

4 key laws, including Data Protection Act, get President's assent

The Hindu Bureau

NEW DELHI

President Droupadi Murmu on Saturday gave assent to four key laws, including the Digital Personal Data Protection Act and the one pertaining to the control of services in Delhi.

The laws were passed by Parliament in the recently concluded Monsoon Session.

While the Government of National Capital Territory of Delhi (Amendment) Act provides for a three-member authority that will handle the transfer and postings of Group A officers under the Delhi government, the data protection law will provide for a framework to prevent the misuse of an individual's data by online platforms.

The Delhi services Bill had seen extensive debate in both Houses, with the Opposition pressing for a division of votes in the Rajya Sabha. The parties be-



President Droupadi Murmu

longing to the Indian National Developmental, Inclusive Alliance (INDIA) accused the Centre of violating a May 11 Supreme Court order, which had given the Delhi government the control over services, and usurping the rights of the Arvind Kejriwal-led government in the Union Territory.

The data protection Bill was passed by voice vote amid Opposition protests over Manipur. However, at the time of introduction, several Opposition MPs had opposed it on the ground that it would result in a surveillance state.

In TB detection, India far from meeting the 2025 goal

In 2022, the bacteriologically confirmed cases among notified TB patients in the public sector was just 59% (1.07 million), and testing for at least rifampicin resistance among the bacteriologically confirmed TB patients was just 77% (0.82 million)

R. Prasad

In March 2016, in his Mann Ki Baat address, Prime Minister Narendra Modi urged people to make India TB-free; in 2018 he set the target to "eliminate TB by 2025". To fulfil this goal, the Health Ministry rolled out the National Strategic Plan (NSP) 2017-2025 to "eliminate" TB by 2025. Though the Plan outlined a paradigm shift in approach and strategy to achieve the ambitious goal, by 2020, it became clear that the NSP will not be able to meet these objectives. A new NSP 2020-2025 to end TB was launched.

On the diagnostics front, NSP 2017-2025 wanted to reduce the number of presumptive TB patients who are offered sputum smear microscopy from over 9.1 million in 2015 to 5.8 million in 2022, while increasing the number of molecular tests from 40,000 in 2015 to over 13.4 million in 2022. As per the India TB report, in 2022, India was far from reaching the ambitious target set by the NSP 2017-2025 – smear microscopy was used for detecting 77% (13.9 million) of presumptive TB cases and just 23% (4.1 million) cases were detected using a molecular test. If India failed to meet the diagnostic goals set out by NSP 2017-2025, the revised NSP 2020-2025 has raised the bar even higher for precision tests to be used for initial diagnosis. Three years after the launch of the revised NSP, India is nowhere near meeting this target.

Nearly impossible to "eliminate" TB by 2025

Last year, India failed to meet the diagnostic goals set out by NSP 2017-2025, and now the revised plan has raised the bar even higher



Revised plan: A new National Strategic Plan 2020-2025 to end TB has been launched

- The revised National Strategic Plan 2020-2025 requires "prompt diagnosis" using highly sensitive diagnostic tests for detecting presumptive TB cases "at the first point of contact" both in the private and public sectors

- As per the revised NSP, advanced diagnostic services need to be scaled up, and sputum microscopy needs to be replaced with new precision diagnostic tools in all TB diagnostic centres in India

- Bacteriologically confirmed cases in 2022 among notified TB patients in the public sector was only 59%, and at least rifampicin resistance among the bacteriologically confirmed TB patients was just 77%

- The revised National Strategic Plan 2020-2025 clearly states that NTEP should provide "universal access" to drug resistance testing

- The revised NSP emphasises the need for replacing smear microscopy with rapid molecular diagnostic tests for active case finding. But this is yet to happen

One of the main objectives of the revised NSP is the early detection of presumptive TB cases. It says there should be "prompt diagnosis" using highly sensitive diagnostic tests for detecting presumptive TB cases "at the first point of contact" both in the private and public sectors.

Under the prioritised set of actions to be taken over the NSP period 2020-2025, the revised plan underlines the need to "scale-up advanced diagnostics services and TB surveillance capacity by replacing sputum microscopy services with new precision diagnostic tools". And it clearly states that smear microscopy services should be replaced with precision diagnostic tools, which is molecular tests, "in all TB

diagnostic centres in the country". Three years after the revised NSP was chalked out and just two more years left for meeting the 2025 target of "eliminating" TB from the country, replacing smear microscopy services with molecular tests is yet to become a reality.

In 2022, bacteriologically confirmed cases among notified TB patients in the public sector was just 59% (1.07 million) and a meagre 28% (nearly 0.16 million) in the private sector. This could mean a sizable number of diagnoses are based on X-rays and clinical evaluation without bacteriological confirmation. Grimmer still is that results for at least rifampicin resistance among the bacteriologically confirmed TB pa-

tients was just 77% (0.82 million). Universal drug-susceptibility testing in all drug-sensitive TB cases is crucial for early identification of drug-resistant TB. The revised NSP clearly states that NTEP should provide "universal access" to drug resistance testing, which is yet to happen.

In November 2019, WHO and the Joint Monitoring Mission undertook an intensive review of the TB programme. Among the set of recommendations listed out by the team that represent the "minimum required" to fulfil the Prime Minister's 2025 goal is the urgent need to replace smear microscopy with molecular tests across the country. To further increase the availability of advanced molecular tests

across the country and at double-quick time to meet the 2025 goal, the WHO-JMM team has recommended that NTEP should utilise the molecular testing capacity available in the private sector to get 20 million molecular tests done annually.

Besides limited availability of 5,090 machines to undertake molecular tests, there are additional challenges in terms of availability of trained personnel to run these advanced tests and shortage of molecular tests. There is huge compulsion to use the scarce resource to first test the most vulnerable groups with presumptive TB such as paediatric population, people with extrapulmonary TB, people who are HIV positive, and previously treated patients. Besides digital chest X-ray screening, the revised NSP too emphasises the need for replacing smear microscopy with rapid molecular diagnostic tests for active case finding. The revised NSP has highlighted the challenge of lack of access to the latest NAAT-based molecular tests at the peripheral health institutions for active case finding. Finally, all presumptive TB cases detected using smear microscopy need to be tested for drug resistance using molecular tests. All these challenges underline the compulsion to outsource molecular tests to the private sector to improve case detection at the first point of contact till such time universal access to molecular tests in the public sector becomes a reality.

North India more affected by El Nino

Jacob Koshy

Ahead of every monsoon, meteorologists track, with a degree of nervousness, temperatures in the central and eastern Pacific Ocean. Six in 10 years, a half degree or more rise – an El Nino – corresponds to diminished rainfall in India. The converse, or a La Nina, is linked to increased rain. A study last week however suggests that this cyclical swing – called the El Nino Southern Oscillation (ENSO) – affects vast regions of India differently.

ENSO fluctuations

Since 1981, the study published this week in *Scientific Reports* notes, monsoon rainfall over Central India – known as the monsoon core zone and where agriculture is largely rainfed – is increasingly getting disassociated from the ENSO with only 10% of droughts or excess rains linked to ENSO fluctuations.

On the other hand, the ENSO link to North India was strengthening, with 70% of

rainfall fluctuations linked to the ENSO cycle. In southern India, the relationship has remained largely stable.

While past research into monsoon patterns have suggested a “weakening” of the relationship between ENSO and monsoon, the latest suggests that this too has varied since 1901.

“We notice that the ENSO-ISMR inverse relationship started getting stronger from 1901 to 1940, became stable from 1941 to 1980 and then the relationship has weakened in the recent epoch (1981 onwards),” the authors note in their study.

Monsoon rainfall, which accounts for 80% of India’s annual rainfall, is influenced by two broad factors: the external one is the impact of ENSO which influences the trade winds and their ability to carry warm, moist air towards India around monsoon. The other, internal, is the ‘monsoon trough’ – an elongated low-pressure area which extends from over Pakistan to the Bay of Bengal.



Influence: Climate change has dramatically increased Indian Ocean temperature influencing the number of depressions during monsoon. AFP

This trough swings between north and south India through the monsoon bringing rain wherever it is active and is fed on moisture brought in from the Bay of Bengal (and the Arabian Sea to a lesser extent) in the form of low-level cyclones called ‘depressions.’

Rise in temperature

In the last few decades, the role of climate change has dramatically increased ocean

temperatures in the Indian Ocean, said Roxy Mathew Koll, scientist at the Indian Institute of Tropical Meteorology, Pune and one of the study authors. This was influencing the number of depressions that formed during the season and consequently rain over Central India.

However, these depressions weren’t reaching out as strongly towards North India as it was in the past.

“Consequently, this has left

it more vulnerable to the impact from El Nino, which is known to affect the trade winds and the monsoon circulation over India,” he told *The Hindu*. For the rainfall over south India, the influence of ENSO and strength of monsoon trough have been consistent over the entire period, he added.

Accounting for the regional variation in the effect of El Nino would improve the accuracy of monsoon forecasts.

“The ENSO dominance over the core monsoon zone is weak, which means that seasonal prediction over this region has become less predictable in the recent decades. Other factors like Indian Ocean warming should be monitored for the core monsoon zone, due to its impact on the strength of the monsoon trough and the depressions,” he added.

Currently an El Nino forming in the Pacific is likely to strengthen in the coming months and influence monsoon rainfall in August and September.

What is the debate around Article 370?

Why is history, as much as law, dominating discussions? What are the issues involved in the legal challenge to the removal of Kashmir's special status? Could it have been unilaterally removed?

K. Venkataraman

The story so far:

The ongoing arguments before a Constitution Bench of the Supreme Court on the abrogation of Jammu and Kashmir's special status under Article 370 throw considerable light on the history behind the unique status enjoyed by the State until August 2019, when the Centre removed it.

Why was J&K given special status?

Jammu and Kashmir was accorded special status because of the circumstances in which it acceded to India soon after Independence. Sandwiched between the two new Dominions of India and Pakistan, the State did not make an immediate decision on which country to join, as it had vital economic and cultural links with both. However, by October 1947, Maharaja Hari Singh was faced with regular military attacks from the Pakistan side by "soldiers in plainclothes, desperadoes with modern weapons". There was mass infiltration by heavily armed tribesmen from the North-West Frontier into Kashmir, and the Maharaja felt this could not happen without the support of the governments of Pakistan and of the North-West Frontier Province. In a desperate letter to India's Governor-General, Lord Mountbatten, on October 26, 1947, he sought help from India, noting that "naturally they cannot send the help asked for" without his State acceding to the Dominion of India. Therefore, he attached an 'Instrument of Accession' with the letter. However, it was not unconditional. He specified matters on which the Dominion legislature may make laws for Jammu and Kashmir, but the rest of the powers were to be retained by the State.

The Bench has raised questions whether the dissolution of the State Constituent Assembly could render Article 370 beyond abrogation or amendment

These subjects were Defence, Foreign Affairs and Communications.

Was the accession temporary?

While India was then ruled under the provisions of the Government of India Act, 1935, Jammu and Kashmir had its own Constitution since 1939. In the Instrument of Accession, Hari Singh had laid down a condition that it cannot be altered unless he accepted the change. Quite significantly, he said: "Nothing in this Instrument shall be deemed to commit in any way to acceptance of any future Constitution of India or to fetter my discretion to enter into arrangement with the Government of India under any such future Constitution."

When Article 370 was adopted in the Constituent Assembly of India, care was taken to see that it reflected the clauses and spirit of the Instrument of Accession. Hence, the key issue of whether the status could have been abrogated unilaterally is being argued in historical terms, and not merely in legal terms.

What are the features of Article 370?

Many believe that Article 370 is the sole mechanism by which Jammu and Kashmir can be a part of India, and that without it, the conditions of its accession will be breached. It falls under a heading 'Temporary provisions with respect to the State of Jammu and Kashmir'. It has three core principles:

(a) On items in the Union List and Concurrent List, the power of Parliament to make laws for the State will be limited to those matters that correspond to those specified in the Instrument of Accession; and, even that will be in 'consultation' with the State government. (b) On other matters in these Lists, Parliament can make laws for the State only with the State government's 'concurrence'. This is why until before the abrogation, Indian laws did not automatically apply to Jammu and Kashmir. (c) Article 1 (which declares India a Union of States) and Article 370 itself were made applicable as such to J&K. However, the rest of the Constitution of India would be applicable only through Orders passed by the President from time to time "with exceptions and modifications". Finally, the Article provided for its own demise: the President could declare it inoperative if there is such a recommendation from the State Constituent Assembly.

How was the special status removed?

On August 5, 2019, President Ram Nath Kovind initially issued an Order "with the concurrence of the State government of Jammu and Kashmir". As the State was then under President's Rule, it is presumed that the State

Governor gave such concurrence. The Order stated that all the provisions of the Constitution of India, as amended from time to time, will be applicable to Jammu and Kashmir. It superseded the Constitution (Application to Jammu and Kashmir) Order, 1954, and the amendments made to it in subsequent years.

However, further measures were required. The President's August 5 Order made crucial changes to definitions in Article 370. For this, it added provisions to Article 367 of the Constitution which describes how to interpret some terms. The new clause said, when applicable to Jammu and Kashmir, all references to the 'Sadar-i-Riyasat', acting on the aid and advice of the Council of Ministers, would be construed as references to the Governor of Jammu and Kashmir. All references to the State government shall mean "the Governor". And most importantly, the reference to the "Constituent Assembly" in a proviso to Article 370 (3) was amended to read "Legislative Assembly of the State".

A resolution was introduced to elicit Parliament's views (instead of the J&K Assembly because the State was under President's Rule) on the introduction of a new law to reorganise Jammu and Kashmir as two new Union Territories - 'Jammu and Kashmir, as a Territory with an Assembly, and Ladakh as a Territory without an Assembly'. Another resolution was adopted in Parliament to recommend that Article 370 be declared inoperative. Parliament was acting on behalf of the J&K Legislative Assembly, which itself was treated as the equivalent of the State's Constituent Assembly. The President issued another order on August 6 declaring Article 370 inoperative except for a clause that declared that all provisions of the Constitution will apply to J&K.

What are the legal issues involved?

The key questions so far argued on behalf of petitioners who have challenged the removal of the special status and downgrading and bifurcation of the State are: whether the status of J&K had not become permanent after the Constituent Assembly refrained from any decision on Article 370; whether the latter effectively prevents the Union government from unilaterally altering the State's relationship with India, and whether what was considered a 'temporary' provision prior to the work of the State's Constituent Assembly had not become permanent subsequently. The Bench has raised questions whether the dissolution of the State Constituent Assembly could render Article 370 beyond abrogation or amendment, as if it is part of the Basic Structure, and whether the State's accession had not become complete after the terms of its relationship with India had been finalised by the respective Constitutions. And why Parliament could not alter its status in exercise of its sovereign power through legal and constitutional means.



Historic debate: National Conference MP Farooq Abdullah at the hearing of petitions challenging the abrogation of Article 370 on August 8. ANI

Can improved nutrition help prevent TB?

With undernutrition the most prevalent risk factor for tuberculosis, what has an Indian trial shown? How was the trial carried out? Can weight gain lead to reduction in cases and mortality?

R. Prasad

The story so far:

According to recent reports in *The Lancet* and *The Lancet Global Health*, nutritional support has helped prevent both tuberculosis (TB) among household contacts and mortality among TB patients in a trial in Jharkhand. In 2017, the World Health Organization had estimated that undernutrition is responsible for twice the number of TB cases than HIV globally. Any attempt to end/eliminate TB in India by 2025 will become possible only if undernutrition among people is addressed. As per conservative estimates, 40% of new TB cases annually in India are due to undernutrition.

What are the key achievements of the trial?

A large field-based trial was undertaken between August 2019 and August 2022 in four districts of Jharkhand by a team led by Dr. Anurag Bhargava and Dr. Madhavi Bhargava from the Yenepoya Medical College, Mangaluru in collaboration with the National Tuberculosis Elimination Programme (NTEP) and the National Institute for Research in Tuberculosis-Indian Council of Medical Research (NIRT-ICMR).

The RATIONS (Reducing Activation of Tuberculosis by Improvement of Nutritional

In the trial, more than 85% of TB patients survived with nutritional support

Status) trial enrolled 2,800 people with pulmonary TB disease and 10,345 household contacts of TB patients. While all the TB patients received nutritional support, household contacts were randomly assigned to receive either nutritional support or usual diet alone. There were 5,621 household contacts in the intervention arm and 4,724 contacts in the control group.

While there were 108 (4%) deaths among TB patients across all body weights, mortality among those under 35 kg body weight (severely underweight) was 7%. In comparison, in a study carried out by the Chennai-based NIRT in Tiruvallur district, Tamil Nadu, which did not provide any nutrition support to the TB patients, mortality was 14% in those weighing under 35 kg; mortality dropped to 4% among those weighing over 35 kg. Incidence of TB deaths reduced by 12% with a one-unit increase in BMI and by 23% for a two-unit increase in BMI. With the nutritional support, at six months, the proportion of those with normal BMI increased from 16.5% to 43.5%. In general, extreme undernutrition – BMI less than 13 in men and BMI less than 11 in women – can often be fatal. However, in the current trial, more than 85% of such TB patients survived with nutritional support. Over 80% of TB patients had a BMI less than 18.5 and nearly 49% had a BMI less than 16 (severely underweight). There was 5% weight gain in the first two months which was associated with 60% lower risk of TB mortality. As per a 2022 study undertaken in India, the absence of weight gain during treatment in patients with severe undernutrition was associated with a five-fold higher death rate.

Among the household contacts, nutritional support led to a 39%-48% reduction in TB disease in the intervention group compared with the control arm. In the study that lasted for six months, 122 people in the control group developed TB whereas the intervention arm had only 96 TB cases. There was a 39% reduction in TB incidence – pulmonary and extra-pulmonary – while there was 48% reduction in pulmonary TB. The 39%-48% reduction in TB disease in the household contact intervention arm was after adjusting for confounding factors such as TB preventive treatment to children below five

years, diabetes, smoking, and alcohol use.

What was the nutritional support provided?

Each adult household contact in the intervention arm received 5 kg of rice, 1.5 kg of split pigeon peas (tur dal), and micronutrient pills every month for six months. Each child (below 10 years) household contact received 50% of the adult nutrition support. Those in the control arm did not get any nutritional supplementation.

For TB patients, monthly nutritional support included 5 kg of rice, 1.5 kg of milk powder, 3 kg of roasted chickpea flour, 500 ml of oil, and micronutrient pills for a period of six months for people with drug-susceptible TB, and 12 months for people with MDR-TB.

What effect does undernutrition have?

Many new cases of TB are attributable to five risk factors – undernourishment, HIV infection, alcohol use disorders, smoking (especially among men) and diabetes, says the WHO Global TB report 2022. In TB-endemic countries such as India, undernutrition is the most widely prevalent risk factor, accounting for the “highest population attributable risk for TB in India”. It is also responsible for increased TB disease severity, higher mortality and poor treatment outcomes. A study in India found that severe undernutrition at diagnosis was associated with a two-fold higher risk of death. As per a 2016 paper by NIRT researchers, undernutrition is an important risk factor for progression of latent TB infection to TB disease. It increases the risk of drug toxicity, TB relapse and mortality. For each unit reduction in BMI, the risk of TB increases by about 14%. Undernourished patients also tend to have poor bioavailability of drugs such as rifampicin, leading to treatment failure and development of multidrug resistance.

How do schemes like Nikshay Poshan Yojana and Ni-kshay Mitra help?

Nikshay Poshan Yojana is a direct benefit transfer (DBT) scheme for nutritional support to TB patients. It was launched in 2018. All notified TB cases are provided with a financial incentive of ₹500 per month. According to the 2022 India TB report, seven million TB patients have benefited between 2018 and 2022, and ₹2,089 crore has been disbursed during this period. Also, as of March 9, 2023, 9.55 lakh consented TB patients across India adopted by Ni-kshay Mitras will receive nutritional support.



Towards a better future: Healthcare workers at a TB awareness rally in Vijayawada on March 24. KVS GIRI