

The Hindu- 06- November-2023

# Muddying the waters

The Kaleshwaram Project has assumed centre stage in the electoral battle

## STATE OF PLAY

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**A**s the main political parties in Telangana gear up for the Assembly elections by arguing about a host of issues, the Kaleshwaram Lift Irrigation Project (KLIP) appears to be assuming centre stage, particularly after the sinking of a few piers of the Medigadda Barrage of the KLIP on October 21.

The opposition Congress has turned KLIP into a poll issue to target the ruling Bharat Rashtra Samithi (BRS). It has alleged that the BRS has misappropriated ₹1 lakh crore from the project. Senior Congress leader Rahul Gandhi visited the area of the sunken pillars a few days ago and posted on X that the cracks exposed the corruption in the government. Earlier, at public meetings and during his Bharat Jodo Yatra, Mr. Gandhi targeted BRS president and Chief Minister K. Chandrashekar Rao and accused his family of using Kaleshwaram as an "ATM".

The ruling party has hit back at the opposition by demanding to know how ₹1 lakh could have possibly been swindled given that expenditure on the project has not reached a six-digit figure. The BRS has also been referring to Union Minister of State for Jal Shakti Bishweswar Tudu's statement in Parliament in July 2021 that "no instances of corruption in the execution of Kaleshwaram Project have come to the Centre's notice".

Apart from the sinking of piers of Medigadda Barrage on October 21, the November 1 report of the National Dam Safety Authority (NDSA) expert



team after its visit to the barrage site on October 23 and 24 has provided the Congress and the BJP ammunition before the election. In a letter to the State government, the NDSA said that it had found the barrage to be severely compromised, rendering it useless unless it is fully rehabilitated. While State Irrigation department officials said that the piers sank because the sand beneath them got washed away, the NDSA said that the piers sank due to a combination of factors related to planning, design, quality control, and operation and maintenance.

## Anti-corruption campaign

Much like in Karnataka, where it initiated a 'PayCM' campaign to allege that the Basavaraj Bommai-led BJP government was charging 40% commission on public works, the Congress has grabbed this moment to launch an anti-corruption campaign in Telangana too. In Karnataka, the party stuck 'PayCM' posters with a QR code that took users to a website called '40% Sarkara'. In Telangana, it has readied several dummies of ATMs to accuse the ruling BRS of having made easy money from the project. It has also published an 80-page booklet highlighting corruption in the project and is using it as material for electioneering. Leaders of the Bharatiya Janata Par-

ty (BJP) have also referred to the project to target the BRS.

Taken aback by the unexpected turn of events relating to the Kaleshwaram project such as the sinking of the piers on October 21 and leaks under the foundation later, the BRS has been on the defensive. Reacting to the critical NDSA report, a senior leader of the BRS said that the report was self-contradictory as it recommended "carrying out a detailed investigation to determine the causes of failure" while also blaming the design, build, operation and maintenance with just an "exterior examination" of the damage.

"The opposition parties had raised similar ruckus when flood waters submerged the Kannepally pump-house attached to the Medigadda Barrage and inundated the Annaram pump-house linked to the Annaram Barrage in July 2022. We had unprecedented floods then, and the highest-ever recorded flood level of 28.7 lakh cusecs in the Godavari river against the designed discharge capacity of 28.25 lakh cusecs. Within four months the two pump-houses were back in use at the costs of the work agency," the BRS leader said.

While the exact causes of the damage to Medigadda Barrage can be ascertained only after a detailed investigation, the opposition is now fired up. It is going to take a lot more for the Congress and the BJP to unsettle the BRS, which, despite facing anti-incumbency, still enjoys widespread support. However, the issue and the battle of perceptions that it has generated has made the electoral contest more interesting. It has also somewhat put to rest the murmurs and allegations that there is an 'understanding' between the BRS and the BJP in Telangana.



# NITI weighs discontinuing key water report launched 5 yrs ago

Latest edition says water scarcity a 'national problem'

**HARIKISHAN SHARMA**  
NEW DELHI, NOVEMBER 5

NITI AAYOG, the government's think tank, is learnt to have marked the reports on states progress on water management for 2018-19 and 2019-20 for "internal use" after having publicly released the previous editions.

Called the 'Composite Water

**EXPLAINED**  
**E** Problem of data inadequacy

WATER is a scarce resource, and efficient management is critical. Much of its responsibility lies with states. After launching a 'one of its kind in the world' water index five years ago, the NITI Aayog feels data may not be fully adequate. Hence, a pause in releasing the report publicly.

Management Index' report, the first edition launched five years ago in June 2018 brought India's water challenges into spotlight and ranked states in terms of efficacy based on 28 parameters. The first edition provided data for 2015-16 and 2016-17, and the second edition launched in August 2019 was for 2017-18.

The report, published by NITI Aayog, was prepared in association with three ministries — Water Resources, Drinking Water & Sanitation, and Rural Development.

In May this year, the NITI  
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## • NITI weighs discontinuing key water report launched five years ago

Aayog wrote to the Union Ministry of Jal Shakti, seeking the government's perspective on the "use and applicability" of the Index and whether the CWMI should continue. There has been no response from the Ministry, even as the third and fourth editions are awaiting release, sources said.

When contacted, a NITI Aayog spokesperson said there was an idea to club the report for 2018-19 and 2019-20 with that of the next two years (2020-21 and 2021-22). It was also felt that the coverage should be extended to districts. Finally, on the continuation of CWMI itself, there was a view that other channels also need to be explored to undertake the task of indexing rather than bank only on CWMI, the spokesperson said.

The latest report, a copy of which has been seen by *The Indian Express*, maps the performance of states for 2018-19 and 2019-20, and points out that water scarcity is a "national problem". The average annual per capita water availability is expected to reduce to 1,486 cubic meters per person per year by 2021 from 1,545 cubic meters per person per year in 2011, according to the Jal Shakti Ministry.

As per the annual water availability norms, the availability value of less than 1,700 cubic meter/person/year indicates water shortage. Water avail-

ability below 1,000 cubic metre/capita/year is considered as "scarcity".

According to the report for 2019-20, Gujarat tops the list "with continuous improvements year on year and is closely followed by Rajasthan, Andhra Pradesh and Madhya Pradesh" in terms of performance.

"It is encouraging to see that Rajasthan jumped nine positions upward from 2017-18 to FY 2019-20," the latest unreleased report states. Goa, it said, has slipped from the fourth position in 2017-18 to tenth position in 2019-20. Punjab too has seen a drop in its rank during this period.

Responding to questions from *The Indian Express*, a NITI Aayog spokesperson said work on the third and fourth rounds of the index was started in 2022, and attributed the delay to unavailability of updated data due to the Covid-19 pandemic. NITI Aayog also "ideated" whether the third and fourth rounds should be clubbed with fifth and sixth rounds meant to cover years 2021-22 and 2022-23.

"NITI Aayog also commenced the work for 3rd & 4th rounds of CWMI in 2022. However, due to Covid-19, updated 2022 data was not available. In consultation with both the Ministry of Jal Shakti and State Water Resource Departments, it was ideated that (i) a combined report of CWMI rounds 3.0, 4.0, 5.0 and 6.0 should be re-

leased; and (ii) coverage of data should be extended to districts level," the statement reads.

"One view regarding the continuation of CWMI was that other channels also need to be explored to undertake the task of indexing rather than only on CWMI. Views of the Departments have been sought in this regard," the statement said.

The consultation mentioned in the spokesperson's response took place on December 12, 2022, two months after the combined report of the third and fourth rounds of the Index were ready. The meeting was chaired by NITI Aayog member Ramesh Chand and officers of the Jal Shakti Ministry where it was indeed "ideated" whether a combined report of CWMI rounds 3.0, 4.0, 5.0 and 6.0 should be released together.

However, five months later, the NITI Aayog sent letters to Department of Water Resources, River Development and Ganga Rejuvenation and the Department of Drinking Water and Sanitation, both of which come under the Jal Shakti Ministry, saying that the Member (economist Ramesh Chand and NITI Aayog member) is of the view that "other channels need to be explored to undertake the task of indexing rather than relying only on CWMI and that the CWMI is not widely used or applied in Planning, Decision making, Policy Formulation or

Research by public or private stakeholders concerned with water sector."

"It has also been directed to obtain the views of Departments under the Ministry of Jal Shakti before deciding on the continuation of CWMI," said the NITI Aayog communication sent to the Ministry on May 12, 2023.

"It is therefore kindly requested to share your views on use, applicability, and whether the CWMI is to be continued anymore," said the communication, issued with the "approval of competent authority" in NITI Aayog.

Emails soliciting comments of Jal Shakti Ministry and Rural Development Ministry did not elicit a response.

In June 2018, the NITI Aayog said the CWMI report was meant to foster "a culture of evidence and data-backed policy-decisions for efficient management of water resources" and also bring about competitive and cooperative federalism among states.

In October, the United Nations University — Institute for Environment and Human Security (UNU-EHS), had warned that India is close to reaching its groundwater risk tipping point. Environmental tipping points are critical thresholds in the Earth's systems, beyond which abrupt and often irreversible changes occur.

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## केंद्रीय टीम ने जलशक्ति अभियान के कार्यों का लिया जायजा

ठाणे, 5 नवंबर (भाषा)।

केंद्र सरकार की एक टीम ने महाराष्ट्र के ठाणे जिले में जलशक्ति अभियान की परियोजनाओं का जायजा लिया तथा उसके तहत चल रहे निर्माण कार्यों पर संतुष्टि जताई। नीति आयोग की सदस्य जागृति सिंगला और केंद्रीय भूजल बोर्ड विभाग के वैज्ञानिक वैष्णवी परिहार की यह टीम दो और तीन नवंबर को जिले के गांवों में गई तथा उसने सरपंचों एवं अन्य संबंधित व्यक्तियों/अधिकारियों के साथ चर्चा की।

**केंद्रीय** टीम ने योजना के तहत निर्माण कार्यों पर संतुष्टि जताई

टीम ने जिलाधिकारी अशोक सिंगारे तथा जिला परिषद के मुख्य कार्यकारी अधिकारी मनुज जिंदल से भेंट की जिन्होंने जलशक्ति अभियान के तहत चल रहे कार्यों के बारे में उसे बताया। यह टीम इस पहल के तहत कार्यों का निरीक्षण करने के लिए शुक्रवार को भिवंडी तालुका गई और उसने झीलों के जलस्तर पर संतुष्टि जताई।



आइआइटी गांधीनगर, कैम्ब्रिज विवि की संयुक्त शोध में सामने आए तथ्य

## बाढ़ से बचाव को स्थान पर आधारित विशिष्ट मॉडल, बुनियादी ढांचे को बढ़ाने की जरूरत

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**अहमदाबाद.** भारत सहित दुनिया भर के कई बड़े शहरों ने शहरी बाढ़ के खतर से निपटने को जिस ग्रीन इंफ्रास्ट्रक्चर (जीआइ) उपाय को अपनाया है वे मूसलाधार बारिश के दौरान शहरी बाढ़ और जल जमाव को कम करने में पूर्णतः सक्षम नजर नहीं आ रहे हैं। ऐसे में शहरों को उनके क्षेत्र के आधार पर विशिष्ट मॉडल एवं जल निकासी के बुनियादी ढांचे के विकास को बढ़ाने की जरूरत है। यह तथ्य आइआइटी गांधीनगर की पीएचडी छात्रा अंगना बोराह और सिविल इंजीनियरिंग विभाग के प्रोफेसर उदित भाटिया, ब्रिटेन के कैम्ब्रिज विश्वविद्यालय



आइआइटी गांधीनगर का सर्वे।

की प्रो. रोनिता वर्धन की संयुक्त शोध रिपोर्ट में सामने आए हैं। इस टीम ने बारिश के दौरान अहमदाबाद शहर के पश्चिमी क्षेत्र में बने बाढ़ से हालात को देखते हुए बाढ़ के एक दिन बाद बहने पहुंचकर सर्वे किया था। जिसमें पाया कि शहरी बाढ़ प्रबंधन के लिए अपनाए गए एक समान ग्रीन इंफ्रास्ट्रक्चर उपाय के लाभ मामूली हैं, जिससे अत्यधिक

बारिश के दौरान शहरी बाढ़ के जोखिम को कम करने के लिए शहर में उसके स्थान-विशिष्ट मॉडल या ग्रीन इंफ्रास्ट्रक्चर समाधान और पारंपरिक शहरी जल निकासी बुनियादी ढांचे को बढ़ाने की जरूरत है। यह शोध हाल ही में एल्सेवियर द्वारा इंटरनेशनल जर्नल ऑफ डिजास्टर रिस्क रिडक्शन में प्रकाशित किया गया है।

**जीआइ के प्रकार, बाढ़ प्रबंधन में प्रभावशीलता का अध्ययन:** टीम ने अहमदाबाद में चार प्रकार के ग्रीन इंफ्रास्ट्रक्चर (हरित अवसंरचना) की जांच की। 1-हरित छतें, 2-पारगम्य फुटपाथ, 3-जैव-प्रतिधारण कोशिकाएं और 4-वनस्पति स्वेल्स का अध्ययन किया। ये इंजीनियरिंग संरचनाएं हैं, जिन्हें वनस्पति उगाने

के उद्देश्य से मिट्टी की कई परतों के साथ डिजाइन किया जाता है, जो साथ ही बाढ़ के चरम और बाढ़ के विस्तार को कम करने के लिए आवश्यक रीटेन्शन, इनफिल्ट्रेशन, और वाष्पीकरण में भी सहायता करते हैं। टीम ने वर्षा जल अपवाह में कमी के कारकों, बाढ़ की सीमा और बाढ़ के चरम की गहराई के मेट्रिक्स के आधार पर इन ग्रीन इंफ्रास्ट्रक्चर उपायों की प्रभावकारिता का मूल्यांकन और मात्रा निर्धारित की।

**शहरीकरण से चरमरा रही जल निकासी प्रणालियां:** प्रो.भाटिया कहते हैं कि पारंपरिक जल निकासी प्रणालियां, जो कभी शहरी बाढ़ प्रबंधन की रीढ़ होती थीं, अबसर चरमरा जाती हैं। यह अपर्याप्तता

## हाइड्रोडायनामिक मॉडल से सर्वे

अहमदाबाद मनपा के 55% क्षेत्र में बरसाती जल निकासी का बुनियादी ढांचा होने के बावजूद कुछ वर्षों में बारिश के कारण गंभीर बाढ़ की स्थिति बनी है। शहर के पश्चिमी क्षेत्र के विभिन्न क्षेत्रों में बाढ़ के बाद टीम ने हाइड्रोडायनामिक मॉडल से व्यापक क्षेत्र सर्वेक्षण किया। टीम

ने बाढ़ के स्तर को मापने के लिए विभिन्न अवासीय क्षेत्रों, ओवरब्रिज के खंभों जैसे बुनियादी ढांचे की दीवारों पर बाढ़ के छोड़े गए निशान को मापा। मॉडल को प्रमाणित करने को उपयोग से उच्च-रिज़ॉल्यूशन रिमोट सेंसिंग डेटा को भी एकीकृत किया।

## एक समान समाधान उपयुक्त नहीं

प्रो. उदित भाटिया ने कहा बड़ते शहरीकरण, जलवायु परिवर्तन से उत्पन्न अद्वितीय चुनौतियों से निपटने को एक समान समाधान उपयुक्त नहीं है। यह अध्ययन स्थान-विशिष्ट मॉडल की जरूरत पर प्रकाश डालता है।

तीव्र और व्यापक शहरीकरण के बदल रही हैं, जिससे मौजूदा जल निकासी पैटर्न बाधित हो रहा है।