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THE DIFFERENCE IN DEMAND BETWEEN WINTER & SUMMER IS ESTIMATED TO BE AROUND 20%

Facing shortage, DJB asks Hry to ramp up supply

OUR CORRESPONDENT

NEW DELHI: The Delhi Jal Board (DJB) has yet again requested the neighbouring state of Haryana to release additional water as the Capital faces shortage of it.

The depleting water levels at Wazirabad has added to the disruption in the production of water, a senior official in the DJB said.

"The situation is fine during

the monsoon and winter season but due to the summer season the demand for water also increases and the Board cannot fulfil the requirement on its own. We need the cooperation of the neighbouring states," the official aware of the developments said.

The difference in demand between winter and summer is estimated to be around 20 per cent.

A similar request was



PIC/NAVYEN SHARMA

made on April 30 and the latest letter sent by the Board has mentioned that the level of water in the Yamuna at the Wazirabad pond has fallen to 672.6 feet against the normal level of 674.5 feet, indicating a drop of around two feet of water. The flow in the CLC (Carried Lined Channel) and DSB (Delhi Sub-Branch), the channels that bring river water into Delhi from Haryana, is also "fluctuating", the letter

stated.

The Board has requested the DJB has requested the Haryana Irrigation Department to supply an additional 150 cusecs of water till the onset of monsoon.

Meanwhile, an official from the Haryana Department has said that the DJB is being provided with their due share of water and any additional supply is difficult as they are facing shortage too.

Business Line- 04- May-2022

Is participatory irrigation management working?

A survey of Water Users' Associations in Uttar Pradesh indicates that equitable distribution of water is still a distant reality

KRITI BARDHAN GUPTA
KUSHANKUR DEY

Water is an indispensable factor of production in agriculture. Participatory irrigation management (PIM), adhering to the rules and norms of community-based natural resource management, gained salience when it received a thrust in the National Water Policy 2002. The PIM Act aims to monitor the equitable distribution of water resources between beneficiary farmers through Water Users' Associations (WUAs).

WUAs, as a user-based participatory group of farmers, are responsible for water distribution and conflict management. Some 84,779 WUAs are operational in several States, and the performance of WUAs is skewed across States. For example, the performance of the 802 WUAs in the Uttar Pradesh, one of the largest States contributing to agricultural production, appears to be dismal. In other words, a key question arises: How participatory is participatory irrigation management through WUAs in Uttar Pradesh?

Parameters like adequacy equity, utility, cropping intensity, productivity, sustainability, and farm-

ers' satisfaction were used to assess the performance of WUAs. Primary data from the seven irrigation divisions of Uttar Pradesh, where WUAs have been in existence since 2010-11, were collected. As many as 432 beneficiary farmers associated with older WUAs, and 36 non-beneficiaries related to the newer WUAs promoted in 2019-20 were part of the survey. Also, representatives of 52 WUAs (48 older and four contemporary) and officials of the irrigation department were approached to record their responses concerning the governance and management of WUAs.

Findings from the survey

First, most WUAs surveyed meet regularly, maintain their internal records and hold timely elections for WUA executives, which indicate a positive stroke of governance of such WUAs

Second, while more than 79 per cent of member-farmers located at the head reach stated the increase in canal water availability post the formation of WUAs, only about 38 per cent of the farmers at the tail reach indicated an increase. However, equitable distribution of water remains a distant reality. About 41 per cent of farmers located at the



Irrigation needs to improve

tail reach of the canal agreed that water distribution is more equitable than earlier, compared to 63 per cent and 81 per cent of farmers situated in the middle reach and head reach, respectively. Unauthorised use of water and canal offences are also reported.

Third, about 23 per cent of WUA respondents indicated satisfaction in drawing the support of the irrigation department, while about 42 per cent were dissatisfied as they could not get support.

Fourth, there is a provision of a definite financial grant to functional WUAs in the UP-PIM Act, 2009. However, WUAs do not get any funding from the department for operations and maintenance. What they receive is merely a temporary departmental fund on an ad-hoc basis for desilting canals.

But there is no flexibility given to the WUA management committee for fund utilisation. This defeats the very purpose of the participatory approach to managing water resources. WUAs do not collect membership fees to manage their administrative and conveyance expenses. This has raised concerns about the sustainability of such WUAs.

Fifth, beneficiary farmers predominantly grow wheat and paddy crops. They agreed that there has been no significant change in cropping patterns over the last few years. WUAs have not been very active in motivating farmers to adopt crop diversification for more profitable or less water-guzzling crops. The average agricultural profits for the farmers interviewed have increased from ₹70,085 per acre in 2017-18 to ₹99,244/acre in 2019-20.

Sixth, potential factors and their relative importance in influencing the performance of WUAs were identified. The prioritised factors based on farmers' responses include: (1) increased water availability at farm level post the formation of WUAs, (2) operation and maintenance quality, (3) tail reach water availability, (4) level of physical, financial resource mobilisation, (5) leadership quality, (6) equitable dis-

tribution of water after the formation of WUAs, (7) orderly meeting, and (8) prevention of unauthorised use of water.

The irrigation departments concerned should make a provision of utilising physical, technical and financial resources for the operation and maintenance of WUAs. Devolution of powers to performing WUAs and corpus management through their self-governance are critical to sustain the management of common property resources.

Canal offences, acting as a major disincentive to rule-abiding farmers, should be prevented through peer pressure, negotiation and sanctions infractions. Grant, incentives to users and adequate infrastructure such as office space can have crucial implications for institutional efficiency, transparency and sustainability. The overall performance of older WUAs, which started functioning about 10 years ago, has been better than the newer ones established in 2019-20. In other words, WUAs require a stipulated period to realise their full potential as functional, user-based and participatory institutions.

Gupta and Dey are faculty of CFAM, IIM Lucknow. Views are personal

Fears of glaciers vanishing exaggerated, says study

Cato Institute paper says Himalayan melt has little impact on rivers

RITWIK SHARMA
New Delhi, 3 May

Fears of global warming rapidly melting Himalayan glaciers that feed major river basins in India are unfounded, according to a paper published by the US-based think tank Cato Institute on Tuesday.

The report titled *False Alarm over the Retreat of the Himalayan Glaciers*, co-authored by Swaminathan S Anklesaria Aiyar and Vijay K Raina, says that the importance of glacial melt in river flows has been grossly exaggerated.

In 2007, the Intergovernmental Panel on Climate Change (IPCC) published a report that said, "Glaciers in the Himalayas are receding faster than in any other part of the world and, if the present rate continues, the likelihood of them disappearing by the year 2035 and perhaps sooner is very high."

Raina, who was director general of the Geological Survey of India, wrote a report titled *Himalayan Glaciers: A State-of-Art Review of Glacial Studies, Glacial Retreat and Climate Change* in 2009, after he was appointed by the government of India.

The new Cato Institute paper points out that Raina's report highlighted the formation of glaciers and their melting. "In the 20th century, the average annual retreat was around five metres (16 feet) until the late 1950s, but then it accelerated fast until the late 1980s, reaching up to 30 metres (98 feet) in some years for the Gangotri Glacier, and even more for some smaller glaciers," it observed, and added that "glacial retreat decelerated from the 1990s onward, the period when global temperatures have been rising".

In 2010, the IPCC admitted that they had erred in their claim.

Raina's report also argued that the main causes of glacial melting "are very local phenomena".

One of the examples it cited to illustrate the point was that of the Siachen Glacier, the biggest in the Himalayas and over 70 km long (44 miles). "It advanced 700 metres (2,297 feet) between 1862 and 1909, retreated 400 metres (1,312 feet) between 1929 and 1958, and then hardly retreated



WHAT THE PAPER SAYS

■ The retreat of the Gangotri Glacier has decelerated in recent decades to 10 m (33 ft) per year, at which rate it will last 3,000 years

■ Until recently, studies couldn't distinguish between the contribution of snowmelt and glacial melt to river flows. One study shows that the

contribution of glacial melt is less than 1% of the river flow in the Ganges Basin and less than 2% in the Indus Basin even at high altitudes, and much less downstream

■ Glacier alarmism — some studies claim the Ganges flow will shrink 70% as glaciers disappear — can distort agricultural research and planning priorities

at all in the next 50 years."

Raina's study gave estimates of the annual retreat of the Gangotri Glacier up to 2007-2009. The Cato paper also refers to a 2017 study by Dhruv Sen Singh et al (*Pattern of Retreat and Related Morphological Zones of Gangotri Glacier, Garhwal Himalaya, India*) that extended the data on retreat until 2015. The retreat of the Gangotri Glacier, which is the source of the Ganges, was relatively modest at a little over 10 metres (33 feet) per year between 1935 and 1956, the 2017 study noted. After that it accelerated, with one study estimating an average of as much as 40 metres (131 feet) per year during 1962-1982, leading to "alarmist speculation", it added.

"Singh and his co-authors estimate that the glacier's retreat averaged 17.44 metres (57.22 feet) per year during 1976-1990; then it came down to 12.55 metres (41.17 feet) per year during 1990-2001; and then it fell further to 10 metres (33 feet) per year

between 2001 and 2015."

The new paper by Aiyar and Raina also refers to satellite-based data collected by the Indian Space Research Organisation (ISRO) on the Himalayan glaciers for a few decades, which covers the Indus, Ganges, and Brahmaputra basins.

One of its studies between 2004 and 2011 identified 34,919 glaciers spread over 75,779 square km (29,258 square miles) of glaciated area in the Himalayan region. It also monitored the advance and retreat of 2,018 glaciers from 2000-2001 to 2010-2011, the results of which were published in the journal, *Current Science*. From ISRO data it emerged that altitude is a key factor in the amount of glacial melt. "Glaciers at low altitudes face relatively high atmospheric temperatures and so melt faster, while those at high altitudes are colder and melt more slowly, or in some cases, advance," the Cato paper says.

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लखवार परियोजना : एनजीटी ने अपने आदेश की समीक्षा की मांग ठुकराई

नई दिल्ली (भाषा)। राष्ट्रीय हरित अधिकरण (एनजीटी) ने उस बहु-अनुशासनात्मक समिति के गठन के अपने आदेश की समीक्षा की मांग करने वाली याचिका को खारिज कर दिया है, जिसे उत्तराखंड में लखवार बहुउद्देशीय परियोजना पर एक रिपोर्ट पेश करने का काम सौंपा गया था।

एनजीटी अध्यक्ष न्यायमूर्ति ए के गोयल की अध्यक्षता वाली पीठ ने कहा कि समीक्षा के आवेदन में कोई दम नहीं है, लिहाजा इसे खारिज किया जाता है। पीठ ने कहा, आवेदन में शिकायत की गई है कि मामले के प्रभावी निपटारे के लिए इसमें उभरने वाले मुद्दों पर अपनी राय देने के लिए एक बहु-अनुशासनात्मक समिति का गठन करना अधिकार क्षेत्र के बाहर है। ऐसे में समिति का गठन उचित नहीं है। उसने कहा, उचित विचार करने के बाद हम समीक्षा के आवेदन में कोई दम नहीं पाते हैं। एनजीटी के निर्णय से संबंधित किसी भी मुद्दे पर विचार करने के लिए एक समिति गठित करने का इस अधिकरण का अधिकार क्षेत्र कानून की दृष्टि में सवालों से परे है।

एनजीटी ने परियोजना की व्यवहार्यता, पर्यावरण पर इसके प्रतिकूल प्रभाव को कम करने और निवासियों के पुनर्वास के बारे में अध्ययन करने के लिए जल संसाधन मंत्रालय के अतिरिक्त सचिव की अध्यक्षता में एक स्वतंत्र विशेषज्ञ समिति का गठन किया था। पीठ ने

कहा, आवेदन में कोई दम नहीं है, लिहाजा इसे खारिज किया जाता है

कहा था कि ये विषय विशेषज्ञ अपने-अपने क्षेत्रों पर गौर करेंगे और डेटा को सामूहिक रूप से मिलान किया जाएगा। गत 20 जनवरी को जारी आदेश में एनजीटी ने समिति को 'उपलब्ध डेटा या आने वाले समय में जुटाए जाने वाले डेटा' के संबंध में दो महीने के भीतर अपना अध्ययन पूरा करने का निर्देश दिया था।

अधिकरण ने समिति को अपना अध्ययन पूरा करने के लिए चार महीने का समय दिया था और 30 जून या उससे पहले एनजीटी के समक्ष एक रिपोर्ट दाखिल करने को कहा था। राष्ट्रीय हरित अधिकरण उत्तराखंड जल विद्युत निगम लिमिटेड की लखवार बहुउद्देशीय परियोजना के लिए पर्यावरण एवं वन मंत्रालय की ओर से दी गई पर्यावरण मंजूरी के खिलाफ पर्यावरण कार्यकर्ता मनोज मिश्रा द्वारा दायर एक याचिका पर सुनवाई कर रहा था। लखवार बहुउद्देशीय परियोजना से 300 मेगावाट बिजली पैदा होगी। इसके जलाशय में मौजूद 33 करोड़ घन मीटर पानी उत्तराखंड, हिमाचल प्रदेश, हरियाणा, उत्तर प्रदेश, राजस्थान और दिल्ली को सिंचाई व पीने के लिए जल की आपूर्ति करेगा।