merchandise export value,” the Centre said.
केंद्र ने कहा, “उदाहरण के लिए, \$3,000 तक की खेपों का हिस्सा शिपिंग बिलों का 43% है, लेकिन भारत के कुल वस्तु निर्यात मूल्य का केवल 0.86% है।”
- Prior to this change, exporters had to obtain an RCMC or Certificate of Registration from the relevant export promotion council or the commodity board.
इस बदलाव से पहले, निर्यातकों को संबंधित निर्यात संवर्धन परिषद या वस्तु बोर्ड से RCMC या पंजीकरण प्रमाणपत्र प्राप्त करना पड़ता था।

RBI absorbs ₹2.9 lakh cr. to suck excess liquidity

GS III: Economy
The Hindu Bureau
MUMBAI

The Reserve Bank of India (RBI) absorbed almost ₹2.9 lakh crore from the banking system through overnight Variable Rate Reverse Repo (VRRR) auctions on September 16, as part of its efforts to suck excess liquidity.

The RBI conducted the liquidity-absorption operation in two tranches. The first auction, targeting ₹2,50,025 crore, received bids worth ₹3,17,088 crore.

The central bank accepted ₹2.5 lakh crore at a cut-off rate of 5.4%, which was also the weighted average rate. In the second auction, the RBI set a target of ₹1 lakh crore but got bids worth only ₹40,302 crore.

17S9. RBI absorbs ₹2.9 lakh cr. to suck excess liquidity

अतिरिक्त तरलता को अवशोषित करने के लिए RBI ने ₹2.9 लाख करोड़ सोखे

- The Reserve Bank of India (RBI) absorbed almost ₹2.9 lakh crore from the banking system through overnight Variable Rate Reverse Repo (VRRR) auctions on September 16, as part of its efforts to suck excess liquidity.

भारतीय रिज़र्व बैंक (RBI) ने अतिरिक्त तरलता को अवशोषित करने के अपने प्रयासों के तहत 16 सितंबर को ओवरनाइट वैरिएबल रेट रिवर्स रेपो (VRRR) नीलामी के माध्यम से बैंकिंग प्रणाली से लगभग ₹2.9 लाख करोड़ अवशोषित किए।

- The RBI conducted the liquidity-absorption operation in two tranches. The first auction, targeting ₹2,50,025 crore, received bids worth ₹3,17,088 crore.

RBI ने तरलता अवशोषण की यह प्रक्रिया दो चरणों में संचालित की। पहली नीलामी में ₹2,50,025 करोड़ का लक्ष्य रखा गया था, जिसके लिए ₹3,17,088 करोड़ की बोलियाँ प्राप्त हुईं।

- The central bank accepted ₹2.5 lakh crore at a cut-off rate of 5.4%, which was also the weighted average rate.

केंद्रीय बैंक ने 5.4% की कट-ऑफ दर पर ₹2.5 लाख करोड़ स्वीकार किए, जो भारित औसत दर भी थी।



Too much, too soon: reforms can come at a cost

SS III: Economy

OPINION

Arun Maira

India has moved too far from the original social objectives of economic development—employment, public investment, capability-building and economic security

A common refrain in India's economic reforms establishment is that the 1991 reforms have not been implemented fully. These economists suggest that the government should take advantage of the economic crisis, as it had in 1991 when the management of the Indian economy was 'liberalised' under pressure from the Washington establishment. The government should push through with unfinished reforms.

A fundamental thrust of Washington Consensus' economics was the privatisation of the economy, including public services. U.S. President Ronald Reagan, who was greatly influenced by Nobel laureate economist Milton Friedman (who said that 'the business of business must be only business'), had declared that "government is not the solution: it is the problem". In 2013, a popular writer on the Indian economy advocated faster privatisation of India's education and health systems. He said India works at night when the government is asleep.

I was invited by Dr. Manmohan Singh, the architect of India's liberal market reforms in 1991, to join India's Planning Commission in July 2009, when he commenced his second term as India's Prime Minister. I am not an economist, and I did not think I was qualified to serve in India's apex planning institution. Dr.



For human touch: An aerial view of Banerghatta road and metro line in Bengaluru. GETTY IMAGES

Singh surprised me by saying he wanted me in the Commission not because I was not an economist but because I was a 'systems thinker'. He said the 1991 reforms had not served Indian citizens well. The GDP was growing fast. Our policy makers had declared that India was the 'fastest growing free market democracy', in those heady 'India Shining' days.

The caveats of 'free market' and 'democracy' had to be added because it was embarrassing to admit that China's economy had grown five times larger, and Chinese per capita incomes had increased eight times faster than India's, though countries were at comparable levels at the end of the 1980s. Moreover, Chinese manufacturing industries, including high tech manufacturing, had dwarfed Indian industry. China had become the factory of the world by 2009, and Indian manufacturers were importing their components and machinery from China, enabled by the ease of imports that liberal

import policies had encouraged from 1991, along with the dismantling of India's industrial policies.

Privatisation of services Infrastructure and public services are crumbling in Indian cities, including Bengaluru, Gurugram, and Pune, hubs for high-tech ventures and expensive, private real estate.

Modern private hospitals, which attract medical tourists from many countries, are unaffordable for India's common citizens. India's education system, from primary schools to universities, has been extensively privatised, but good quality education is unaffordable for poor citizens.

On my first day in the Planning Commission in July 2009, my first visitor was a senior adviser in the Commission. He brought two assistants who placed a stack of books on my table. He said I should read them because they would provide me all I needed to know about implementation of reforms of the In-

dian economy. They were manuals of SOPs on how to implement PPPs (public private partnerships) in various sectors: road and transport infrastructure; power generation and distribution; urban water and electricity services; education and health, etc. All manuals had been prepared by legal experts so there would be no need for central ministries or state governments to consult further, he assured me. They could get on with speedy implementation of projects in partnerships with private companies who would bring expertise and invest in the ventures for profit. The government would provide them with land, permissions to use environmental resources and financial incentives to cover their risks.

Gujarat model

A 'Gujarat model' of development for India was advocated by economists Jagdish Bhagwati and Arvind Panagariya. Panagariya was appointed the first vice-chairman of the NITI

Aayog, with which Mr. Modi replaced the Planning Commission. They publicly derided Amartya Sen and Jene Drèze for suggesting that human development should precede economic growth, as in China. That was 'socialism', which had become a bad word from 1991, wherever mainly U.S.-led ideas of free markets and 'minimum government' economics had spread.

Human development indicators (HDI), which reflect the foundations of an economy, have remained very low in India, well behind China's. Even much poorer Bangladesh has caught up with India in global HDI rankings, after India's economic policies veered away from 'socialism' in 1991. A 'million mutinies' of students, workers, and farmers have risen against the system.

India's GDP may be growing nicely, provided the government's quarter to quarter statistics can be relied upon (about which there is doubt now amongst economists on all sides of the political spectrum). India's stock market is doing well, even though it swings up and down nervously every day. India's balance of payments is healthy, unlike 1991, propped by inflows of remittances by Indians working abroad and short-term financial investors. However, the pattern of economic growth is neither producing welfare, nor providing good jobs for India's 600 million strong youth below the age of 25. The economy's demographic dividend is slipping away.

India's economic policies need some fundamental reforms. Here are nine recommendations.

1. Strengthen public sector in education and healthcare; reverse their

excessive privatisation

2. Put more equity into public welfare schemes instead of improving only their efficiency

3. Raise humanisation of the economy rather than its financialisation

4. Rather than more centralisation and digitisation, put more human agency on the ground and more substance into public services

5. Devolve power to local rural and urban communities for improving their local systems instead of the State delivering benefits directly to individual beneficiaries

6. Increase the 'communitisation', rather than 'corporatisation' of social enterprises

7. Put the voices and needs, of common citizens at the centre of public-private partnerships between governments and private sector companies. Change the formats of PPPs, i.e. public (government) and private partnerships, into 'PPPPs'—people, public (government) and private partnerships

8. Measure the performance of public sector enterprises by the welfare they create for citizens, especially the neediest rather than financial returns they produce for investors. By this measure, the State Bank of India and the Life Insurance Corporation will beat even the best private sector banks who are measured only by the financial returns they provide in stock markets

9. Promote more technological depth in Indian-owned enterprises

Shakespeare said, "A rose by any other name will smell as sweet". If this is socialism, so be it.

(The writer is author of *Reimagining India's Economy: The Road to a More Equitable Society*)

17S9. Too much, too soon: reforms can come at a cost

बहुत अधिक, बहुत जल्द: सुधारों की कीमत चुकानी पड़ सकती है

- A fundamental thrust of **Washington Consensus'** economics was the **privatisation of the economy, including public services.**

वॉशिंगटन कंसेंसस की अर्थव्यवस्था का एक मूलभूत जोर सार्वजनिक सेवाओं सहित अर्थव्यवस्था के निजीकरण पर था।

- U.S. President Ronald Reagan, who was greatly influenced by Nobel laureate economist Milton Friedman (who said that '**the business of business must be only business**'), had declared that "**government is not the solution: it is the problem**".

अमेरिकी राष्ट्रपति रोनाल्ड रीगन, जो नोबेल पुरस्कार विजेता अर्थशास्त्री मिल्टन फ्रीडमैन से बहुत प्रभावित थे (जिन्होंने कहा था कि 'व्यवसाय का काम केवल व्यवसाय होना चाहिए'), ने घोषणा की थी कि "सरकार समाधान नहीं है: वह समस्या है।"

- In 2013, a popular writer on the Indian economy advocated **faster privatisation of India's education and health systems**.
2013 में, भारतीय अर्थव्यवस्था पर लिखने वाले एक लोकप्रिय लेखक ने **भारत की शिक्षा और स्वास्थ्य प्रणालियों के तेज निजीकरण** की वकालत की।
- He said **India works at night when the government is asleep**.
उन्होंने कहा कि भारत रात में काम करता है, जब सरकार सो रही होती है।
- China had become the factory of the world by 2009**, and Indian manufacturers were importing their components and machinery from China, enabled by the ease of imports that liberal import policies had encouraged from 1991, along with the dismantling of India's industrial policies.
2009 तक चीन **दुनिया की फैक्ट्री** बन चुका था और भारतीय निर्माता चीन से अपने कल-पुर्ज और मशीनरी आयात कर रहे थे, जिसे 1991 से उदार आयात नीतियों द्वारा प्रोत्साहित की गई आयात सुगमता तथा भारत की औद्योगिक नीतियों के विघटन से बढ़ावा मिला था।

Privatisation of services सेवाओं का निजीकरण

- They were manuals of **SOPs** on how to implement **PPPs (public-private partnerships)** in various sectors: road and transport infrastructure; power generation and distribution; urban water and electricity services; education and health, etc.
वे विभिन्न क्षेत्रों में **PPPs (सार्वजनिक-निजी भागीदारी)** को लागू करने के तरीके से संबंधित **SOPs** की पुस्तिकाएँ थीं: सड़क और परिवहन अवसंरचना; विद्युत उत्पादन और वितरण; शहरी जल और विद्युत सेवाएँ; शिक्षा और स्वास्थ्य आदि।

Gujarat model गुजरात मॉडल

- A '**Gujarat model**' of development for India was advocated by economists Jagdish Bhagwati and Arvind Panagariya.
अर्थशास्त्रियों जगदीश भगवती और अरविंद पनगढ़िया ने भारत के लिए '**गुजरात मॉडल के विकास**' की वकालत की।
- Panagariya was appointed the first vice-chairman of the NITI Aayog**, with which Mr. Modi replaced the Planning Commission.
पनगढ़िया को **NITI Aayog** का पहला उपाध्यक्ष नियुक्त किया गया, जिसके माध्यम से श्री मोदी ने योजना आयोग का स्थान लिया।
- They publicly derided Amartya Sen and Jean Drèze for suggesting that **human development should precede economic growth**, as in China.
उन्होंने अमर्त्य सेन और ज्यां द्रेज का यह सुझाव देने के लिए सार्वजनिक रूप से उपहास किया कि चीन की तरह **मानव विकास को आर्थिक विकास से पहले होना चाहिए**।
- That was '**socialism**', which had become a bad word from 1991, wherever mainly U.S.-led ideas of free markets and 'minimum government' economics had spread.
वह '**समाजवाद**' था, जो 1991 से एक बुरा शब्द बन गया था, जहाँ भी मुख्य रूप से अमेरिका के नेतृत्व वाले मुक्त बाजार और 'न्यूनतम सरकार' की अर्थव्यवस्था संबंधी विचारों का प्रसार हुआ था।
- Human development indicators (HDI)**, which reflect the foundations of an economy, have remained very low in India, well behind China's.
मानव विकास संकेतक (HDI), जो किसी अर्थव्यवस्था की बुनियाद को दर्शाते हैं, भारत में बहुत निम्न बने हुए हैं और चीन से काफी पीछे हैं।
- Even much poorer Bangladesh has caught up with India in global HDI rankings, after India's economic policies veered away from 'socialism' in 1991.



भारत की आर्थिक नीतियों के 1991 में 'समाजवाद' से दूर जाने के बाद, कहीं अधिक गरीब बांग्लादेश भी वैश्विक HDI रैंकिंग में भारत के बराबर आ गया है।

- The economy's **demographic dividend** is slipping away.
अर्थव्यवस्था का जनसांख्यिकीय लाभान्श हाथ से निकलता जा रहा है।
- India's economic policies need some **fundamental reforms**.
भारत की आर्थिक नीतियों में कुछ मौलिक सुधारों की आवश्यकता है।
- Here are nine recommendations.
यहाँ नौ सिफारिशें हैं।
- **1. Strengthen public sector in education and healthcare; reverse their excessive privatisation**
1. शिक्षा और स्वास्थ्य सेवा में सार्वजनिक क्षेत्र को मजबूत करें; उनके अत्यधिक निजीकरण को उलटें
- **2. Put more equity into public welfare schemes instead of improving only their efficiency**
2. सार्वजनिक कल्याण योजनाओं में केवल उनकी दक्षता सुधारने के बजाय अधिक समानता सुनिश्चित करें
- **3. Raise humanisation of the economy rather than its financialisation**
3. अर्थव्यवस्था के वित्तीयकरण के बजाय उसके मानवीकरण को बढ़ावा दें
- **4. Rather than more centralisation and digitisation, put more human agency on the ground and more substance into public services**
4. अधिक केंद्रीकरण और डिजिटलीकरण के बजाय जमीनी स्तर पर अधिक मानवीय भूमिका और सार्वजनिक सेवाओं में अधिक सार्थकता सुनिश्चित करें
- **5. Devolve power to local rural and urban communities for improving their local systems instead of the State delivering benefits directly to individual beneficiaries**
5. राज्य द्वारा व्यक्तिगत लाभार्थियों को सीधे लाभ पहुँचाने के बजाय स्थानीय प्रणालियों में सुधार के लिए स्थानीय ग्रामीण और शहरी समुदायों को अधिकार हस्तांतरित करें
- **6. Increase the 'communitisation', rather than 'corporatisation' of social enterprises**
6. सामाजिक उद्यमों के 'निगमीकरण' के बजाय उनके 'सामुदायिकीकरण' को बढ़ाएँ
- **7. Put the voices and needs, of common citizens at the centre of public-private partnerships between governments and private sector companies. Change the formats of PPPs, i.e. public (government) and private partnerships, into 'PPPPs'—people, public (government) and private partnerships**
7. सरकारों और निजी क्षेत्र की कंपनियों के बीच सार्वजनिक-निजी भागीदारी में आम नागरिकों की आवाज और जरूरतों को केंद्र में रखें। PPPs अर्थात् सार्वजनिक (सरकारी) और निजी भागीदारी के प्रारूप को 'PPPPs'—जनता, सार्वजनिक (सरकारी) और निजी भागीदारी—में बदलें
- **8. Measure the performance of public sector enterprises by the welfare they create for citizens, especially the neediest rather than financial returns they produce for investors. By this measure, the State Bank of India and the Life Insurance Corporation will beat even the best private sector banks who are measured only by the financial returns they provide in stock markets**
8. सार्वजनिक क्षेत्र के उपक्रमों के प्रदर्शन को निवेशकों के लिए उत्पन्न किए गए वित्तीय प्रतिफल के बजाय नागरिकों, विशेष रूप से सबसे जरूरतमंद लोगों के लिए उत्पन्न किए गए कल्याण के आधार पर मापें। इस मापदंड के आधार पर, भारतीय स्टेट बैंक और भारतीय जीवन बीमा निगम उन सर्वश्रेष्ठ निजी क्षेत्र के बैंकों से भी आगे होंगे, जिन्हें केवल शेयर बाजारों में उनके द्वारा प्रदान किए जाने वाले वित्तीय प्रतिफल के आधार पर मापा जाता है
- **9. Promote more technological depth in Indian owned enterprises**
9. भारतीय स्वामित्व वाले उद्यमों में अधिक तकनीकी गहराई को बढ़ावा दें
- Shakespeare said, "A rose by any other name will smell as sweet".
शेक्सपियर ने कहा था, "गुलाब किसी भी अन्य नाम से पुकारा जाए, उसकी सुगंध उतनी ही मधुर होगी।"



TELEGRAM CHANNEL: <https://t.me/patrioticIAS>
YOUTUBE CHANNEL: <https://www.youtube.com/@PatrioticIAS>
CONTACT: 9971932488



- If this is socialism, so be it.
यदि यह समाजवाद है, तो ऐसा ही सही।

GS Paper III: Science and Technology		17 September 2026
TOPICS COVERED		
17S9	India has a research blindspot: its own science system भारत में एक शोध-अंधबिंदु है: उसकी अपनी विज्ञान प्रणाली	
17S9	Cities on the moon may run dry far faster than space barons think चंद्रमा पर शहर अंतरिक्ष के दिग्गजों की सोच से कहीं अधिक तेजी से पानी से वंचित हो सकते हैं	
17S9	What Voyager's journey tells us about the purpose of exploration वॉयेजर की यात्रा हमें अन्वेषण के उद्देश्य के बारे में क्या बताती है	
17S9	'Trump govt.'s vaccine policy led to deaths from measles' 'ट्रंप सरकार की वैक्सीन नीति के कारण खसरे से मौतें हुई'	

India has a research blindspot: its own science system

The country needs to invest in metascience, in institutions, expertise, and people whose job is to study how Indian science actually works; it means documenting what has worked and what has not, instead of forgetting it with every change in leadership

ESSAYS
Moumita Koley

The U.S. Office of Science and Technology Policy (OSTP) recently released a 125-page policy document titled 'Science: A New Golden Age', which presents a renewed vision for American science. It positions itself as a sequel to the American inventor Vannevar Bush's 1945 report, 'Science: The Endless Frontier', which laid the foundations of the famously successful post-war American research system.

As it happens, the new report can be consequential for the Indian science system as well – by revealing the importance of something that India currently does not have but should as quickly as possible: the ability to study its own science system with evidence.

Why a system works

The report starts with a diagnosis well known to the science-of-science, or metascience, research community: despite sustained increases in research and development investment, returns in scientific productivity and innovation have not kept pace. But more than agreement or disagreement with this diagnosis, what matters is that a system should be able to interrogate itself using its own data and be able to reach a conclusion like this.

After its diagnosis, the report draws two conclusions worth exploring. First, it says the U.S. should invest more in individual researchers with bold, high-risk ideas rather than routing funds primarily through what it calls "legacy institutions". Second, it calls into question the prevailing one-size-fits-all model of research funding, instead advocating for experimenting with alternative funding mechanisms. It also calls for funding agencies to evaluate whether their own mechanisms can be made more effective.

The institutions that fund science should be accountable for the evidence that what they fund and why are actually working – and not just in the U.S. Across Europe, the U.K., China, and Japan, governments and funders are investing seriously in metascience that is able to address this concern. Governments and the people need concrete answers to how their research systems actually function: specifically, how it sets funding priorities, how funding mechanisms perform, how peer-review behaves, how it assesses researchers, how its incentives affect the way scientists collaborate, and so on.

Building a memory

In India, this conversation has barely begun. The country's science system has historically been shaped by the experience, judgment, and leadership of eminent scientists. That experience is invaluable and must remain a source of evidence – but it is also no longer sufficient considering today's research ecosystem is far more complex than it was half a century ago, and



The institutions that fund science should be accountable for the evidence that what they fund, and why, are actually working. GETTY IMAGES

understanding it requires systematic analysis. Specifically, it needs to draw on economics, the sociology of science, political science, public policy, organisational studies, scientometrics, and history and philosophy.

An exploration of bibliographic databases shows that, between 1950 and 2024, Indian publications addressing metascience or closely related questions across these domains remained low. Except for scientometrics, Indian research in these areas accounted for only around 1-2% of global research output, with the total number of publications generally not exceeding a hundred over the entire period.

A related problem is institutional memory. As leadership and personnel change, experiential knowledge about what worked, what failed, and why is lost. India has very few publicly available analytical reports documenting the evolution of its research system, and little that carries institutional learning across successive generations of policymakers. Building that memory is itself part of building better science governance, and it is where metascience can have a significant impact.

For these reasons, India needs to invest in scientific research as well as in the capacity to study the ecosystem in which this research happens.

Reason of state

The OSTP report also called for setting clearer national scientific goals to streamline research efforts and speed up the translation of discoveries into technologies, including those for society's benefit. This, too, is worth taking seriously but also debating carefully because it understates how much of

transformative science begins without any defined mission at all, i.e. as curiosity-driven research. And this, again, is precisely the kind of question a meaningful metascience capacity would allow India to debate with evidence rather than insights alone.

Quantum mechanics emerged in the early 20th century to answer fundamental questions about the nature of matter. It later became the foundation of semiconductors, lasers, and modern computing. Decades of curiosity-driven research in molecular biology, with no application in sight, eventually made CRISPR gene-editing and mRNA vaccines possible. The mathematics underlying today's artificial intelligence – including neural networks and transformer architectures – emerged from exploratory research in statistical mechanics.

The economist Mariana Mazzucato has documented this pattern in her work on what she calls "the entrepreneurial state". She has shown that many of the technologies in a single iPhone, including the internet, GPS, touchscreen, and the voice-recognition algorithms behind Siri, have their roots in blue-sky research funded by U.S. federal agencies such as DARPA and the National Institutes of Health. All these were undertaken decades before any company saw commercial application potential in them. In her account, the state was a bold and patient investor that was absorbing risks no private venture would touch. This is the kind of long-horizon, curiosity-driven investment that a purely 'mission and metrics' approach to funding – like what increasingly prevails in India today – risks crowding out. But at the same time, mission-oriented research has its own record of delivery. The Apollo programme

forced rapid advances in aerospace engineering, materials science, and computing that spread far beyond the space race. The Human Genome Project turned biology into a coordinated, global, infrastructure-scale enterprise. India itself had the Green Revolution, where crop-breeding research backed by state investment and clear food-security goals transformed the country's relationship with hunger within a single generation. The Revolution has its own legitimate critics as well, regarding ecological costs, regional inequity, and long-term sustainability. But that very disagreement also makes the case for India to be able to evaluate a mission using evidence.

Striking the balance

A healthy research ecosystem may well need both approaches to research, with research on a mission being used to meet pressing challenges and curiosity-driven, blue-sky research to open new frontiers. It is just that any decision on where to strike that balance should rest on deliberation and evidence, rather than on which topics happen to be fashionable in global policy discourse at a given moment.

To facilitate that, India needs to invest in metascience, in institutions, expertise, and people whose job is to study how Indian science actually works. It means documenting what has worked and what has not, instead of forgetting it with every change in leadership, and building institutions strong enough to imagine an ambitious future for Indian science.

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17S9. India has a research blindspot: its own science system

भारत में एक शोध-अंधबिंदु है: उसकी अपनी विज्ञान प्रणाली

- First, it says the U.S. should invest more in individual researchers with bold, high-risk ideas rather than routing funds primarily through what it calls "legacy institutions".

पहला, इसमें कहा गया है कि अमेरिका को मुख्य रूप से धन को तथाकथित "legacy institutions" के माध्यम से वितरित करने के बजाय साहसिक और उच्च-जोखिम वाले विचारों वाले व्यक्तिगत शोधकर्ताओं में अधिक निवेश करना चाहिए।

- Second, it calls into question the prevailing one-size-fits-all model of research funding, instead advocating for experimenting with alternative funding mechanisms.
दूसरा, यह प्रचलित one-size-fits-all शोध वित्तपोषण मॉडल पर प्रश्न उठाता है और इसके बजाय वैकल्पिक वित्तपोषण तंत्रों के साथ प्रयोग करने की वकालत करता है।
- It also calls for funding agencies to evaluate whether their own mechanisms can be made more effective.
यह वित्तपोषण एजेंसियों से यह मूल्यांकन करने का भी आह्वान करता है कि क्या उनके अपने तंत्रों को अधिक प्रभावी बनाया जा सकता है।
- The institutions that fund science should be accountable for the evidence that what they fund and why are actually working — and not just in the U.S.
विज्ञान को वित्तपोषित करने वाली संस्थाओं को इस बात के साक्ष्य के लिए जवाबदेह होना चाहिए कि वे क्या वित्तपोषित करती हैं और क्यों करती हैं, वे वास्तव में प्रभावी हैं—और यह केवल अमेरिका के लिए ही लागू नहीं होता।
- Across Europe, the U.K., China, and Japan, governments and funders are investing seriously in metascience that is able to address this concern.
पूरे यूरोप, U.K., चीन और जापान में सरकारें और वित्तपोषक इस चिंता का समाधान करने में सक्षम मेटासाइंस में गंभीरता से निवेश कर रहे हैं।
- Governments and the people need concrete answers to how their research systems actually function: specifically, how it sets funding priorities, how funding mechanisms perform, how peer-review behaves, how it assesses researchers, how its incentives affect the way scientists collaborate, and so on.
सरकारों और जनता को इस बात के ठोस उत्तर चाहिए कि उनकी शोध प्रणालियाँ वास्तव में कैसे काम करती हैं: विशेष रूप से, वे वित्तपोषण की प्राथमिकताएँ कैसे निर्धारित करती हैं, वित्तपोषण तंत्र कैसे प्रदर्शन करते हैं, सहकर्मी समीक्षा (peer review) कैसे कार्य करती है, शोधकर्ताओं का मूल्यांकन कैसे किया जाता है, तथा प्रोत्साहन वैज्ञानिकों के सहयोग करने के तरीके को कैसे प्रभावित करते हैं, आदि।

Building a memory

स्मृति का निर्माण

- In India, this conversation has barely begun.
भारत में यह विमर्श अभी मुश्किल से शुरू हुआ है।
- The country's science system has historically been shaped by the experience, judgment, and leadership of eminent scientists.
देश की विज्ञान प्रणाली ऐतिहासिक रूप से प्रतिष्ठित वैज्ञानिकों के अनुभव, विवेक और नेतृत्व से आकार लेती रही है।
- Quantum mechanics emerged in the early 20th century to answer fundamental questions about the nature of matter.
क्वांटम यांत्रिकी (Quantum mechanics) का उदय 20वीं सदी के प्रारंभ में पदार्थ की प्रकृति से जुड़े मौलिक प्रश्नों के उत्तर देने के लिए हुआ।
- It later became the foundation of semiconductors, lasers, and modern computing.
बाद में यह अर्धचालकों, लेजर और आधुनिक कंप्यूटिंग का आधार बन गई।
- Decades of curiosity-driven research in molecular biology, with no application in sight, eventually made CRISPR gene-editing and mRNA vaccines possible.
आणविक जीवविज्ञान में दशकों तक किए गए जिज्ञासा-प्रेरित अनुसंधान, जिसका उस समय कोई स्पष्ट अनुप्रयोग दिखाई नहीं देता था, ने अंततः CRISPR जीन-संपादन और mRNA टीकों को संभव बनाया।
- The mathematics underlying today's artificial intelligence — including neural networks and transformer architectures — emerged from exploratory research in statistical mechanics.
आज की कृत्रिम बुद्धिमत्ता (Artificial Intelligence) के आधार में मौजूद गणित—जिसमें न्यूट्रल नेटवर्क

और ट्रांसफॉर्मर आर्किटेक्चर शामिल हैं—का उद्भव सांख्यिकीय यांत्रिकी (statistical mechanics) में किए गए अन्वेषणात्मक अनुसंधान से हुआ।

- The economist Mariana Mazzucato has documented this pattern in her work on what she calls “the entrepreneurial state”.
अर्थशास्त्री Mariana Mazzucato ने जिसे वह “उद्यमशील राज्य (entrepreneurial state)” कहती हैं, उस पर अपने कार्य में इस प्रवृत्ति का दस्तावेजीकरण किया है।
- She has shown that many of the technologies in a single iPhone, including the internet, GPS, touchscreen, and the voice-recognition algorithms behind Siri, have their roots in blue-sky research funded by U.S. federal agencies such as DARPA and the National Institutes of Health.
उन्होंने दिखाया है कि एक iPhone में प्रयुक्त अनेक प्रौद्योगिकियों, जिनमें इंटरनेट, GPS, टचस्क्रीन और Siri के पीछे काम करने वाले वॉइस-रिकग्निशन एल्गोरिद्म शामिल हैं, की जड़ें DARPA और National Institutes of Health जैसी अमेरिकी संघीय एजेंसियों द्वारा वित्तपोषित ब्लू-स्काई अनुसंधान (blue-sky research) में हैं।
- In her account, the state was a bold and patient investor that was absorbing risks no private venture would touch.
उनके विवरण के अनुसार, राज्य एक साहसी और धैर्यवान निवेशक था, जो ऐसे जोखिमों को वहन कर रहा था जिन्हें कोई निजी उद्यम लेने के लिए तैयार नहीं था।
- The Apollo programme forced rapid advances in aerospace engineering, materials science, and computing that spread far beyond the space race.
Apollo programme ने एयरोस्पेस इंजीनियरिंग, पदार्थ विज्ञान और कंप्यूटिंग में तीव्र प्रगति को प्रेरित किया, जिसका प्रभाव अंतरिक्ष दौड़ से कहीं आगे तक फैला।
- The Human Genome Project turned biology into a coordinated, global, infrastructure-scale enterprise.
Human Genome Project ने जीवविज्ञान को एक समन्वित, वैश्विक और अवसंरचना-स्तरीय उद्यम में बदल दिया।
- India itself had the Green Revolution, where crop-breeding research backed by state investment and clear food-security goals transformed the country's relationship with hunger within a single generation.
भारत में स्वयं हरित क्रांति (Green Revolution) हुई, जिसमें राज्य के निवेश और स्पष्ट खाद्य-सुरक्षा लक्ष्यों द्वारा समर्थित फसल-प्रजनन अनुसंधान ने एक ही पीढ़ी के भीतर देश के भुखमरी के साथ संबंध को बदल दिया।
- It means documenting what has worked and what has not, instead of forgetting it with every change in leadership, and building institutions strong enough to imagine an ambitious future for Indian science.

इसका अर्थ है कि नेतृत्व में प्रत्येक परिवर्तन के साथ उन्हें भूल जाने के बजाय, क्या सफल रहा है और क्या सफल नहीं रहा है, इसका दस्तावेजीकरण किया जाए और ऐसी संस्थाओं का निर्माण किया जाए जो भारतीय विज्ञान के लिए एक महत्वाकांक्षी भविष्य की कल्पना करने में पर्याप्त रूप से सक्षम हों।



Cities on the moon may run dry far faster than space barons think

GS III: S&T
Vasudevan Mukunth

As NASA and China speed up their lunar space programmes, a more-than-temporary human settlement on the moon inches closer to reality. Space agencies with these plans are targeting the moon's south pole region, where permanently shadowed craters are supposed to hold large quantities of water ice.

In the long-term, entrepreneurs like Jeff Bezos have argued for moving heavy industries to the moon while Elon Musk has said the satellite can support a "self-growing city". As on the earth, water is at the centre of these plans.

But a new study by two astronomers, Martin Elvis of the Smithsonian Astrophysical Observatory and Jonathan McDowell of Durham University, has thrown up a reality check. The duo has estimated that even if the moon hosted one billion tonnes of water, it would support a population of only one million people for roughly a century if they recycled 98% of it.

The findings were published in *Frontiers in Space Technologies*.

The scientists arrived at this estimate based on calculations of how much water the moon may really hold, how much

electricity people and industrial activities consume, how much water a human settlement might need, and how efficiently that water can be reused.

Right now, the exact quantity of water on the moon is a major source of uncertainty, and which scientists are studying using robotic missions like India's Chandrayaan and China's Chang'e programmes. One 2022 study of 65 large permanently shadowed craters estimated that eight of them together hold around 34 million tonnes of water.

Against this backdrop, Elvis and McDowell assumed 1 billion tonnes of water as a generous baseline – around 4 lakh Olympic-sized swimming pools – and the demand to amount to 500 tonnes per person per year.

(The duo also estimated that a city of one million inhabitants would require around 2 GW of power, which can be sourced relatively easily from solar panels and nuclear reactors.)

Without recycling, this will sustain a million people for only around two years. But with 98% recycling, they estimated that a million people will deplete a billion tonnes of water in a century, and a lakh people in a millennium.

They also found one million people could have water for a millennium if they recycled the water to the tune of 99.75% – essentially living like the fictitious Fremen tribe in the 'Dune' books and films.

At present, NASA has said it will set up a permanent outpost near the moon's south pole from the 2030s under its 'Moon Base' programme. China's 'International Lunar Research Station' plans for a basic station by 2035 that will be built out in the 2040s.

India itself is planning a crewed landing on the moon by 2040. In August, NASA also invited the Indian Space Research Organisation to participate in the 'Moon Base'.

Since Elvis and McDowell assumed a minimum population of one lakh for their analysis, the findings don't apply to short-duration missions or small lunar outposts. But as these outposts expand, the study suggests, the space agencies and the governments behind them may have to treat water on the moon as a strategic resource.

17S9. Cities on the moon may run dry far faster than space barons think

चंद्रमा पर शहर अंतरिक्ष के दिग्गजों की सोच से कहीं अधिक तेजी से पानी से वंचित हो सकते हैं

- The scientists arrived at this estimate based on calculations of how much water the moon may really hold, how much electricity people and industrial activities consume, how much water a human settlement might need, and how efficiently that water can be reused.

वैज्ञानिकों ने यह अनुमान इस आधार पर लगाया कि चंद्रमा पर वास्तव में कितना जल उपलब्ध हो सकता है, लोग और औद्योगिक गतिविधियाँ कितनी

बिजली की खपत करती हैं, मानव बस्ती को कितने जल की आवश्यकता हो सकती है, और उस जल का कितनी दक्षता से पुनः उपयोग किया जा सकता है।

- Right now, the exact quantity of water on the moon is a major source of uncertainty, and which scientists are studying using robotic missions like **India's Chandrayaan and China's Chang'e programmes**.

फिलहाल, चंद्रमा पर जल की सटीक मात्रा एक बड़ी अनिश्चितता का विषय है, जिसका वैज्ञानिक भारत के Chandrayaan और चीन के Chang'e कार्यक्रमों जैसे रोबोटिक अभियानों के माध्यम से

अध्ययन कर रहे हैं।

17S9. What Voyager's journey tells us about the purpose of exploration वॉयेजर की यात्रा हमें अन्वेषण के उद्देश्य के बारे में क्या बताती है

- Come November, **Voyager 1 will be around one light-day away from the earth**. नवंबर आते-आते, वॉयेजर 1 पृथ्वी से लगभग एक प्रकाश-दिन की दूरी पर होगा।
- That means light will take one day to travel from our home planet to the spacecraft**. इसका अर्थ है कि हमारे गृह ग्रह से अंतरिक्ष यान तक प्रकाश को पहुँचने में एक दिन लगेगा।
- The **Voyager missions** are two identical spacecraft NASA launched in 1977 to explore the **outer planets**.



वॉयेजर मिशन दो समान अंतरिक्ष यानों से संबंधित हैं, जिन्हें NASA ने 1977 में बाहरी ग्रहों का अन्वेषण करने के लिए प्रक्षेपित किया था।

- **Voyager 1 and Voyager 2 made historic flybys of Jupiter and Saturn; Voyager 2 also visited Uranus and Neptune.**
वॉयेजर 1 और वॉयेजर 2 ने बृहस्पति और शनि के ऐतिहासिक फ्लाईबाई किए; वॉयेजर 2 ने यूरेनस और नेपच्यून का भी दौरा किया।
- **Both spacecraft later became humankind's most distant operating probes.**
बाद में दोनों अंतरिक्ष यान मानवता की सबसे दूर स्थित सक्रिय अंतरिक्ष जाँच प्रणालियाँ बन गए।
- Today, **Voyager 1 is at the outer limits of the solar system**, and has been for a few years. आज वॉयेजर 1 सौरमंडल की बाहरी सीमाओं पर है और पिछले कुछ वर्षों से वहीं है।
- The spacecraft had to travel at **17 km/s on average for roughly 17,900 days** just to get to the picket fence at the end of its little neighbourhood — a day's journey for light. इस छोटे से पड़ोस के अंत में स्थित सीमा तक पहुँचने के लिए अंतरिक्ष यान को लगभग 17 किमी/सेकंड की औसत गति से करीब 17,900 दिनों तक यात्रा करनी पड़ी — जबकि प्रकाश के लिए यह एक दिन की यात्रा है।
- On the other hand, our telescopes have captured breathtaking visuals of distant **celestial wonders**, from the Pillars of Creation to the Orion Nebula, from the Sombrero Galaxy to Hoag's Object, thousands to millions of **lightyears** away.
दूसरी ओर, हमारी दूरबीनों ने हजारों से लेकर लाखों प्रकाश-वर्ष दूर स्थित अद्भुत आकाशीय संरचनाओं के मनमोहक दृश्य कैद किए हैं, जिनमें पिलर्स ऑफ क्रिएशन से लेकर ओरायन नेबुला तक और सोमब्रेरो गैलेक्सी से लेकर होआग्स ऑब्जेक्ट तक शामिल हैं।
- It is entirely possible humans may never see them up close firsthand, but who knows what the future will bring?
यह पूरी तरह संभव है कि मनुष्य उन्हें कभी प्रत्यक्ष रूप से निकट से न देख पाएँ, लेकिन कौन जानता है कि भविष्य क्या लेकर आएगा?

17S9. 'Trump govt.'s vaccine policy led to deaths from measles' 'ट्रंप सरकार की वैक्सीन नीति के कारण खसरे से मौतें हुई'

MEASLES

- **Measles**, also called **rubeola**, is a highly contagious **viral disease** that mainly affects the respiratory system before spreading throughout the body.
- It is caused by the **measles virus**, an **enveloped RNA virus** belonging to the genus **Morbillivirus**. Humans are its natural host.
- Measles should not be confused with **rubella (German measles)**. They are caused by different viruses, although both can produce a skin rash.
- Measles is **vaccine-preventable**, but it can cause serious complications and death, particularly among young, unvaccinated or undernourished children.

How Does Measles Spread?

- Measles is an **airborne infection**. An infected person releases virus-containing particles when breathing, coughing or sneezing.
- The virus initially infects the **respiratory tract** and subsequently spreads to other parts of the body.
- It is exceptionally contagious. About **90% of susceptible people in close contact with an infected person may become infected**.
- The virus can remain infectious in contaminated air or on surfaces for **up to about two hours**.

Symptoms of Measles



- Symptoms generally begin about **10–14 days after exposure**.
- The early symptoms commonly include **high fever, cough, runny nose and red, watery eyes**.
- **Koplik spots**, which are tiny white spots inside the mouth, may appear before the skin rash.
- A characteristic **red, blotchy rash** usually begins on the **face and upper neck** and then spreads downward over the trunk and limbs.

Complications

- Measles is not merely a harmless childhood rash.
- Complications can include **severe diarrhoea and dehydration, ear infection, pneumonia, blindness and encephalitis**, which is inflammation of the brain.
- Severe disease is more likely among **children below five years**, poorly nourished children, especially those with **vitamin A deficiency**, and people with weakened immunity.
- Measles can also temporarily weaken the immune system, increasing vulnerability to other infections after the illness.

Prevention and Vaccination

- **Vaccination is the most effective method of preventing measles.**
- WHO recommends that children receive **two doses of a measles-containing vaccine**, because some children do not develop sufficient immunity after a single dose.
- In India, the **Measles-Rubella (MR) vaccine** is provided under the **Universal Immunisation Programme (UIP)**.
- Under India's routine schedule, MR vaccine is administered at **9–12 months** and again at **16–24 months**.
- MR protects against both **measles and rubella**.

GS Paper III: Environment		17 September 2026
TOPICS COVERED		
17S9	Hog in the limelight सुखियों में पिग्मी हाँग	
17S9	Quiz	



GS III: Environment

Hog in the limelight

The survival of the pygmy hog depends on a thriving ecosystem

The decline of the pygmy hog — the sole surviving species of the genus *Porcula* and the world's smallest wild suid — is a narrative about the decline of India's alluvial floodplains. The pygmy hog depends significantly on dense grasslands to feed, conceal itself, and reproduce, so distress among these animals is an indicator of the floodplain suffering degradation. Protecting the pygmy hog can also extend protections to threatened species such as the Bengal florican, hispid hare, hog deer, and greater one-horned rhinoceros. The Assam government was recently right to laud the efforts of a captive breeding programme that increased the pygmy hog population in the State 32-fold in the last three decades. Breeding from a small founder stock while preventing diseases — suids are highly susceptible to swine diseases — and inbreeding requires conservationists to track pedigree, follow biosafety protocols, and condition individuals before release. That said, the species' survival in the wild depends on the survival of specific ecosystems, and the latter remains a work in progress. The pygmy hog was believed to be extinct by the mid-20th century as floodplains were converted for farms, tea plantations, and flood control infrastructure and were degraded by invasive plants and altered flood cycles, with the unscientific burning of grasslands further fragmenting habitats. A few individuals were rediscovered in 1971, prompting one conservation effort. The current efforts are due to the Pygmy Hog Conservation Programme from 1995.

Even now, the difficulty of spotting and counting these animals means that it is hard to say how many exist in the wild; per the Durrell Wildlife Conservation Trust, there were some 250 individuals in early 2025, with the last surviving natural population in the Panbari grasslands area of the Manas National Park. Since they continue to be threatened, the captive individuals form the insurance group, but even so, the group's long-term evolutionary fitness is still not guaranteed. Researchers are also alert to the accumulation of harmful gene variants in the population and low genetic diversity, and thus look forward to the pygmy hog's natural habitats being restored. Alluvial floodplains are dynamic ecosystems; in addition to threats such as land conversion, efforts to 'save' them, such as widespread dry-season fires, can still destroy the dense cover the pygmy hog needs. On the other hand, suppressing ecological processes can leave trees and shrubs to turn grassland into woodland. Given the plan to increase the wild pygmy hog population to 300 by 2040, Assam needs to revert the fragmentation of its protected grasslands, especially in Rupahi and Kanchanbari, and to restore buffer zones around the Manas and Orang National Parks and the Sonai Rupai Wildlife Sanctuary.

17S9. Hog in the limelight

सुर्खियों में पिग्मी हॉग

- The decline of the pygmy hog — the sole surviving species of the genus *Porcula* and the world's smallest wild suid — is a narrative about the decline of India's alluvial floodplains.

पिग्मी हॉग — *Porcula* वंश की एकमात्र जीवित प्रजाति और दुनिया का सबसे छोटा जंगली सूअर (wild suid) — का पतन भारत के जलोढ़ बाढ़मैदानों (alluvial floodplains) के पतन की कहानी है।

- The pygmy hog depends significantly on dense grasslands to feed, conceal itself, and reproduce, so distress among these animals is an indicator of the floodplain suffering degradation.

पिग्मी हॉग भोजन करने, स्वयं को छिपाने और प्रजनन करने के लिए घने घास के मैदानों पर काफी हद तक निर्भर रहता है, इसलिए इन जानवरों की दुर्दशा बाढ़मैदानों के क्षरण का एक संकेतक है।

- Protecting the pygmy hog can also extend protections to threatened species such as the Bengal florican, hispid hare, hog deer, and greater one-horned rhinoceros.

पिग्मी हॉग का संरक्षण Bengal florican, hispid hare, hog deer और greater one-horned rhinoceros जैसी संकटग्रस्त प्रजातियों को भी संरक्षण प्रदान कर सकता है।

- The Assam government was recently right to laud the efforts of a captive breeding programme that increased the pygmy hog population in the State 32-fold in the last three decades.

असम सरकार ने हाल ही में उस बंदी प्रजनन कार्यक्रम के प्रयासों की सराहना की, जिसने पिछले तीन दशकों में राज्य में पिग्मी हॉग की आबादी में 32 गुना वृद्धि की है।

- Breeding from a small founder stock while preventing diseases — suids are highly susceptible to swine diseases — and inbreeding requires conservationists to track pedigree, follow biosafety protocols, and condition individuals before release.

एक छोटे संस्थापक समूह (founder stock) से प्रजनन कराते समय रोगों — suids स्वाइन रोगों के प्रति अत्यधिक संवेदनशील होते हैं — और अंतःप्रजनन को रोकने के लिए संरक्षणवादियों को वंशावली का रिकॉर्ड रखना, जैव-सुरक्षा प्रोटोकॉल का पालन करना और छोड़ने से पहले प्रत्येक जीव को अनुकूलित करना आवश्यक होता है।

- The pygmy hog was believed to be extinct by the mid-20th century as floodplains were converted for farms, tea plantations, and flood control infrastructure and were degraded by invasive plants and altered flood cycles, with the unscientific burning of grasslands further fragmenting habitats.

20वीं सदी के मध्य तक पिग्मी हॉग को विलुप्त माना जाता था, क्योंकि बाढ़मैदानों को खेतों, चाय बागानों और बाढ़ नियंत्रण अवसंरचना के लिए परिवर्तित कर दिया गया था तथा आक्रामक पौधों और परिवर्तित बाढ़ चक्रों के कारण उनका क्षरण हुआ था, जबकि घास के मैदानों को अवैज्ञानिक ढंग से जलाने से आवास और अधिक खंडित हो गए।

- A few individuals were rediscovered in 1971, prompting one conservation effort. 1971 में कुछ पिग्मी हॉग फिर से पाए गए, जिसके बाद संरक्षण का एक प्रयास शुरू हुआ।
- The current efforts are due to the Pygmy Hog Conservation Programme from 1995. वर्तमान प्रयास 1995 से चल रहे Pygmy Hog Conservation Programme के कारण संभव हुए हैं।



- Even now, the difficulty of spotting and counting these animals means that it is hard to say how many exist in the wild; per the Durrell Wildlife Conservation Trust, there were some 250 individuals in early 2025, with the last surviving natural population in the **Panbari grasslands area of the Manas National Park**.

आज भी इन जानवरों को देखना और उनकी गणना करना कठिन होने के कारण यह बताना मुश्किल है कि जंगल में इनकी संख्या कितनी है; Durrell Wildlife Conservation Trust के अनुसार, 2025 की शुरुआत में लगभग 250 पिग्मी हाँग थे, जिनकी अंतिम जीवित प्राकृतिक आबादी Manas National Park के Panbari grasslands क्षेत्र में थी।

Questions and Answers to the previous day's daily quiz: 1.

Name the British Antarctic Survey scientists whose 1985 paper reported the Antarctic "ozone hole". **Ans: Joe Farman, Brian Gardiner and Jon Shanklin**

2. What 1985 international treaty, signed by 20 countries and the European Economic Community, established the framework for later ozone regulations? **Ans: The Vienna Convention for the Protection of the Ozone Layer**

3. When did the Montreal Protocol enter into force? **Ans: January 1, 1989**

4. Who is often called the "father of the Montreal Protocol" for his role as UNEP's head in brokering the deal? **Ans: Mostafa Kamal Tolba**

5. What 2016 amendment added a phase-down of hydrofluorocarbons under the Protocol? **Ans: The Kigali Amendment**

Visual: Identify this French physicist. **Ans: Charles Fabry**

Early Birds: K.N. Viswanathan | Prem Raj P. | Aanchal Lakra | Lalchand Bhutani | Sunil Madhavan

control.

17S9. Quiz

1. Scientists Who Reported the Antarctic Ozone Hole

- British Antarctic Survey scientists **Joe Farman, Brian Gardiner and Jon Shanklin** analysed long-term ozone measurements collected at **Halley Bay, Antarctica**.
- Their paper, titled *Large Losses of Total Ozone in Antarctica Reveal Seasonal ClO_x/NO_x Interaction*, was published in the journal *Nature* on **16 May 1985**.
- They reported a dramatic springtime decline in stratospheric ozone over Antarctica, popularly called the "**ozone hole**."
- Their findings connected the decline with chlorine-based chemical reactions and provided compelling evidence that chlorofluorocarbons required international

2. Vienna Convention for the Protection of the Ozone Layer

- The **Convention** was adopted and opened for signature at Vienna on **22 March 1985**.
- On the adoption day, it was signed by **20 States and the European Economic Community**; the total number of signatories subsequently reached 28.
- It entered into force on **22 September 1988**.
- The **Convention** created a framework for international cooperation, scientific research, monitoring and information exchange concerning ozone depletion.
- It did not itself prescribe binding reduction targets for ozone-depleting substances. Specific control measures were subsequently established through the **Montreal Protocol of 1987**. UN Treaty Collection

3. Entry into Force of the Montreal Protocol

- The **Montreal Protocol on Substances that Deplete the Ozone Layer** was adopted at Montreal, Canada, on **16 September 1987**.
- It entered into force on **1 January 1989**, after its prescribed ratification requirements had been fulfilled.
- The **Protocol** introduced binding controls on the production and consumption of ozone-depleting substances, including chlorofluorocarbons and halons.

4. "Father of the Montreal Protocol"



- Egyptian scientist **Mostafa Kamal Tolba** served as Executive Director of the United Nations Environment Programme from **1975 to 1992**.
- He is widely called the “**father of the Montreal Protocol**” because of his central diplomatic role in negotiating agreements among countries, scientists and chemical industries.

5. Kigali Amendment

- The **Kigali Amendment** was adopted at Kigali, Rwanda, on **15 October 2016** and entered into force on **1 January 2019**.
- It added a phased reduction of **hydrofluorocarbons**, or HFCs, to the Montreal Protocol.
- HFCs generally do not destroy stratospheric ozone, but many are powerful greenhouse gases with high global-warming potential.
- The Amendment therefore connects ozone governance with climate-change mitigation.
- Parties follow differentiated phase-down schedules according to their development categories.
- India approved ratification in **August 2021** and deposited its instrument of ratification on **27 September 2021**.

GS Paper III: Internal Security		17 September 2026
TOPICS COVERED		
17S9	Pak. corvette collides with Indian warship after ‘unsafe approach’ ‘असुरक्षित तरीके से पास आने’ के बाद पाकिस्तानी कॉर्बेट भारतीय युद्धपोत से टकराया	
17S9	CBI books Timothy Initiative, six others over fund routing CBI ने फंड के रूटिंग के मामले में Timothy Initiative और छह अन्य के खिलाफ मामला दर्ज किया	



Pak. corvette collides with Indian warship after 'unsafe approach'

India summons Pakistan envoy, lodges strong protest over 'unprofessional conduct'; PNS Hunain approached Indian ship at high speed and suffered damage in collision; no casualties reported; the Indian ship was on a routine surveillance mission

GS II: Internal Security

Saurabh Trivedi

NEW DELHI

A Pakistan Navy corvette collided with a frontline Indian Navy warship after approaching it at high speed and manoeuvring in an "unsafe and unprofessional" manner in the North Arabian Sea on Tuesday evening. The incident prompted India to summon Pakistan's Chargé d'Affaires and lodge a strong diplomatic protest.

Defence Ministry sources said the incident took place in international waters while the Indian warship was on a routine surveillance mission. PNS Hunain (F-273) approached the Indian vessel while attempting to intercept or follow it. The close-range manoeuvre caused the two vessels to graze each other.

Sources said PNS Hunain sustained damage in the collision and returned to the harbour. The Indian naval vessel suffered minor damage and continued on its mission. No casualties



The incident comes amid continued deployment of Indian and Pakistani naval assets in the Arabian Sea. In 2011, PNS Babur and INS Godavari were involved in a similar incident. FILE PHOTO

or major damage were reported from the incident.

"The Chargé d'Affaires of the High Commission for the Islamic Republic of Pakistan in New Delhi was summoned to the Ministry of External Affairs today and a strong protest was lodged with him over the unacceptable and unprofessional conduct of Pakis-

tani naval units at sea that led to a collision with a unit of the Indian Navy," the External Affairs Ministry said.

"While the incident, which took place in international waters, did not cause any major damage, the conduct of the Pakistani naval ship was in direct contravention of Article 10 of the Agreement between

India and Pakistan on Advance Notice on Military Exercises, Manoeuvres and Troops Movements of April 1991," it said.

The Pakistani diplomat was advised to convey to the authorities in Pakistan the need for all military units to exercise due care and respect the provisions of relevant bilateral agree-

ments to prevent a recurrence of such incidents.

The Indian Chargé d'Affaires in Islamabad has been instructed to lodge a similar protest with Pakistan's Ministry of Foreign Affairs, the government said.

Pakistan's response

Later, Pakistan summoned the Chargé d'Affaires of the Indian High Commission in Islamabad and lodged a strong protest over what it termed a "highly provocative and unacceptable" action by an Indian Navy vessel in Pakistan's EEZ.

PNS Hunain is a Yarmook-class offshore patrol vessel built by Damen Shipyards in Romania and commissioned into the Pakistan Navy in July 2024.

The latest incident comes amid the continued deployment of Indian and Pakistani naval assets in the Arabian Sea. The exact circumstances leading to the close manoeuvring and collision are likely to be examined by the two sides through relevant channels.

17S9. Pak. corvette collides with Indian warship after 'unsafe approach'

'असुरक्षित तरीके से पास आने' के बाद पाकिस्तानी कॉर्बेट भारतीय युद्धपोत से टकराया

- **PNS Hunain (F-273)** approached the Indian vessel while attempting to intercept or follow it. **PNS Hunain (F-273)** ने उसे रोकने या उसका पीछा करने के प्रयास में भारतीय पोत के पास आने की कोशिश की।
- "While the incident, which took place in international waters, did not cause any major damage, the conduct of the **Pakistani naval ship was in direct contravention of Article 10 of the Agreement between India and Pakistan on Advance Notice on Military Exercises, Manoeuvres and Troops Movements of April 1991**," it said.
इसने कहा, "यद्यपि अंतरराष्ट्रीय जलक्षेत्र में हुई इस घटना से कोई बड़ी क्षति नहीं हुई, लेकिन पाकिस्तानी नौसैनिक पोत का आचरण अप्रैल 1991 के **Agreement between India and Pakistan on Advance Notice on Military Exercises, Manoeuvres and Troops Movements** के Article 10 का प्रत्यक्ष उल्लंघन था।"
- **PNS Hunain** is a Yarmook-class offshore patrol vessel built by Damen Shipyards in Romania and commissioned into the Pakistan Navy in July 2024.
PNS Hunain एक Yarmook-class offshore patrol vessel है, जिसे रोमानिया में **Damen Shipyards** ने बनाया था और जुलाई 2024 में इसे पाकिस्तान नौसेना में शामिल किया गया था।

17S9	Dadasaheb Phalke honour for Kannada film artist Anant Nag कन्नड़ फिल्म कलाकार अनंत नाग को दादासाहेब फाल्के सम्मान
17S9	Hague court convicts Kosovo's ex-President Thaci of war crimes हेग की अदालत ने कोसोवो के पूर्व राष्ट्रपति थाची को युद्ध अपराधों के लिए दोषी ठहराया

Dadasaheb Phalke honour for Kannada film artist Anant Nag

Actor dedicates award to Kannadigas and Karnataka; recognition comes a year after he was awarded Padma Bhushan; Since his 1973 debut, Nag has acted in over 300 films, spanning mainstream and parallel cinema, in his five-decade career

PCS
The Hindu Bureau
BENGALURU

In a big honour for Kannada cinema, veteran actor Anant Nag became the second artist from the State to win the Dadasaheb Phalke Award on Wednesday. The recognition comes a year after the actor was given the Padma Bhushan.

After Dr. Rajkumar received the honour in 1995, no Kannada actor had bagged the country's highest award in the field of cinema.

Mr. Nag, who debuted with the 1973 Kannada film *Sankalpa*, has acted in more than 300 movies for over five decades in both mainstream and parallel cinema, with more than 250 of his performances being in Kannada.



Unparalleled range: Anant Nag is the recipient of five State Awards, including the Lifetime Achievement honour. FILE PHOTO

The actor, born Anant Nagarkatte in 1948 in Uttara Kannada district, began his acting stint with Kannada, Marathi, Hindi and Konkani plays. He has a rich background in theatre shaped largely in Mumbai.

Mr. Nag is the recipient of five Karnataka State Awards, including the Life-

time Achievement honour.

He will receive the Phalke award at the 72nd National Film Awards Ceremony on September 22 in Kevadia, Gujarat.

"It's a great feeling to receive this honour. In a way, I feel the Padma Bhushan was a rehearsal for this big award, with all the excitement and anticipation that came with it. I dedicate this award to Kannadigas and Karnataka," the actor told presspersons here.

'Illustrious journey'

A statement from the Press Information Bureau read, "On the recommendation of the Dadasaheb Phalke Award Selection Committee, the Government of India is pleased to announce that the actor will be conferred the prestigious Dadasaheb Phalke Award 2024 for his contribution to Indian cinema and an illustrious cinematic journey that has inspired generations."

Prime Minister Narendra Modi congratulated the actor for "infusing unparalleled performance and vitality in every role he played". Mr. Modi took to

social media and said, "Over the past several decades, his natural acting, remarkable versatility, and exceptional artistic talent have left an indelible mark on Indian cinema, particularly in the Kannada film industry."

Karnataka Chief Minister D.K. Shivakumar also commended Mr. Nag's cinematic journey and the Phalke award. "Heartfelt congratulations to Shri Anant Nag. His artistic journey will forever inspire future generations," Mr. Shivakumar said in a post on X.

Though cinematographer V.K. Murthy from Karnataka received the award in 2008, it was for his work in Hindi cinema.

Mr. Nag's win marks the second time Kannada cinema has been honoured.

17S9. Dadasaheb Phalke honour for Kannada film artist Anant Nag

कन्नड़ फिल्म कलाकार अनंत नाग को दादासाहेब फाल्के सम्मान

- In a big honour for **Kannada cinema**, veteran actor **Anant Nag** became the **second artist from the State** to win the **Dadasaheb Phalke Award** on Wednesday.

कन्नड़ सिनेमा के लिए एक बड़े सम्मान के रूप में, दिग्गज अभिनेता अनंत नाग बुधवार को दादासाहेब फाल्के पुरस्कार प्राप्त करने वाले राज्य के दूसरे कलाकार बन गए।

- The recognition comes a year after the actor was given the **Padma Bhushan**. यह सम्मान अभिनेता को पद्म भूषण दिए जाने के एक वर्ष बाद मिला है।
- After **Dr. Rajkumar** received the honour in 1995, no Kannada actor had bagged the country's **highest award in the field of cinema**.



1995 में डॉ. राजकुमार को यह सम्मान मिलने के बाद किसी भी कन्नड़ अभिनेता को सिनेमा के क्षेत्र में देश का सर्वोच्च पुरस्कार नहीं मिला था।

- Mr. Nag, who debuted with the 1973 Kannada film *Sankalpa*, has acted in more than **300 movies** for over five decades in both mainstream and parallel cinema, with more than 250 of his performances being in Kannada.
श्री नाग, जिन्होंने 1973 की कन्नड़ फिल्म *Sankalpa* से अपने अभिनय करियर की शुरुआत की, ने पांच दशकों से अधिक समय में मुख्यधारा और समानांतर सिनेमा दोनों में **300 से अधिक फिल्मों** में अभिनय किया है, जिनमें उनके 250 से अधिक अभिनय कन्नड़ में हैं।
- The actor, born Anant Nagarkatte in 1948 in Uttara Kannada district, began his acting stint with **Kannada, Marathi, Hindi and Konkani** plays.
1948 में उत्तर कन्नड़ जिले में अनंत नागरकट्टे के रूप में जन्मे अभिनेता ने कन्नड़, मराठी, हिंदी और कोंकणी नाटकों से अपने अभिनय की शुरुआत की।
- He has a **rich background in theatre** shaped largely in Mumbai.
मुंबई में मुख्य रूप से विकसित उनका **रंगमंच** से समृद्ध जुड़ाव रहा है।
- Mr. Nag is the recipient of five Karnataka State Awards, including the **Lifetime Achievement honour**.
श्री नाग को **लाइफटाइम अचीवमेंट** सम्मान सहित पांच कर्नाटक राज्य पुरस्कार प्राप्त हो चुके हैं।
- He will receive the **Phalke award at the 72nd National Film Awards Ceremony on September 22 in Kevadia, Gujarat**.
उन्हें गुजरात के केवड़िया में 22 सितंबर को आयोजित **72वें राष्ट्रीय फिल्म पुरस्कार समारोह** में फाल्के पुरस्कार प्रदान किया जाएगा।

‘Illustrious journey’ ‘गौरवशाली यात्रा’

- A statement from the **Press Information Bureau** read, “On the recommendation of the **Dadasaheb Phalke Award Selection Committee, the Government of India** is pleased to announce that the actor will be conferred the prestigious Dadasaheb Phalke Award 2024 for his contribution to Indian cinema and an illustrious cinematic journey that has inspired generations.”
प्रेस सूचना ब्यूरो के एक बयान में कहा गया, “दादासाहेब फाल्के पुरस्कार चयन समिति की सिफारिश पर, भारत

सरकार को यह घोषणा करते हुए प्रसन्नता हो रही है कि अभिनेता को भारतीय सिनेमा में उनके योगदान और ऐसी गौरवशाली सिनेमाई यात्रा के लिए प्रतिष्ठित दादासाहेब फाल्के पुरस्कार 2024 से सम्मानित किया जाएगा, जिसने पीढ़ियों को प्रेरित किया है।”

- Though cinematographer V.K. Murthy from Karnataka received the award in 2008, it was for his work in **Hindi cinema**.

हालाँकि कर्नाटक के छायाकार वी.के. मूर्ति को 2008 में यह पुरस्कार मिला था, लेकिन यह उन्हें **हिंदी सिनेमा** में उनके कार्य के लिए प्रदान किया गया था।

- Mr. Nag’s win marks the **second time Kannada cinema has been honoured**.
श्री नाग की जीत **कन्नड़ सिनेमा को सम्मानित किए जाने का दूसरा अवसर** है।

Hague court convicts Kosovo’s ex-President Thaci of war crimes

PCS
Associated Press
THE HAGUE

A European Union-backed court on Wednesday convicted former Kosovo President Hashim Thaci of four counts of war crimes committed during his country’s war for independence from Serbia and sentenced him to 25 years in prison.

Thaci, who is 58, resigned from office nearly six years ago to face the charges. He was convicted by a panel of judges at the

Kosovo Specialist Chambers of murder, torture, cruel treatment and arbitrary detention.

Both he and the prosecutors, who had asked for a stricter sentence, can appeal.

Thaci “showed a ruthless ability to remove and eliminate political impediments” to his and other commanders’ leadership, Presiding Judge Charles Smith said.

Kosovo Foreign Minister Glauk Konjufca condemned the verdicts.



17S9. Hague court convicts Kosovo's ex-President Thaci of war crimes हेग की अदालत ने कोसोवो के पूर्व राष्ट्रपति थाची को युद्ध अपराधों के लिए दोषी ठहराया

- A European Union-backed court on Wednesday convicted former Kosovo President Hashim Thaci of four counts of war crimes committed during his country's war for independence from Serbia and sentenced him to 25 years in prison.
यूरोपीय संघ समर्थित एक अदालत ने बुधवार को कोसोवो के पूर्व राष्ट्रपति हाशिम थाची को सर्बिया से स्वतंत्रता के लिए उनके देश के युद्ध के दौरान किए गए चार युद्ध अपराधों के मामलों में दोषी ठहराया और उन्हें 25 वर्ष की जेल की सजा सुनाई।
- Thaci, who is 58, resigned from office nearly six years ago to face the charges. He was convicted by a panel of judges at the Kosovo Specialist Chambers of murder, torture, cruel treatment and arbitrary detention.
58 वर्षीय थाची ने आरोपों का सामना करने के लिए लगभग छह वर्ष पहले अपने पद से इस्तीफा दे दिया था। कोसोवो स्पेशलिस्ट चैंबर्स के न्यायाधीशों के एक पैनल ने उन्हें हत्या, यातना, क्रूर व्यवहार और मनमाने ढंग से हिरासत में रखने के अपराधों में दोषी ठहराया।
- Both he and the prosecutors, who had asked for a stricter sentence, can appeal.
थाची और अभियोजन पक्ष, जिसने अधिक कठोर सजा की मांग की थी, दोनों इस फैसले के खिलाफ अपील कर सकते हैं।
- Thaci "showed a ruthless ability to remove and eliminate political impediments" to his and other commanders' leadership, Presiding Judge Charles Smith said.
पीठासीन न्यायाधीश चार्ल्स स्मिथ ने कहा कि थाची ने अपने तथा अन्य कमांडरों के नेतृत्व के लिए मौजूद राजनीतिक बाधाओं को "हटाने और समाप्त करने की निर्मम क्षमता" दिखाई।
- Kosovo Foreign Minister Glauk Konjufca condemned the verdicts.
कोसोवो के विदेश मंत्री ग्लाउक कोन्यूपका ने इन फैसलों की निंदा की।