Telangana- 08- May-2023

Malkapeta reservoir works pick pace

Reach final stage; officials planning a trial run soon

Workers fixing the motors at Malkapeta reservoir pump house. Godavari water to be pumped to the reservoir at Konaraopet mandal.

RAGHU PAITHARI
RAJANNA-SIRCILLA

Work on the Malkapeta reservoir project is progressing on a brisk note, with officials planning a trial run soon as the works have reached the final stage.

In order to turn parched lands into green fields by supplying Godavari water to upland areas in the district, the State government had taken up the Malkapeta reservoir project with the initiative of IT and Industries Minister KT Rama Rao.

Being constructed under Package-9 of the Kaleshwaram Lift Irrigation project, this reservoir is aimed at supplying water for irrigation to 96,150 acres in Sircilla and Vemulawada constituencies. The 3 TMC capacity project is expected to cost about Rs 1,000 crore.

Godavari water will be shifted to the Malkapeta reservoir of Konaraopet mandal, Singasamudram tank of Yellareddypet mandal and Upper Manair. For this purpose, a 40 km canal has been developed.

As part of the project, Godavari water from the Mid Manair reservoir will be shifted to Malkapeta reservoir, 12 km away from the Mid Manair Dam (MMD). The water will be taken through an underground tunnel that passes through Sircilla's first bypass road, Chandrampeta, Ragudu, Kolanuru and Malkapeta. For this purpose, a head regulator is also constructed at Ramappaguttalu, 2.5 km away from MMD. The 3 TMC storage capacity Malkapeta reservoir has been developed in between seven hillocks in a stretch of five km. To lift 1,100 cusecs of water from a depth of 130 metres, two motors, each of 30 MW, are also installed in the pump house. Water will be pumped into the reservoir through a surge pool pump house.

Later, the Godavari water will be taken to the Singasamudram tank and Battalacheruvu of Gambhiraopet mandal through gravity canals. Then the water will be shifted to the Upper Manair reservoir through another canal. A 33/11 kv substation has been established to operate the motors.

As part of the Kaleshwaram project, three barrages were constructed in erstwhile Karimnagar district. They are Medigadda (Lakshmi barrage)- 16 TMC, Annaram (Saraswati)-11.9 TMC and Sundilla (Parvati barrage)-8.83 TMC. Besides the barrages, Kannepalli, Siripuram, Goliwada and Nandi pump houses were constructed to lift water from Medigadda, Annaram, Sundilla barrages and the Yellampalli respectively.

The world's largest pumping house, Lakshmi pump house, was constructed 470 feet below the earth's surface near Lakmipur, Ramadugu mandal of Karimnagar district. It lifts 3,000 cusecs of water to the height of 111 metres.

The Hindu- 08- May-2023

India's first national water-body census

What is the importance of a water-body census? How has the census thrown light on rainfall patterns? What are some of the shortcomings with respect to the data collected? Does the data give insight into natural ecosystems and how water bodies sustain them?

EXPLAINER

Veena Srinivasan

The story so far:

The findings of the first-ever water body census, conducted by the Ministry of Jal Shakti, was published recently.

Why is a water body census necessary?

India is facing a water crisis with groundwater decline, biodiversity loss, and climate change increasing the frequency of floods and droughts. In this context, water bodies are important. They buffer against climate variability, holding flood waters for use in dry periods. They contribute to food and water security as well as livelihoods by recharging groundwater and providing water for irrigation and livestock. They also have cultural and ecological significance. However, water bodies are increasingly under threat from pollution, encroachment, urbanisation, and drying. If they are to be conserved and managed effectively, we need action plans which require baseline data. As water bodies are managed by different agencies from State to local to private entities, the data must be uniform and easily accessible. To actually manage water bodies, we need contextual and traditional knowledge of communities which are to be integrated with formal data. While data on reservoirs and rivers has been available on the India Water Resources Information System (WRIS) for the last few years, there has been no data on smaller water bodies that are the lifeline of rural India and critical cultural, flood-control and recreational spaces in cities.

How was the census conducted?

The massive effort expended in the first-ever water body census was much needed. The census's objective was to develop a national database with information on the size, purpose, ownership, status, and conditions of water bodies. It covered all natural and human-made units bounded on all sides for storing water, irrespective of condition or use.

A software for data entry and a mobile app for capturing the location and visual of the water bodies were developed, and data-processing workshops were conducted to train the surveyors in all States and Union territories.

The census was built on existing and publicly available satellite-derived datasets. These datasets are extremely rich, allowing citizens to hone in on a specific village and download the historical time series data on each water body. However, they only include attributes that can be observed from space. The water body census thus, extends this to social characteristics including ownership, use and condition.

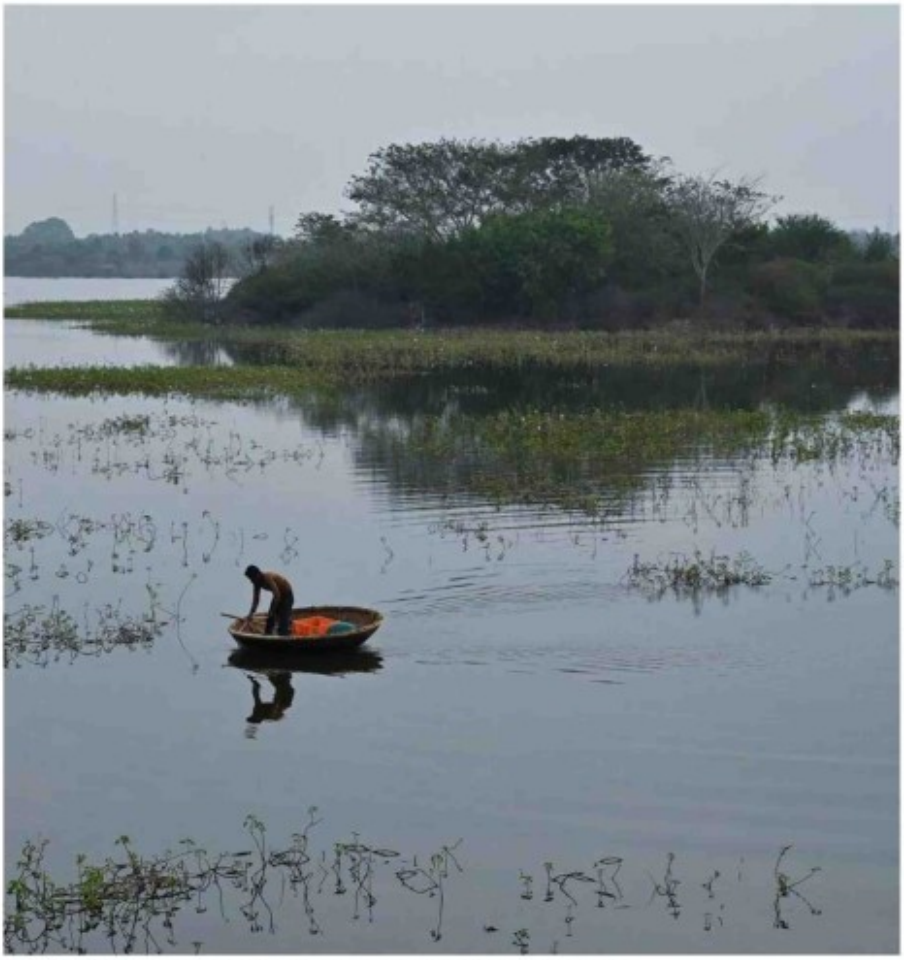
What does the data show?

Such a large national effort allows us to compare spatial and temporal trends of water bodies across the country. These are some of the observations based on the data:-

(a) Most water bodies in the country are very small – the vast majority of India's water bodies are less than one hectare (ha) large. This means locating and keeping track of them is likely to remain a challenge. The traditional way to map these water bodies, using satellites, may not work, which is why the mammoth effort expended in ground-based tracking is very welcome.

(b) The water bodies show regional patterns that correlate with rainfall – in general, in drier States like Gujarat, Maharashtra, and Rajasthan, water bodies tend to be larger and publicly held. In the wetter parts of the country, like Kerala, West Bengal, and States in the northeast, more than three-quarters of the water bodies are privately owned. In drier States, the water bodies are primarily used for irrigation and groundwater recharge while in wetter States, domestic use and pisciculture dominate. Mid-sized water bodies are largely panchayat-owned.

(c) Most water bodies have never been repaired or rejuvenated – several water bodies were classified "not in use", meaning despite the recent interest in rejuvenating water bodies, most of them have never been repaired or revived.



Monitoring waters: A fisherman casts his net at Madhure Kere lake on the outskirts of Bengaluru on April 1. AFP

How can the census improve?

While the census was a clearly Herculean effort, we must take care when interpreting the data.

First, there are some clear gaps. Water bodies have an important role in supporting biodiversity. They harbour fish that birds feed on and provide roosting and breeding spaces for resident and migratory birds. These ecological functions are related to the size and location of the water bodies. But the latest water body census does not address any questions about this. The report itself noted in its preamble that water bodies "support healthy ecosystems", yet the focus was exclusively on human use, which means only pisciculture or fish farming, which is seeded and does not reflect natural biodiversity.

In classifying water bodies in terms of reasons of abandonment or disuse, "others" emerged as a significant reason, on par with "drying up" in a few States, but far ahead of other specific categories such as industrial pollution, construction, and salinity. One possibility is that the census questionnaire may have left out the most common reasons like eutrophication, sewage pollution, and solid waste dumping.

Secondly, there are inconsistencies in the census. The census groups water bodies into five types: ponds, tanks, lakes, reservoirs, and water conservation schemes. Its glossary defines a pond as a smaller water body than a tank, while "water conservation structures" might include check dams and percolation tanks. However, these categories are not mutually exclusive – many tanks that were traditionally used directly for irrigation serve primarily as recharge structures today. Based on the data, it appears that in Karnataka, these were classified as ponds and tanks serving the purpose of irrigation, whereas in Maharashtra these were classified as water conservation structures, primarily serving the purpose of groundwater recharge. The sources of irrigation statistics for the two States suggest neither State has much tank irrigation.

Third, the data was not standardised across States. Some States like Gujarat do not show any water bodies not being in use, whereas Karnataka reports almost 80% of its water bodies as being in a state of disuse. This suggests differences in interpretation by the enumerators.

There are some other concerns as well. For example, the map for north Karnataka seems suspiciously empty. Since the original geotagged data does not seem to have been made available yet, it is unclear if some districts were skipped or if they genuinely had a lower water-body density.

Notwithstanding these shortcomings, it is crucial that the government continue such nationwide censuses of a vital resource, with modifications. This first edition itself provides high-level indications on the way forward by detailing ownership, state of use, and the costs of construction and repair. It points to how and why water bodies must be restored, which agency's capacities need to be strengthened, where and how much funds are needed, and who will benefit from such efforts. If such censuses are conducted every five or 10 years, over time, they will accurately represent emerging trends and the state of water in the country as a whole.

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THE GIST

- India is facing a water crisis with groundwater decline, biodiversity loss, and climate change increasing the frequency of floods and droughts. In this context, water bodies are important.
- The first water-body census's objective was to develop a national database with information on the size, purpose, ownership, status, and conditions of water bodies. It covered all natural and human-made units bounded on all sides for storing water, irrespective of condition or use.
- The first edition itself provides high-level indications on the ways forward by detailing ownership, state of use, and the costs of construction and repair.

Times of India- 08- May-2023

Nine months after it developed cracks, work to repair Karam dam yet to begin

TIMES NEWS NETWORK

Bhopal: Even though nine months have elapsed, the government is yet to start the work to repair Karam dam. Last year in mid-August, the under-construction dam in MP's Dhar district had developed cracks trigerring panic among villagers nearby. The seeping water from the dam had led to evacuation of people in villages close to the dam. Thousands of residents of 18 villages were shifted to relief camps and Army was called for rescue. A channel was dug to drain water from reservoir was wilting under pressure of the surging water.

The incident had flagged major irregularities in building of the dam. The company that constructed the dam was blacklisted and field officials had to face action, but no step has been taken after that. With work of the dam not yet started, people fear for their safety in the upcoming monsoon. When asked when the work of Karam dam will begin, water resources minister Tulsi Silawat said that a committee has been constituted and experts from Delhi have also been roped in. The minister did not say anything further in this regard.

File pic

State minister Tulsiram Silawat participate in flag hoisting ceremony on the 76th Independence Day last at the Karam Dam in Dhar district.After the leakage of Karam Dam, the administration emptied the dam.Due to the strong flow of water fields along with the crops were washed away

A top official in the state secretariat said that the state water resources department and central water commission would jointly carry out the work to ensure that there is no safety breach this time. Central water commission has already been informed, the official said.

Sources said out that the government is moving slowly to avoid any fresh controversy in the election year on the issue that attracted national attention and the rescue work was supervised by the highest level last year. A private firm has been building the Rs 304-crore dam. The breach in the dam was noticed on August 11 sparking panic in nearby areas and alarm in the administration. After government engineers failed to plug the leak, the Army was called in and hundreds of soldiers worked to prevent collateral damage. The under-construction dam, according to officials, was only 90% complete then and the reservoir was filled up for the first time in monsoon, but the walls breached within days.

Dainik Jagran- 08- May-2023

विभिन्न देशों में पानी की कमी बन रही टकराव का कारण

बढ़ते शहरीकरण, जलवायु परिवर्तन और जनसंख्या की बेतहाशा वृद्धि से वैश्विक स्तर पर जल संकट की आहट अब शोर में तब्दील हो चुका है। दो वर्ष पूर्व संयुक्त राष्ट्र की रिपोर्ट ने भी इस बात की पुष्टि कर दी थी कि वर्तमान में वाटर मैनेजमेंट, इसकी निगरानी, पूर्वानुमान और वक्त रहते चेतावनी दी जा सकने वाली तकनीक के बीच सही तालमेल नहीं है। साथ ही विश्व स्तर पर किए जा रहे जलवायु वित्त पोषण के प्रयास भी अपर्याप्त हैं। गंभीर होती स्थिति के बीच विश्व में पानी को लेकर टकराव की स्थिति दिनोंदिन बढ़ रही है। पिछले वर्ष ताजिकिस्तान और किर्गिस्तान के बीच पानी को लेकर हुई हिंसा में 41 लोग मारे गए थे और 200 से अधिक घायल हुए थे। इन घटनाओं में वर्ष 2000 से लगातार वृद्धि हो रही है। आइए विश्व में पानी को लेकर हुए टकराव पर एक नजर डालें।

2019 के बाद विश्व में पानी को लेकर हुए टकराव

75
2020 में

127
2021 में

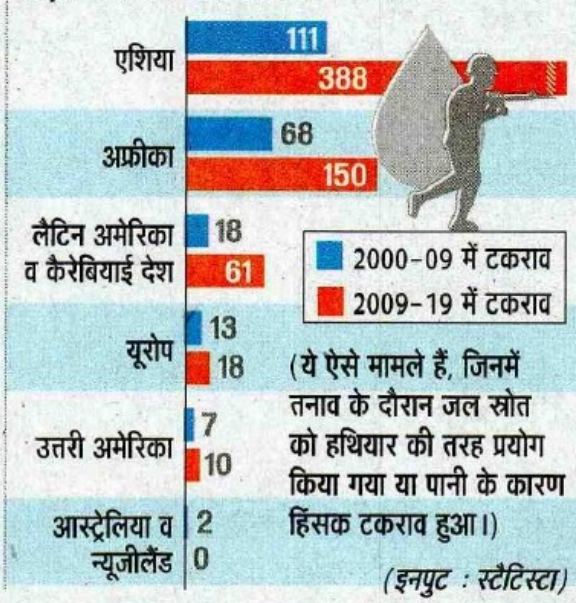
तापमान में वृद्धि से जल की सुलभता प्रभावित

संयुक्त राष्ट्र के मुताबिक धरती का तापमान जिस तेजी के साथ बढ़ रहा है उसकी बदौलत जल की सुलभता में भी बदलाव आ रहा है। जलवायु परिवर्तन का सीधा असर बारिश के पूर्वानुमान और कृषि ऋतुओं पर भी पड़ रहा है। इसका असर खाद्य सुरक्षा, मानव स्वास्थ्य और कल्याण पर भी हो सकता है। अगर हालात नहीं सुधरे तो वर्ष 2050 तक विश्व में पांच अरब लोग जल संकट का सामना कर सकते हैं।

सूखा पड़ने का संकट गहरा रहा

जल संकट की बात करें तो बीते दो दशकों में भूमि की उपसतह में जल की मात्रा में प्रतिवर्ष एक सेंटीमीटर की दर से कमी आई है। इसका एक बड़ा प्रभाव अंटार्कटिका और ग्रीनलैंड में भी देखने को मिला है। वहीं बीते दो दशक में पूरी दुनिया में सूखे की घटनाओं में भी तेजी आई है। इसकी वजह से सबसे अधिक मौत अफ्रीका में हुई हैं।

बढ़ते जा रहे टकराव के मामले



(ये ऐसे मामले हैं, जिनमें तनाव के दौरान जल स्रोत को हथियार की तरह प्रयोग किया गया या पानी के कारण हिंसक टकराव हुआ।)

(इनपुट : स्टैटिस्टा)

Hindustan- 08- May-2023

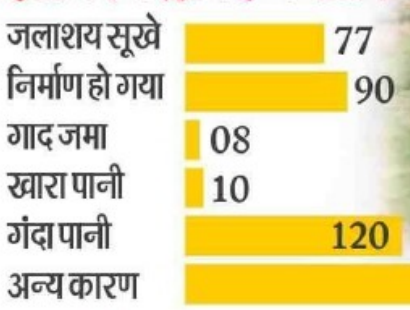
अतिक्रमण और सूखने से दिल्ली के तीन चौथाई जलाशयों पर संकट

■ संजय कुशवाहा

नई दिल्ली। राजधानी दिल्ली के तीन चौथाई फीसदी जलाशयों की सेहत ठीक नहीं है। वे सूखे हैं या फिर अतिक्रमण उनका अस्तित्व मिटा रहे हैं। कहीं पर पानी इतना गंदा है कि जलाशय का इस्तेमाल नहीं हो पा रहा है।

केंद्रीय जल शक्ति मंत्रालय ने देश के अलग-अलग राज्यों में जलाशयों की स्थिति पर अपनी तरह की पहली गणना रिपोर्ट जारी की है। दिल्ली में कुल जलाशय 893 है। इसमें से 95.1 फीसदी जलाशय ग्रामीण क्षेत्र में हैं, जबकि शहरी क्षेत्र में 4.9 फीसदी हैं। चिंताजनक यह है कि कुल जलाशयों में से 73.5 फीसदी जलाशयों का इस्तेमाल नहीं हो पा रहा है। महज 26.5 फीसदी ही प्रयोग में हैं। जलाशय या तो सूख रहे हैं या फिर इनमें उद्योगों से निकला हुआ गंदा पानी या सीवरेज का पानी डाला जा रहा है। गाद जमा होने या पानी खारा होने जैसी समस्याएं भी हैं। इससे जलीय जीवन के लिए भी यहां का पानी बहुत अनुकूल नहीं रहा है।

इसलिए बदहाल हैं जलाशय



देश का हाल

- **24,24,540** जलाशयों की कुल संख्या है भारत में
- **97.1%** जलाशय हैं ग्रामीण क्षेत्र में
- **83.7%** तालाबों का हो रहा है इस्तेमाल