INDIAN CHRONICLE City

5 January 2025| Sunday www.indianchronicle.com Published from : Ranga Reddy (Telangana State) Pages: 8 (8+8)

Farmers question new application requirement for Rythu Bharosa scheme

Hyderabad: In a move that has sparked widespread concern among the farming community, the Cabinet Sub-Committee has sought to require applications from farmers for the extending the crop investment support under the Rythu Bharosa scheme and it has drawn heavy flak across all sections. It is resented that the government has lost the emotional touch with the peasant community and hence the retrograde systems were being put in place.For the past six years, there was no need for such applications, making this sudden change adding to the travails of the farmers. With the government already possessing detailed information as part of the vast data base developed over the past one decade about land and crops, the necessity of new applications is being questioned.

The main worry now is whether farmers who fail to apply will still qualify to receive the much-needed benefit or not. The brief, three-day window being facilitated for applications has only added to the confusion, especially for those residing far from their villages or owning small plots of land. Farmers argue that this decision appears to be a tactic to reduce the number of beneficiaries and cut costs.'Govt lost emotional connection with farmers'A majority of the farmers no longer stay in their native villages as they cannot afford to do so if their meager income levels are to be taken into consideration. They either moved to the towns and district headquarters for the education of their children. Some of the farmers with their occupations turning not so remunerative have taken up some time jobs or business activity elsewhere. Are they all required to come back to fulfill the formalities to qualify for the assistance?

With ongoing crop registration surveys through AEVOs and plans for a satellite survey, the call for new applications raises doubts. Farmers are seeking clarity on whether the Rythu Bharosa benefits will be granted based on these applications or the government's crop survey. The new process is seen as adding bureaucratic red tape, forcing farmers to rely on local officials and potentially leaving those unfamiliar with the procedures at a disadvantage.This scenario may also foster the emergence of agents' systems offering assistance for a fee, putting the gullible sections of the farming community at risk of having their personal data exposed. K.V.N.L Narasimha Rao, a farmer from Nelakondapalli village near Kodad, lamented that the government seems to have lost its emotional connection with the farming community.

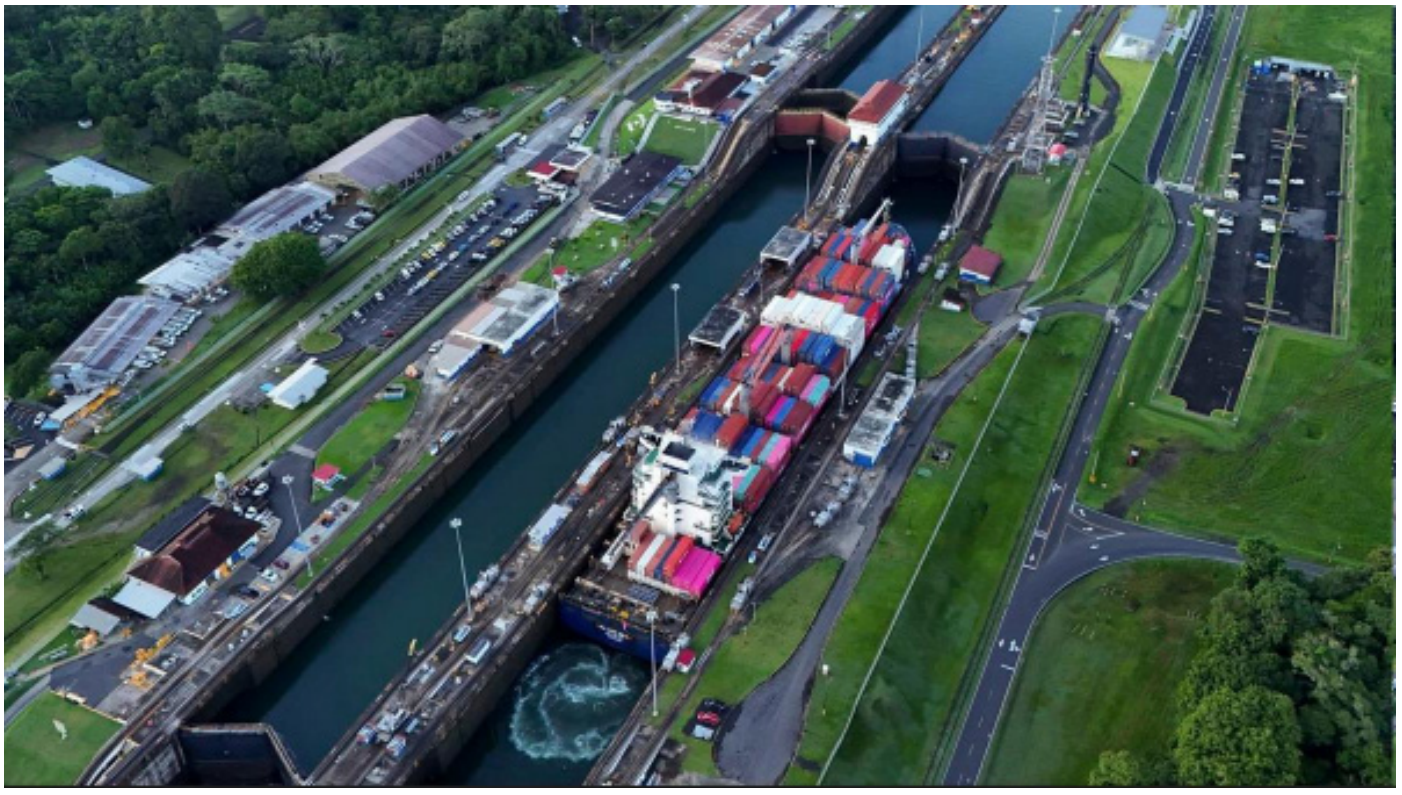
Farmers are already frustrated with the systems in place for paddy procurement, which often benefit millers more than the farmers. Now, the requirement for Rythu Bharosa applications is seen as a further mockery of the existing system, he resented adding that millers had deducted four to six kgs per quintal citing 'Taalu' and moisture issues while paying the farmers for the paddy purchased from them at the paddy purchase centre. Rao said he lost in a big way because of the failure of the government to eradicate this practice.Kannegatti Ravi of Rythu Swarajya Vedika expressed concerns that the delayed process might adversely affect genuine farmers. He hopes that the State cabinet meeting on Saturday will make the right decisions, considering the Congress party's election manifesto, the farmers' declaration, and the prevailing conditions on the ground.

Controversies mar land acquisition for IT hub

Mancherial: The process of land acquisition for a proposed industrial and IT hub at Vempalli, Mulkalla and Pochampahad villages in Hajipur mandal has been marred by controversies.There are allegations that the process has been started without notifications, with certain Congress leaders and officials fixing compensations on their own and forcing farmers to hand over the land to them.Officials had estimated that 276 acres of land was required for creating the hub at the three villages. Compensation of Rs 13.50 lakh per acre was reportedly fixed by the officials.

The process of land acquisition had allegedly begun without publishing a formal notification. Certain leaders of Congress are drawing flak for forcing farmers to give land for the facility.A group of farmers submitted an application to Collector Kumar Deepak seeking his intervention in the issue. They alleged that the leaders were exerting pressure on the farmers to allow the government to acquire their lands for the hub. They accused the leaders of gathering signatures of the farmers to express their interest to give the lands.The farmers urged the Collector to take action against revenue officials who attended an informal meeting held by the leaders in a function hall as part of acquiring lands for the hub. They stated that they would suffer losses if lands were acquired at low prices suggested by the Congress leaders as the assets were priced around Rs 50 lakh per acre.They announced that they would chalk out an action plan soon.The farmers said that Kumar Deepak assured them of taking steps to ensure justice for them. They stated that the Collector promised to convene a meeting with them soon before acquiring the lands and a proposal would be submitted to the government over the compensation.Meanwhile, Dommati Arjun, a farmer filed a query with revenue officials under the Right to Information Act, 2005, seeking details of the hub a few weeks back.

Panama Canal: Troubled waters



Emboldened by his victory in the U.S. presidential polls, Donald Trump has drummed up his rhetoric of belligerence by announcing plans to annex Canada and Greenland and retake control of the Panama Canal. While the U.S. has not historically shied away from coveting the two northern territories, threatening to renege on a deal that ceded Washington's control of the canal to Panama has been strictly the brainchild of the President-elect.Panama Canal is an 82-km-long strategic waterway that connects the Pacific and Atlantic Oceans. It helps ships do away with the need to go around the South American tip of Cape Horn, saving 13,000 km and days of journey. Consequently, the canal facilitates the passage of over 14,000 ships a year.

The 78-year-old Republican first spelt out his plans for the canal during a speech at a Conservative event in Arizona and subsequently on his social media platform Truth Social. "We're being ripped off at the Panama Canal like we're being ripped off everywhere else," he said, referring to the increased shipping rates, while speaking at AmericaFest on Sunday (December 22). "It was given to Panama and the people of Panama, but it has provisions. If the principles, both moral and legal, of this magnanimous gesture of giving are not followed, then we will demand that the Panama Canal be returned to us, in full, quickly and without question." Mr. Trump also warned of said while of warning about the growing "Chinese influence" in the region. Later, Mr. Trump posted a photo on Truth Social of the U.S. flag flying over the narrow waterway in the Isthmus of Panama. The caption read "Welcome to the United States Canal".In its response, the Central American nation said, "Every square meter of the Panama Canal and the surrounding area belongs to Panama and will continue belonging (to Panama)." The country's President Jose Raul Mulino decried Chinese presence and stated that shipping rates were not set on a whim. Mr. Trump's remarks also angered the Panamanians who took to the U.S. embassy calling out "Trump, animal, leave the canal alone" and burning his image.

Mr. Trump's grief in the matter is understandable for the U.S., whose ships constitute 74% of the traffic in the canal, is its biggest benefactor, followed by China at 21%. If not for the canal, ships traversing the east and west coasts of the U.S. would have to undertake an additional 22 days of voyage. In historical context, The canal also came to the aid of the Allies during the Second World War.What began as a French project in 1880 under the leadership of Ferdinand de Lesseps, who had built the Suez Canal, soon fell apart due to unforeseen difficulties. Americans stepped in to complete the canal but Colombia, which ruled over Panama, did not favour the idea. By orchestrating independence from Colombia, then U.S. President Theodore Roosevelt secured a deal whereby Panama gave his country control over a 16-km wide strip of land to build the canal in exchange for monetary compensation.Lock technology

The canal entered into operation in 1914. By using a technology comprising a series of locks, it revolutionised shipping. However, a dispute over the ownership and administration soon broke out between the U.S. and Panama, which eventually led to a direct clash in 1964 costing the lives of 28 people. In 1977, then President Jimmy Carter (despite opposition from the Senate) and Panama's military leader Omar Torrijos signed two treaties — the Permanent Neutrality Treaty and the Panama Canal treaty that saw the U.S. hand over the control of the canal to Panama in 1999.The former agreement grants the U.S. the authority to ensure the canal remains free and open without giving it the power to interfere in Panama. The latter ensured that Washington transferred the canal to Panama by December 31, 1999.Since 2000, Panama has overseen the administration of the canal. However, the region, one of the wettest until recently, experienced a rainfall deficit in 2022. Gatun Lake, which provides the 200 million litres of water needed for each ship to transit the canal, experienced a drop in water levels, prompting authorities to increase shipping charges starting in 2025. Mr. Trump has objected to this.His allegation of Chinese influence pertains to the Hong Kong-based company C.K. Hutchison Holdings, which manages two of the five ports in the region — one on each side of the canal. Bolstering his claim further was Panama's 2017 decision to cut ties with Taiwan.

Political dynasts ruling countries in 2024

Story so far: Across Asia, Africa and even America, political dynasts have been elected to power this year. Starting from Bangladesh's Sheikh Hasina in January to Paetongtarn Shinawatra in August, voters increasingly chose ex-Presidents' kin to lead their country. Of these, seven leaders are from Asia itself – leading Indonesia, Thailand, Bangladesh, North Korea, Pakistan, Philippines and Cambodia. Kicking off the year, incumbent Prime Minister Sheikh Hasina, daughter of Bangladesh's first Prime Minister Sheikh Mujibur Rahman, was re-elected for the fourth straight time in January, ushering in her fifth term. Following her was Indonesia's Prabowo Subianto, elected as President along with Vice-President Gibran Rakabuming Raka in February – both kins of former Indonesian Presidents.

In March, Pakistan re-elected Shehbaz Sharif, brother of exiled ex-PM Nawaz Sharif, for a second time in spite of independent candidates backed by jailed ex-PM Imran Khan winning the largest number of directly elected seats in the National Assembly. He chose ally Pakistan People's Party (PPP) chief Asif Ali Zardari, widower of late PM Benazir Bhutto, as his President.Meanwhile, in August, Thailand's Parliament chose its youngest PM - Paetongtarn, daughter of ex-PM Thaksin Shinawatra. Her aunt Yingluck too had been PM before her term was cut short in 2014 when military rule was imposed.There are six other political heirs currently leading Canada (Justin Trudeau), Uruguay (Luis Lacalle Pou), Philippines (Ferdinand Romualdez Marcos Jr), Malta (Robert Abela), North Korea (Kim Jong-Un) and Cambodia (Hun Manet).

Surviving the massacre that wiped out her family in 1975, Sheikh Hasina returned to Bangladesh in 1981 and joined hands with her rival Khaleda Zia in 1988 to bring an end to military rule. She was elected for the first time as Prime Minister in 1996 and took the nation on a secular, democratic, and progressive path. After she was re-elected in 2008, she won three more consecutive terms in 2014, 2018, and 2024. During her 15-year term, she consolidated power by cracking down on Opposition, extremists involved in the 1971 war and jailing her critics.In spite of being elected virtually unopposed in January, she faced a massive student protest seeking the abolishment of 30% quota for descendants of freedom fighters and basic reform of the reservation system. Amid intense police crackdown, the street protests snowballed into a demand for her resignation. With no other respite, Bangladesh's longest-serving PM was forced to step down and flee to India.

In February, Indonesia chose to repose faith in former general and defence minister – 73 year-old Prabowo Subianto, to lead the world's most populous Muslim-majority nation. Mr. Subianto, married to the nation's longest-serving Prime Minister Suharto's daughter Siti Hediati Hariyadi, had previously lost the presidential election to Joko Widodo in 2014 and 2019. With Mr. Widodo completing his maximum two-term limit, he backed Mr. Subianto's bid. He also fielded his 36-year-old son Gibran Rakabuming Raka as Mr. Subianto's running mate. The two were awarded a landslide win as they ran virtually unopposed.In April 2022, the Pakistan Muslim League-Nawaz (PML-N) and Pakistan People's Party (PPP) voted out Imran Khan, replacing him with Shebaz Sharif, brother of ex-PM Nawaz Sharif. After Mr. Khan was arrested in connection with a corruption case while he was appearing in an Islamabad court in May 2023, violent protests broke out across Pakistan.As Mr. Khan's incarceration continued, his popularity swelled leading to the Election Commission stripping his party Pakistan Tehreek-e-Insaf (PTI) off its iconic 'bat' symbol and Mr. Khan being barred from contesting polls for five years. Banking on public sympathy, PTI-backed Independents won 92 seats in the polls held in March, emerging as the largest bloc in the 272 seats in direct contest, but failed to clinch a majority. With the PML-N and PPP coalition winning a comfortable victory, Mr. Sharif was chosen as PM while PPP chief Asif Ali Zardari – widower of ex-PM Benazir Bhutto – was elected as President, for the second time.

"Meru Antaragni 2025 Celebrates the Fusion of Art and Sustainability at Meru International School"

Hyderabad: : Meru International School hosted its annual art exhibition, "Meru Antaragni" 2025, transforming its campus into a vibrant hub of creativity centered around the theme of sustainability. This year's exhibition featured an impressive array of student and teacher artworks crafted from recycled and upcycled materials, celebrating both artistic talent and environmental consciousness.

The exhibition was inaugurated by esteemed guests Mr. Ravinder Rao, Chairman of Yashoda Hospitals, Mr. Surender Rao, Managing Director of Yashoda Hospitals, and Ms. Meghana Gorukanti Jupally, the school's founder on 4th January, 2025. The event emphasized the significance of integrating creativity with environmental stewardship, underscoring the school's commitment to nurturing responsible global citizens.

“Meru Antaragni exemplifies our school’s commitment to fostering creativity and environmental responsibility,” stated Ms. Meghana Gorukanti Jupally. “It is a powerful testament to how art can inspire meaningful conversations about global challenges.”

Highlights from this year’s exhibition included:

- Wooden Panel Art: Featuring breathtaking creations that celebrated India’s traditional art forms, including Cheriyal, Madhubani, Pattachitra, Pichwai, and Kalamkari, reflecting the cultural richness of the nation.

- 10-ft Best-Out-of-Waste Clock Installation: A towering clock made from waste materials that encouraged viewers to consider the pressing issues of global waste management.

- Papier-Mâché Tree Trunk with Mirror: A poignant piece symbolizing the interconnectedness of humanity and nature, inviting viewers to reflect on their responsibility to nurture the environment.

- "Sankalp Se Siddhi" Post Box Installation: A nostalgic display where children expressed their hopes for a sustainable future through heartfelt letters to Mother Earth.

- "Gitanjali"-Inspired Tribute: This artistic homage to Rabindranath Tagore’s Gitanjali celebrated the dedication and contributions of the school's sub-staff, capturing themes of gratitude and hard work.

2025 HR Trends: Strategic Shifts for a Future-Ready Workforce

Hyderabad

As we close out 2024, it's clear that the Talent landscape has undergone significant transformation. The year was marked by continued adaptation to hybrid work models, a renewed focus on employee well-being, and the rapid integration of AI and automation across organization and the need to upskill, reskill and reimagine jobs. Yet, despite these advancements, challenges like talent retention, skill building and leadership development have remained persistent. Looking ahead to 2025, HR leaders are shifting their priorities—transitioning from reactive measures to proactive strategies that not only address today’s workforce needs but also anticipate tomorrow’s. The trends shaping HR in 2025 will focus on deeper employee connections, skill-building, and leveraging technology for smarter talent management.

Leadership development in a changing workplace:

Effective leadership is critical in managing hybrid teams, multi-generational workforces, and the uncertainties of modern work environments. Studies show that companies investing in leadership development see a 25% increase in organizational performance. Leadership creates culture that has far reaching impact on the organization and is a major reason why employees chose to stay and hence the need to evolve leadership expectations in tune with the organization and people requirement.

Shift from hiring to retention:

The Great Resignation era may be behind us, but the need for effective retention strategies has never been greater. Companies are now shifting their focus from recruitment to retention, realizing that keeping top talent is crucial for long-term success. Retention is no longer just about offering standardized benefits—it’s about crafting personalized employee experiences that align with diverse needs.

It is imperative to retain key critical skills and talent that builds the organization and hence the need for strategic talent management to identify and invest in talent one wants to retain. Retention is still an outcome, and hence the need for effective strategies and culture where great talent is built and thrives to be their best.

Upskilling to embrace AI:

AI is fast becoming commonplace in corporate corridors. In fact, employees are eager to discover the ways in which generative AI can help them improve efficiency, both in term of TAT and cost, in their day-to-day routine. In the future, AI will play out in a big way in the corporate world, and organizations that are ahead of the curve in upskilling their employees to embrace AI will benefit immensely. Given this context, HR will focus on transitioning their employees to an AI-supported workplace. While training will be critical, HR will also have to pre-empt and manage concerns over reimagining jobs and reskilling talent as AI become widely prevalent at the workplace.

Automation in HR:

According to Deloitte, 41% companies globally plan to increase investments in HR automation by 2025. Automation is extending its reach from recruitment to operational workflows, like payroll and compliance management. This shift can reduce manual errors and enhance efficiency, allowing HR teams to focus on strategic initiatives.

If anything happens to Dallewal; central government will be held responsible, warns SKM

Chandigarh (JAG MOHAN THAKEN), January 4: In Samyukta Kisan Morcha (SKM) rally held at Tohana in Haryana on Saturday, all farmer leaders warned that the central government will be held responsible if anything happens to Jagjit Singh Dallewal, who is on fast-unto-death since November 26. It is pertinent that Dallewal's hunger strike in Punjab's Khanauri has entered into 40th day.

A hugely attended Kisan Mahapanchayat held at Tohana by Sanyukta Kisan Morcha on Saturday vehemently rejected the recently released draft of the National Framework for the Agricultural Marketing (NFAM) and expressed deep concern over deteriorating health condition of fasting leader Jagjit Singh Dallewal.

A massive gathering including a large number of women converged in Mahapanchayat defying inclement weather conditions to express their stiff opposition to the NFAM draft which the farmers leaders described as revival of the three farm laws which Modi government was forced to repeal following the 13-month historical agitation in 2020-21.

SKM had already accused the newly introduced National Policy Framework on Agriculture Marketing (NPFAM) Framework of the NDA3 Government as more dangerous than the 3 repealed Farm Acts of the NDA2 Government. The Policy Framework, if implemented will erode the federal rights of the State Governments and destroy the interests of the farmers, agricultural workers, petty producers and small traders since there is no provision to ensure MSP and Minimum Wage to farmers and workers respectively.

Prominent SKM leaders attending the Panchayat included Jogender Singh Ugrahan, Rakesh Tikait, Krishna Prasad, Dr Darshan Pal, Raminder Patiala, Satyawan, Suresh Koth, Jogender Nain, Master Balbir, R.Venkaiah, Ruldu Singh Mansa, Manjeet Singh Dhaner, Amreek Singh, Kanwar jit Singh and others.

Jogender Ugrahan exhorted the farmers to grasp the link between the corporate model of IMF-WTO and the just released draft of the NPFAM by the Modi government. He said that a powerful movement will have to be unleashed by mobilizing even more strength than the 2020-21 movement at the borders of the national capital.

Rakesh Tikait said broader unity was the need of the hour and this time we are planning to hold the agitation on the KMP that surrounds Delhi.

Inderjit Singh, national vice-president of All India Kisan Sabha (AIKS) placed the resolution opposing the draft of NPFAM which was unanimously disapproved by the Mahapanchayat. The resolution has appealed to all the Gram Panchayats to send letters to the Central government against the ruinous draft demanding its withdrawal forthwith.

The participants of the Mahapanchayat paid condolences by observing two-minute silence over the tragic death of three women in an accident coming from Bhatinda district to attend the Mahapanchayat.

In another program, organised separately by Samyukt Kisan Morcha (non-political) and Kisan Majdoor Morcha at Khanauri, Punjab on Saturday, Samyukt Kisan Morcha (non-political) leader Jagjit Singh Dallewal, whose fast-unto-death entered 40th day, said that the Morcha Will win and urged the gathering to send one trolley from each village of Punjab at the Khanauri protest site.

Dallewal was addressing the massive crowd gathered at 'kisan mahapanchayat', held at Khanauri protest site near Patiala on Saturday.

Harish slams Congress over Rythu Bharosa, says govt betrayed farmers yet again

Hyderabad: Coming down heavily on the Congress government in the State for backing out on its guarantees, BRS leader and former Minister T Harish Rao accused the Congress government of betraying Telangana's farmers with false promises.

The Congress, which came to power on the back of grand promises to increase investment support under Rythu Bandhu and provide Rs 15,000 per acre annually through its 'Rythu Bharosa' scheme, has failed to deliver on its commitments.

Reacting to the Cabinet decision to give only Rs 6,000 per acre per season, he recalled that during the election campaigns, Chief Minister A Revanth Reddy had confidently proclaimed, "BRS is giving Rs 10,000 now; vote for us, and we will provide Rs 15,000."

However, after securing power, the Congress government reduced the Rythu Bharosa scheme to just Rs 6,000 per acre per season, far below the Rs 7,500 per season they promised. This has led to widespread disappointment among farmers, who feel betrayed by the government's inability to keep its word.

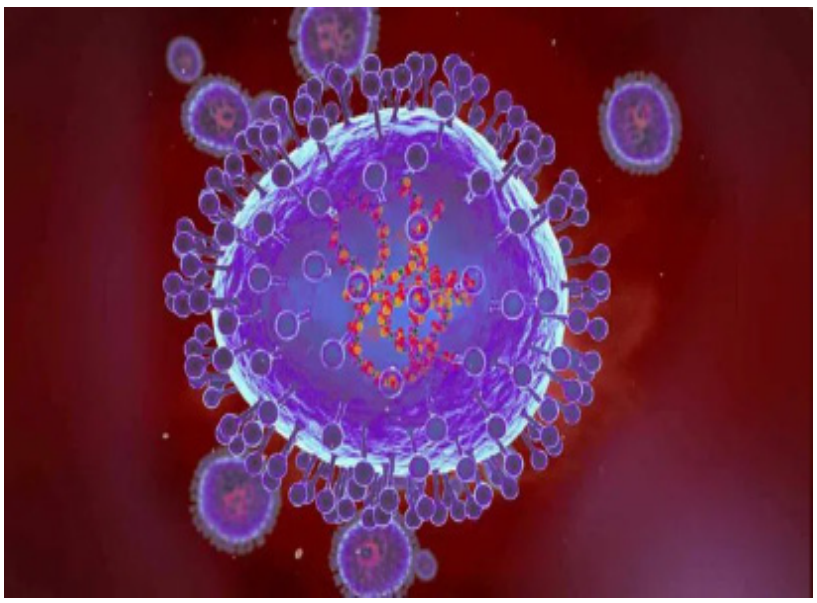
Unlike the acclaimed Rythu Bandhu scheme introduced by the BRS president and former Chief Minister, K Chandrashekhar Rao, which ensured inclusive support for all farmers, the current Congress-led Cabinet has ignored tenant farmers entirely.

Despite promising Rs 15,000 annually for both landowners and tenant farmers, the government has not addressed the issue in its discussions, he said. Harish Rao demanded immediate payment of the pending Rythu Bharosa for the rainy season and fulfilment of the promised Rs 15,000 per acre support for the Rabi season.

He also criticised the Congress' loan waiver scheme, which has left out over half of the farmers, and the absence of the promised crop bonus and crop insurance. Telangana's farmers, feeling deceived by the Congress government, are expected to respond strongly in due time.

The Congress has broken the trust of those who voted for them, and they will face the people's verdict for their failures and dishonesty, he said.

World Allergy Foundation cautions parents in protecting kids from HMPV



Hyderabad: Following reports of surge in infections of HMPV in China, immunologist and founder president of World Allergy Foundation, Dr Vyakaranam Nageshwar in an advisory urged parents to be vigilant and proactive in protecting children from HMPV and other viral infections.

Encourage hydration: Ensure the child drinks plenty of water and consider preparing natural drinks like lemon juice at home. Offer these drinks periodically, especially when symptoms are present.

Protect from extreme temperature: Avoid exposing child to extreme cold temperatures, as this can aggravate the risk of viral infections

Sunlight therapy: Ensure children take a sunbath between 10 am and 4 pm at least once a week for a minimum of 40 minutes. This can boost Vitamin D levels.

Nasal irrigation: Perform nasal irrigation with normal saline water every morning and night to help clear out viruses from upper airways

Throat gargling: Make it a habit to perform lukewarm salt water gargling for throat and oral cavity every day before bedtime

Dietary precautions: Avoid giving child outside food like pizza, burger, pasta, pani puri, cakes, high sugar foods as they cause gut disturbances and lower gut immunity

Symptoms to watch out for: Fever, cough, nasal congestion, runny nose, sore throat, nausea and vomiting, wheezing, shortness of breath and rashes.

"Antibiotics play no major role in infections but could potentially damage the child's gut immunity. Hence desirable to avoid them and strictly avoid self medication," Dr Vyakaranam added.

Burglars loot cigarettes worth Rs 25 lakh in Kothagudem

Kothagudem: Thieves in Kothagudem have been getting innovative and finding new avenues to make quick money, if the break-in that took place at Paloncha town in the district is any indication.

Burglars broke into a warehouse owned by DMR Enterprises (ITC distributor) at TTD Kalyana Mandapam road in the town during the wee hours of Saturday and stole 10 large-sized cartons, containing cigarettes worth Rs 25 lakh.The distributor, Pavan Maniar, who came to his warehouse during the day, found that the shutters were broken. Based on his complaint, the town SI, Suman, along with the clues team and sniffer dogs, visited the spot and carried out searches on the warehouse premises.

It was said that the burglars had cut the connection of CCTV cameras installed at the warehouse prior to committing the theft. Police seized the iron rods, which were said to have been used to open the shutters.

Google's Willow quantum processor — how it works, why it matters

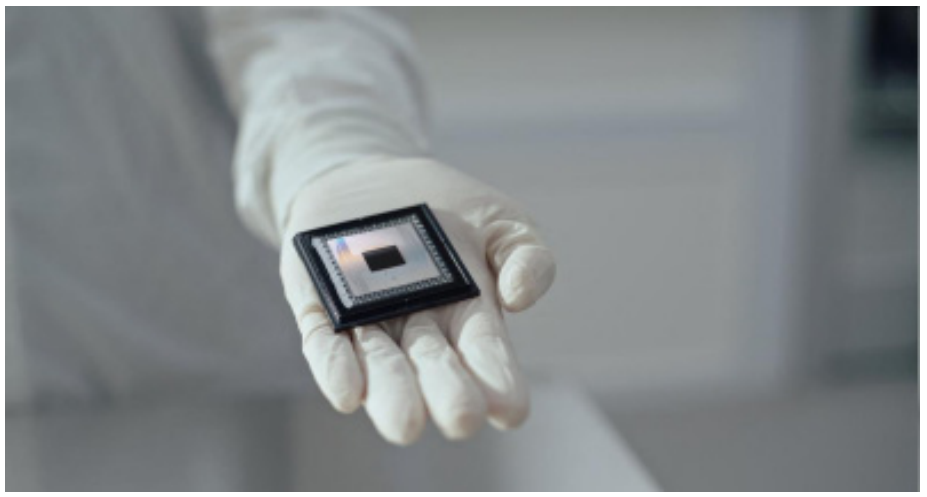
Google recently unveiled its latest quantum processor, named 'Willow'. The research team that built it also tested it and the results were published in Nature.They created a great level of buzz about the realisability of quantum computers that could tackle many practical problems.The results also kicked up intriguing debates about explaining the power of quantum information processing and how they could solve problems that even the most powerful classical computers struggle with.Bit versus qubitComputers process information stored in an array of 0s and 1s. In classical computers, some physical system with two possible states is used to represent these 0s and 1s. These physical systems are called bits. A common example is an electric circuit that allows two levels of voltage, one called 0 and the other called 1. A classical computer is a collection of bits together, and the information flowing in and out of bits is controlled and manipulated by physical operations called gate operations. For example, an AND gate accepts two inputs, each either 0 or 1, and outputs 1 if both inputs are 1 and 0 for any other combination of inputs.A quantum bit, or qubit, has two distinct states representing 0 and 1. More importantly, a qubit can be in states that are also combinations of 0 and 1. This feature is called quantum superposition. Classical bits can't do this. Because of this ability, each qubit needs two distinct numbers to represent the contributions of 0 and 1 respectively in the qubit's state. If we have two bits, we need two numbers, one for each bit, to represent the state of the collection. With two quantum bits, we need four numbers to represent the state. For 10 bits, we need 10 numbers to represent the state of the collection. For ten qubits, we need 210 (1,024) numbers.

This exponential growth in the information required to represent qubits' states and the superposition of states are the major reasons why quantum computers could be more efficient and powerful than classical computers. Like a classical computer, a quantum computer is also a collection of qubits and a host of physical operations called quantum gates that change the states of qubits to perform calculations.Difficult to isolateSome of the major impediments to realising quantum computers are the fragile nature of quantum states. Specifically, while classical bits are robust and long-lasting, qubits are fragile and collapse quickly at the slightest disturbance. This in turn limits the amount of time for which qubits can hold information, how errors-free the quantum computer can keep its calculations, and how well a quantum computer can be scaled.

It is difficult to isolate a physical gadget to avoid perturbations due to external noise. Therefore, computations are prone to errors. For example, when a bit is expected to represent 0, there is a small chance it may be in the state representing 1. This is called the bit flip error. Methods to identify and fix these errors are called error-correction protocols.A single 0 is represented by three bits in the state 000 (corresponding to each bit in the state 0). If there is a bit-flip error, the resulting state could be 100, 010 or 001 (depending on whether the first, second or third bit is flipped). Similarly, 1 is represented as 111. If we need to encode 01 as the basic information, its true representation is 000111. Looking at the concatenated sequence in groups of three bits, the occurrence of 100, 010, 001, 011,101 or 110 will mean an error has crept in. When three physical bits represent one logical digit, it is easy to figure out which bit has flipped and correct it suitably before the next step in the computation.

Similarly, one way to mitigate the effect of errors in a quantum computer is to correct them using additional qubits that keep track of errors creeping in during computations. This is a logical answer to the error problem, it is however unsuitable for qubits in superposed states. Creating exact copies of unknown superposed states is prohibited by the no-cloning theorem of quantum physics. On the other hand, error correction often requires redundancy, i.e. providing more qubits than what is needed to encode information. This makes it clear more than one physical qubit is needed to represent a single logical qubit. (Qubits also have another type of error called phase flip error, which presents similar challenges to error correction.)One effective method to detect and correct errors in a quantum computer without also violating the no-cloning theorem is called surface code. Here, engineers arrange an array of qubits on a grid. The qubits are grouped into two categories, namely data qubits and measurement qubits. While the error in data qubits is what we wish to identify and correct, any attempt to measure them will force them out of superposition and whatever information they encode will be lost.To avoid this, the surface code method provides the set of measurement qubits. These qubits are entangled with data qubits through suitable gate operations. (If two qubits are entangled, any measurement of one particle will instantaneously cause the other particle to lose its superposition state.) In this setup, the presence of errors in the data qubits is inferred by making suitable measurements of the measurement qubits, while using the gates to prevent the data qubits from being affected, and thus correcting inconsistencies in the data qubits.The error rateAccording to Google, its new quantum processor Willow has significantly better error correction and is thus significantly faster than other quantum computers, not to mention classical computers as well. The researchers who developed it tested it by using it to solve a computationally hard problem.Willow houses 105 physical qubits and operates at temperatures close to the theoretically possible lowest temperature (0 K, -273.15° C). Nearly half of these are data qubits and the remaining are measurement qubits. The superconducting qubits are not strictly two-state systems. When performing gate operations, the physical system can get excited or 'leak' to states other than 0 and 1. These excited states can subsequently interfere with the computations and introduce errors. So a few qubits — i.e. the measurement qubits — are reserved to correct such leakage errors.

Coherence time is the duration over which an intended state (typically, superpositions) of a qubit can survive without being changed due to interactions with the environment or with other parts of the computer. The coherence time of data qubits on Willow is about 100 microseconds, which is more than the coherence time of the physical qubits. This is a consequence of the error



correction protocols used. This in itself is an interesting result because it means the information-holding time can be improved by external manoeuvring.The next milestone for researchers to achieve is to lower the error rate — calculated as the ratio of the number of qubit errors to the number of gate operations — as they build ever-larger quantum computers with more physical qubits and more error correction operations. Google alone has progressed from 3-by-3 to 5-by-5 to 7-by-7 arrays of data qubits, and the error rate has decreased by more than half in each step.What one expects for a collection of qubits on a circuit is that the error rate either remains the same or increases as the number of qubits is increased. That the error rate becomes smaller as more qubits are added is the below-the-threshold capability of Willow's architecture and operation. This is vital to achieve quantum processors with enough qubits that perform almost error-free computations of problems of practical relevance — the ultimate goal.

No dead-endsThe particular computationally difficult task with which Google tested Willow is called random circuit sampling (RCS). In the RCS task, Willow has to calculate the probability of occurrence of possible strings of 0s and 1s in the output when the quantum gates that act on the qubits are chosen randomly. If there is no noise, RCS is a computationally hard task, meaning that the number of calculations required to make the prediction increases exponentially with the input size.Willow completed the RCS task for random gate operations realisable on Willow in a few minutes. The researchers estimated that the same task on the most powerful classical computer available today would take 10 septillion years (i.e. 1 followed by 24 zeroes). To compare, the universe's age in years is approximately 1 followed by 10 zeroes. It is plausible that classical computers running better algorithms may eventually match Willow's feat, although researchers are not aware of such improvements today.Researchers are still a long way away from realising quantum processors of reasonable size to be useful in practical contexts. This said, it's only natural that Willow created the sort of buzz that it did: it has shown that the major issues in realising a reliable quantum computer can be addressed and surmounted, that they are not dead-ends. The work of the Google team provides hope that quantum computers may soon help us unravel nature's mysteries and also solve computationally difficult problems in drug design, materials science, climate modelling, and optimisation, among others — all with deep societal impact.

Chinese hackers remotely accessed workstations, documents in 'major' cyber incident in United States

Washington: Chinese hackers remotely accessed several US Treasury Department workstations and unclassified documents after compromising a third-party software service provider, the agency said.The department did not provide details on how many workstations had been accessed or what sort of documents the hackers may have obtained, but it said in a letter to lawmakers revealing the breach that "at this time there is no evidence indicating the threat actor has continued access to Treasury information." It said the hack was being investigated as a "major cybersecurity incident."'Treasury takes very seriously all threats against our systems, and the data it holds," a department spokesperson said in a separate statement. "Over the last four years, Treasury has significantly bolstered its cyber defense, and we will continue to work with both private and public sector partners to protect our financial system from threat actors."The revelation comes as US officials are continuing to grapple with the fallout of a massive Chinese cyberespionage campaign known as Salt Typhoon that gave officials in Beijing access to private texts and phone conversations of an unknown number of Americans. A top White House official said Friday that the number of telecommunications companies affected by the hack has now risen to nine.The Treasury Department said it learned of the problem at the agency on December 8, when a third-party software service provider, BeyondTrust, flagged that hackers had stolen a key used by the vendor that helped them override the service's security and gain remote access to several employee workstations.The compromised service has since been taken offline.

Carterpuri residents fondly recall Jimmy Carter's visit which gave the village its name

When Atar Singh, a 71-year-old resident of Carterpuri in Haryana, heard the news of the demise of former U.S. President Jimmy Carter, it reminded him of his elder brother Kartar Singh who passed away about two months ago. The two had met the U.S. President about 46 years ago in 1978 when Mr. Carter had visited India during the term of then Prime Minister Morarji Desai.During the trip, Carter visited the otherwise non-descript village, then known as 'Daulatpur-Nasirabad', on January 3, 1978, and it made a permanent mark on the village which was named after him following his visit.

The villagers since then have declared January 3 a holiday and have celebrated every pivotal moment in his life, including his winning the Nobel Peace Prize in 2002, with grandeur. They are now mourning Carter. A chowk on the outskirts of the village with a signed photo of Carter is decorated with yellow marigold flowers, and a banner reads, "Heartfelt tribute, may god grant peace to his soul."Even as their memories fade away, many elders in Carterpuri have made sure that the story of the connection between the village and Mr. Carter does not die with them. Mr. Singh says, "When my brother Kartar Singh, who was the village postmaster, was alive, he made a file with pictures of the visit and every article written about the trip. I will continue the tradition for him until I live and later our children will."Letters from CarterCarter's office continued to write letters back to the village for a long time after his visit.Arjun Singh and his elder brother Surjan Singh were college students when the U.S. President visited. Now in their 70s, they recall how their parents told them stories of the visit of Carter's mother to the village as a volunteer for the peace corp.Bansari Devi, 67, says her eldest son, who is aged 50 now, was in her arms the day Carter and his wife Rosalynn Carter visited. She remembers that the villagers had borrowed one of her dupattas to present to Ms. Carter but it never came back. She jokes, "My old dupatta must have travelled more than I did."The villagers remember how massive security deployment had shrouded the village two days before Carter's visit. Lala Ram, 71, said, "They had horses, police, army people and so many other things; villagers were asked to stay indoors for hours before his visit." Some others recall that how Carter walked every corner of the village and even visited the then newly inaugurated Gobar Gas plant without making any fuss about it, and how it made them feel respected."More than 5,000 people from neighbouring villages had come to see the President; it upgraded our status as a village of importance, and we have kept it close to us since then. Carter, despite never visiting again, made sure to always reply to our letters to him in some form," said Ram Sukh Yadav.The villagers had presented the Carters with several gifts, including a pair of shoes made by the local mochi, a red and yellow dupatta, traditionally given to expecting mothers, a sandalwood carving of Lord Krishna and Arjuna on a chariot and a doll. The villagers hope all these gifts are kept safely somewhere just as Carter's visit has been stored safely in their memories.

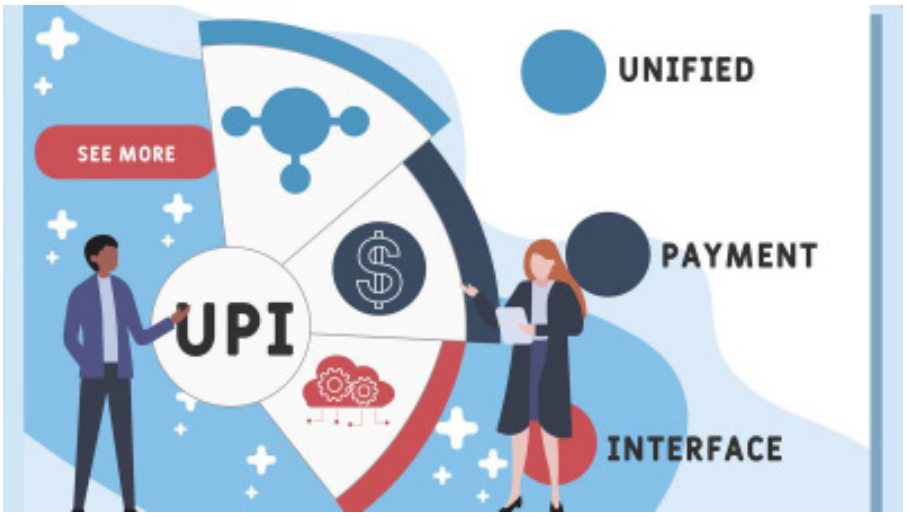
UPI duopoly's rise and market vulnerabilities

The rise of Unified Payments Interface (UPI) in the eight years since its launch has been meteoric, with the UPI ecosystem now accounting for nearly eight in every 10 digital transactions in India, with a value of over ?20.60 lakh crore in August of this year alone.This success, however, is no small feat for a country like India, which is characterised by low digital literacy and a historic reliance on cash, and is deeply reflective of the critical role UPI has played in fostering public trust in digital payments.

UPI's continued success will heavily depend on whether its ecosystem can maintain and build upon such public trust, which will, in turn, depend on the ecosystem's performance on metrics such as resilience, reliability, and openness to innovation. This is particularly important as UPI's penetration remains at 30% of the population, which is impressive for a new payments technology, but shows how much of India remains to be brought into the digital payments fold. Achieving this will require substantially new innovations in everything from service offerings to app design and the overall product base of the UPI ecosystem to make it relevant for the remaining 70% of the country.A major hindrance is the extreme market concentration of two Third Party App Providers (TPAPs) in the UPI network — Phone Pe and Google Pay. Together, they control over 85% of the total market share, whereas the next biggest player, Paytm, controls merely 7.2%.Major risks

The emergence of a duopoly, especially a foreign-owned one, at a relatively early stage in the UPI ecosystem creates three major risks. The first is the increased systemic vulnerability. High market concentration in the payments space can lead to single points of failure, where any sudden stoppage or break in services can have ripple effects across the entire financial structure. Given that nearly eight out of 10 transactions carried out via UPI in a month take place on either PhonePe or GooglePay, these two apps have effectively become such single points of failure. For a system as critical as UPI to remain robust, it is essential to develop failsafes and backup mechanisms to ensure the system continues to function smoothly.Second, there is the risk of decreased competition and innovation in the payments and financial ecosystem. By consolidating a disproportionately large share of the market and user base, the two dominant TPAPs benefit from a scale that creates high barriers to entry for smaller and newer market participants. Given that all service providers in the UPI network are subject to a zero-charge framework for users, they primarily compete to achieve user scale, which they then leverage for commercial purposes by cross-selling other financial products.The widespread scale of operations and user base that the two foreign-owned TPAPs have consolidated creates an inherently uncompetitive market. The lack of competition also disincentivises investment in new innovations, as the existing dominant players need not do anything more to maintain their current positions.

Third is the risk of foreign dominance. Both TPAPs in the duopoly are foreign-owned — PhonePe by Walmart and GPay by Google. No Indian TPAP or service provider can realistically hope to compete against the dominant TPAPs without billions of dollars in funding. Further, this foreign ownership creates multiple potentially new lines of failure, including data protection and backdoor access to sensitive information of Indian citizens, many of which Indian regulators might not even be aware of. It is therefore prudent policy to encourage the development of Indian TPAPs, which can strengthen the UPI ecosystem by providing a counterbalance to the current dominant platforms. This is not an argument against having foreign-owned UPI players or service providers, but rather a call to create a more level playing field for Indian apps and developers.



A major hindrance is the extreme market concentration of two Third Party App Providers (TPAPs) in the UPI network — Phone Pe and Google Pay.

While the existing duopoly has been repeatedly flagged for its associated risks by regulators and parliamentarians alike, it remains to be substantially addressed. In 2020, the National Payments Corporation of India (NPCI) issued a circular instructing all TPAPs to cap their market share at 30% of the total volume of transactions processed via UPI during the previous quarter and imposed an upper limit of two years for implementation. However, the NPCI subsequently extended this deadline. Four years later, the two TPAPs in question are no worse for the wear, with PhonePe alone accounting for 48.36% and Google Pay for 37.3% of market share in volume, as of August 2024. It is now being reported that such delays could continue beyond this year.To further add to the troubles of Indian developers, recent reports suggest that the NPCI may potentially increase the market share cap from 30% to 40%. However, every subsequent extension given by the NPCI, with any potential increase in the market share cap, will only allow the dominant TPAPs to consolidate their hold.Under the right conditions and with the right incentives, however, the UPI ecosystem has every potential to offer smaller market participants a level playing field where they can innovate and compete with larger established players. As UPI enters its next phase of growth in both reach and innovation, the implementation of a market cap is a key step in insulating the ecosystem from such risks that stand to substantially erode public trust and derail UPI's success and future transformational capabilities.

Ken-Betwa project: Bringing rivers closer

The massive river link project, envisaged in 1995, has finally kicked off, with hopes that it will provide drinking water to millions and concerns over environmental damage

On December 25, Prime Minister Narendra Modi was in Madhya Pradesh's Khajuraho to lay the foundation stone for various development projects. Among them was the ambitious Ken-Betwa river linking project that plans to transfer excess water from the Ken river basin to the Betwa river basin in the Bundelkhand region that covers parts of Madhya Pradesh and Uttar Pradesh.As the Prime Minister flagged off work on the project, the Congress and a section of environmentalists raised concerns regarding its potential impact on environment, local ecology and wildlife as a large part of the project falls inside the Panna National Park and Tiger Reserve of Madhya Pradesh.

According to the Union Ministry of Jal Shakti, the Ken-Betwa link project (KBLP) is the first of 30 such link projects under a National Perspective Plan (NPP) for water resources development and interlinking of rivers with 'surplus water' to those with 'deficit water', formulated in 1980 by the Ministry (then Union Ministry of Irrigation) and the Central Water Commission.The NPP is divided into two components — Himalayan Rivers Development that proposes 14 links and Peninsular Rivers Development that plans 16 links, as identified by the National Water Development Agency (NWDA).

An idea first envisaged in 1995 after a feasibility study by the NWDA, the KBLP, part of the Peninsular Rivers Development, has moved at a slow pace. The first major breakthrough was, however, achieved on August 25, 2005 as the Central Government and the governments of Madhya Pradesh and Uttar Pradesh signed a memorandum of understanding (MoU) for the preparation of a Detailed Project Report (DPR).Entrusted to the NWDA, the report was completed in December 2008 and in February 2009, it was decided that the DPR will be prepared in two phases. In phase I, Daudhan Dam and its appurtenant works, two tunnels, two power houses and link canal will be included. The second phase, on the other hand, will see the construction of Lower Orr Dam and various barrages.After a tripartite MoU was signed between the Centre and the two States in March 2021 for the implementation of the project, it was finally approved by the Union Cabinet in December that year, with a budget of ?44,605 crore.The project plans on transferring the declared surplus water of the Ken river by constructing the Daudhan Dam on it and using a 221-km canal, including a 2-km tunnel, to the Betwa river. Apart from this, the project is also expected to generate 103 MW of hydropower and 27 MW of solar power.

It is also aimed at solving the water woes of the drought-prone Bundelkhand region by providing drinking water to 4.4 million people in about 12 districts of Madhya Pradesh and more than 2 million people in 10 districts of Uttar Pradesh.As per an NWDA report, the project is also expected to provide annual irrigation to 8.11 lakh hectares and 2.51 lakh hectares of land Madhya Pradesh and Uttar Pradesh, respectively.While launching the works on the Daudhan Dam on December 25, Mr. Modi said the KBLP will bring prosperity to the Bundelkhand region. "The people of Bundelkhand struggled for every drop of water, but the previous governments did not find any permanent solution to the water crisis. Even after seven decades of Independence, disputes over river water between States continued, but no concrete efforts were made to resolve them," he had said.Spread between the northern parts of Madhya Pradesh and southern Uttar Pradesh, the partly-hilly region covers 13 districts in the two States and has for long suffered droughts and water shortages, prompting locals to move to other cities for employment. The region is also among one of the country's most socio-economically backward regions.

Environmental issuesEven as the BJP governments at the Centre and in the two States continue to claim various benefits of the project, several environmental concerns have been flagged.Among the most prominent is the project's potential impact on the wildlife inside the Panna Tiger Reserve as the project is expected to cause massive deforestation, felling of over 2.3 million trees with a girth of 20 cm or more as per an estimate, and harm the local ecology due to the Daudhan Dam's construction inside the forest.Former Union Environment Minister and Congress general secretary (communications) Jairam Ramesh has claimed that the project is likely to "submerge over 10% of the core area of the tiger reserve". Concerns have also been raised that the project may hurt the tiger reintroduction programme in the Reserve which revived the feline population after it had locally gone extinct in 2009.

Apart from tigers, species like endangered vultures, mahseer fish, and gharials in the Ken Gharial Sanctuary are also feared to be impacted.The Central Government is also yet to release hydrological data of the two basins claiming they are sensitive by virtue of being subsets of the international Ganga basin.A Central Empowered Committee (CEC) of the Supreme Court had in a 2019 report also flagged various wildlife clearances to the project, claiming that the authorities had not considered its impact on the Gharial Sanctuary and the vulture nesting sites. It had also warned of serious impacts on the riverine flora and fauna of the Ken river as well as the unique ecosystem of the region.

Experts also believe the data the government has banked on to conclude that the Ken river has surplus water is outdated and have demanded release of the latest figures.Between 2005 and 2008, the then Panna Collector, Deepali Rastogi, had written to various Central and State Government departments, claiming that there was no surplus water in the Ken river.In May, 2017, a group of 30 activists and experts had written to the Union Minister of Environment, Forest, and Climate Change, flagging several concerns regarding the project, including the possible displacement of at least 10 villages in Chhatarpur and Panna districts.