

EDITORIAL HIGHLIGHTS

20-08-2026

GS 2: INTERNATIONAL RELATIONS THE HINDU

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Erratic Trump left with few exits in Iran war

Increased war costs and depleting critical munitions indicate that the U.S. is caught in a bind in the ongoing Iran-Israel-U.S. conflict

DATA POINT

Sambavi Parthasarathy
Gauri Singavarapu

The expiry of the U.S.'s Memorandum of Understanding with Iran on Monday with no indication of any extension has left Washington with no clear exit strategy, six months since it launched attacks on Iran along with Israel. This is evidenced in President Donald Trump's erratic stances on the war, expressed via his statements (Chart 1).

The chart shows an alternation between crude threats of destruction – for instance on March 21, he said that U.S. will destroy Iran's power plants if Tehran didn't fully open the Strait of Hormuz – and softened rhetoric when three days later he said that the U.S. and Iran had a productive conversation about resolution (denied by the Iranians). The yo-yo nature of his statements show how the Trump administration has been stuck in a quagmire following its actions, which lacked a clear strategic objective for the Americans. Rising fuel and fertilizer prices, the increased costs of waging the war, and the weakening of military advantages have caught it in a bind.

Contrary to Mr. Trump's assertions on the weakening of Tehran, Iran has not budged from its positions, despite being subject to intense bombing and a renewed naval blockade.

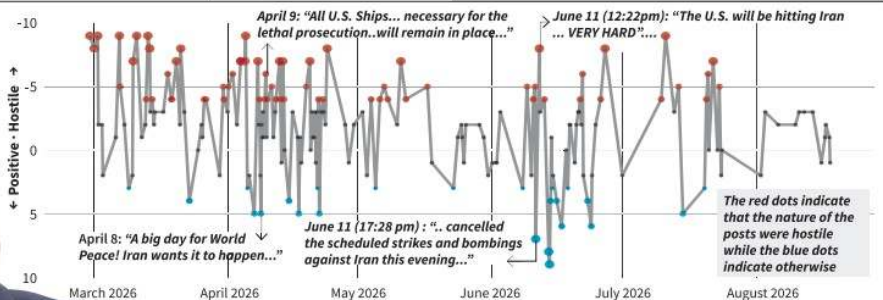
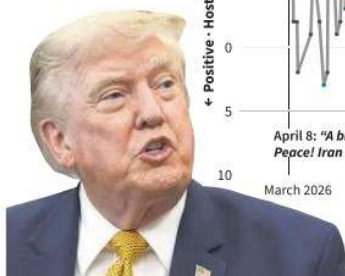
Meanwhile, the aerial bombing, missiles and drone-led retaliations by Iran have created a new bottleneck for the U.S. and its allies, who are running low on critical munitions. (Table 2).

This will also come at a great cost. According to estimates by CSIS, the Trump administration's actions in Iran, till June alone, have already incurred huge costs (~\$40 billion) (Table 1). Iran's determination to withstand the blockade is costing the U.S. both militarily and monetarily.

Caught in a bind

The data for the charts were sourced from Truthsocial, Centre for Strategic and International Studies (CSIS), and Armed Conflict Location & Event Data (ACLED)

CHART 1: The chart plots U.S. President Trump's Truth Social posts related to Iran since Feb. 28, 2026



The posts were scored as below:
■ Strong positive (+4 to +10): Posts claiming deals, ceasefires and peace.
■ Positive (+1 to +3): Posts acknowledging talks or progress of deals.
■ Negative (-1 to -3): Posts accusing and mocking Iran, its powers and its leadership.
■ Hostile posts (-4 to -6): Posts directly threatening to retaliate or punish Iran and its allies while demanding "unconditional surrender"

For the above chart, The Hindu scraped and analysed around 187 Iran-related posts made by Mr. Trump on his Truth Social account. 'Re-Truths' or reposts, posts that did not mention anything on Iran war, or posts containing quoted article links and images were not included in the analysis

CHART 2: Events of attacks by the U.S. and Iran in the ongoing conflict. Attacks refer to shelling, artillery, missile attacks, air/drone strikes, and interceptions

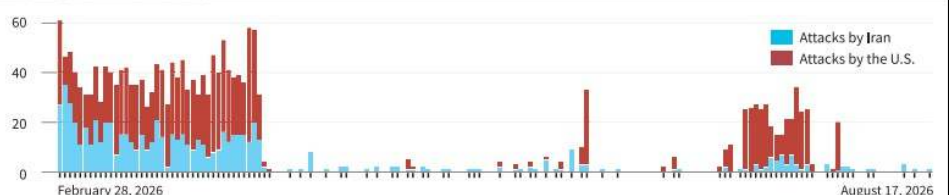


TABLE 1: Estimated cost of the Iran war for the U.S.

Category	Cost	Remarks
Deployment/Redeployment	\$0.17 bn	Most activities already in budget
Munitions	\$26.1 bn	Main driver of war costs
Higher operational tempo	\$0.75 bn	Includes personnel benefits
Equipment losses	\$1.7-\$3.5 bn	Aircraft and major ground equipment
Base damage	\$4.0-\$9.4 bn	Structures and interior content
Other DOD costs	\$1.5 bn	Higher fuel costs, infrastructure security
Total	\$34.2-\$41.5 bn	

The estimates by CSIS is as of June 23, 2026 and predates ceasefire violations and latest developments. The actual cost of the prolonging conflict could be much higher

Gauri Singavarapu is interning with The Hindu's Data team

TABLE 2: Cost of select expended ground attack and air defence munitions and their rate of production

Munition Type	Units expended	Unit Cost	Cost to replace expended munitions	Production rate (missiles per Year)	Orders placed for FY26	Total delivery time (in months)
Tomahawk	1000+	\$2.6 M	\$2.8 B	79	57	47
JASSM (Joint Air-to-Surface Standoff Missile)	1100+	\$1.9 M	\$2.3 B	385	144	48
PrSM (Precision Strike Missile)/ATACMS (Army Tactical Missile System)	150-380	\$1.6 M	\$0.5 B	56	45	46
Patriot (PAC-3)	1,060-1,430	\$4.9 M	\$5.3-\$7.1 B	183	233	42
THAAD (Terminal High Altitude Area Defense)	190-290	\$11.9 M	\$2.3-\$3.5 B	28	25	53
SM-3 (Standard Missile-3)	130-250	\$28.7 M	\$3.9-\$7.5 B	53	12	64
SM-2/6 (Standard Missile-2/6)	190-370	\$4.3 M	\$0.8-\$1.6 B	96	10	53

The estimates for munitions expended is as of June 2026. Replacing existing munitions alone will cost the Trump administration around \$26 billion. However, it is not just the cost that matters. The U.S. is also running low on time to replace these critical munitions as they have a lengthy production timeline

GS 2: INTERNATIONAL RELATIONS INDIAN EXPRESS

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• POLITY

How India plans to count caste now, what went wrong earlier

Vikas Pathak
New Delhi, August 19

WITH THE Registrar General of India deciding to use an "open-ended question on caste" for the ongoing census to enumerate caste, the lack of a predetermined list of castes means it will be up to the respondent to mention his or her caste to the enumerator.

"If you identify your caste by your surname, the census official will be duty-bound to include it as your caste. If he misspells your surname, that too will become an entry in the caste column," a senior IAS officer told *The Indian Express* on condition of anonymity.

It is likely to throw a plethora of entries pertaining to what may be a single caste. For instance, Rajput, Thakur, Singh, and Kshatriya may be used interchangeably by a respondent. However, Rajput in Bundelkhand region cutting through Uttar Pradesh and Madhya Pradesh may also mean the Other Backward Class Lodh community, and Singh is a surname cutting across castes and categories.

Until the 1931 Census, when the data of the last census that enumerated caste were released, the colonial state had also used the same method. The 1931 Census report shows the problems faced in enumerating caste, as

it became an extremely subjective category.

The 1931 Census

In the 1931 Census report, there were instances of caste groups clubbing themselves as one caste, or sometimes even imagining a new category to define themselves.

Sections of the leather working caste among Dalits in Punjab decided to assume a new religious identity of Aad Dharmis, meaning people who belonged to the "original", "pre-Aryan" religion of India. As many as 418,789, roughly the same number as Christians in Punjab at that time, enumerated themselves as Aad Dharmis, a category that did not exist in 1921. The same trend was noticed in other regions too, with names like Adi Dravida, Adi Andhras, and Adi Karnatakas coming up.

The 1931 Census also offered examples of multiple castes consolidating into a single caste for bolstering their numbers or claiming a new social status. "The best instance of such a tendency to consolidate a number of castes into one group is to be found in the grazier castes which aim at combining under the term 'Yadava' the Ahirs, Goals, Gopis, Idaiyans and perhaps some other castes of milkmen, a movement already effective in 1921," the report said.

What the numbers say

- The Ministry of Social Justice and Empowerment lists 1,208 Scheduled Castes, with different castes being in the category in different states.
- A Press Information Bureau year-end press release of 2022 lists exactly 730 Scheduled Tribes.

What happened after

In the 1941 Census, though caste details were collected, caste was dropped from the final tabulation. In the 1951 Census, in a newly independent India shaped by the ideals of equality and secularism, the government led by Jawaharlal Nehru decided there would be no caste enumeration.

The 2011 exercise of the UPA government failed to produce usable caste data because of the problem of open-ended enumeration. The final dataset contained nearly 46.7 lakh distinct caste names, compared with the 4,147 castes recorded in the last comprehensive caste census in 1931. The Union government eventually withheld the raw caste data.

In 2023, then Bihar Chief Minister Nitish Kumar ordered a statewide caste survey. An IAS officer aware of the exercise told *The Indian Express* that the state officials had compiled a list of castes for the purpose, as not having a list would create an administrative nightmare. After the survey data came out, questions were raised regarding the way the lists were prepared and methodology.

The solution

Former Indian Council of Social Science Research chairman S K Thorat, who was a

member of the expert committee to write a report on the caste data in Telangana, told *The Indian Express* that a predetermined list was necessary.

"There are already SC, ST and OBC lists recognised by the government. All we need is a similar list of castes in the general category, and we will then have an exhaustive list," he said. "It may still have a small margin of error, maybe 2-3%, but that will actually minimise the error, rather than going for open-ended caste enumeration."

He added that there can also be columns for "no caste" and "no religion" for people not identifying with these.

Thorat also suggested that separate questionnaires be prepared for effective data focusing on the separate exclusions faced by the Scheduled Castes (untouchability related) and Scheduled Tribes (physical and geographical isolation). He underlined that such a questionnaire for the OBCs was not required, as social and educational backwardness would anyway be captured by the census exercise.

"There should also be questions on the hierarchies and exclusions within the SCs and STs, as some castes are more deprived than others," said O P Shukla, a Valmiki activist who has been raising his voice for sub-categorisation of the SCs.

GS 2: POLITY

INDIAN EXPRESS PAGE: 13

An institution in freefall: Parliament is all dressed up with nowhere to go



THAROORTHINK
BY SHASHI THAROOR

THE RECENTLY concluded Parliament session has confirmed yet again that urgent action is needed to restore the "temple of our democracy" to something better than utter dysfunctionality. Our collective failure to strike a balance between partisan politics and mature statesmanship remains the most glaring weakness of our parliamentary democracy. The Opposition remains adamant that certain issues must be discussed, but faces a government that considers compromise a sign of weakness. The Opposition persistently chooses disruption if it won't be heard; the government refuses to reach out and accommodate even some of its demands. Time, taxpayers' money and meaningful debate are all lost. So also are opportunities for MPs to question ministers, to raise constituency issues in Zero Hour or issues of national importance under Rule 37, and to place on record their views on the bills that the government cheerfully passes amid the din.

The relationship between the government and the Opposition has devolved into an unprecedented bitterness. It was not always so. A foundational civility once governed our public life: Atal Bihari Vajpayee took delight in recounting how Jawaharlal Nehru treated him with immense courtesy as a young Opposition backbencher; how Rajiv Gandhi ensured he received medical care in the US; and how Narasimha Rao dispatched him to Geneva to represent India at a critical UN summit on Kashmir. Such bipartisan grace is today unimaginable.

Instead, Indian politics has descended into a crusade of mutual demonisation. Each side claims the mantle of absolute virtue while writing off the other as irredeemable. To the ruling party, dissent is branded as "anti-national"; the Opposition, in turn, casts itself as an outnumbered band of Pandavas

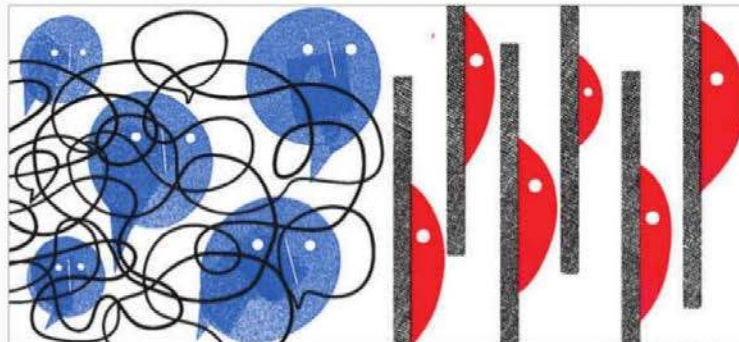


ILLUSTRATION: CR SASIKUMAR

battling a ruthless, resource-rich Kaurava establishment. But democracy cannot survive without a basic presumption of mutual good faith: the belief that even our fiercest rivals care about the nation's welfare, even if we disagree profoundly on how to serve it. When we treat political adversaries as existential enemies, the common ground required for governance vanishes.

This breakdown of democratic trust is a collective failure. The ruling party was just as uncompromising when it was out of power. The very leaders who once championed parliamentary obstruction as a vital tool for enforcing executive accountability discovered, upon taking office, that where you stand depends on where you sit. Suddenly, disruption became an unpardonable sin. Unsurprisingly, the Opposition, having suffered under those tactics for years, rejects the sermon. If the traditional Golden Rule urged us, "Do unto others as you would have them do unto you," the new code of Indian politics is far simpler and far more destructive: Do unto them what they did unto you.

There is also a glaring disconnect between parliamentary performance and electoral success. Representatives are elected (and re-elected) for reasons that have almost nothing to do with their ability to skewer a minister during Question Hour or dissect a flawed

The Opposition persistently chooses disruption if it won't be heard; the government refuses to reach out and accommodate even some of its demands. Time, taxpayers' money and meaningful debate are all lost

bill with forensic precision. Instead, voters judge their MPs by the constituent services they render and the raw, local political muscle they command. The talent that ought to be showcased on the floor of the House has migrated to television studios. In turn, when party whips corral MPs into the well of the House to disrupt proceedings with organised shouting rather than reasoned debate, party leaders signal that they value partisan aggression far above parliamentary excellence.

At one time, political parties valued different skills in their leaders: The mass mobilisation of the "politics of the street" and the debating prowess of the "politics of Parliament". When the "politics of the street" has invaded Parliament, the "politics of Parliament" has no place to go, impoverishing our democratic discourse and rendering the possibility of national consensus on progress untenable. Some good work continues in parliamentary committees, mostly away from the media glare, and in the absence of the cameras that place a premium on disruptive grandstanding. But what the public sees is disruption, the absence of dialogue and a complete breakdown in communication. Disillusionment with the functioning of Parliament is rife across the country.

This generational freefall in legislative standards has only

been exacerbated by the ruling dispensation. The current government displays a barely concealed contempt for the legislature, preferring to ride roughshod over the Opposition rather than engage it. Unlike Jawaharlal Nehru, who attended Parliament daily and treated it as the beating heart of Indian democracy, Prime Minister Narendra Modi rarely deigns to grace the House with his presence. Over recent years, the government has reduced Parliament from a consultative chamber in a deliberative democracy to a mere noticeboard for announcing executive decisions and a rubber stamp for legalising them.

This systematic diminishing of Parliament strikes at the very core of our democratic order. Tragically, its own custodians are allowing the institution to be hollowed out, bringing us dangerously close to a point where the public will no longer even miss it when it is effectively rendered meaningless. But if Parliament is allowed to lose all purpose, what will remain of our democracy?

Democracy requires a rare, delicate balance. It demands that politicians maintain fierce ideological convictions during an election, yet actively cooperate for the collective progress of the nation once the ballots are cast. This principle is essential to build a healthy political culture, drawing on timeless lessons from democratic history, global precedents, and the evolving nature of public service. When both sides concur that national interests should be prioritised over partisan rivalries, governance can shift from zero-sum obstructionism to constructive collaboration. This approach does not mean giving up party ideology or abandoning one's principles. Instead, it recognises that while political parties offer different paths toward progress, the ultimate destination remains the welfare, safety, and prosperity of the nation.

An obvious solution, successfully used elsewhere, is to grant the Opposition one day a week or two hours a day to raise any issue it deems essential, while allowing the work of Parliament to proceed undisturbed the rest of the time. Does no one in the government have the imagination or the vision to effect such a compromise?

The writer is a fourth-term Congress MP from Thiruvananthapuram

GS 2: POLITY

THE HINDU PAGE: 10

The myth called 'perfect victim'

The Tejpal case shows how the 'ideal victim' stereotype can shape judicial perceptions, with survivors often judged by their behaviour and personal background rather than the evidence; such assumptions have created a hierarchy of victimisation, prompting the court to call for greater gender sensitivity in judicial writing

LETTER & SPIRIT

Grace Paul Vallooran

In August 6, the Goa Division Bench of the Bombay High Court set aside the 2021 judgment of the trial court that had acquitted Tarun Tejpal. The High Court convicted Tejpal, the former editor of *Tehelka* magazine, and sentenced him to 10 years of rigorous imprisonment for raping a former colleague.

While terming the trial court's ruling "perverse", the High Court also said that it had fallen for the notion that a sexual assault complainant must be a 'perfect victim' and conduct herself in a certain way to appear credible.

Nils Christie's concept

What is the idea of a 'perfect victim' or an 'ideal victim'? It was theorised by Norwegian criminologist Nils Christie in a chapter of the same name, in the book *From Crime Policy to Victim Policy*, in 1986.

Christie said the 'ideal victim' or 'perfect victim' possesses five main attributes. First, they are often female, disabled, very young, or very old, and are therefore weak in relation to the offender. Second, they are involved in "respectable activities". Third, they cannot reasonably be blamed for being where they were during the crime. Fourth, they do not know the offender personally. Fifth, they are attacked by a perpetrator who is "big and bad". Christie also noted that while being weak, the victim must have enough social power to influence sympathy and have their victim status recognised.

This one-size-fits-all idea of victimhood is propagated widely – by the media, social media, films, and by the larger society. Race, class, gender and other factors are involved in these dramatic portrayals where the most "innocent" and "deserving" become the 'ideal victim' while others are viewed as "undeserving" of sympathy, Christie argued.

In contrast to the idea of the 'ideal



GETTY IMAGES

victim' is the idea of the 'ideal offender'. According to Christie, such an individual must be framed as purely bad, dangerous, and a stranger to the victim so that it becomes easy for society not to like him. When the offender is a familiar person with a "good background story", the 'ideal' dynamic breaks down.

In the case of Tejpal, his social status and his image as a liberal intellectual complicated this stereotype of the 'ideal offender'. As per Christie's argument, when there is no 'ideal offender' to hate, it becomes hard to perceive an 'ideal victim' to sympathise with.

Hierarchy of victimisation

This narrow perception of an 'ideal victim' creates a hierarchy of victimisation. Those who are thought of as "undeserving" are even perceived as contributing to the situation and receive less sympathy or none at all.

For instance, in the 1979 Mathura custodial rape case of a teenager, the Sessions Court had relied on the survivor's previous sexual experience to reason that she had likely consented, and described her as "habituated to sexual intercourse". The Supreme Court, while

acquitting the accused policemen, noted the absence of any alarm or resistance from the survivor or injuries on her body.

Similarly, in the gang-rape case of social worker Bhanwari Devi (1992) that became a catalyst for the formulation of the Vishakha guidelines and later, the enactment of the Sexual Harassment of Women at Workplace (Prevention, Prohibition and Redressal) Act, 2013, the Japur District and Sessions Court in 1995 acquitted the accused of gang rape. The court reasoned that it was unlikely that upper caste men would "pollute" themselves by having sexual relations with a Dalit woman. In short, in the eyes of the court, Devi's caste status made her an unlikely 'ideal victim'.

In 2017, in an interim order, a Punjab and Haryana High Court division bench suspended the sentences and granted bail to three former Jindal Global Law School students convicted of gang-raping and blackmailing a classmate. It described the survivor's behaviour as having a "perverse streak".

The court said, "...We are conscious of the fact that allegations of the victim regarding her being threatened into submission and blackmail lend sufficient

diabolism to the offence, but a careful examination of her statement again offers an alternate conclusion of misadventure stemming from a promiscuous attitude and a voyeuristic mind." This remark placed the survivor's sexual behaviour at the centre of the court's assessment, effectively questioning her status as an 'ideal victim'.

These rulings have demanded a 'performance' of trauma from survivors. Any digression from that expected behaviour has cast doubts on the survivors' credibility and status as legitimate. The rulings reflect Christie's theory that victimhood is not an objective state, but a deeply gendered moral status that can be granted or denied by society.

The Tejpal case

In 2021, in the Tejpal case, the Goa Sessions Court noted that there were several discrepancies in the survivor's versions. It also said that while the victim had claimed to be in shock and trauma after exiting the lift on November 7, 2013, the CCTV footage showed that she was composed and smiling.

The High Court criticised the Sessions Court for focusing on the complainant's conduct, reactions, and personal background instead of the evidence on record. It also noted that a survivor has already faced trauma and might feel too ashamed, nervous, or confused to respond clearly when questioned repeatedly in an unfamiliar environment.

The Supreme Court has questioned this idea in some of its judgments. In 2025, former Chief Justice B.R. Gavai had apologised on behalf of the judiciary for the Supreme Court judgment in the Mathura case, calling it a "moment of institutional embarrassment".

Recently, on August 3, the Supreme Court issued a report recommending greater gender sensitivity in judicial writing. It cautioned judges against drawing adverse conclusions from delayed reporting, lack of physical injuries, inconsistencies in testimony or a survivor's demeanour, noting that trauma affects people differently.

THE GIST

▼ Nils Christie's 'ideal victim' theory holds that vulnerability, respectability and innocence shape who is perceived as deserving of sympathy.

▼ Court rulings in cases such as Mathura, Bhanwari Devi and Tejpal show how survivors' behaviour and personal circumstances have been used to question their credibility.

▼ The Supreme Court has recently urged judges to avoid such assumptions, noting that trauma can affect survivors differently.

GS 3: ENERGY

THE HINDU PAGE: 7

If solar irrigation is over-drawing groundwater, it's being done wrong

Over the past five years, India's agricultural solar programme, PM-KUSUM, has installed over 2.5 million solar pumps, making them affordable through subsidies; as the govt. prepares PM-KUSUM 2.0, the challenge is to advance the clean energy transition without continuing to over-exploit groundwater

Mohammad Faiz Alam
Alok Sikka

"Solar irrigation will worsen the groundwater crisis." This concern is raised in most discussions about the rapid spread of solar irrigation in India – where heavily subsidised or free electricity has led to unsustainable groundwater abstraction, contributing to falling water tables, depleting aquifers, and growing fiscal burdens on energy utilities.

Thus, with solar irrigation offering almost free power and no incentive to limit pumping, farmers may draw ever more groundwater.

However, there are three gaps in this framing that one should consider. First, the current debate often treats solar irrigation as a single model – typically a farmer operating a standalone solar pump with no incentive to conserve water.

In reality, solar irrigation models come in different shapes and sizes differentiated by design, ownership structure, and pricing incentives, all of which influence groundwater-related outcomes.

Dependence on model

For example, grid-connected solar models that allow farmers to sell surplus solar electricity back to the grid provides incentives for efficient water use. Evidence from Gujarat's *Suryashakti Kisan Yojana* (SKY) scheme, where approximately 100 agricultural feeders were transitioned to solar energy, shows that solar farmers had significantly slower growth in energy consumption and irrigation application than non-solar farmers, indicating more sustainable water use.

The SKY scheme offered around ₹7 per unit of energy as a feed-in-tariff, creating a meaningful incentive to conserve electricity and export energy. And by exporting energy, farmers earned an average of roughly ₹71,900 annually, effectively transforming them from energy consumers to energy producers.

Similarly, in Bangladesh, in the most common solar model – called the fee-for-service centralised solar model – pump owners have earned revenue by supplying water to multiple farmers within a fixed command area. This model showed that farmers who used solar irrigation did not apply more water than farmers who used diesel for irrigation even though solar irrigation was 20-30% cheaper.

This is because excessive irrigation by one farmer reduced the operator's ability to serve others, making the efficient and equitable use of groundwater for irrigation imperative for businesses looking to become financially sustainable.

So the real question is not whether solar irrigation is inherently good or bad for groundwater but what kind of solar irrigation model is deployed, where, and with what incentives.

Even for standalone off-grid pumps under the Pradhan Mantri Kisan Urja Suraksha evam Utthan Mahabhyan (PM-KUSUM), there is evidence that solar pump utilisation – and the extent to which it replaces diesel versus grid electricity use – varies widely with



Solar irrigation models come in different shapes and sizes differentiated by design, ownership structure, and pricing incentives, all of which influence groundwater-related outcomes. (GALTI IMAGES/ISTOCKPHOTO)

installed capacity, the water table's depth, and years of operating experience.

Diverse outcomes

Second, the current debate treats energy as the only factor determining groundwater outcomes, discounting the impact of local hydrogeology and agriculture. Evidence shows solar irrigation impact on farmers' irrigation behaviour is shaped by local hydrogeology, cropping patterns, marginal returns to irrigation, and soil type, among other factors.

In regions with hard-rock aquifers with limited water storage capacity, and rainfed cropping, where each additional unit of irrigation water yields high marginal benefits, water use changed little between solar and non-solar uses (regardless of the energy source in the latter case). This diversity in outcomes must be central to policy design.

In regions such as Punjab and Haryana, where irrigation is already widespread and dominated by water-intensive crops like rice and wheat, there is little scope to expand irrigated area, making it unlikely that solar irrigation will drive further groundwater over-exploitation.

The key question in such regions is not whether solar threatens groundwater, but whether it can make water, energy, and food systems more sustainable. Replacing subsidised fossil-fuel electricity with grid-connected solar can reduce subsidy costs, lower emissions, and encourage more efficient water and energy use.

On the other hand, Eastern India presents a different picture where irrigation expansion has been constrained more by access to energy than to water. Large areas remain rainfed, with farmers facing high diesel costs and unreliable power for irrigation. In such regions, solar irrigation can meaningfully improve agricultural productivity and climate resilience.

This shows solar irrigation policy, as it

relates to groundwater, should follow a differentiated regional approach, reflected in context-specific deployment of solar irrigation models, paired with stronger groundwater monitoring and adaptive management to catch emerging stress early.

Emissions, subsidy burdens

A third limitation is when solar irrigation is evaluated in a silo, either as a water or energy intervention, when its consequences span water, energy, and food. For example, groundwater irrigation in India is estimated to generate between 45-62 million tonnes of carbon dioxide a year. Agricultural electricity subsidies across States amount to over ₹1 lakh crore a year. Solar irrigation can reduce both emissions and subsidy burdens.

Estimates from Gujarat suggest each grid-connected solar farmer offsets approximately 12.3 tonnes of CO₂ annually through on-farm solar use and electricity exported to the grid while subsidies covered nearly one-fourth of government investments within the first two years. Scaled across India's more than 25 million agricultural pumps, the mitigation and fiscal implications are substantial. Thus, the question we should be asking is not whether solar irrigation will worsen groundwater risks but how best solar irrigation can be deployed to maximise its benefits.

Expanding access

Over the past five years, India's agricultural solar programme, PM-KUSUM, has installed over 2.5 million solar pumps, making them affordable for smallholder farmers through subsidies. As the government prepares PM-KUSUM 2.0, the challenge is to advance the clean energy transition without worsening the country's already over-exploited groundwater. In water-stressed regions, grid-connected solar can be expanded

either through individual pumps or by making entire agricultural feeders go solar. Ideally, both models should reward farmers for saving water while helping energy distribution companies (DISCOMs) transition to clean energy.

However, the current approach of paying farmers to save water by selling surplus electricity to the grid has seen limited uptake. Feeder-level transitions to solar energy has performed better, but in its current form does little to change pumping behaviour. Both models therefore need to be refined.

The individual pump model requires simpler grid connection procedures and attractive buyback prices that reflect the local value of water and crops. DISCOMs should also be incentivised to support it. Feeder-level transition to solar energy, meanwhile, should be paired with water-saving incentives to reduce both water and energy use, not just benefit DISCOMs. These could include support for micro-irrigation and direct cash payments for reduced pumping, similar to Punjab's 'Pani Bachao, Paisa Kamao' and Haryana's 'Mera Pani Meri Virasat' schemes.

That said, where farmers still lack reliable irrigation, the priority is expanding access rather than saving water. Standalone solar pumps should therefore remain the preferred option in areas with limited irrigation, poor grid access, and low groundwater risk. Rather than focusing on individual ownership, greater emphasis should be placed on scaling them through water-user associations, water-selling entrepreneurs, and farmer cooperatives in India's most irrigation-deprived regions.

(Mohammad Faiz Alam is senior regional researcher at International Water Management Institute and Alok Sikka is an emeritus scientist and former country representative in India and Bangladesh at International Water Management Institute.)

GS 2: INTERNATIONAL RELATIONS THE HINDU

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A Palestinian state is the foundation for regional peace

There is one, and only one solution to the decades long, volatile and bloody situation in West Asia: the creation or the establishment of a sovereign, independent, viable Palestinian state. In essence, it is no different from the oft-touted two-state solution. But the two-state formula speaks of the establishment of two states living side by side in good neighbourliness. However, one state already exists. What is needed is to establish or create a new, second state, namely Palestine. There will never be peace and stability in the region unless this is done. All the conflicts in the region – Israel's war on Gaza, the Iran war, the Hezbollah-Israel war, the Houthi phenomenon – will not be resolved unless a viable Palestinian state comes into being. Israel's relations with its Arab neighbours will remain strained until it accepts the reality of a Palestinian state, just as the Arabs have reconciled to the reality of Israel.

United States President Donald Trump seems to have recognised the importance of working towards the creation of a Palestinian state. Resolution 2803 setting up a Board of Peace (BoP), which was adopted by the United Nations Security Council in November 2025 has the following provision in its annex: "While Gaza re-development advances and when the PA [Palestinian Authority] reform program is faithfully carried out, the conditions may finally be in place for a credible pathway to Palestinian self-determination and statehood, which we recognize as the aspiration of the Palestinian people."

On Iran and Israel

A major player in this conflict-infested region is Iran. Iran has not always been hostile to Israel. Indeed, under the Shah, Iran's relations with Israel were cordial and there was a sizeable Jewish community in Iran. Since the Islamic revolution of 1979, most Jews left for Israel. But there are still about 15,000 Jews in Iran. Iran's Constitution provides for a seat for the Jewish community in Parliament.

Historically, there has not been perpetual enmity between Islam and Judaism. The Koran mentions many prophets and patriarchs from the Hebrew bible, such as Moses, and Abraham. The Crusades were fought between Muslims and Christians; the Jews were not a party to them. Jews were persecuted in countries professing Christianity. The Arabs bore no responsibility for the Holocaust which was carried out by Nazi Germany and its collaborators. It would not be an



C.R. Gharekhan

Former United Nations Coordinator for Occupied Territories and Special Envoy of India for West Asia

exaggeration to say that but for the Holocaust, and the sense of guilt felt by the western countries, Israel might not have been born. It is well known that most western countries, including the U.S., barred the entry of Jews seeking refuge from Hitler's Germany.

The transition from holy land to homeland started with the infamous Balfour Declaration of 1917 when the British expressed support for a homeland for the Jews, expressly limiting the indigenous Arab population only to civil and religious rights.

The roots of regional hostility

The hostility of Iran and the Arab countries towards Israel is based on the fact that Israel was created and imposed on the region at the expense of the indigenous Arab population. It is argued that the Palestinians were offered a state in the UN resolution of 1947 and a few times subsequently, but they rejected all offers. An Israeli Foreign Minister, Abba Eban, famously said that the Arabs never miss an opportunity to miss an opportunity. But one can hardly blame a landlord if he rejects an offer of a few rooms from an intruder who has occupied the whole house. Indeed, the slogan of the Zionists was: land without people for a people without land.

It is noteworthy that Hezbollah, a Shia movement, and Iran, a Shia-majority country, support Hamas, a Sunni movement. This is easily explained by their commitment to the right of self-determination for the Palestinian people. Israel naturally comes in for hostility as the only power that stands in the way of the emergence of an independent Palestine.

Hezbollah began launching rockets and missiles against Israel just after Israel started its war on Gaza after October 7, 2023. It follows that if Israel accepts the reality of a Palestinian state at some time, Hezbollah will have no reason to make the life of people in northern Israel difficult.

In that case, Iran too will stop supplying weapons to Hezbollah. This is not to suggest that if the Palestinians are able to exercise their right of self-determination, Iran and Israel will become friends. But without that, their mutual enmity will never abate. If an irreversible road map to a Palestinian state emerges and is accepted by all the parties, secondary issues such as the Strait of Hormuz will be much easier to resolve.

Since Hamas' terrorist attack on Israeli civilians in October 2023, whatever little support some in Israel had for the concept of a Palestinian state has evaporated. Israel's disproportionate and

ruthless strikes on Gaza, post October 7, might have almost isolated Israel, but in the process, the Gaza strip has been devastated and the possibility of the emergence of Palestine has receded by many years, perhaps decades. Consequently, peace and stability in the region have become an illusion.

Mediation is the key

The only way to have a realistic possibility of resolving the conflict is through external mediation. And the only external power that has the required influence and even goodwill with both sides is the United States. It is true that there is no such thing as an honest broker. But brokers, even non-honest ones, do manage to sell the transaction to the satisfaction, or equal non-satisfaction, of both parties.

Israel has insisted on bilateral talks, adding at the same time that there is no one on the other side to negotiate with. Usually, the stronger side insists on a bilateral approach, and the weaker side prefers an outside agency to help. The only time progress was achieved was when the Oslo Accord was concluded in 1993. Oslo was negotiated with the mediation or good offices of Norway.

Under Oslo, the Palestine Liberation Organization formally recognised Israel and the PA was created; it is this PA, albeit a reformed one, that is often mentioned as a possible caretaker government of Palestine. The Oslo Accords paved the way for Jordan's recognition of Israel and eventually the Abraham Accords.

The other viable broker is the UN. Israel at the moment is dead set against the UN and has even declared the UN Secretary-General *persona non grata*. But Israel owes its existence to the UN. There is nothing permanent in international relations. Positions evolve with evolving situations.

Israeli Prime Minister Benjamin Netanyahu has his own personal reasons for opposing the idea of an independent Palestine. He had voted against the Oslo Accords and is implacably opposed to the idea of a Palestine state.

Let us hope that in due course, enlightened leadership will emerge in West Asia on all sides. If the leaders do not have the wisdom and the courage to make the necessary decisions, however difficult, the people of the region will remain doomed to suffer and be denied the peace and stability they need. Without these, they will never be able to realise the full potential for development that new technologies have to offer.

The road to peace in West Asia runs through Palestinian statehood

GS 2: POLITY

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LEGAL

Dignity in death: Debate over 'humane' execution

SC has upheld validity of execution by hanging. What does the law say about the right to die with dignity, and how do other countries carry out executions?



AMAALE SHEIKH & ARAV SHAH

CAN A method of execution devised in colonial India still satisfy the Constitution's promise of dignity? The Supreme Court on Tuesday said it can, at least on the material currently before it. The bench dismissed a PIL that argued the method is scientifically unreliable and violates the right to a dignified death under Article 21 of the Constitution.

The court held that the challenge ran into two hurdles — the 1983 precedent of *Deena vs. Union of India* in which a three-judge bench upheld hanging as a Constitutional mode of execution, and Parliament's decision to retain hanging while enacting the Bharatiya Nagarik Suraksha Sanhita (BNSS).

The method

In India, hanging is the prescribed method of executing death sentences and is a result of British Common Law. Historically, hanging was carried out through the "short-drop" method. As the name suggests, it's a short drop that causes asphyxiation.

Today, modern executions rely on the long-drop method. The longer drop is meant to immediately snap the second and third cervical vertebrae (C2 and C3) and, thus, the spinal cord. This is meant to instantly render the individual unconscious. But the length of the drop must be calibrated to the individual's weight and height. A drop that is too short can fail to break the neck and result in prolonged strangulation. Conversely, a drop that is too long can risk decapitating the person.

Standard prison protocols dictate that the body be left hanging for 30 minutes after the trap door opens.

The challenge

The petition sought a declaration that the provision prescribing hanging was unconstitutional and argued that Article 21 includes a right to die through a dignified procedure. They said the method is "accompanied by intense physical torture and

CAPITAL PUNISHMENT IN INDIA....

921
Executions that have taken place between 1947 and 2025

1,281
Convicts sentenced to death between 2016 and 2025

8 Executions that have taken place since 2001.
• The most recent ones were in 2020, of the four Delhi gang rape and murder convicts.

...AND THE WORLD

The following are the countries that recorded the most executions in 2025



SOURCE FOR INDIA FIGURES: THE SQUARE CIRCLE CLINIC, NALSAR;
SOURCE FOR GLOBAL FIGURES: AMNESTY INTERNATIONAL

pain," and inherently unpredictable.

They cited a 1992 study of the remains of 34 people hanged in England between 1882 and 1945. Fractures at C2-C3 were common, but the "hangman's fracture" — assumed to cause near-instant death — showed up in only three of the 34 cases; six died of asphyxiation instead. They said this made hanging neither quick nor controllable.

Anup Surendranath, Executive Director of The Square Circle Clinic at NALSAR University of Law — formerly Project 39A, which intervened in the proceedings — told *The Indian Express* that the studies placed before the court raised broader concerns about the assumptions underlying hanging as a mode of execution. Surendranath said researchers who examined the remains of executed prisoners found that "people had not died by this instant breaking of the neck. Instead there were a whole host of other very painful, long-drawn suffering reasons that had caused their death".

The jurisprudence

Section 393(5) of the BNSS provides that where a person is sentenced to death, "the sentence shall direct that he be hanged by

the neck till he is dead". The clause, which has barely changed since it was introduced in the CrPC in 1861, has survived multiple amendments and now appears in the BNSS.

The right to die with dignity flows from the right to life guaranteed under Article 21 of the Constitution. The Supreme Court in *Gian Kaur v State of Punjab* (1996) held that the right to life includes the right to live and consequently to die with dignity.

The Supreme Court in *Deena vs. Union of India* (1983), upheld the constitutional validity of hanging after examining medical evidence, expert opinion, and comparative execution methods. The court held that hanging, when properly administered, is a quick and certain method of execution and does not violate Article 21. It said that the process causes no greater pain than any other known method and avoids "barbarity, torture and degradation".

Why top court upheld hanging

The Union government maintains that hanging remains the "safest and quickest" method of execution. It said that no botched execution has ever been recorded in India, while lethal injection in the US carries a well-documented history of failures.

The bench found no reason to revisit *Deena*. It noted that the petitioners had placed scientific material before the court but held that the material did not displace the basis on which *Deena* had been decided. Nor did it establish that lethal injection, electrocution, lethal gas or shooting offered an advantage over hanging.

It referred to the reasoning in *Deena*, where hanging through the long-drop method was described as a process intended to bring about immediate unconsciousness through cervical fracture. The court said the existing method continues to satisfy the State's obligation to carry out a death sentence with "decency and decorum" and without "degradation or brutality".

While dismissing the petition, the bench stopped short of treating the issue as closed forever. It observed that Constitutional law evolves and that future challenges could arise if new scientific, medical or empirical material fundamentally alters the assumptions on which *Deena* was decided. It also left it open to the Union government to examine alternative methods

of execution, should it choose to do so.

Modern execution methods

More than two-thirds of the world's nations — around 113 — have ended the death penalty in law or practice, according to Amnesty International. Yet, a 2025 report by the non-profit showed a 12% increase in executions compared to the previous year.

The search for a humane method of execution has led to varied practices, each carrying its own scientific and ethical controversies. Hanging remains one of the more widely authorised methods of execution, particularly in countries influenced by British Common Law, including India, Singapore and Japan. A 2012 Cornell Law School database identified 60 countries that authorised hanging as a method of execution. Other prevalent methods are:

Lethal injection: This is the primary method in several US states where the death penalty is allowed and heavily utilised in China. In this method, a sequence of drugs is administered to a convict — an anesthetic, a paralytic and finally potassium chloride. The procedures can often get botched owing to compromised venous access.

Shooting (firing squad or single bullet): This is used in China, North Korea, Somalia and parts of West Asia. While visually violent and traumatic for executioners, proponents say it causes near-instantaneous cardiac or neurological destruction.

Beheading: Saudi Arabia carries out executions by beheading with a sword. It is reliant on the executioner's precision.

Nitrogen hypoxia: A recently introduced method in the US involving the inhalation of pure nitrogen gas. It is designed to cause asphyxiation without triggering the hypercapnic alarm response — that panicked feeling of suffocation. Critics argue it has not been sufficiently vetted and amounts to human experimentation.

The legal debate over methods of execution is largely between how state power and human rights intersect. Reformists argue hanging can take too much time if there are any errors, constituting cruel and inhuman treatment. But while capital punishment remains in use, finding an execution method that balances the finality of state action with the dignity of the individual will remain a difficult question.

Fewer executors, more executions

More than two-thirds of the world's nations have stopped the death penalty in law or practice.

Yet, a 2025 Amnesty report showed a 12% increase in executions compared to the previous year.

GS 2: POLITY

THE HINDU PAGE: 10

Why is the Supreme Court examining polygamy again?

What are the petitioners seeking? What has the court ruled on polygamy before?

Ziya Us Salam

The story so far:

The Muslim men's supposed right to have multiple wives is once again before the Supreme Court. Following a petition challenging the constitutional status of polygamy, the court sought the Centre's response last week. It also asked the Centre to consider taking suitable legislative steps to abolish the practice for all citizens, irrespective of religion. The petition was filed by five activists, who sought to have polygamy treated as a criminal offence under Section 82 of the Bharatiya Nyaya Sanhita.

Incidentally, Section 82 applies to non-Muslims and provides for a punishment of up to seven years for marrying another person during the subsistence of an existing marriage. The petitioners also sought annulment of the exemptions granted under Muslim Personal Law.

What are the petitioners seeking?

The five petitioners challenged the constitutional validity of Section 2 of the Muslim Personal Law (Shariat) Application Act, 1937, which permits polygamy. They claimed that the said Act is against the Constitution's Articles 14, 15, and 16, which provide equality to all citizens irrespective of their religion or gender. They also requested the court to direct the Union government to take steps towards the codification of Muslim Personal Law to ensure that its provisions run parallel to Constitutional provisions of gender equality.

They sought compulsory registration of Muslim marriages and divorces with State authorities to prevent any second or subsequent marriage of a man with a subsisting marriage. In case this was flouted, the first wife and children should have the first and lasting right to the matrimonial home.

The petitioners also sought the court to direct the Law Commission of India or the

Union government to prepare a draft for the codification of Muslim Personal Law that aligns marriage, divorce, and succession with constitutional principles of gender equality. Incidentally, two of the activists had reached out to the Supreme Court to prohibit instant triple talaq in the famous Shayara Bano and others case. Then too, they argued that the practice of triple talaq violates fundamental rights of women. Following their petition, the apex court had invalidated instant triple talaq in August 2017. The court had then refrained from giving its verdict on polygamy and nikah halala, which too had been sought.

Following the verdict, the Centre framed the Muslim Women (Protection of Rights on Marriage) Act in 2019. The Act made instant triple talaq a punishable offence.

What has the court ruled before?

In the much-talked-about Sarla Mudgal case of 1995, the Supreme Court prohibited a Hindu man with a subsisting

marriage from converting to Islam purely for the purpose of marrying for the second time. The court noted, "the second marriage of a Hindu husband after converting to Islam without having dissolved the first marriage is void."

The court ruled on similar lines in the *Lily Thomas v. Union of India* case in 2000. Here the Supreme Court reiterated its stand of the Sarla Mudgal case, holding that a second marriage contracted after a feigned conversion to Islam was illegal and punishable under Section 494 of the Indian Penal Code.

Does Islam sanction polygamy?

Contrary to the contention that the Quran encourages polygamy, the book encourages monogamy. It permits a man to have up to four wives in special circumstances, such as marrying a widow or an orphan. It, however, makes it incumbent upon him to grant them complete equality. This being a practical impossibility, it asks men to desist from multiple marriages.

Says verse 3 of Surah Nisa, "If you fear you might fail to give orphan women their due rights if you were to marry them, then marry other women of your choice – two, three, or four. But if you are afraid you will fail to maintain justice, then content yourselves with one." Pertinently, this verse was revealed at a time when many men used to have multiple spouses, their numbers often running into three figures.

THE GIST

The Supreme Court has sought the Centre's response to a petition challenging polygamy under Muslim Personal Law and asked it to consider legislative steps to abolish the practice for all citizens, irrespective of religion.

The petitioners have challenged the constitutional validity of the law permitting polygamy, seeking its criminalisation, compulsory registration of Muslim marriages and divorces, and codification of Muslim Personal Law in line with gender equality.

GS 3: SCIENCE AND TECHNOLOGY THE HINDU

PAGE: 9

The IISERs have a leadership problem

The Indian government created the Indian Institutes of Science Education and Research (IISERs) to offer students an intellectually vibrant research environment and to bring them into research at a relatively – vis-à-vis the Indian milieu – early stage.

The institutions prize autonomy as an essential ingredient of good science, including in the form of scientists being able to decide which questions are worth pursuing and with what resources. Top-down control is inimical to this vision. That said, the government also brought the IISERs within the statutory framework of the National Institutes of Technology, Science Education and Research Act 2007, which required each IISER to have a Board of Governors that included senior government officials and other government nominees. The IISER statutes specify, among others, the secretary of higher education and the director of the Indian Institute of Science (IISc), Bengaluru too.

While publicly funded science should be publicly accountable, suboptimal appointments or outright vacancies are objectionable as they can lead to policy paralysis – at best.

Multiple roles

Consider the current composition of the seven IISER Boards.

The IISc director is an ex-officio member of most IISERs. The chair of IISER Pune's Board is also the chairperson of the Visvesvaraya National Institute of Technology, Nagpur. The chair of the IISER Berhampur Board was given "additional charge" while also chairing the Board of IIT Guwahati; the Board also has nominated positions lying vacant, including one for an IIT director and two for eminent scientists.

IISER Bhopal's current director is listed as the "director-in-charge" after their predecessor, Gobardhan Das, left to join NITI Aayog in June. At IISER



Vasudevan Mukunth

While there is no rule that the chairperson of a scientific institution must be a scientist, it matters for each institution's credibility and vision

Thiruvananthapuram, the chairperson simultaneously chairs the Boards of IIT Kottayam and the Indian Institute of Information Technology, Design and Manufacturing, Kurnool.

There are also signs of churn among sitting government officials. Interim appointments are routine and vacancies can arise during transitions. Ex-officio positions also change when officials move between posts. But taken together, several IISERs are operating under temporary or incomplete leadership.

A closer look at the qualifications of the extant leaders also raises questions.

IISER Pune chairperson M. Madan Gopal is a retired IAS officer whose educational background is in commerce and journalism. Its director is a chemical engineer by training, whereas the IISERs have little focus on engineering. IISER Thiruvananthapuram chairperson Vjayaalakshmi Deshmane is a surgeon. IISER Tirupati chairperson Hari Bhartia is a chemical engineer and co-founder of the Jubilant Bhartia Group. IISER Berhampur chairperson Satyabrata Dey is an executive in the footwear industry.

While there is no rule that the chairperson of a scientific institution must be a scientist, it matters for each institution's credibility and vision. The government had earlier appointed the finest scientists to the IISERs' helm before dropping the practice. Today, going by awards, fellowships or global achievement and recognition, there are few outstanding scientists in positions of authority on the IISER Boards.

The Boards can benefit from people with expertise in administration, industry, finance, and public policy – but there is a strong case to draw the leadership of institutions focused on basic science from the scientific community, where there are many people with distinguished research careers and substantial experience in running academic

and research organisations.

The question is not about the competence of the current crop of leaders but why India's many accomplished scientists are not being asked to lead institutions whose central purpose is basic science.

The availability of this 'research cadre' also calls into question the practice of moving the same people between institutions.

People familiar with the IISERs' functioning today describe a situation where the administration is losing its ability to keep up with students' needs vis-à-vis a good education in basic science. By design, the directors and the Board have the power to institute positive changes. However, as a senior scientist at one of the IISERs put it, "There is no vision or imagination and no sense of leadership propelling the institution towards its core goals of carrying out high-quality frontier research in and teaching basic science at an international level."

Weakening autonomy

The Indian government's choices are weakening the IISERs' institutional autonomy. With 'outsiders' and people whose attention is already divided between multiple institutions as leaders, scientists have less control over decisions that affect their work.

An institution whose governance has begun to decline can still remain scientifically productive for many years as long as the people who built its reputation remain and the 'IISER' label is still valuable. But given the cumulative effects of the IISERs' flagging leadership – of the institutions becoming less autonomous and less collegial – it is reasonable to brace for more warning signs, including concentration of authority and an increasingly risk-averse institutional culture.

None of them is conducive to good science or a good education.