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Daily News Analysis

The Hindu Important News Articles & Editorial For UPSC CSE

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Edition : International Table of Contents

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Page 01 & 04 : GS II : International Relations

The recent detention of Nicolás Maduro, President of Venezuela, by U.S. forces in New York on charges of narco-terrorism has triggered a major constitutional, diplomatic, and geopolitical crisis in Latin America. In response, Venezuela's Supreme Court appointed Vice-President Delcy Rodríguez as Acting President, while she simultaneously reaffirmed Maduro as the "rightful leader". Statements by U.S. President Donald Trump have further escalated tensions, raising serious questions about sovereignty, international law, regime change politics, and global energy security.

Maduro in NY jail, V-P to take over in Caracas

With Maduro facing charges in the U.S., Venezuela's apex court appoints V-P Rodríguez as interim chief

Acting President demands that the U.S. free the President, calls him the country's rightful leader

If Rodríguez does not do what is right, she will pay a bigger price than Maduro, says Trump

Associated Press
Reuters
CARACAS

Venezuelan President Nicolás Maduro was held in a New York prison on Sunday to face criminal charges after being captured in a night-time military operation done without approval from the U.S. Congress, even as the South American country's top court appointed Vice-President Delcy Rodríguez as interim leader.

Mr. Maduro and his wife, Cilia Flores, were taken from their home in a military base by U.S. forces on Saturday – an act that Mr. Maduro's government called "imperialist". The couple faces U.S. charges of participating in a narco-terrorism conspiracy.

In Venezuela, the the Supreme Court ordered on Saturday that Ms. Rodríguez assume the role of Acting President in the absence of Mr. Maduro.

While the court said Ms. Rodríguez would assume "the office of President of the Bolivarian Republic of Venezuela, in order to guarantee administrative continuity and the comprehensive defence of the nation", she demanded that the U.S. free Mr. Maduro and called him the country's rightful leader.

U.S. President Donald Trump on Sunday said Ms. Rodríguez may pay a bigger price than Mr. Maduro "if she does not do what is right," according to an interview with *The Atlantic magazine*.

Venezuela's President Nicolas Maduro at the offices of the U.S. Drug Enforcement Administration in New York on Saturday. REUTERS

Ms. Rodríguez had said that her country would defend its natural resources after Saturday's events.

"If she does not do what is right, she is going to pay a very big price, probably bigger than Mr. Maduro," Mr. Trump was quoted as saying in a telephone interview. He also said other countries may be subject to American intervention.

"We do need Greenland, absolutely," Mr. Trump said of the island that is part of Denmark, a NATO country.

The Venezuela court's ruling on Sunday added that the court will debate the matter in order to "determine the applicable legal framework to guarantee the continuity of the state, the administration of government, and the defence of sovereignty in the face of the forced absence of the President of the Republic."

Some Venezuelan civilians and members of the military were killed, said Ms. Rodríguez, who didn't give a number.

Speaking to reporters hours after Mr. Maduro's capture on Saturday, Mr. Trump had revealed his plans to exploit the leadership void to "fix" the country's oil infrastructure and sell "large amounts" of oil to other countries.

After arriving at a small airport in New York City's northern suburbs, Mr. Maduro was flown by helicopter to Manhattan, where a convoy of law enforcement vehicles, including an armoured car, was waiting to whisk him to a nearby U.S. Drug Enforcement Administration office.

A video posted by a White House account showed Mr. Maduro, smiling, as he was escorted through that office by DEA agents grasping his arms.

Venezuela's ruling party has held power since 1999, when Mr. Maduro's predecessor, Hugo Chávez, took office, promising to uplift poor people and later to implement a self-described socialist revolution.

India 'concerned' for the well-being of Venezuelans

NEW DELHI

A day after the U.S. took away President Nicolas Maduro and his wife Cilia Flores from Venezuela's capital Caracas, India expressed its concern for the "well-being of the people of Venezuela", and called for dialogue to ensure peace in the region. » PAGE 4

Key Developments

Regime Disruption and Constitutional Uncertainty

The capture of a sitting head of state by a foreign power is unprecedented in recent international relations and challenges the principle of sovereign equality of states under the UN Charter.

Venezuela's Supreme Court invoked "administrative continuity" to appoint an interim leader, indicating internal institutional alignment with the ruling establishment rather than regime collapse.

U.S. Strategy: Sanctions to Direct Intervention

The action marks a shift from economic sanctions and diplomatic isolation to direct coercive intervention.

Mr. Trump's remarks about "fixing" Venezuela's oil infrastructure and selling its oil suggest a resource-driven geopolitical motive, reinforcing critiques of neo-imperialist behaviour.

Threats and Coercive Diplomacy

The warning issued to Ms. Rodríguez reflects the use of coercive diplomacy, where political compliance is sought through threats rather than negotiation.

Statements about possible intervention elsewhere (e.g., Greenland) point to a broader assertive U.S. foreign policy posture.

Energy Geopolitics and OPEC Dynamics

Venezuela, though a member of OPEC, currently contributes only about 1% of global oil supply due to sanctions and infrastructural decay.

Venezuelan crude is heavy oil, limiting its marketability and making China the primary buyer.

Any U.S. takeover of oil infrastructure could reshape supply chains but is unlikely to cause immediate global shocks.

Implications for India

Minimal Energy Security Impact

Venezuela accounts for only 0.3% of India's oil imports in FY 2025 (till November).

Since 2019, India has diversified its crude sources and reduced exposure due to U.S. secondary sanctions.

Therefore, no immediate threat to India's energy security is anticipated.

Strategic and Normative Concerns

India traditionally supports non-intervention, sovereignty, and peaceful resolution of disputes.

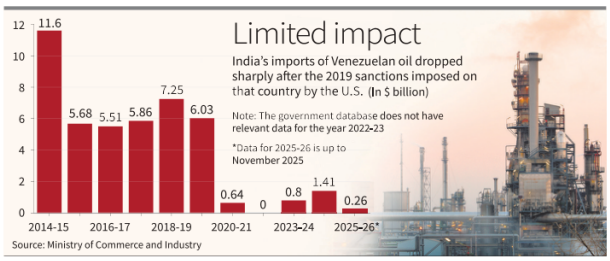
Such unilateral actions by major powers undermine global governance norms and set destabilising precedents that concern middle powers like India.

Balancing Relations

Venezuela crisis unlikely to hit India's energy security

Venezuelan crude accounted for about 0.3% of India's total oil import in the current financial year up to November; since 2019, India has been cutting its imports from Venezuela after U.S. sanctions

T.C.A. Sharad Raghavan
NEW DELHI



The United States attack on Venezuela is unlikely to have any direct impact on India's energy security, an analysis of the latest data shows.

Numbers from the Commerce and Industry Ministry show that India imported $255.3 million worth of oil from Venezuela in the current financial year up to November 2025, about 0.3% of its total oil import during this period.

In 2013, India had imported as much as $13 billion worth of Venezuelan oil. Since 2019, India has been cutting its oil imports and commercial engagements with Venezuela in response to U.S. sanctions and threats of secondary sanctions.

"Given the low trade volumes, existing sanctions constraints, and the large geographical distance, the current developments in Venezuela are not expected to have any meaningful impact on India's economy or energy security," Ajay Srivastava, founder of the Global Trade Research Initiative and former Director-General of Foreign Trade for the Indian government, said.

OPEC member

Venezuela is a member of the Organization of the Petroleum Exporting Countries (OPEC), a group of countries that largely dominates the global oil market. However, Venezuela currently produces a relatively small amount of crude oil compared with the other oil-producing nations.

According to OPEC data, Venezuela accounts for about 3.5% of the OPEC's total oil exports, and about 1% of global oil supplies.

Heavy oil

This relatively low supply is due to the U.S. sanctions on Venezuela and the heavy nature of Venezuelan oil, which requires special refineries that most countries do not have. Most of Venezuela's oil supply goes to China.

Following the U.S. actions in Venezuela over the weekend, Mr. Trump announced that the U.S. would take over Venezuela's oil supply. "We are going to rebuild the oil infrastructure, which will cost billions of dollars, it will be paid for by the oil companies directly," Mr. Trump said in his address following the attack.

India must continue balancing its strategic partnership with the U.S. while upholding principles of international law and strategic autonomy.

Broader International Significance

The episode underscores the weaponisation of legal and economic instruments in geopolitics.

It weakens faith in multilateralism and may encourage other powers to justify similar interventions.

Latin America may witness renewed instability, reviving Cold War–style spheres of influence politics.

Conclusion

The detention of President Nicolás Maduro by the United States represents a critical inflection point in contemporary geopolitics, blurring the lines between law enforcement, regime change, and resource-driven intervention. While the immediate impact on India's energy security is negligible, the episode raises profound concerns about sovereignty, international law, and the erosion of multilateral norms. For India and other emerging powers, the challenge lies in navigating an increasingly coercive global order while safeguarding strategic autonomy and a rules-based international system.

UPSC Mains Exam Practice Question

Ques: Energy security today is as much a geopolitical challenge as an economic one. Examine with reference to OPEC dynamics and recent events in Venezuela. (150 Words)

Page 06 : GS II : Governance / Prelims Exam

The recent discovery of multiple carcasses of Olive Ridley turtle along the Visakhapatnam–Anakapalli coast has raised serious concerns at the start of the nesting season. Andhra Pradesh's coastline is one of India's important nesting habitats for this vulnerable marine species. The incident highlights persistent challenges related to unsustainable fishing practices, coastal regulation, and conservation governance.

Olive Ridley deaths raise concern as new nesting season begins in A.P.

V. Kamalakara Rao
VISAKHAPATNAM

This year's nesting season of Olive Ridley sea turtles is in full swing on Visakhapatnam's beaches. However, the discovery of turtle carcasses on the shore has alarmed wildlife enthusiasts and conversationalists.

On Sunday morning, the carcasses of three large Olive Ridley turtles washed ashore on the Muthyalammapalem, Thantadi, and Rajanapalem beaches. It is believed the animals might have drowned after getting entangled in fishing nets, possibly while migrating.

Experts said that the turtles need to surface for breathing every 40 to 45 minutes and can drown if caught in fishing nets. They called for stricter enforcement of the Andhra Pradesh Marine Fishing Regulation Act, including action against illegal fishing within 8 km of the coast.

Olive Ridley turtles were spotted on different beaches along the Visakhapatnam-Anakapalli coast on Sunday. SPECIAL ARRANGEMENT

With the Forest Department planning to create four nesting zones next week, concerns have been raised about the impact of artificial lighting along the Visakhapatnam coastline.

Speaking to *The Hindu* on Sunday, Visakhapatnam District Forest Officer Ravindra Dhama said: "We are collaborating with The Tree Foundation to run four hatcheries along the coast. Special precautions will be taken during the Visakha Utsav (January 23-31) to ensure that the nesting turtles are not disturbed."

The Andhra Pradesh coastline is a crucial nesting ground for Olive Ridleys (*Lepidochelys olivacea*), which are listed as 'vulnerable' by the International Union for Conservation of Nature (IUCN). The turtles typically nest along sandy beaches from December to April.

Key Issues Highlighted by the Incident

Threat from Fishing Activities

Experts suspect that the turtles drowned after getting entangled in fishing nets during migration.

Olive Ridleys must surface every 40–45 minutes to breathe; entanglement leads to suffocation, making bycatch one of the leading causes of mortality.

Illegal fishing within 8 km of the coastline violates the Andhra Pradesh Marine Fishing Regulation Act, pointing to gaps in enforcement.

Ecological Significance of the Region

The Andhra Pradesh coast forms part of a broader eastern Indian marine ecosystem that supports seasonal nesting between December and April.

The species is listed as 'Vulnerable' on the International Union for Conservation of Nature Red List, indicating a high risk of population decline if threats persist.

Impact of Coastal Development and Artificial Lighting

Artificial lighting along urbanised beaches disorients nesting females and hatchlings, which rely on natural light cues to move towards the sea.

Festivals and tourism-related activities, such as Visakha Utsav, increase anthropogenic pressure during a biologically sensitive period.

Conservation Measures and Institutional Response

The Forest Department's plan to establish four nesting zones and hatcheries, in collaboration with civil society organisations, reflects a community-based conservation approach.

Temporary regulation of lighting and human movement during peak nesting periods is crucial for success.

Broader Environmental and Governance Implications

The incident illustrates the conflict between livelihood security of traditional fishers and marine biodiversity conservation.

It underscores the need for Turtle Excluder Devices (TEDs), real-time monitoring, and awareness among fishing communities.

Effective coastal conservation requires convergence between environmental laws, fisheries management, local administration, and public participation, aligning with India's commitments under global biodiversity frameworks.

Conclusion

The deaths of Olive Ridley turtles along the Visakhapatnam coast serve as a reminder that legal protection alone is insufficient without effective enforcement and ecological sensitivity in coastal development. As nesting season begins, balancing marine conservation with economic activities is imperative. Strengthening fisheries regulation, reducing light pollution, and empowering local communities can ensure that India's eastern coast remains a safe and sustainable habitat for one of the world's most iconic marine species.

UPSC Prelims Exam Practice Question

Ques: With reference to Olive Ridley sea turtles, consider the following statements:

1. They are listed as Endangered on the IUCN Red List.

2. They require periodic surfacing to breathe and can drown if trapped underwater.

3. The eastern coast of India is an important nesting ground for this species.

Which of the statements given above are correct?

(a) 1 and 2 only

(b) 2 and 3 only

(c) 1 and 3 only

(d) 1, 2 and 3

Ans : b)

Page 07 : GS III : Science and Tech / Prelims Exam

A recent study published in Science has reported a previously unrecognised genetic code in certain archaea, including microbes found in Antarctic lakes. In these organisms, the TAG codon—traditionally a stop signal in protein synthesis—has been entirely repurposed to encode a rare amino acid, pyrrolysine (Pyl). This discovery challenges the long-held universality of the genetic code and opens new possibilities in protein engineering and synthetic biology.

Unusual genetic code in Antarctic microbes yields rare amino acid

A recent pioneering study may enable scientists to engineer proteins with previously unknown functional advantages; this advancement could facilitate novel bioengineering approaches, allowing researchers to manipulate bacteria to produce valuable materials, according to independent experts

Sayantan Datta

The dictionary of life has a new update. A DNA sequence that signals cells in almost all other organisms to stop synthesising proteins instead encodes a rare amino acid in some archaea, according to a study published in *Science* in November.

Archaea are microbes that resemble bacteria in shape and size but are biologically distinct.

Calling the study "the first of its kind," Bose Institute, Kolkata, biological sciences associate professor Abhrajyoti Ghosh said the discovery could help scientists engineer proteins with "functional advantages that have been hitherto unknown." Dr. Ghosh studies how archaea respond to stress.

The study's findings provide "yet another fantastic example of how biology hides secrets that drive biotechnology innovation," University of California, Berkeley, chemistry professor and study coauthor Alanna Schepartz said in a statement.

Reading the dictionary

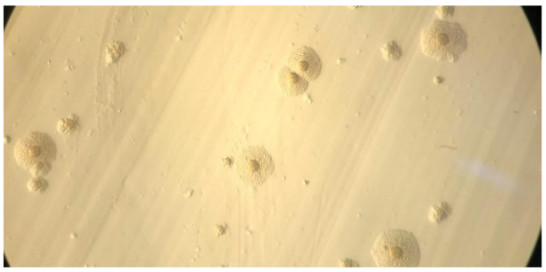
By the late 1960s, scientists had identified the set of rules that dictate how a sequence of DNA corresponds to the order in which amino acids are placed in proteins. These rules came to be called the genetic code.

At the heart of this code are the four nitrogen-containing bases that are a part of DNA: adenine (A), guanine (G), cytosine (C) and thymine (T). Each amino acid in a protein corresponds to a three-base-long sequence of DNA – a.k.a. a triplet codon. For example, a codon consisting of three thymines (TTT) corresponds to the amino acid phenylalanine, while TTA encodes leucine.

The genetic code is a dictionary of 64 such codons. Of these, 61 'sense' codons together encode 20 common amino acids. The remaining three, called 'stop' codons, don't correspond to any amino acid. Instead, when the protein-making mechanism encounters them, it terminates the protein chain.

Exceptional archaea

This code is for the most part common to all living organisms. Exceptions are rare. Some notable ones include the bacterium *Mycoplasma*, where the stop codon TGA encodes the amino acid tryptophan. In human beings, the same stop codon encodes the rare amino acid selenocysteine, used in a small number of proteins. In a few proteins in some archaea, the stop codon TAG doubles up as a code for another rare amino acid, pyrrolysine (Pyl).



Mycoplasma growing on Hayflick agar. The stop codon TGA encodes the amino acid tryptophan in these bacteria and the rarer amino acid selenocysteine in humans. THEKNOWHOWE (CC BY-SA)

Even in archaea where TAG is known to sometimes encode Pyl, scientists had until recently believed these organisms usually "use TAG as a stop codon, except in the very few enzymes in which Pyl occurs," the authors of the *Science* study wrote in their paper.

That is now set to change. In their study, the authors reported certain archaea where the TAG codon has been completely repurposed. These organisms read the TAG codon as a signal for Pyl not occasionally but always: i.e. every time there is a TAG codon in the organisms' DNA, they incorporate Pyl in a protein chain.

This "genome-wide incorporation of Pyl at TAG codons" has led the team to propose "the existence of a previously unrecognised genetic code," the authors wrote. Dubbed the 'Pyl code' by the team, it has 62 sense codons instead of the usual 61. And they code for 21 amino acids instead of the conventional 20.

Predicting proteins

The authors used computational methods to identify nine kinds of archaea where the TAG codon appeared to have been completely repurposed to encode Pyl. From these, they chose two archaea for experiments. One of these was *Methanococcoides burtonii*, which grows in the extremely low temperatures of Antarctic lakes. The other was *Methanomethylophilus alvi*, found in the human gut.

From these archaea, the researchers extracted proteins, fragmented them, and used a technique called mass spectrometry to identify the constituent amino acids. They found 54 proteins "not previously shown to contain Pyl," they wrote. The proteins they identified play diverse roles in these organisms, including replicating DNA and producing energy. This led the authors to conclude that "*M. burtonii* and *M. alvi* archaea have adopted a non-standard genetic code with 62 sense codons encoding 21 amino acids and only two stop codons".

> The study's findings provide "yet another fantastic example of how biology hides secrets that drive biotechnology innovation
>
> ALANNA SCHEPARTZ
> UNIVERSITY OF CALIFORNIA, BERKELEY

The finding might require scientists to rethink how they predict protein sequences for these organisms. Typically, predicting the protein encoded by a gene requires researchers to read codons using the standard genetic code. But now, scientists must use the Pyl code, "interpreting all TAG codons as coding for Pyl for correct protein prediction," the authors have argued.

Bacteria as factories

The study's potential applications involve bioengineering, where researchers can manipulate bacteria to produce useful materials. The study's findings could help researchers "incorporate Pyl in proteins at desired positions," Tanweer Hussain, associate professor of developmental biology and genetics at the Indian Institute of Science, Bengaluru, said. Dr. Hussain studies how organisms build protein from their DNA blueprints.

His enthusiasm may be well founded. In their study, the Berkeley researchers genetically modified *Escherichia coli*, a common bacterium, to express the archaeal cellular machinery required to read the Pyl code and incorporate Pyl in proteins. They also engineered the bacterium to express a protein whose sequence had a TAG codon in the middle. If this setup worked, the bacteria would read this TAG codon as Pyl-coding, add Pyl at that location, and produce the complete protein. Otherwise, the TAG codon would signal 'stop', and the bacteria would produce a shorter protein.

Extracts from these bacteria confirmed that they had produced the complete protein. That is: they could indeed use the archaeal machinery to produce Pyl-containing proteins.

The discovery of the Pyl code has scientists excited. Both Dr. Hussain and Dr. Ghosh are keen to know more about the role of Pyl in proteins.

"Does Pyl incorporation confer the archaea a fitness advantage in their natural environments?" Dr. Ghosh asked.

He anticipated that future research could soon offer an answer.

(Sayantan Datta is a faculty member at Krea University and an independent science journalist. dattasayantan95@gmail.com)

THE GIST

The genetic code is a dictionary of 64 codons. Of these, 61 sense codons encode 20 amino acids. The remaining three, called stop codons, don't correspond to any amino acid. Instead, when the protein mechanism encounters them, it terminates the protein chain

When the authors extracted proteins from archaea, they found 54 not previously shown to contain Pyl. This led the authors to conclude that the archaea have adopted a non-standard genetic code with 62 sense codons encoding 21 amino acids and only two stop codons

Berkeley researchers modified *Escherichia coli* giving it the ability to incorporate Pyl in proteins. They also engineered it to express a protein whose sequence had a TAG codon in the middle. The bacteria read the TAG codon and add Pyl, producing the complete protein

Background: The Genetic Code

The genetic code is the set of rules by which DNA sequences are translated into proteins.

It consists of 64 codons (triplets of nucleotides).

61 sense codons encode 20 standard amino acids.

3 stop codons (TAG, TAA, TGA) terminate protein synthesis.

While the code is largely universal, rare deviations exist, such as TGA encoding tryptophan in Mycoplasma or selenocysteine in humans.

Key Findings of the Study

Genome-wide Repurposing of TAG Codon

In certain archaea, the TAG codon never functions as a stop codon.

Instead, it always codes for pyrrolysine, resulting in:

62 sense codons

21 amino acids

Only two stop codons

The 'Pyl Code'

Researchers propose the existence of a distinct "Pyl genetic code", fundamentally different from the standard genetic code.

This requires reinterpreting gene-to-protein predictions in these organisms.

Extreme Environment Adaptation

One studied archaeon thrives in Antarctic cold lakes, suggesting that genetic code flexibility may contribute to survival in extreme environments.

Experimental Validation

Using mass spectrometry, researchers confirmed pyrrolysine incorporation in dozens of proteins previously not known to contain it.

The study further demonstrated that Escherichia coli could be genetically engineered to use the Pyl code and produce full-length Pyl-containing proteins.

Scientific and Technological Significance

Challenges the "universality" of the genetic code, a foundational concept in molecular biology.

Enhances understanding of evolutionary plasticity at the molecular level.

Provides tools to expand the amino acid repertoire of proteins beyond natural limits.

Applications and Future Potential

Biotechnology and Synthetic Biology

Enables site-specific incorporation of rare amino acids, allowing the design of proteins with novel chemical and functional properties.

Potential applications in:

Industrial enzymes

Novel biomaterials

Pharmaceuticals

Bacteria as Biofactories

Engineered microbes could be programmed to produce high-value proteins with enhanced stability or catalytic efficiency.

Astrobiology and Evolutionary Biology

Insights into how life adapts at the molecular level in extreme environments may inform the search for life beyond Earth.

Conclusion

The discovery of a genome-wide alternative genetic code in archaea marks a paradigm shift in molecular biology. By demonstrating that even the genetic code is evolutionarily flexible, the study not only deepens our understanding of life in extreme environments but also unlocks transformative possibilities in bioengineering. As science moves toward designing life at the molecular level, such discoveries will play a crucial role in shaping the future of biotechnology—while simultaneously raising important ethical and regulatory considerations.

UPSC Prelims Exam Practice Question

Ques: Consider the following statements regarding the genetic code:

1. The standard genetic code consists of 64 codons, of which three are stop codons.

2. Pyrrolysine and selenocysteine are considered the 21st and 22nd amino acids respectively.

3. In all archaea, the TAG codon exclusively codes for pyrrolysine instead of acting as a stop codon.

Which of the statements given above is/are correct?

(a) 1 and 2 only

(b) 2 and 3 only

(c) 1 only

(d) 1, 2 and 3

Ans : a)

UPSC Mains Exam Practice Question

Ques: The discovery of a new genetic code in archaea challenges one of the foundational principles of molecular biology. Discuss the significance of this statement and examine its implications for biotechnology and synthetic biology. **(150 Words)**

Page 09 : GS I : Indian Society / Prelims Exam

The continued invisibilisation of women's labour—particularly unpaid domestic, care, emotional, and mental work—remains a major structural challenge in both national accounting and public policy. As highlighted by literary, empirical, and feminist economic perspectives, women across societies contribute substantially to social reproduction and economic stability, yet this labour is largely excluded from formal definitions of "work". A 2023 report by the United Nations underscores this imbalance, noting that women globally spend 2.8 hours more per day than men on unpaid care and domestic work.

The struggle to count women's labour

Rajesh Ranjan
is a Chevening Scholar

Vrishti Shami
is a lawyer-researcher who writes on policy and law

In the poem, *The Woman's Labour* (1739), Mary Collier writes: "When Harvest comes, into the Field we go, And help to reap the Wheat as well as you. Or else we go to the Ears of Corn to glean; No Labour scorning, be it e'er so mean; But in the Work we freely bear a Part, And what we can, perform with all our Heart." It is a powerful way of pointing to how women's labour often goes unseen. A 2023 United Nations report showed that globally, women spend 2.8 more hours than men on unpaid care and domestic work. The struggle to count women's labour continues.

While domestic labour has increasingly entered the public discourse, the emotional and mental labour in sustaining relationships, managing household dynamics, and supporting the well-being of others continues to go largely unacknowledged. This uncounted labour which plays a critical role in the smooth functioning of families and societies, is rarely measured or rewarded.

Shirin Rai, a professor,argues that "...many who cope with this work in contexts of poverty and of violence, are constantly told that their everyday labour – both paid and unpaid to maintain the rhythms of life-ecology do not count in/as production. ... as a global society, we fail to recognise this labour in our everyday lives, and we continue to deny its appropriate inclusion in discourses about work, in our national budgets, and in policy frameworks".

This raises a critical question: what structural and ideological forces render this labour unseen and undervalued? Feminist scholars such as Isabella Bakker, Nancy Fraser and Shirin Rai have argued that economic and policy priorities have long marginalised care work by framing it as secondary to "productive" labour traditionally performed by men.

The privileging of male breadwinner employment, the relentless focus on GDP growth, and the emphasis on physical infrastructure investment over social infrastructure have all contributed to the systemic devaluation of care-related work. These priorities often result in the diversion of public resources away from services that support caregiving, such as childcare, elder care, and mental health services domains that are disproportionately occupied by women.

Recognising women's labour requires a major policy shift

Antonella Picchio, a professor at Cambridge, argued that "the biological aspects of human reproduction were used to hide the historical and social aspects of the gender division of labour. The separation between the process of production and that of social reproduction of labour between men and women took new forms and shaped new power relationships within the traditional context of women's subordination". Thus, in our view, the act of non-inclusion of women's direct and indirect labour is a continuation of the subjugating practice of considering women's labour as non-productive. A closer look at global legislation and statutes reveals that the efforts to recognise women's labour institutionally are very scattered.

Few countries have introduced laws, constitutional provisions or policies recognising unpaid care work/domestic/emotional labour. Article 338 of the Bolivian Constitution recognises that work at home is an economic activity that creates added value and produces social welfare and wealth. Housewives are entitled to social security in accordance with the law. Trinidad and Tobago has the Counting Unremunerated Work Act, 1996 requires the statistical authorities to measure unremunerated work (housework, caring for children/elderly/disabled), break it down by gender, and assign a monetary value. Similarly, Argentina enacted a law recognising employment contracts for domestic workers where women can get pension credits (equivalent to social security contributions) for unpaid care work they have done raising children. But no law and policy recognises the mental and emotional labour put in by women to run the economy and the family.

In India, there is still no legal framework that recognises or compensates this form of unpaid work, despite it being the backbone of families and, by extension, the economy. However, courts have begun to challenge this silence. In *Kannaian Naidu and Others vs Kamsala Ammal and Others* (2023), the Madras High Court ruled that a wife who performed household duties and cared for the family contributed, albeit indirectly, to the acquisition of family assets. Therefore, she was entitled to an equal share in the property. These efforts to recognise women's labour must be accompanied by a structural reconfiguration of gendered social relations, wherein men actively participate in and co-shoulder care responsibilities. Without such a transformation, the burden of unpaid care work will remain disproportionately feminised. It will either continue to constrain the full participation of women in the formal economy or force women from marginalised socio-economic locations to sustain the reproductive labour of households where other women from dominant groups engage in formal employment.

Any revaluation of labour must also encompass the often invisible factor of emotional labour, which plays a critical role in sustaining households, communities and broader economic systems, yet remains systematically unacknowledged in policy and practice.

The writers acknowledge the help of Professors Rachel Rose, Eve Dickson, Shirin Rai, and Chris Newfield, and also Prof. Vanza Hamzic and Rashmi Satyal for inputs

Core Issues Highlighted

Unpaid and Emotional Labour: The Invisible Backbone

Beyond physical domestic tasks, women disproportionately perform emotional and mental labour—managing relationships, caregiving, household planning, and emotional well-being.

This labour is essential for the smooth functioning of families, labour markets, and societies, yet remains unmeasured, unpaid, and unrecognised in economic frameworks.

Structural and Ideological Marginalisation

Feminist scholars such as Nancy Fraser, Isabella Bakker, and Shirin Rai argue that care work is systematically devalued due to:

The male breadwinner model

GDP-centric growth paradigms

Preference for physical infrastructure over social infrastructure

These priorities divert public resources away from childcare, elder care, and mental health services—sectors heavily reliant on women's labour.

Production vs Social Reproduction Divide

Scholars like Antonella Picchio highlight how economic thought historically separated "productive" market work from "social reproduction", assigning the latter to women and rendering it non-economic.

This divide entrenches gendered power relations and perpetuates women's subordination.

Comparative Global Responses

Bolivia: Constitutional recognition of domestic work as value-creating economic activity with social security entitlements.

Trinidad and Tobago: Counting Unremunerated Work Act, 1996 mandates measurement and valuation of unpaid work by gender.

Argentina: Pension credits for unpaid care work linked to child-rearing.

However, no country formally recognises emotional and mental labour, revealing the limits of current policy imagination.

Indian Context

India lacks a comprehensive legal or policy framework recognising unpaid care or emotional labour, despite its foundational role in sustaining households and the economy.

A notable judicial intervention came in Kannaian Naidu vs Kamsala Ammal, where the Madras High Court held that a wife's unpaid household labour contributed indirectly to asset creation, entitling her to equal property rights.

While progressive, such judicial recognition remains fragmented and does not translate into systemic economic valuation or compensation.

Policy and Social Implications

Failure to recognise women's unpaid labour:

Constrains women's participation in the formal economy

Reinforces gender inequality

Pushes care burdens onto poorer and marginalised women through informal labour markets

Sustainable reform requires:

Redistribution of care responsibilities within households

Investment in social infrastructure

Time-use surveys and satellite accounts

A redefinition of "work" beyond market productivity

Conclusion

The struggle to count women's labour reflects deeper ideological biases embedded in economic thought and public policy. While limited legal and judicial recognitions mark important steps forward, they remain insufficient without a structural revaluation of care and emotional labour and a redistribution of caregiving responsibilities across genders. Recognising women's unpaid work is not merely a question of equity; it is essential for building an inclusive, resilient, and sustainable economy. Without such recognition, economic growth will continue to rest on an invisible and unjust foundation.

UPSC Prelims Exam Practice Question

Ques: Consider the following statements regarding unpaid care work:

1. It includes domestic chores, caregiving, and emotional support activities.

2. It is fully captured in GDP calculations through household consumption data.

3. Women globally spend significantly more time on unpaid care work than men.

Which of the statements given above is/are correct?

(a) 1 and 3 only

(b) 2 only

(c) 1 and 2 only

(d) 1, 2 and 3

Ans: (a)

UPSC Mains Exam Practice Question

Ques: Discuss how unpaid care and emotional labour performed by women sustains households and economies, yet remains socially and economically invisible. What are the implications for gender equality? **(150 Words)**

Page 09 : GS III : Disaster Management

Natural disasters are emerging as a major structural constraint on economic growth and human development in Asia. Recent data analysis highlights that India loses around 0.4% of its GDP every year due to natural disasters, underscoring the rising economic cost of climate variability and extreme events. As disaster frequency and intensity increase across Asia, disaster risk finance has become a critical policy priority for governments.

India loses 0.4% of its GDP every year to natural disasters

As the scale of economic loss escalates, disaster risk finance has moved to the forefront of policy

DATA POINT

The Hindu Data Team

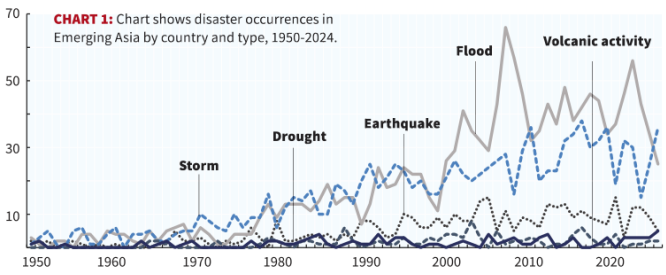
Emerging Asian economies that comprise India, China, and the ASEAN-11, face an escalating threat from natural disasters that are growing in both frequency and intensity (**Chart 1**). Over the past decade, the region has had an average of 100 disasters annually, impacting approximately 80 million people. The nature of these threats varies by geography: while floods and storms are the primary drivers of risk in India, tropical cyclones frequently batter the Philippines and Vietnam. Meanwhile, China and Indonesia contend with significantly higher seismic risks (**Chart 2**). The human and economic toll of this vulnerability has been punctuated by several landmark catastrophes.

As the scale of economic loss escalates (**Chart 3**), disaster risk finance has moved to the forefront of regional policy. To design an effective response, governments must first establish a data-driven foundation. From 1990 to 2024, India sustained average annual disaster-related losses equivalent to 0.4% of GDP (**Chart 4**). The composition of these losses is geographically distinct. India's vulnerability is primarily hydrological (non-storm-related floods and landslides), whereas Myanmar's losses are predominantly meteorological (extreme temperatures and cyclonic storms).

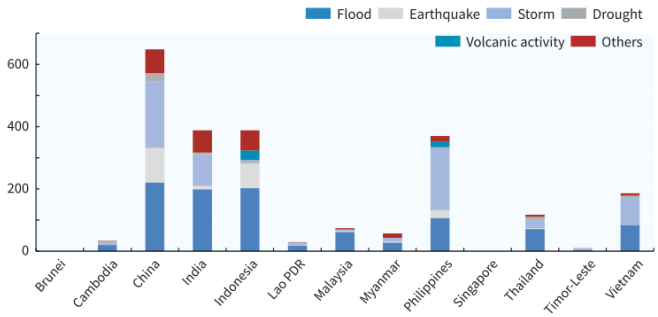
The regional risk framework also includes climatological factors (drought and wildfire), and geophysical hazards (seismic activity and volcanic eruptions) too. Among the Asian economies analysed, India ranks second only to the Philippines in the World Risk Index (**Chart 5**). The index calculates risk as the geometric mean of exposure (population burden) and vulnerability (a combination of structural susceptibility, coping capacity, and long-term adaptation).

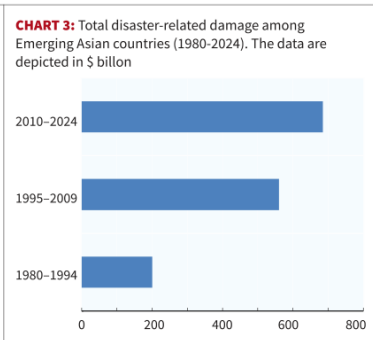
Asia's climate bill is rising

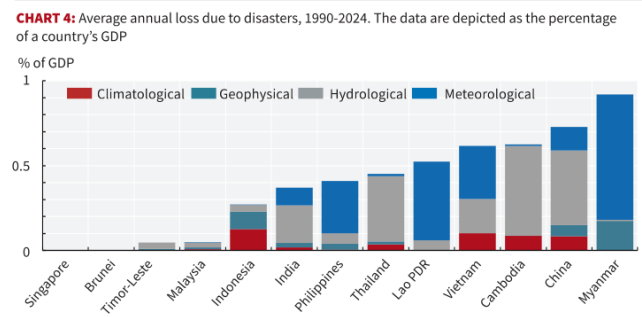
The charts were sourced from the OECD development centre's "Economic Outlook for Southeast Asia, China and India 2025: Enhancing Disaster Risk Financing" report released in December 2025

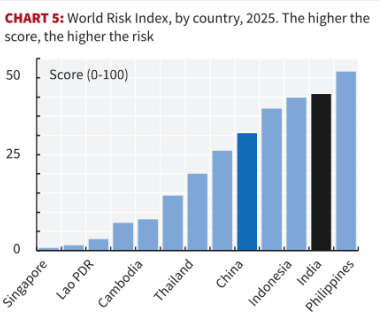


Counting losses: A convenience shop owner assesses the damage after floods in southern Thailand in November 2025. AP









Scale and Pattern of Disaster Risk in Asia

Rising Frequency and Human Impact

Emerging Asian economies—China, India, and the ASEAN-11—experience on average 100 natural disasters annually, affecting nearly 80 million people each year.

This reflects the growing interaction between climate change, rapid urbanisation, and ecological degradation.

Geographical Variation of Risks

India: Predominantly affected by hydrological disasters—floods and landslides.

Philippines and Vietnam: High exposure to tropical cyclones and storms.

China and Indonesia: Greater vulnerability to geophysical hazards, including earthquakes and volcanic activity.

Myanmar: Losses driven largely by meteorological events such as cyclones and extreme temperatures.

Economic Implications for India

Between 1990 and 2024, India's disaster-related losses averaged 0.4% of GDP annually, representing a persistent drain on public finances and development outcomes.

Such losses divert fiscal resources away from health, education, infrastructure, and poverty alleviation, thereby compounding developmental challenges.

Recurrent disasters also disproportionately affect vulnerable populations, deepening regional and social inequalities.

Disaster Risk Index and Vulnerability

Among Asian economies, India ranks second only to the Philippines on the World Risk Index.

The index combines:

Exposure: Population and assets at risk

Vulnerability, comprising:

Structural susceptibility

Coping capacity (institutional and emergency response ability)

Long-term adaptive capacity

India's high ranking reflects not just exposure, but also gaps in urban planning, infrastructure resilience, and adaptive governance.

Policy Shift: Disaster Risk Finance

The escalating economic toll has pushed disaster risk finance to the forefront of policymaking.

Key instruments include:

Risk pooling and insurance mechanisms

Dedicated disaster mitigation funds

Resilient infrastructure investment

Data-driven early warning and risk assessment systems

For India, integrating disaster risk into fiscal planning and infrastructure design is essential to prevent repeated economic shocks.

Conclusion

India's annual loss of 0.4% of GDP due to natural disasters signals that disasters are no longer episodic shocks but systemic economic risks. As climate extremes intensify, the focus must shift from reactive relief to proactive risk reduction and financial preparedness. Strengthening disaster risk finance, improving adaptive capacity, and embedding resilience into development planning are essential for safeguarding economic growth and ensuring sustainable development in an era of rising climate uncertainty.

UPSC Mains Exam Practice Question

Ques : Natural disasters in India are no longer episodic events but structural economic risks. In this context, examine how recurrent disasters lead to long-term GDP losses and developmental setbacks. **(250 words)**

Hubris and caution — China's posture as 2026 begins

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As 2026 begins, China presents a paradox: a nation wrestling with economic challenges yet projecting strategic confidence; a leadership tightening political control domestically while expanding its diplomatic and institutional reach abroad; and a system that is both anxious and assertive. For India, this Chinese posture and the shift in the stance of the United States toward Beijing and New Delhi have narrowed strategic space and complicated the management of a fraught relationship. India's diminishing prominence in the foreign policy calculus of Washington and Beijing alike adds to the complexity.

The shift in China's overall mood has been striking. Until late 2024, Track 2 dialogues revealed palpable anxiety among Chinese interlocutors about U.S. containment and economic slowdown. By mid-2025, a sense of regained momentum – sometimes bordering on hubris – permeated Beijing's strategic community. Many believed China had gained ground in a recalibrated great power competition with the U.S., managed escalation dominance more effectively, and secured tactical advantages in trade and tariff disputes. This confidence was bolstered by China's expanding influence in the Global South, its deepening alignment with Russia, and its ability to stabilise key relationships – with the notable exception of Japan – without altering core positions.

Yet, beneath this confidence lies a leadership aware of structural challenges at home and a difficult international environment. The Fourth Plenum in October 2025 and the Central Economic Work Conference in December saw President Xi Jinping doubling down on national security, technological self-reliance, and the "real economy" as organising principles, while persisting with exports as a key growth driver even as he spoke of boosting domestic consumption.

Economic strains and the turn inward

China's 2025 economic growth was weaker than official figures (about 5%) suggest. Domestic demand remained weak, and the overbuilt property sector continued to weigh on confidence. Deflationary pressures (producer prices in negative territory for 38 consecutive months), sluggish productivity and tepid corporate profits persisted. Local governments face fiscal stress, limiting stimulus options.

Instead of boosting consumption, Beijing reinforced a state-led model, prioritising advanced manufacturing, semiconductors, Artificial Intelligence (AI), green energy, and dual-use technologies. Massive industrial policy support aims for "whole-chain breakthroughs" and the 15th Five-Year Plan (2026-30) underscores technological self-reliance and supply chain insulation.

This inward turn occurs even as China's export dependence grows to compensate for weak domestic demand. China's trade surplus crossed $1 trillion in the first 11 months of 2025. It is increasingly dominating global value chains in manufacturing across high-tech industries such as electric vehicles, batteries, solar panels and industrial machinery. This "China Shock 2.0" is generating serious disruptions for developed and developing economies alike. As IMF Managing Director Kristalina Georgieva warned in December, China is now too large to export its way out of a slowdown without aggravating global trade tensions. For India, China's advantages in scale, technology and system-wide efficiency and upstream control of critical inputs (rare earths to battery precursors) have not only expanded the trade deficit, expected to exceed $110 billion in 2025, but also intensified vulnerabilities in sectors ranging from pharmaceuticals to electronics, green energy and rare earth magnets.

Domestically, 2025 was marked by further political consolidation. The leadership tightened information control, reinforced ideological discipline, and expanded the remit of national security. Yet, dysfunctionalities of the party-state were also evident in large-scale sacking of generals.

The PLA continued to expand its conventional and nuclear capabilities. Emerging nuclear doctrinal shifts, such as movement toward an "early warning counter-strike" posture, suggest a more assertive and risk-tolerant military.

The Great Power dynamics

The most consequential external development was the recalibration of U.S.-China relations under President Donald Trump's second term. Under the U.S. National Security Strategy 2025, China is no longer framed as a systemic rival but primarily as an economic competitor. The Indo-Pacific is no longer the strategic centre of gravity; the Western Hemisphere has taken precedence, reflecting a more inward-looking "America First" approach. However, America's military intervention regime change in Venezuela, which seriously affected Chinese interests and investments and elicited sharp reactions from Beijing, have shown that the U.S.-China strategic rivalry is intact.

The Trump-Xi meeting in Busan in October produced de-escalation, including modest tariff adjustments and a selective easing of export controls. These were transactional bargains, not steps toward a G2. Yet the perception of a "G2 overlay" – a shadow of tacit coordination – has serious consequences, as even limited China-U.S. accommodation can constrain the choices of other states.

For India, the implications are sobering. The long positive trajectory of the India-U.S. partnership has been disturbed by friction over trade, Russia, and Pakistan. The U.S. remains committed to preventing Chinese hegemony in Asia but is less inclined to prioritise relations with India as a strategic counter to China. Meanwhile, China believes it has gained relative advantage *vis-à-vis* the U.S., while Chinese interlocutors increasingly argue that India's interest in stabilising relations with China stems from turbulence in India-U.S. ties. These twin perceptions make China less inclined to accommodate India's concerns.

With Europe, instead of leveraging trans-Atlantic tensions to drive a wedge between Brussels and Washington, China adopted a tough posture – digging in on EV subsidies, refusing to curb industrial overcapacity, pushing back hard against EU trade-defence actions, and consolidating its strategic linkages with Russia. Europe, despite growing alarm over China's "strategic enabling" of Russia's war in Ukraine and fears of industrial hollowing out, found itself constrained due to economic headwinds, dependencies on China, and strategic distractions.

China's attempts to stabilise major-power ties were undercut by its harsh response to the Japanese Prime Minister's comment on Taiwan. Beijing signalled that its outreach has clear limits and that it remains unwilling to accommodate divergence on issues it deems sensitive.

Mr. Xi is attaching strategic priority to the Global South, positioning China as its leader and as a stabilising partner amid western retrenchment, and stepping up BRI projects, diplomatic initiatives and influence operations. But this expanding presence has also stirred unease over opaque financing, debt vulnerabilities, environmental concerns, and political leverage Beijing can derive from economic dependence. Even as China deepened its influence in Southeast Asia, the Gulf, Africa, and Latin America and pushed a China-centric institutional architecture through the AIIB, NDB, and expanded BRICS and SCO, many countries remain cautious about loss of policy autonomy.

China continued to treat South Asia as its strategic periphery and pursue a "two-ocean strategy" that normalises PLA Navy operations in the Indian Ocean.

On India–China relations

India-China relations in 2025 witnessed cautious stabilisation but no substantive progress on structural issues. The summit-level meeting in Tianjin and other high-level exchanges helped rebuild a damaged relationship. Yet, the situation along the borders remains stable but not normal. Disengagement has not been accompanied by de-escalation or de-induction. "Buffer zones" continue to restrict India's patrolling rights and grazing access. If these temporary arrangements become permanent, China will have achieved incremental gains consistent with its grey-zone playbook.

China's tactical outreach has not addressed India's core concerns. Negative signals included China-Pakistan battlefield collusion (Operation Sindoor), work on a massive hydropower project in Tibet near the border, denial of rare earth magnets, delays in clearing key components, and repeated efforts to flag territorial claims in Arunachal Pradesh. India has prudently opted for step-by-step improvement in ties.

China is likely to persist with its current strategy: managed competition with the U.S., stabilisation of major relationships along with hardball diplomacy, intensified outreach to the Global South, incremental assertiveness in maritime and border theatres, and pricklines on its "core interests". The PLA will persist with grey-zone tactics while avoiding major kinetic actions.

New Delhi must pursue calibrated engagement to reduce immediate risks while strengthening asymmetric deterrence and accelerating domestic technological and industrial capabilities. External balancing remains relevant, but its dependability must be conservatively assessed in an era of U.S.-China tactical accommodation. India must prepare for a long haul – clear-eyed, resilient, and strategically patient.

The views expressed are personal

The Chinese leadership is aware of structural challenges at home and in a difficult international environment; India must be alert and strategically patient

GS Paper II : International Relations

UPSC Mains Exam Practice Question : How does China's "two-ocean strategy" and expanding naval presence in the Indian Ocean Region affect India's maritime security calculus? **(150 words)**

Context :

As 2026 begins, China presents a paradoxical posture—simultaneously confident and constrained. Despite visible economic headwinds, Beijing projects strategic assertiveness externally while tightening political and security control domestically. For India, this evolving Chinese posture, combined with a recalibration in the United States approach toward both Beijing and New Delhi, has narrowed strategic space and complicated the management of an already fraught bilateral relationship.

China's Strategic Mood: From Anxiety to Assertiveness

Until late 2024, Chinese strategic circles reflected anxiety over U.S. containment and economic slowdown.

By mid-2025, this shifted to renewed confidence—bordering on hubris—driven by:

- Tactical stabilisation of U.S.–China ties
- Expanded influence in the Global South
- Deepening alignment with Russia
- Sustained dominance in global manufacturing and exports

This confidence, however, coexists with an awareness within the Chinese leadership of long-term structural vulnerabilities.

Domestic Constraints and the Turn Inward

Economic Stress

China's growth trajectory remains weaker than headline figures suggest.

Persistent deflation, property sector distress, weak domestic demand, and fiscal stress at local government levels continue to constrain growth.

State-led Economic Model

Under Xi Jinping, China has doubled down on:

- National security–centric development
- Technological self-reliance

Advanced manufacturing, AI, semiconductors, and green technologies

The 15th Five-Year Plan (2026–30) prioritises insulation from external supply-chain shocks rather than consumption-led growth.

Export Dependence and "China Shock 2.0"

China's trade surplus exceeding $1 trillion in 2025 underscores its reliance on exports.

This has generated global trade disruptions, intensifying concerns in both developed and developing economies.

For India, this has widened the trade deficit and exposed vulnerabilities in pharmaceuticals, electronics, green energy, and critical minerals.

Political Consolidation and Military Posture

Domestically, political control has tightened through:

Information control

Ideological discipline

Expanded definition of national security

Simultaneously, internal dysfunctions surfaced through purges within the military establishment.

The People's Liberation Army continues rapid modernisation, including nuclear capability expansion and doctrinal shifts toward a more assertive posture, increasing regional risk.

Great Power Dynamics: U.S.–China Recalibration

Under President Trump's second term, U.S.–China relations have shifted from systemic rivalry to primarily economic competition.

The Indo-Pacific has lost strategic centrality for Washington, though rivalry persists, as demonstrated by U.S. intervention in Venezuela affecting Chinese interests.

Limited U.S.–China de-escalation has created a "G2 overlay", constraining the strategic autonomy of middle powers.

Implications for India

Shrinking Strategic Space

India's perceived centrality in U.S. Indo-Pacific strategy has diminished.

China increasingly views India's outreach as driven by uncertainty in India–U.S. ties, reducing Beijing's incentive to accommodate Indian concerns.

India–China Relations

2025 saw cautious stabilisation but no resolution of structural issues.

Border disengagement has not translated into de-escalation, with buffer zones potentially institutionalising Chinese gains.

Continued frictions include:

China–Pakistan strategic coordination

Infrastructure projects in Tibet

Supply-chain coercion (rare earths)

Repeated assertions over Arunachal Pradesh

Strategic Response Required

India must combine calibrated engagement with strengthened deterrence.

Accelerating domestic technological and industrial capacity is critical.

External balancing remains relevant but must be pursued with realism amid U.S.–China tactical accommodation.

Conclusion

China's posture as 2026 begins reflects a blend of strategic confidence and underlying caution—an assertive external approach resting on an internally stressed economic and political system. For India, this environment demands strategic patience, resilience, and clarity. Navigating a world marked by selective U.S.–China accommodation and Chinese grey-zone assertiveness will require India to reduce immediate risks through engagement while systematically strengthening its long-term economic, technological, and military foundations. The challenge is not episodic, but structural—and preparation must be for the long haul.