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Homes destroyed, thousands flee as wildfires tear through Los Angeles

Two killed, 70,000 face evacuation orders while 28,000 structures under threat; flames race towards neighbourhoods home to California's rich and famous; Vice-President Kamala Harris's home among those that fall under evacuation zones

Associated Press
LOS ANGELES

Multiple massive wildfires tore across the Los Angeles area with devastating force on Wednesday, destroying more than 1,000 structures and killing at least two persons as desperate residents escaped through flames, ferocious winds and towering clouds of smoke.

Three major blazes were burning in the metropolitan area, from the Pacific Coast inland to Pasadena, home of the famed Rose Parade. With thousands of firefighters already attacking the flames, the Los Angeles Fire De-



Fire fury: A home engulfed in flames during the Eaton fire in the Altadena area of Los Angeles in California on Wednesday. AFP

partment put out a plea for off-duty firefighters to help, and weather conditions were too windy for firefighting aircraft to fly, further hampering the fight. Fire officials hoped

to get the flights up later Wednesday.

In addition to the two deaths, Los Angeles County Fire Chief Anthony Marone said many others were hurt in the fires,

which threatened at least 28,000 structures.

At least 70,000 people were ordered to evacuate, officials said. The flames marched toward highly populated and affluent neighborhoods home to California's rich and famous. Hollywood stars, including Mark Hamill, Mandy Moore and James Woods, were among those forced to flee.

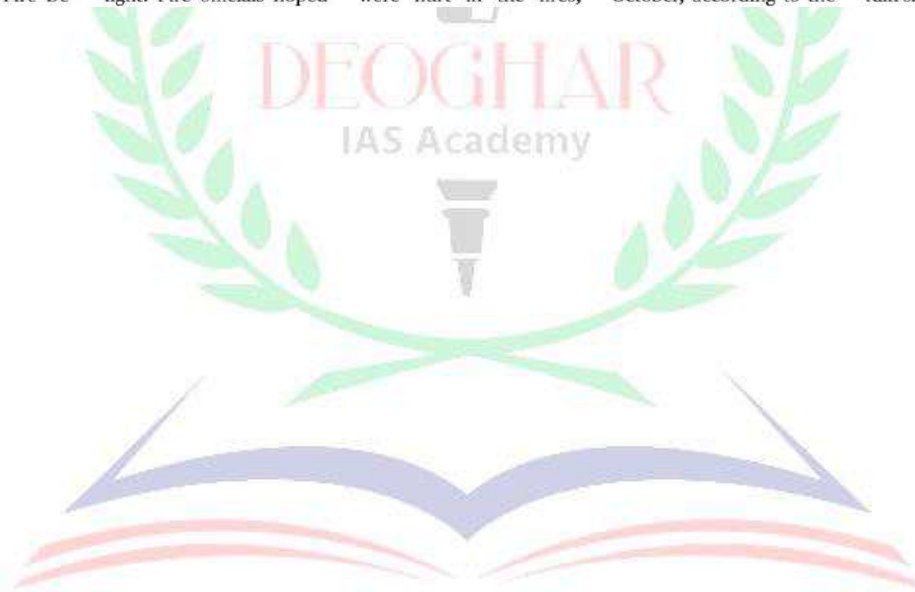
The home of Vice President Kamala Harris was included in an evacuation zone, although no one was there, according to a spokesperson.

California's wildfire season typically begins in June or July and runs through October, according to the

Western Fire Chiefs Association, but January wildfires are not unprecedented.

The season is beginning earlier and ending later due to rising temperatures and decreased rainfall tied to climate change, according to recent data. Rains that usually end fire season are often delayed, meaning fires can burn through the winter months, the association said.

Recent dry winds have contributed to warmer-than-average temperatures in Southern California, where there's been very little rain so far this season. Southern California hasn't seen more than 0.25 cm of rain since early May.



How the UAPA, a draconian law, is wrecking lives

The UAPA prohibits a judge from granting bail if, on a perusal of the police diary or the police report, the judge is of the opinion that there are 'reasonable grounds for believing that the accusation is ... prima facie true'

Gautam Bhatia

On January 7, Delhi police opposed the bail pleas of activists Umar Khalid, Sharjeel Imam and others, who are accused in the 2020 north-east Delhi riots case. These activists have been jailed under the Unlawful Activities (Prevention) Act (UAPA), 1967. In this article, dated August 7, 2022, Gautam Bhatia talks about how the UAPA brings in elements of a trial into a bail hearing.

In March 24, a Sessions Court in Delhi denied bail to Umar Khalid as part of a set of cases that have commonly come to be known as "the Delhi riots cases". The case of the police was that Mr. Khalid was one of the conspirators behind the February 2020 violence in Delhi, which had claimed more than 50 lives. For this, Mr. Khalid, along with many others, was charge-sheeted under the Unlawful Activities (Prevention) Act (UAPA), 1967, and jailed pending trial. Mr. Khalid has been in jail for over 500 days. The trial has not yet begun.

Much has been written about the serious problems with the manner in which the Delhi Police has conducted its investigation, and prosecution of the Delhi riots; in particular, its selective targeting of activists who were involved with the protests against the Citizenship (Amendment) Act of 2019, which was the alleged trigger for the violence, while refraining from prosecuting individuals who are on record delivering incendiary speeches. The denial of bail to Mr. Khalid highlights an equally serious problem: the broken nature of India's criminal justice system.

Bail hearing becomes trial

First, consider these facts. Mr. Khalid's bail application was filed in July 2021. The order denying bail was passed eight months later, after multiple hours-long hearings, multiple adjournments, and three deferrals of the order itself. It is important to ask why an application for bail took so many hearings and eight months to decide: in criminal law, the purpose of bail is to ensure that an individual is not unjustly denied their liberty while the trial against them is still proceeding and their guilt has not yet been established. As such, in normal circumstances, courts are supposed to consider whether an accused is a flight risk, or is likely to tamper with evidence or intimidate witnesses. If neither of those dangers exist, there is no purpose in denying an individual their freedom before their guilt has been established in a court. This, in other words, is the real meaning of the hoary phrase 'innocent until proven guilty'.

This is where the notorious UAPA comes in. Shorn of legalese, the UAPA prohibits a judge from granting an individual bail if, on a perusal of the police diary or the police report, the judge is of the opinion that there are "reasonable grounds for believing that the accusation is ... prima facie true." The effect of this, as the criminal legal scholar Abhinav Sekhri has pointed out, is that the UAPA introduces elements of the criminal trial into the question of bail. There are traces of this in the Indian Penal Code as well, for bail under serious

non-UAPA offences. This hints at a larger problem with the criminal justice system, of which the UAPA is only the starkest example. Questions of guilt or innocence are meant to be determined at the end of a trial, after evidence has been sifted, witnesses examined and cross-examined, and arguments completed. The question of guilt or innocence at the stage of bail short-circuits that essential procedure.

But that is not the only problem with turning bail hearings into mini-trials. The problem is also that this mini-trial – to borrow a colourful phrase from the U.S. Supreme Court – licenses "one side ... to

fight freestyle, while requiring the other to follow the Marquis of Queensberry Rules (i.e., the rules of professional boxing)". What the judge has before them is entirely one side of the case: the police version. In a trial, the defence would be entitled to cross-examine the prosecution's witnesses, determine inconsistencies in their testimony, examine its own witnesses, present its own evidence, and otherwise demonstrate that the case against the accused has not been made out beyond reasonable doubt. In a bail hearing, the defence can do none of that. The starting

point of the bail hearing is the presumption that everything in the police report is true. Based on that presumption, all the two sides can then argue about whether according to these "facts", the legal ingredients of the offence are fulfilled – or, in some rare cases, about whether the facts themselves are self-contradictory or flat-out implausible, so that no reliance can be placed on them even at the stage of bail. To use an analogy, it is like holding a debate between two sides, stopping it after one side finishes, allowing the other side to pose two or three questions but not say anything more, and then deciding whether the motion passes or falls.

Such a system might possibly be defensible in a situation where criminal justice was swift, efficient, and trustworthy. If, for example, criminal trials habitually concluded within six months, it might just be possible to argue that in terrorism cases, six months of pretrial incarceration is a painful but proportionate price to pay (in my opinion, it is still unjustifiable, but there is at least a case to be made). However, that is not the case in India: a UAPA trial takes years – often more than 10 years. In such a situation, the court's decision on bail, de facto, becomes the decision on the case: the denial of bail means that a person is likely to spend a decade or more behind bars, as the trial winds on. And given the UAPA's abysmally low conviction rates, the trial will likely end in acquittal.

This, thus, explains why bail hearings take so long, and are so convoluted (although there is still little excuse for the eight-month-long process in Mr. Khalid's case). Both the defence and the prosecution know that the outcome of the bail hearing is, for all practical effects, the outcome of the case itself. The result of the denial of bail is, functionally, the same as the result of a finding of guilt: a decade-plus in jail. But, as we have seen, while the denial of bail is effectively a finding of guilt, it has none of the safeguards that the criminal law puts into place before an actual finding of guilt. The accused is first gagged from contesting the police's version and is then condemned for not being able to disprove the police's case.

Rank injustice

In a notorious judgment in *National Investigation Agency v. Zahoor Ahmad Shah Watali* (2019), the Supreme Court made a bad situation even worse by forbidding the lower courts from scrutinising in depth even the police case. This leads to absurd situations like Mr. Khalid's bail order.

A reading of the bail order shows that the court reproduces various allegations against Mr. Khalid – some of them hearsay, and therefore inadmissible during the trial, and some extremely implausible; dismisses the defence's challenges to them without any engagement; and then denies bail. Lawyers and legal scholars may disagree over whether the UAPA actually requires the courts to become stenographers for the prosecution, even under existing legal doctrine. The point, however, is that for all the reasons we have discussed above, the result is rank injustice.

Reforming the criminal justice system is the task of many years. In the immediate future, however, it is at least possible to curtail the manner in which the UAPA plays havoc with the lives of so many individuals.

Striking down or reading down its bail prohibitions and subjecting the police case to stricter scrutiny during bail hearings would be a start. It remains to be seen whether the judiciary has the will and the inclination to do so.

Gautam Bhatia is a Delhi-based lawyer.



GETTY IMAGES

Why is deciphering the Indus script important?

Why has Tamil Nadu Chief Minister M.K. Stalin announced a \$1-million prize to anyone who deciphers the scripts of the Indus Valley Civilisation? Has any work in recent times pointed to the possible cultural contact between the Indus Valley and south India?

EXPLAINER

T. Ramakrishnan

The story so far:

In January 5, Tamil Nadu Chief Minister M.K. Stalin announced a \$1-million prize for experts or organisations in the event of their success in deciphering the scripts of the Indus Valley Civilisation (IVC). He made the announcement at the inauguration of an international conference to mark the centenary of the IVC discovery, which was disclosed through an article published in September 1924 by the then Director-General of the Archaeological Survey of India (AS) John Marshall. That the Chief Minister of a southern State in the country had made such an announcement was due to the possible Dravidian connection with the IVC. Notwithstanding the political dimension of the Dravidian concept, historians, archaeologists and linguistic scholars have been debating over the Dravidian hypothesis ever since the publication of Marshall's article.

How do scholars define the Indus Valley Civilisation (IVC)?

The IVC, also called the Harappan Civilisation, spanned 2,000 sites across 1.5 million sq. km. in the territories of modern-day India, Pakistan, and Afghanistan during the Bronze Age (3000-1500 BCE). It had a wider geographical area than the combined areas of its contemporary civilisations – Egyptian and Mesopotamian. Talking of the IVC's importance, Pakistan's veteran archaeologist Ahmad Hasan Dani, in the December 1973 issue of *UNESCO Courier*, observed that the Valley lies across "ancient migration routes from central and western Asia to India." The IVC introduced urban life for the first time in the valley when similar civilisations had developed on the banks of the Nile and the Tigris-Euphrates valleys.

Why is deciphering the Indus script important?

Other scripts encountered in the contemporary Mesopotamian and Egyptian civilisations had been deciphered in a more satisfying manner. But, the non-decipherment of the Indus script prevents scholars from providing a complete picture of Harappan culture, which is why scholars tend to call it a "mystery script."

What is the Dravidian hypothesis?

The Indus script carries proto-Dravidian references – this is the position of scholars including Sundri Kumar Chatterji, Father Heras, Yri Valentinovich Knorozov, Walter Fairservis, Iravatham Mahadevan, Kamli Zvelebil, Krishnamurti and Asko Parpola – which can be found in the latest study on Indus signs and graffiti marks of Tamil Nadu.

The IVC "is non-Aryan and pre-Aryan," argued Mahadevan in his article published in *The Hindu* on May 3, 2009. Attributing "solid archaeological and linguistic evidence," the scholar, who passed away in 2016, emphasised that "the Indus script is a writing system encoding the language of the region (most probably Dravidian)." Ruling out Aryan authorship of the civilisation, he hastened to add that this did not automatically make it Dravidian. Yet, "there is substantial linguistic evidence favouring the Dravidian theory: the survival of Brahmi, a Dravidian language in the Indus region; the presence of Dravidian



Decoding language: Seals with the script of the Indus Valley Civilisation. WIKIMEDIA COMMONS



Buried secrets: Different structures are exposed in a trench at Rakhigarhi, a Harappan site in Haryana, in 2022. SHY KUMAR PUSHPAKAR

loanwords in the Rigveda; the substratum influence of Dravidian on the Prakrit dialects; and computer analysis of the Indus texts revealing that the language had only suffixes (like Dravidian), and no prefixes (as in Indo-Aryan) or infixes (as in Munda)," Mahadevan wrote. As the Dravidian models of decipherment had still little in common except certain basic features, "it is obvious that much more work remains to be done before a generally acceptable solution emerges," according to him.

What does the latest work have to offer?

Commissioned by the Tamil Nadu government's State Department of Archaeology (TNSDA), the study, which is morphological in nature, reveals that nearly 90% of the graffiti marks found during excavations at archaeological sites in the State have parallels to those found in the Indus Valley Civilisation. "...the exact shapes and their variants found both independently and in composite forms vividly indicate that they were not accidental. It is believed that the Indus script or signs would have not disappeared without any trace(s), rather they would have transformed or evolved into different forms," concludes K. Rajan, formerly professor with Pondicherry University and academic research advisor to the TNSDA, and R. Sivamatham, joint director in the department, who carried out the study.

Defining the terms "graffiti" and "script," the duo, in a monograph, explain that all the recognisable scratches engraved on the ceramics in south India and, to some extent, on Indus ceramics

are identified as graffiti. The ones engraved on seals and other metal objects of the IVC are designated as script. Even though both were written by the same people, they were differentiated and documented as script and graffiti. "However, the extensive comparative study of graffiti marks and Indus scripts evidently suggests that both are undeciphered signs," the two scholars observe.

Which project has preceded the work?

The findings of a two-year-long project of the TNSDA, called 'Documentation and Digitisation of Graffiti and Tamili (Tamil-Brahmi) Inscribed Potsherds of Tamil Nadu', have formed the basis of the monograph.

Aimed at documenting, compiling and analysing the graffiti bearing potsherds and Tamili inscribed potsherds unearthed in archaeological excavations of the State, the project, launched during 2022-23, seeks to compare those graffiti marks with the Indus script to explore whether any cultural relationship existed between the two.

The datasets from the project suggested that 15,844 graffiti-bearing potsherds were reported from 140 sites in the State and nearly 14,165 sherds were documented. Of them, nearly 2,107 signs had been morphologically categorised within a group of 42 base signs, 544 variants and 1,521 composites. Any additional strokes added to the base signs were considered variants of the base signs while a group of signs containing more than one base sign was regarded as a composite sign. "Several signs

encountered in Tamil Nadu had exact parallels in the Indus scripts. Likewise, some signs had near parallels. These signs probably evolved from the base signs. Out of 42 base signs and their variants, nearly 60% of them found their parallels in the Indus script," the document explains.

How has the question of cultural contact between the IVC and south India been explored by the work?

The monograph talks of a "possibility of cultural exchanges." Even though the occurrences of identical graffiti marks in south India suggest a kind of cultural contact, one needs more material evidence and tangible data to support or strengthen the view.

The recent chronometric dates indicate that when the Indus Valley experienced the Copper Age, south India experienced the Iron Age. "In this sense, the Iron Age of South (sic) India and the Copper Age of Indus are contemporary." If that is so, there is a "possibility of cultural exchanges either through direct or intermediate zones," the authors of the monograph point out.

The document goes on to state that the occurrence of a large number of carnelian and agate beads and high-tin bronze objects, particularly from Iron Age graves, give a clue about the contact, as carnelian, agate, copper and tin have to come from the north or elsewhere. Besides semiprecious stones and copper, a few more cultural items are required to prove the existence of contact "convincingly," the authors state, calling for future explorations, excavations, scientific investigations and historical linguistic analysis.

THE GIST

The IVC, also called the Harappan Civilisation, spanned 2,000 sites across 1.5 million sq. km. in the territories of modern-day India, Pakistan, and Afghanistan during the Bronze Age (3000-1500 BCE). It had a wider geographical area than the combined areas of its contemporary civilisations – Egyptian and Mesopotamian.

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The Centre's share in States' revenue has surged in the last decade

The falling efficiency of States in collecting more taxes has deepened their dependency on the Centre

DATA POINT

Samreen Wani

Over the last decade, States have been relying more and more on transfers and grants from the Centre.

In the last decade (FY16 to FY25), 23-30% of the total revenue of States was collected from the Centre as transfers. However, in the 2000s and the first half of 2010, the share was 20-24%. Also, close to 65-70% of the non-tax revenue of States was collected from the Centre as grants in the last decade compared to the 2000s and the first half of the 2010s when the share was lower at 55-65%.

States have also not done enough to efficiently collect taxes to increase their own tax revenue. In addition, revenue from non-tax revenue, other than Central grants, has been diminishing.

The combination of these factors has meant that the dependency of States on Central funds has risen in recent years.

Chart 1 shows the share of States' own tax revenue, non-tax revenue, and Central transfers in their total revenue. For over a decade now, States' own tax revenue as a share of their total revenue has remained considerably below the 50% mark, while in the 2000s and in the early 2010s, it had crossed the 50% mark for many years. Own tax revenue of States includes money raised through stamp duty, registration fees, motor vehicle tax, and other taxes, along with the State component in Goods and Services Tax (GST), or State GST (SGST).

Moreover, the share of non-tax revenue in States' total revenue is likely to go below the 24% mark in FY25 for the first time in the past 25 years. Non-tax revenue of States includes grants from the Centre, earnings from social, fiscal, economic, and general services rendered by the States, interest receipts, and dividends/profits from

State public sector enterprises.

While the share of own tax revenue and non-tax revenue of States has reduced, the share of transfers from the Centre has increased (23-30% in the last decade compared to 20-24% in the 15 years before that). This is depicted in Chart 1.

Kausik K. Bhadra, PFM consultant, UNICEF, says, "While expenditure responsibilities have been rapidly spiralling, the nearly stagnant own tax revenue mobilisation impedes the States' counter-cyclical expansionary fiscal measures in a sustained manner to boost aggregate demand in the economy."

Mr. Bhadra adds that the share of own tax revenue in States' total revenue is largely driven by SGST. While SGST accounted for 15% of the States' total revenue in FY18, it currently makes up about 22%. This is shown in Chart 2. Consequently, the share of own tax revenue, without the contribution from SGST, has declined from 34% to 28%.

This means that not only is the share of States' own tax revenue consistently below the 50% mark, but also an increasing share of it is derived from SGST. It is important to note that the SGST is earned based on rates set by the GST Council and these rates have remained a bone of contention. In the past, Finance Ministers of many Opposition-ruled States including Tamil Nadu, Kerala, and West Bengal have spoken out against the Council's decisions.

Chart 3 shows a detailed split of States' non-tax revenue. It depicts the share of grants from the Centre, earnings from services, interest receipts, and dividends/profits from State public sector enterprises in the States' non-tax revenue. Interest receipts have not exceeded 5% of non-tax revenues in the last decade compared to the 2000s and first half of 2010 when it formed 5-9% of non-tax revenue. Moreover, the share of dividends and profits garnered from State public sector enterprises has remained under 1%.

Earnings from services rendered, such as public health (social service) and power (economic service), did not cross the 30% mark in the last decade. It is only estimated to cross the mark in FY25. Compare this to the 2000s and first half of 2010 when it crossed the mark for many years.

While the share of interest receipts and earnings from services has come down, the share of grants from the Centre has increased (65-70% in the last decade compared to 55-60% in the 15 years before that). This is shown in Chart 3.

Charts 1, 2 and 3 when read together show that the Centre is playing a major role in the revenue earned by the States. However, it is also true that many States are not efficiently collecting taxes using avenues at their disposal.

Table 4 shows the ratio of select States' own tax revenue to its GDP. The trend shows a marked decline in this ratio in six States in particular.

For Tamil Nadu, the own tax revenue to GDP ratio has gradually declined from 7.72% in FY13-15 to 6.17% in FY 22-24. This has also been the case in Karnataka, Kerala, Bihar, Delhi, and Madhya Pradesh, too. While the ratio has risen in Maharashtra, Manipur, Meghalaya, Odisha, and Uttarakhand, it has remained stagnant in other States.

"Various States have undertaken a number of measures to improve tax collection from stamp duty, registration fees, and motor vehicle tax. This could likely be considered inadequate and sporadic efforts since these two taxes lack a high degree of technical efficiency according to a number of studies," Mr. Bhadra says.

He adds that "the own tax revenue mobilisation efforts at the State level seems to be falling short of upholding the redistributive macroeconomic implications of tax policies."

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Diminishing States' own revenues

The data for the charts were taken from the RBI's State Finances Report. It also includes The Hindu's calculations

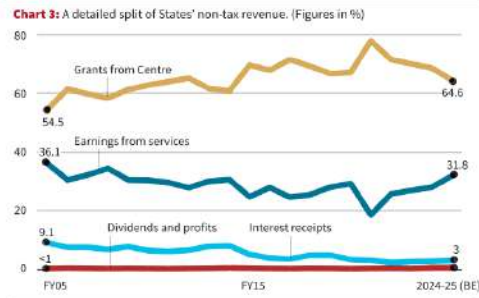
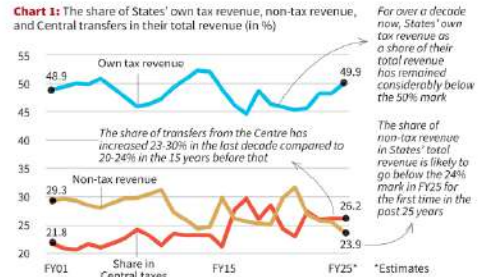


Table 4: Shows the ratio of select States' own tax revenue to their GDP (in %). FY17, FY21 and FY24 are revised estimates. FY25 is budget estimates

| State | FY13-15 | FY16-18 | FY19-21 | FY22-24 |
|----------------|---------|---------|---------|---------|
| Tamil Nadu | 7.72% | 6.67% | 6.20% | 6.17% |
| Karnataka | 7.69% | 6.94% | 6.27% | 6.29% |
| Bihar | 6.04% | 6.25% | 5.44% | 5.75% |
| Delhi | 5.71% | 5.26% | 4.51% | 4.75% |
| Kerala | 7.00% | 6.81% | 6.28% | 6.70% |
| Madhya Pradesh | 7.74% | 7.01% | 6.01% | 6.11% |

Cripple and scuttle

Governments are discouraging the exercise of the right to information

Nearly two decades after the passage of the Right to Information Act, it is quite apparent that governments, at least sections of it, are uncomfortable with the idea of transparency and empowerment associated with it. Amendments to dilute its efficacy and attempts to defeat it by delaying or denying information have been quite common for years. Another way to scuttle the law is to cripple the functioning of information commissions at the central and State levels. The issue has surfaced again, with the Supreme Court of India questioning the large number of vacancies in the central and some State Information Commissions. These commissions hear appeals from members of the public who have been denied access to information or have failed to elicit a response from designated information officers in various departments and institutions. A Division Bench has taken note of the fact that there are eight vacancies in the posts of Information Commissioners in the Central Information Commission (CIC), while 23,000 appeals are pending before it. In fact, some State-level Information Commissions are almost defunct for want of members to hear the public. Any court is bound to ask, as the Court has now done, how an institution can be of any use if it does not have persons to perform the required duties under the law.

The Court has sought to impart some urgency to the matter by directing the Department of Personnel and Training to spell out in two weeks the timelines for completing the selection process and notifying the appointments of the eight Information Commissioners in the CIC. It has also asked for details about the search committee and the list of applicants for the posts. Similarly, States that have initiated the appointment process but without any definite timeline have been asked to complete the process within a specified time. However, this may not be enough to bring about a revival in the fulfilment of the original purpose of the Act. Besides filling up vacancies, not all governments have complied with a Court verdict of 2019 that called for proactive efforts to fill up vacancies in time by advertising them early. The CIC's post was stripped of its autonomy some years ago when the government removed the fixed five-year tenure and made it open-ended. Not much has been done to appoint candidates from various walks of life, as retired civil servants continue to be chosen, a point noted by the Bench in the latest hearing. It is inevitable that a large number of vacancies will result in a huge backlog and ultimately discourage the people from seeking information. It is difficult not to conclude that this is what those in power want.



The right to food and the struggle with the PDS

In 2023, there was a report discussing the right to food in the context of Jharkhand. Similarly, a few days ago, there was another report that was in the context of Odisha. These reports highlighted something alarming – that a substantial number of households have been removed from the rolls of the Public Distribution System (PDS). This disturbing situation is not limited to Jharkhand and Odisha. Bihar, another State in the east-central region, has its own PDS tragedy.

The example of the Musahar community Bihar was blighted by a supply crisis, when rations were needed the most, at the time of the COVID-19 pandemic. Since then, there are communities which continue to be in want of a stable supply of ration. This is more notable among extremely marginalised communities such as the Musahars. This is a community that has been pushed beyond the edge of destitution by the socio-politics of caste. Its struggle with the PDS emerges as a significant symptom of the same.

A number of Musahar households in Patna district do not have an active ration card. Even if they do have one, there is another problem – the card does not have the names of all the family members.

There are also several people who have lost access to their monthly supply of ration ever since biometric verification was made mandatory at fair price shops (FPS). In such cases, the individuals concerned are forced to get a new ration card as after verification it emerges that their names have been struck off the PDS rolls. The ruling dispensation and its over the top marketing of 'smart cities' clearly posits before us the disconnect between the government and the people most in need of state welfare.



Ananye Krishna

Field Researcher at the DEVISE Charitable Trust



Shailendra Kumar

Field Researcher at the DEVISE Charitable Trust

Bureaucratic hurdles are a reason why a substantial number of households have found themselves removed from PDS rolls in parts of north, central and east India

Problems with the PDS are not limited to enrolment and access. There is also the flow of corruption through the veins of the system. Households enrolled with the PDS have reported that FPS dealers have been releasing only four kilograms of food grain/person when a below poverty line (BPL) household which has a Priority Household (PHH) ration card is entitled to five kilograms a person. The four kilograms of grain being issued is rice, which is the lowest quality of 'Usna' rice. No amount of wheat is issued.

Documentation that has no legal basis

Coming back to the issue of enrolment in PDS. The Government of Bihar offers its citizens the option to file a ration card application using a paper-based application form or by filling in an online application form through its e-PDS portal. The first option requires the Aadhaar details of the applicant and their family members. The second option requires an extra set of documents, namely caste certificate, income certificate, and residence certificate. Even when the applicant uses the first method, the officials eventually demand these certificates.

The demand for such documents is not exclusive to Bihar. Jharkhand also makes such a demand while Uttar Pradesh makes it mandatory to provide an income certificate, and Madhya Pradesh requires the submission of proof of residence.

The requirements of these certificates do not have any legal basis. Neither the National Food Security Act (NFSA) of 2013 nor the PDS control order of 2015 explicate the requirement of such documents. An officer from the Food and Consumer Protection Department in Bihar has confirmed that the requirement of those certificates is an oversight in the online system. Here again we see that in the race towards

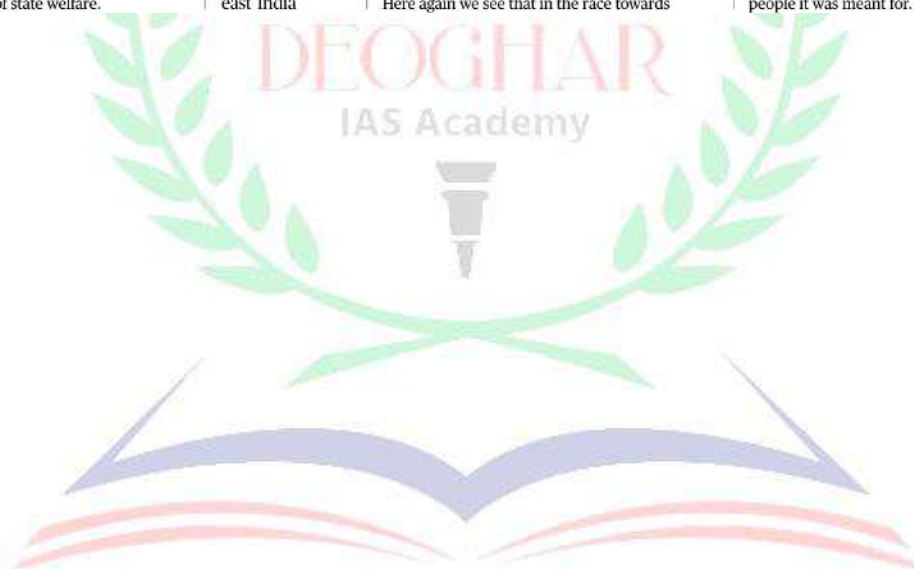
digitisation and e-governance, governments have shed all and any conception of governance and citizen welfare.

The issue of exploitation

It is notable, and most unfortunate, that the government, which has complete awareness of its systemic flaws, has made no attempt at systemic change and that people continue to be crushed under the weight of official indifference. To make matters worse, this hubris of power has provided the perfect conditions for the creation of a market of exploitation.

Most of the people, especially in the Musahar community, who seek to avail the benefits of PDS, neither have the resources nor the knowledge to interact with online processes. This situation has been aggressively exploited by middlemen who charge a sum that is north of ₹3,000 to have a ration card made. Within this market of exploitation, it is not uncommon to hear that neither document was issued nor the middleman traceable after payment.

Amidst the myriad challenges, if the people are somehow able to file their application, there is still no guarantee that they will get their ration card. While the 2015 order states that ration card should be issued within 30 days of the application being filled, there are cases of people whose applications have been pending for long – between four to 18 months. These applications are not for an entitlement which goes above and beyond the diurnal needs of a person. They are for the basic means of subsistence. It has been 24 years since the right to food was recognised as a fundamental right in the case, *People's Union of Civil Liberties vs Union of India*. Since then, governments have wound bureaucratic red tape around it so tightly that it is choking the very people it was meant for.



Growth chill

The economy's sputtering engines
necessitate urgent fiscal actions

The National Statistics Office (NSO) has confirmed emerging fears about the economy's evidently sluggish trajectory through this year in its first Gross Domestic Product (GDP) estimates for 2024-25. While the election-focused first quarter hit public capital spending, the second quarter (Q2) was marred by weak demand and still underwhelming public capex, dragging GDP growth to a seven-quarter low of 5.4%. The Centre and the Reserve Bank of India (RBI), which were projecting that India would log a fourth year of 7%-plus growth, had pared their hopes to 'about 6.5%' and 6.6%, respectively. This was predicated on a bump-up of about 7% in the second half of the year to offset the first half's 6% rise. The NSO, slightly less sanguine, expects GDP to grow at a four-year low pace of 6.4%, from 8.2% in 2023-24, with just agriculture seen rising significantly faster than last year. Manufacturing and mining growth may virtually halve, and though services sectors seem relatively better off, there is some concern of momentum loss. Purchasing Managers' Indices averaged lower than Q2 through Q3, for both manufacturing and services. The NSO expects private consumption to rebound 7.3% this year from just 4% last year. But Q3 trends do not indicate a significant lift-off in urban demand. So, this could be a tad optimistic despite inflation easing slightly since October.

The Finance Ministry has sought to link the demand slowdown to a "combination of monetary policy stance and macroprudential measures by the central bank". Slow wage growth has also been blamed for cramped household demand. The NSO's projection of gross fixed capital formation growth slipping to 6.4% this year from 9% in 2023-24 indicates that private capex – that is contingent on domestic and global demand – remains weak while public capex goals are unlikely to be met. Of course, these early NSO projections are largely conjured up for informing the Union Budget formulation, and some upgrades may happen later, but most economists see significant downside risks for now. Nomura economists, for instance, who have been arguing that India is in the grip of a cyclical slowdown for a while, reckon growth will end up around 6%, implying a flat-lined second half. With the global outlook also shrouded in uncertainty, winter seems to be here for India's economy. How far behind spring lags will depend on policymakers' actions, and inactions. The Union Budget 2025-26 needs to move from incremental tinkering to tailoring reforms and fiscal actions that can bring India's growth back to the 7% mark, if not 8%, at the earliest. If that entails some hard calls such as slashing income, fuel and consumption taxes, along with import tariffs, so be it. Just pinning for interest rate cuts will not suffice anymore.



River interlinking, the fount of environmental disaster

On December 25, 2024, Prime Minister Narendra Modi laid the foundation stone for the Ken-Betwa River Link Project, which aims to solve the water scarcity in the Bundelkhand region that covers parts of Uttar Pradesh and Madhya Pradesh. The project also includes the construction of a dam located within the Panna Tiger Reserve, raising concerns about its submergence. Upon completion, this project will link the supposed water surplus Ken river with the Betwa in drought-stricken Bundelkhand – an area that had 58% forest cover in 1938.

A misplaced model

This project, which costs around ₹45,000 crore, was launched despite the objections raised by experts, including members of an empowered committee appointed by the Supreme Court of India, and by circumventing the law that has strict terms for allowing hydroelectric power projects. Models of grandiose technological fixes as the solution to all water-related problems have gathered momentum. Politicians are now touting the concept of river interlinking for inter-basin water transfers as a geoengineering solution to continued water depletion in India.

The concept of inter-basin transfer was proposed 130 years ago by Sir Arthur Cotton, who designed irrigation dams in the Godavari and Krishna river valleys. M. Visvesvaraya, an early icon among Indian engineers, further refined this idea. K.L. Rao and Captain Dinshaw J. Dastur subsequently expanded the scope of this concept in 1970 and 1980. Initially termed the 'National Water Grid', this concept re-emerged as the 'River-Interlinking Project' (ILR) from the Ministry of Water Resources to transfer surplus waters from the Ganga and the Brahmaputra to water-deficient regions in central and southern India.

Following this, the National Water Development Agency (NWDA) was established in 1982 to conduct surveys and investigations, and to prepare feasibility reports for links under the National Perspective Plan. The NWDA identified 30 links for feasibility studies, divided into 14 Himalayan and 16 Peninsular river links. These links are anticipated to alleviate the impacts of floods and droughts, boost income in rural areas, and address water distress in agriculture.

The currently estimated cost of ₹5.5 lakh crore does not include the social, environmental and operational costs. Ultimately, all this will end up



C.P. Rajendran

Adjunct Professor at the National Institute of Advanced Studies, Bengaluru, and an author of the book, 'The Rumbling Earth – The Story of Indian Earthquakes'

The political class must note that the lofty idea of interlinking rivers overlooks the huge environmental costs and the eventual deaths of rivers and deltaic regions

as taxes on the common man. This lofty idea of interlinking the rivers, to connect surplus rivers of the country with the deficient rivers is fundamentally flawed as it overlooks the huge environmental costs and the eventual deaths of the rivers and deltaic regions.

The uncontrolled human-induced disequilibrium in natural hydrographic systems will destroy associated ecological niches with incalculable repercussions for the long-term well-being of society – an unpardonable disservice to future generations. We may also have to factor in the consequences of climate change impacting rainfall and river flow, which will aggravate the situation. It is unclear how the nation's declared commitment to mitigating human-induced climate change and river manipulation go hand in hand.

The eco-services of rivers

Policy makers ignore the point that there is no "free" surplus water in any river and simple elementary arithmetic rationalisations such as tapping the 'water lost to sea' do not consider the eco-hydrological dimensions of the issue. The supporters of these projects and the politicians do not understand or deliberately ignore viewing the river as a part of the drainage basin with constitutive ecological niches, which includes its final destination of deltaic plains, interfacing with the sea.

The eco-services of the free-flowing rivers include the flushing of silt from riverbeds to the coastal waters to form deltas. Flood water is not to be rationalised as 'surplus'. It needs to be seen as the carrier of minerals for land fertility, groundwater recharge and sustenance of biodiversity, which finally helps the livelihood of millions of marginalised people.

By diverting river water, deltaic regions are starved of water that could have helped balance saltwater from the sea. Now, however, the deltaic ecosystem will suffer from the change. The Indus Delta offers a crucial lesson. Alice Albinia, in her book, *Empires of the Indus: The Story of a River* (2008), narrates how a delta system at the mouth of the Indus – which was once "the richest in all Pakistan" – became impoverished when the British started barrage construction, which Pakistan continued after 1947.

Such examples are aplenty in India as well. The state of the downstream parts of the Narmada since the completion of the Sardar Sarovar dam is a modern example in the making.

The global examples of river channelisation have also proved to be major disasters. The channelisation of the Kissimmee river in the State of Florida, authorised by the U.S. Congress in 1954 to mitigate flooding, is an environmental disaster, resulting in the loss of wetlands. Massive resources are being spent to revive its original configuration. The current state of the Aral Sea – one of the world's largest lakes – is another example of how geoengineering projects destroy natural systems. The lake has now become a howling desert after the rivers that sustained it were diverted by irrigation projects implemented during the heady days of the Soviet Union.

The real reasons for India's water crisis

India's water crisis is spiralling out of control, primarily due to inadequate water management, poor environmental practices, law ambiguity, and corruption. A national water policy should embrace a holistic approach to watershed management, involving local citizens in monitoring the hydrological cycle and working alongside hydrologists, engineers, and biologists. The policy must incorporate effective aquifer management through the regulation of water usage. Farmers should be engaged to help devise strategies for efficient irrigation water usage. The government has limited control over wastewater management and should create innovative reuse programmes. A comprehensive study involving interdisciplinary expertise on river basins is essential before initiating significant water transfer projects.

In the book, *Let There Be Water: Israel's Solution for a Water-Starved World*, Seth M. Siegel notes that Israel's drip irrigation programmes save 25%-75% of pumped water. Israel's success story in water resource management lies in modernising irrigation techniques. This also compels farmers to use less water, fertilisers and pesticides, maintaining aquifer health at an optimum level. Along with such interventions, we must incorporate elements of vernacular practices in watershed management strategies.

Despite the current ruling regime's emphasis on 'Hindutva' and embedded Hindu belief system that extols the deityship of Indian rivers, the river interlinking project stands out as a stark contrast to such an ideology. Manipulated by dams that are in excess, mauled by human and industrial waste, and commodified for religious marketing, India's rivers are under existential threat. Who will save them?



Female birds ‘can’t reproduce without male sex hormones’

Male and female chickens lacking the androgen receptor showed differences in various aspects. These aspects were hormone-dependent. Surprisingly, certain male traits, for example the length of tail feathers and of spurs, remained unaffected by the genetic modification

Madhurima Pattanayak

The androgen sex hormones are responsible for male sexual development while oestrogen and progesterone essay the same roles in females. But new research by a team at the Max Planck Institute of Biological Intelligence and Technical University, Munich, could force scientists to redraw these boundaries. The team has reported that androgen receptors are as important for sexual development and fertility in females as in males.

Specifically, the researchers found that both male and female chickens devoid of androgen receptors turned out to be infertile. But the males still developed testicles and the females ovaries, and produced gonadal hormones. The testicles and ovaries were smaller than in chickens that retained their androgen receptors.

Additionally, female chickens that lacked the receptors failed to develop and lay eggs. And while a few sex-specific peculiarities like tail feathers, spurs, and differences in body size and weight persisted in both sexes, their sexual behaviours failed to develop. Their eye rings remained unpigmented as well.

“For years, one of the key players in avian sexual development has been reported to be testosterone, a steroid hormone belonging to the class of hormones called androgens, commonly thought of as only a male hormone,” Mekhla Rudra, a scientist at the Max Planck Institute of Biological Intelligence and a coauthor of the study, said. “One of the key insights this study provides is that testosterone action via androgen signalling is critical in both male and female birds.”

“The study illustrates that androgen receptors directly influenced diverse tissues leading to sex-specific phenotypes. In females, too, the effects of androgens are to promote the development of head ornaments and normal ovarian follicle,” Peter O’Shaughnessy, a scientist at the University of Glasgow who wasn’t involved in the study, said.

Androgen hormones are known to decrease body weight in chickens. Male chickens in commercial settings are thus castrated to prevent androgen secretion and thus increase their bodyweight.

In birds, androgen and oestrogen receptors help regulate sexual development by mediating the actions of these hormones. Unlike mammals, avian somatic cells (cells other than sperm and ova) also manifest sexual traits independent of hormonal influences. “These characteristics are independent of hormonal influence,” Rudra said.

The shrinkage that wasn’t

The bursa of Fabricius, a.k.a. the cloacal thymus, is a chestnut-shaped lymphoid organ in birds that develops antibodies and B lymphocytes. This organ is also known to be involved in sexual growth and maturation. When a chicken reaches pubescence – around 15-20 weeks after birth – the bursa of Fabricius shrinks in size.

This bursal involution is an androgen-sensitive characteristic that shows sexual development has begun. In the new study, chickens of both sexes lacking androgen receptors had delayed bursal involution. In some cases, the



In the study, female chickens that lacked androgen receptors failed to develop and lay eggs. Representative image. STEPHEN MERENDORF

shrinkage didn’t even begin.

According to the researchers, the shrinkage could be the result of cells dying in the bursa of Fabricius in response to the activity of the androgen receptors. When the scientists exposed the embryos without the ability to develop androgen receptors to testosterone, bursal involution still didn’t happen. But in embryos that could develop the receptors, the shrinkage happened as well.

Of crows and combs

The bodies of roosters and male chickens have a circadian rhythm, or internal body clock, that sends strong signals for them to crow at dawn. The neural circuit associated with this crowing behaviour is sensitive to the presence of androgen hormones, especially testosterone.

In the study, male chickens without androgen receptors didn’t crow even when they were exposed to testosterone a week after hatching. Their receptor-positive counterparts crowed. The researchers figured that the neural circuits responsible for crowing behaviour couldn’t fully develop in the absence of the receptors. Scientists already know the syringeal motor nucleus in the hindbrain and specific midbrain regions govern crowing patterns in birds.

Likewise, comb development – an important sign of sexual maturation among chickens – didn’t occur in male or female chickens birds without androgen receptors, even after they were exposed to testosterone. Receptor-positive chickens began to develop combs within 13-20 days after exposure to testosterone.

Previous studies have reported the basal layer of the comb epidermis – called the stratum germinativum – is a place where androgen-receptor genes are expressed, suggesting comb development depends on the presence of the receptors. As O’Shaughnessy put it, “The effects

of androgens in both sexes appear to be prominent in the sexually dimorphic regions of the head and gonads”.

In birds unlike in mammals

A 2021 study examined male chickens whose testicles had been replaced with ovaries through genetic modification. These chickens developed their complete sexual ornaments – which shouldn’t have been possible if sexual phenotypic characters were entirely under the influence of the testicular hormones. The study thus challenged the canon that these sexual characteristics in birds are regulated only by testicular hormones. In a 2023 study, scientists showed that when androgen signalling is disrupted in (male or female) humans, the internal and external sex organs, sexual characteristics, and behaviours, couldn’t develop properly.

Androgen and oestrogen hormones play their respective roles once they bind to their corresponding receptors. The dearth or impairment of these receptors eventually disrupts the function of the hormone binding to them.

To understand the function of androgen receptors in avian sexual development, the researchers blocked receptor functions – and thus androgen signalling – by knocking off the genes required to develop the receptors using CRISPR/Cas9.

“The methods used in this study are appropriate and the data are reliable,” O’Shaughnessy said.

Necessary but insufficient

In sum, male chickens devoid of androgen receptors didn’t display an overall female phenotype – and nor did female chickens lacking in androgen receptors develop an all-male phenotype.

A 2018 study in the *Journal of Physiology A* reported that while oestrogen receptors could contribute to sexual development in birds of both

Androgen signalling plays a crucial role in the development, fertility, physiology and appearance of both sexes as well as sex-specific crowing behaviour in males

sexes, oestrogen signalling alone was insufficient for complete sexual maturation.

“The mechanism of testosterone action in the brain is complex,” Rudra said. “Testosterone binds to androgen receptors ... However, in the brain, testosterone is also converted to oestrogen and exerts its role by binding to oestrogen receptors, making the understanding of testosterone-mediated effects quite complicated.”

According to her, the study shows androgen signalling plays a crucial role in the development, fertility, physiology and appearance of both sexes as well as sex-specific crowing behaviour in males.

“The findings in the current study are valid,” O’Shaughnessy said.

Male and female chickens lacking the androgen receptor showed clear differences in various aspects compared to their normal counterparts. These aspects were hormone-dependent. Surprisingly, certain male traits, e.g. the length of tail feathers and of spurs, remained unaffected by the genetic modification.

“These traits are thus controlled by either another hormone system or something entirely different. Thus it appears that the sexual development of birds involves a complex interaction of both hormone-dependent and hormone-independent mechanisms,” Rudra said.

(Madhurima Pattanayak is a freelance science writer and journalist based in Kolkata. madhurima.pattanayak@gmail.com)

India balancing on twin pillars of technology, tradition: Jaishankar

At the Youth Pravasi Bharatiya Divas, External Affairs Minister says the nation's quest is unique because development is based on a democratic framework; he lauded the youth, at home and abroad, for contribution to innovations in every sector

Satvasundar Barik
BHUBANESWAR

India is progressing within a democratic framework, balancing on the twin pillars of technology and tradition, said External Affairs Minister S. Jaishankar at the Youth Pravasi Bharatiya Divas (PBD) in Bhubaneswar on Wednesday.

"We are today well on the way to address long-standing challenges to build a modern, inclusive and progressive society. Our quest is unique because the largest nation in the world is developing in that manner in a democratic framework. The mantra of that journey is to advance, as Prime Minister Narendra Modi says, on the two legs of technology and tradition," Mr. Jaishankar remarked.

The youth of the country can be the defining factor in the pace of that endeavour and the realisation of the goals, he added.

Mr. Modi is scheduled to inaugurate the PBD on Thursday.



External Affairs Minister S. Jaishankar, Sports Minister Mansukh Mandaviya, Odisha CM Mohan Majhi and Minister of State for External Affairs Pabitra Margherita in Bhubaneswar on Wednesday. ANI

Stating that the thought behind holding a Youth PBD was to recognise the special contribution that young minds make, at home and abroad, Mr. Jaishankar said, "At a time when so many key developments in the world are being shaped by this younger generation – whether we talk of AI and EV, innovation or start-ups, space or drones, sports, chess, cricket – there is all the more reason to do so."

"The very country that was predicted to go under ended up supplying vaccines and medicines to the entire world. A different but equally telling example is what we see in the realm of space, where there is a growing competition internationally. Our Chandrayaan-3 landing, the Aditya L1 observatory and the proposed Gaganyaan mission are powerful inspirations," the Union Minister said.

"In a digital era, the scale of UPI transactions speaks volumes, both of our infrastructure and of our mindsets. The new India, with 90,000 start-ups and 100-plus unicorns, has calling cards like Drone Didi, Atal Tinkering Labs, hackathons, green hydrogen mission and nano-fertilizers," he said.

Guest of honour Dev Pragad, a person of Indian origin and chief executive officer of *Newsweek*, narrat-

ed how diligent effort had enabled a turnaround of the American media organisation that he helms.

Odisha in focus

Odisha Chief Minister Mohan Charan Majhi took the opportunity to showcase the State's strength in mineral resources, tourism and human resources.

"While Odisha's past is steeped in history, its present is defined by transformation and progress. Today, Odisha stands as a leader in mining and industries such as steel and aluminium, while also emerging as a hub for sports, IT and skill development," Mr. Majhi said.

At a business session on the sidelines of PBD 2025, Mr. Jaishankar focused on the 3Ts – Trade, Technology, and Tourism – as critical drivers of Odisha's growth.

He lauded the State's rich natural and cultural advantages, which position it as a hub for global trade, a fertile ground for technological innovation, and a premier tourism destination.



'India's digital policies, talent getting global recognition'

The IT Minister says the country is crafting balanced policies on data protection, online fact-checking, children on social media, and AI regulations while insisting that society and law have to walk in tandem; he says U.S.-based tech firms operating in India must comply with our law on data transfer restrictions; now the global IT industry is also looking at us as a potential demand centre, he adds

INTERVIEW

Ashwini Vaishnav

Yarghese K. George
Aroon Deep
NEW DELHI

In the past, global IT firms saw India as a way to save costs, but they are now seeing the country as a leading source of talent and demand, Union Minister of Electronics and Information Technology Ashwini Vaishnav says. He speaks on the Digital Personal Data Protection Rules and AI regulation. Excerpts:

What can we expect in the coming months with the Digital Personal Data Protection (DPDP) Rules in terms of further consultation and implementation?

The consultations so far have been extensive, and people are by and large okay with the provisions. I don't see too many amendments coming in the final notification beyond some

tweaks. We have also worked on the entire digital implementation framework of the DPDP Act, so that the Data Protection Board of India's portal is ready, and implementation will happen in a totally digital way.

We would like to notify it as soon as we can, and of course we'll give a good transition period to the industry to move to a new regime. I think we should see the implementation of this Act starting somewhere in the middle of this year.

In the event that government organisations are in breach of standards in the DPDP Rules, will they also be liable to the same penalties and consequences?

Of course, in this country, we have a system where the law stands the same for everybody. The law is supreme.

How do you respond to concerns on the Data Protection Board of India's autonomy?

The law has been drafted

in a way to ensure the functioning and autonomy of the Board. What will be a big challenge will be getting the right people who understand law, digital technology, the financial implications, societal implications. We are working on awareness programmes.

Why are submissions in the Rules' consultation process not public, as they are in those held by the Telecom Regulatory Authority of India?

You cannot compare TRAI's consultation process with a lawmaking consultation. Lawmaking is a sovereign act enabled by the Constitution. Laws are made in a very structured manner. TRAI consultations are regulations for the industry.

The Rules hint at data transfer restrictions abroad. Does this conflict with other countries' laws, especially for U.S. firms doing business here?

The laws passed by the Parliament of India will be ap-



licable to every entity, from every geography that is providing services here.

On Tuesday, Meta announced that they are moving away from professional fact-checkers to community-led fact-checking. The IT Rules had provisions on fact-checking bodies for general news and news on the government...

This whole point proves that the stand that we had taken was the right one, that the owner or the generator of the information, or the person who is well placed to fact check in a particular sector on a particular subject is the right person to do so. [On legal

challenges to fact-checking requirements.] Let the courts decide. This is a very logical way to proceed, and there is no bias in this entire thought process.

On Monday, a subcommittee under the IndiaAI Mission put out a draft framework for AI governance. What is the government's view on tackling AI regulation?

AI has three major dimensions. First, the power that it brings for solving our very complex problems, which we must harness. Second, the potential harms it can cause. And third, the opportunities it creates for our companies, our youth and startups,

that we should not block. That's why our Principal Scientific Adviser has taken this initiative under the honourable Prime Minister's guidance, to create a holistic plan for the country, to create a good regulatory framework which develops trust, and balances innovation and regulation. We will finalise the draft after getting inputs.

Do you think that innovation and strict rules are necessarily in conflict?

They're not. The reason I say this is because some geographies have actually put so much emphasis on the regulation part that the innovation potential there has reduced, and there are some geographies which do not want any regulation, they simply want 100% innovation. We are actually trying to place ourselves somewhere between the two.

And I think the world is noticing, in informal meetings, people are saying that this is the right template which the world should follow. There is an impact [of big tech and social media]

on institutions which have been built over centuries, and most societies are today worried that the institutions are weakened because of the misinformation and the fake news.

So everywhere, society is looking for the right balance between absolute free speech and the right mix of regulation.

The Rules do not outright ban social media for children, like some countries are doing, but require authentication of parental consent.

Here again, we have taken a very nuanced approach and our approach is that these are things which must evolve, and the society must create a consensus around these subjects. Society and the law have to walk in tandem.

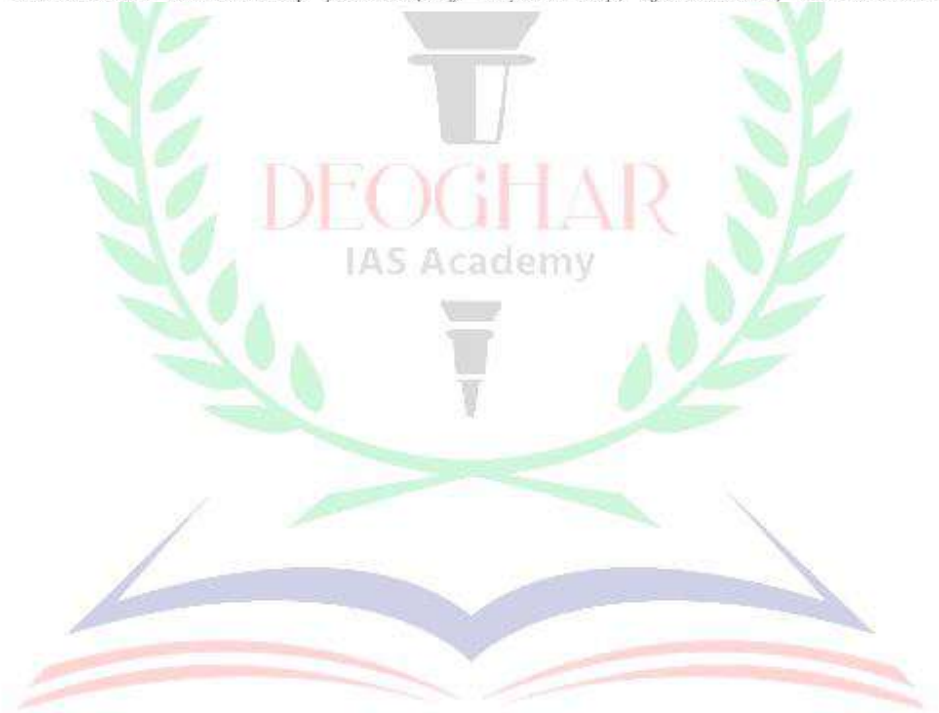
The Digital India Act has been planned to replace the Information Technology Act, 2000. Are we still moving in that direction?

We have to overhaul the

entire digital framework. We began with the two horizontal laws, the Telecommunication Act, 2023 and the DPDP Act, 2023, which cut across all the sectors and have an impact on all sectors. There will be certain verticals which are specific to sectors, and we are working on this whole comprehensive framework.

Microsoft this week announced \$3 billion in India investments, and there were deals announced with the IT Ministry and private firms. What role does the private sector have in our AI ambitions?

All players in the industry have a big role to play in our growth story. We see a very clear trend that the competitiveness of our talent is very well accepted, and so is the certainty of our policies. So now the global IT industry, which was earlier looking at India mostly from a cost and talent arbitrage perspective, is also looking at India as a potential demand centre. (Full interview on newstlive/ashwina)



As ISRO chief, V. Narayanan will have to hit the ground running

The space agency has lined up major projects such as Gaganyaan human spaceflight, Chandrayaan-4 and Bharatiya Antariksha Station; days after he takes over on January 14, the space agency will launch GSVL Mk-II/IRNSS-1 K mission

Tiki Rajwi
THIRUVANANTHAPURAM

V. Narayanan, rocket and spacecraft propulsion expert, will take over as the Chairman of the Indian Space Research Organisation (ISRO) on January 14, with the retirement of the current chief of the space agency, S. Somanath. India's space sector is in a reform mode, and the space agency has lined up major projects such as the Gaganyaan human spaceflight, the Chandrayaan-4 mission and the development of the country's own space station.

Speaking to *The Hindu* on Wednesday, Dr. Narayanan, who has been heading the ISRO's Liquid Propulsion Systems Centre (LPSC) since January 2018, described his upcoming assignment as a "great responsibility" and a "great opportunity to follow in the footsteps of stalwarts who led the ISRO over the decades".

Given the ISRO's busy calendar for 2025, Dr. Narayanan is aware that he has little or no time to get going. "Towards January-end, we have the GSVL Mk-II/IRNSS-1 K mission. We also have lined up the first of the uncrewed flights of the Gaganyaan programme, the G-1 mission, as well as a commercial launch using the LVM3 launch vehicle," he said. "These apart, there are several experiments related to the Gag-



On an upward trajectory: V. Narayanan with a model of the Chandrayaan-3 moon lander. M PERIASAMY

anyaan programme. So you see, we have our hands full."

High-profile programmes on the ISRO's to-do list include the Chandrayaan-4 moon mission, the development of the space station, Bharatiya Antariksha Station, a second mission to Mars, and the maiden Venus Orbiter Mission. While all of these may not happen during Dr. Narayanan's tenure, the space agency has kicked off preparations.

The Appointments Committee of the Union Cabinet has decided that Dr. Narayanan will take over as Secretary, Department of Space, and Chairman, Space Commission, "for a period of two years" from January 14.

Dr. Narayanan, born in

opening it up to private players will play a vital role in this area.

"If you look at societal and strategic applications, today we have about 53 satellites in orbit. We need many more for communication, navigation and earth observation purposes. The ISRO on its own cannot meet this requirement. The reforms will help in this area. We have been giving opportunities to the private sector and the start-up ecosystem," he said.

Dr. Narayanan drew attention to India's plans to expand its share in the global economy from 2% to 10%. "So far, we have not concentrated much on the space economy aspect. We need to have our due share, though. We are targeting 10%," he said.

He reiterated the importance that the ISRO places on collaboration with other space agencies. "In our development stage as a space agency, indeed there was support. Today, all the spacefaring nations truly understand our abilities and strengths. Strength respects strength," he said.

Village upbringing

Dr. Narayanan was born to C. Vanniyaperumal, a farmer, and S. Thangammal, a homemaker, at Melakattuvilai, a village in Kanniyakumari district. He has three brothers and two sisters. Young Narayanan and his siblings studied in a

Tamil-medium school near their home. It was when he was in Class 9 that their home got an electricity connection. He was a Class 10 topper in his school. Dr. Narayanan is married to Kavitharaj N.K. The couple has a daughter, Divyaa, and a son, Kalesh.

He is an alumnus of the Indian Institute of Technology, Kharagpur. He obtained his M.Tech. in cryogenic engineering with a first rank in 1989 and a Ph.D. in aerospace engineering in 2001.

As a rocket propulsion expert, Dr. Narayanan has done important work on major ISRO missions and programmes, including cryogenic technology; the moon (Chandrayaan 1, 2 and 3), Mars (Mangalyaan) and Aditya-L1 (to study the sun) missions; and the upcoming Gaganyaan programme during a career spanning four decades.

On joining the ISRO on February 1, 1984, he initially worked on solid propulsion at the Vikram Sarabhai Space Centre here. In 1989, he moved to the LPSC to work on cryogenic propulsion. "His contributions made India one among six countries in the world to have the complex and high-performance cryogenic propulsion systems and made it self-reliant in this area. He has finalised the Propulsion Road Map of ISRO for the next 20 years [2017-2037]," the LPSC has noted.



Today, all the spacefaring nations truly understand our abilities and strengths. Strength respects strength

V. NARAYANAN
ISRO Chairman designate

to a humble farming family in Kanniyakumari district of Tamil Nadu, brings a wealth of experience to the Chairman's post, having joined the space agency in 1984 and worked in one of its core areas – rocket propulsion.

Dr. Narayanan said increasing India's presence in space tops his list of priorities. He said the space sector reforms set in motion a few years ago by



Tuhin Kanta Pandey

Tuhin Kanta Pandey entrusted with Revenue Department

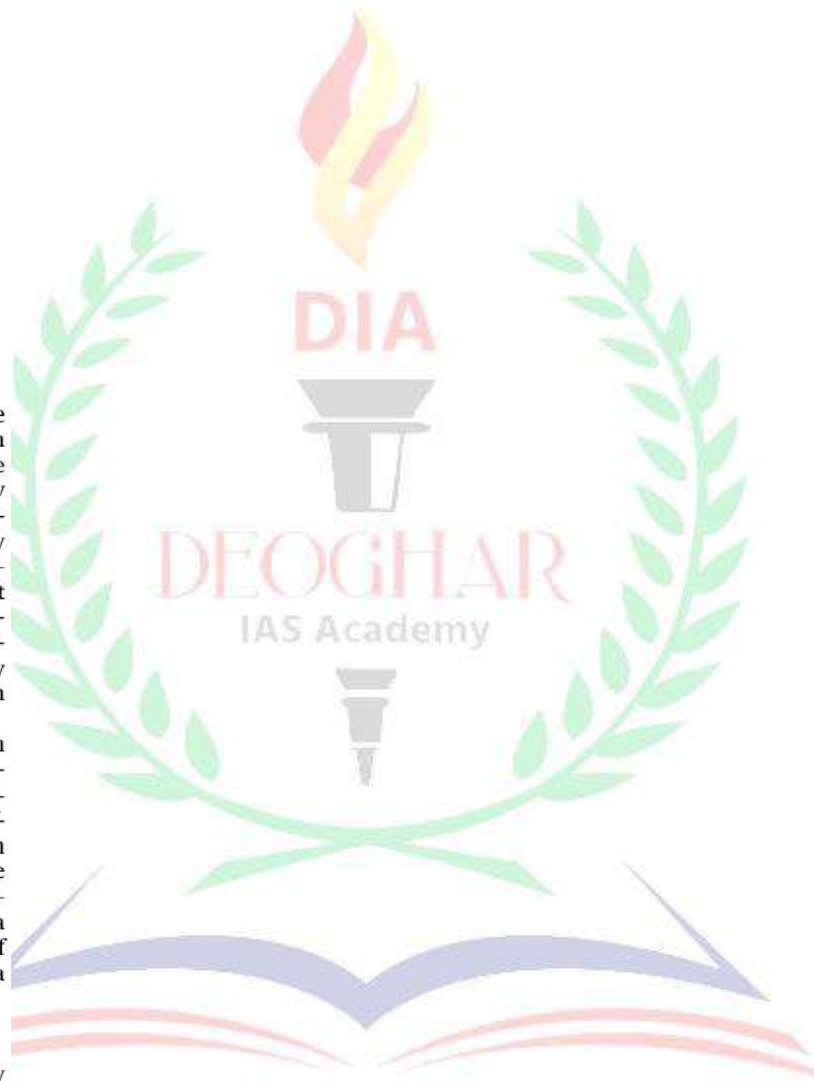
The Hindu Bureau
NEW DELHI

With a little over three weeks to go for the Union Budget on February 1, the Centre on Wednesday shifted the recently appointed Revenue Secretary Arunish Chawla to the Department of Investment and Public Asset Management (DIPAM), and entrusted Finance Secretary Tuhin Kanta Pandey with the Revenue Department.

Mr. Chawla had taken charge as Revenue Secretary on December 26, taking over from Economic Affairs Secretary Ajay Seth who held additional charge of the department since incumbent Sanjay Malhotra was appointed Governor of the Reserve Bank of India last month.

Chawla to steer DIPAM

The Finance Secretary who was also entrusted with steering DIPAM and the Department of Public Enterprises, will now hand over charge of those two departments to Mr. Chawla, who has also been assigned additional charge of Secretary in the Culture Ministry, till a regular incumbent is appointed, the Appointments Committee of the Cabinet decided.



A.P. set to hold 3-day Flamingo Festival

The Hindu Bureau
TIRUPATI

The much-awaited 'Flamingo Festival 2025' is all set to be conducted at Sullurpeta in Tirupati district of Andhra Pradesh from January 18 to 20.

Expectations are high among nature lovers and birdwatchers as the fest was last conducted in 2020. Over 200 varieties of birds are expected to fly to this region during this season. Andhra Pradesh Chief Minister N. Chandrababu Naidu has already informed the district administration to conduct the event on the lines of a State festival.

The three-day event will



Winged visitors: A similar flamingo festival was conducted at Sullurpeta in 2020. NAGARA GOPAL

be spread across five locations including Nelapattu, B.V. Palem, Atakanithippa, Sri City and Sullurpeta. According to Tirupati district Collector S. Venkateswar, a three-day session will be conducted on eco-friendly biodiversity at Sri City, bird

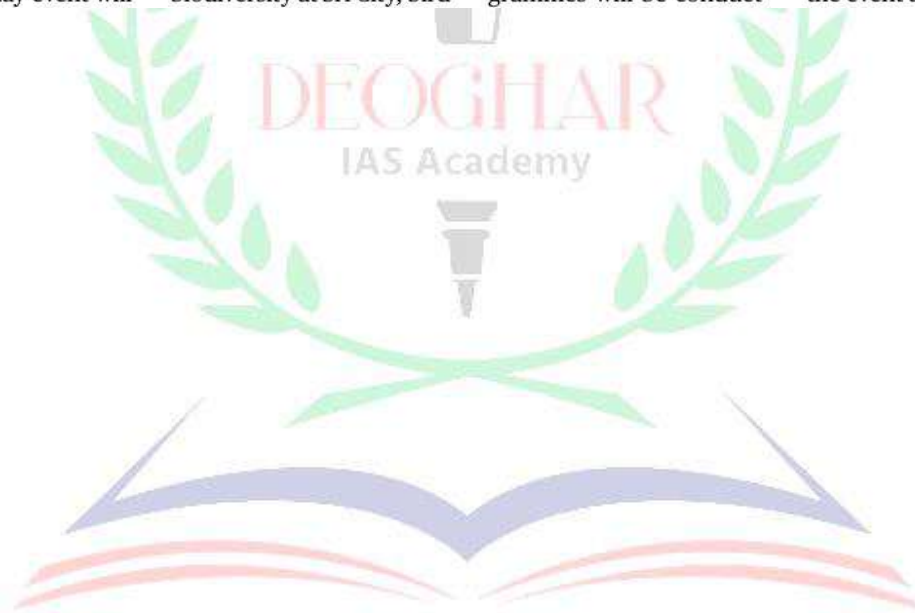
watching spots at Nelapattu and Atakanithippa, and boating facility at B.V. Palem as a tourist attraction.

Stalls will be set up at the Government Junior College campus at Sullurpeta, where cultural programmes will be conduct-

ed. The government has developed infrastructure facilities by integrating it with Mahatma Gandhi National Rural Employment Guarantee Scheme.

Local residents will be prioritised at the festival, Mr. Venkateswar asserted, hinting that the problems faced by the residents of the eco-sensitive zone will be addressed, within the purview of the law.

While inspecting the site along with Sullurpeta MLA Nelavala Vijayasri, Regional Director (Tourism) Ramana Prasad, DFO (Wildlife) Radhika and District Tourism Officer Janardhan Reddy on Tuesday, he directed the officials to make the event a successful one.



Union govt. yet to wake up from its slumber on Dam Safety Act, says SC

Top court was hearing plea seeking lowering of the permissible water level at Mullaperiyar dam; it says Centre has not fully implemented the 2021 law to prevent disasters related to dams; court issues notice to Centre and posts it for January 22

Krishnadas Rajagopal
NEW DELHI

The Supreme Court on Wednesday orally said the Union government was yet to wake up from its 'slumber' and fully implement a nearly five-year-old law to prevent disasters related to dams and ensure their safe functioning.

A three-judge Bench headed by Justice Surya Kant said the Dam Safety Act, 2021, was "existing on paper" after the State of Kerala argued that "nothing has been done", including the constitution of a National Committee on Dam Safety. "Despite Par-



Safety check: Supreme Court-appointed monitoring committee members inspect Mullaperiyar dam in Kerala, on June 13, 2024.

liament having passed this Act, we are aghast that the Executive is yet to wake up from its slumber," Justice Dipankar Datta, on the Bench with Justice Ujjal

Bhuyan, remarked.

The court was hearing a petition filed by advocate-petitioner Mathews Neddumpara, who submitted that a breach at the 129-

year-old limestone-and-surkhi built Mullaperiyar dam may lead to the deaths of lakhs of people spread across five townships. The lawyer sought a lowering of the permissible water level at Mullaperiyar dam from 142 ft to 120 ft.

Section 5 of the 2021 Act mandates the constitution of the National Committee on Dam Safety within 60 days of the commencement of the Act. The committee is to be reconstituted every three years.

"Nothing has been done in the years between 2021 and 2025... The Centre did nothing on the basis of this Act," senior advocate Jai-deep Gupta, appearing for

Kerala, claimed.

However, Tamil Nadu, represented by senior advocate V. Krishnamurthy, informed the Bench that the National Dam Safety Authority (NDSA) was formed under the Act.

But Justice Kant reacted that there was no provision for a "supervisory committee" in the 2021 Act. The court wondered how the NDSA was formed even before the constitution of the National Committee.

The Supreme Court issued notice to the Centre and the NDSA and directed a copy of petition to be sent to Attorney-General R. Venkataramani and posted the matter for January 22.

