Central Water Commission
Water Systems Engineering Directorate
******

2nd Floor (S), Sewa Bhawan
R K Puram, New Delhi-66

Dated 28.06.2019

Subject: ***Submission of News Clippings***

The News Clippings on Water Resources Development and allied subjects are enclosed for perusal of the Chairman, CWC and Member (WP&P/D&R/RM), Central Water Commission. The soft copies of clippings will also be uploaded on the CWC website.

Encl: As stated above.

Senior Artist 28/6/2019
(WSE, Dte.,)

Deputy Director, WSE Dte.

Director, WSE Dte.

28/6/19

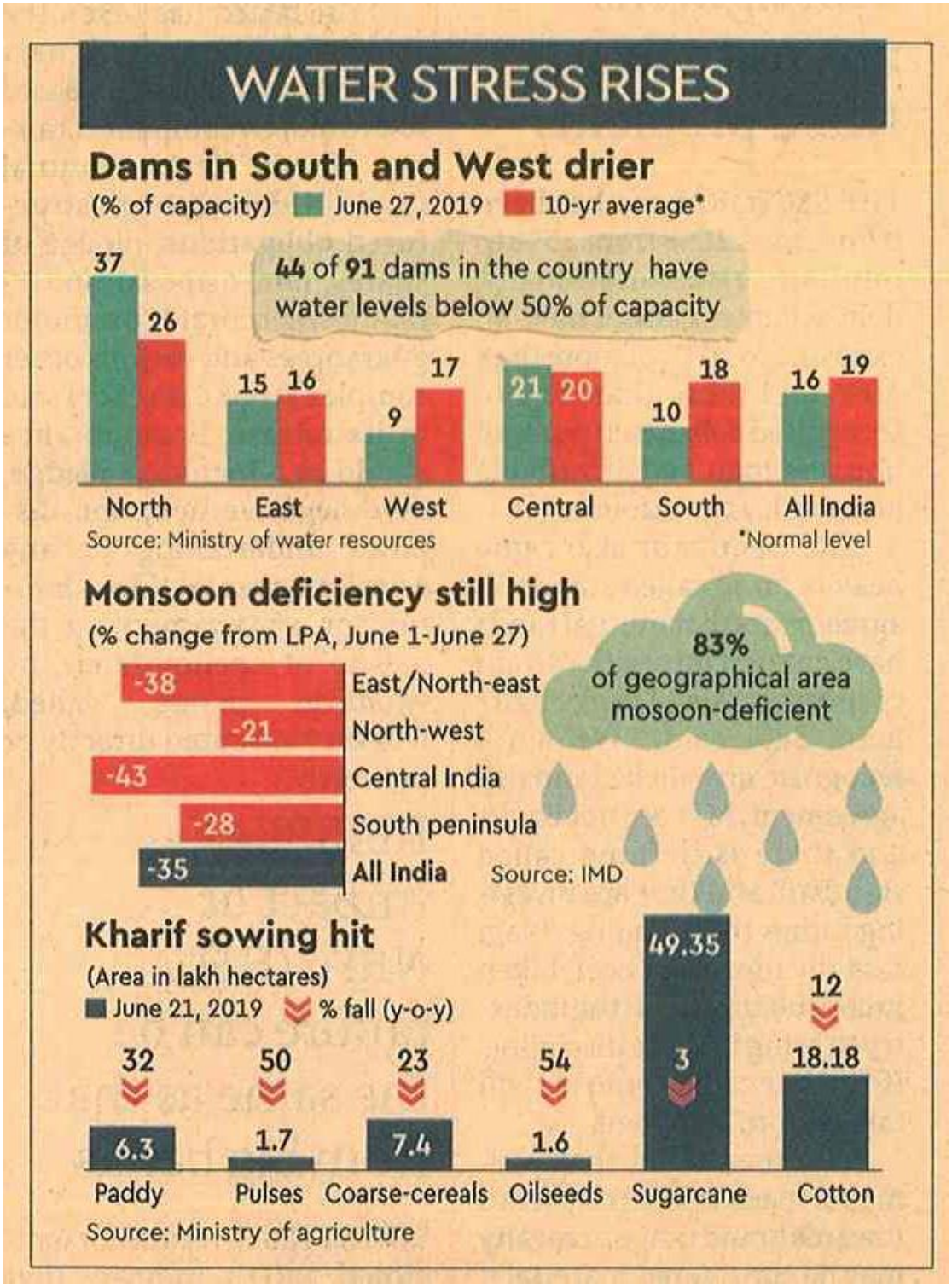
For information to:

Chairman, CWC, New Delhi

Member (WP&P/D&R/R.M.), CWC and

All concerned may visit www.cwc.gov.in

News item/letter/article/editorial published on 28-06-2019 in the **Financial Express** and documented at WSE Dte, CWC.



News item/letter/article/editorial published on 28-06-2019 in the **Mint** and documented at WSE Dte, CWC.

India could yet lead the world on water conservation

SANDEEP CHAKRAVORTY

is India's consul general in New York

The biggest disruptor in the new government of Prime Minister Narendra Modi for India is by far the creation of a ministry of Jal Shakti. The merger of the ministries of water resources, river development, Ganga rejuvenation, and drinking water and sanitation brings about a much-needed integrated approach for India's water issues. Water will be the limiting factor to India's growth. According to a 2018 NITI Aayog report, 600 million Indians face high to extreme water stress and about 200,000 people die every year because of inadequate access to safe water. By 2030, the country's water demand is projected to be twice the available supply, implying severe water scarcity for millions and an eventual 6% loss in the country's gross domestic product (GDP). However, if the Jal Shakti ministry, the one ministry on which the future depends, achieves its objectives, all that will change.

Addressing an election rally before the 2019 Lok Sabha polls, Prime Minister Modi said, "After constructing toilets and giving dignity to women, I will focus my next term on ensuring clean drinking water." The creation of the Jal Shakti ministry and the adoption of an integrated approach to water issues formed part of the Bharatiya Janata Party's vision. Gajendra Singh Shekhawat, the minister of Jal Shakti, has hit the ground running, adopting an inclusive approach by spelling out his vision of partnership with states. In his interview with *India Today* on 8 June, Shekhawat saw India's water challenge as an opportunity to involve stakeholders. He is keen on the use of India's traditional water conservation knowledge whose neglect has brought us to the precipice of a water disaster. He also promised "*nirmal*" or clean Ganga in two years.

"*Nal se Jal*" (tap water) for everyone by 2024 is a delayed yet essential goal for India to break into the middle-income league and become a global economic power. It is not difficult to imagine how much economic activity this goal-setting will engender, potentially contributing billions to India's GDP through the construction/rehabilitation of reservoirs, their linking, the laying of pipes and construction of tanks, among other civil works. Its impact on the nation's health will also be transcendental, as most diseases in India are water-borne. *Nal se Jal* is also a natural companion of Swachh Bharat and the National Toilet Mission, which cannot be sustained without water availability in every household. The National Democratic Alliance government has achieved ambitious goals before, be it the 72 million Ujjwala connections, taking electricity to every village and 20 million households, constructing 92 million toilets in less than five years, and the opening of more than 300 million Jan Dhan accounts. Making piped water reach every household is daunting, but the ability to achieve it is there. It is absolutely "*Mumkin hai*" (possible). If not now, when?

Placing water on top of the conservation pyramid leads to the conservation of soil and forests

Only 4% of the available water in India is used for drinking, whereas 80% is used for irrigation with rampant inefficiencies. About 4,000 litres of water is used in Punjab to produce 1 kg of rice, though 300 litres is sufficient. The first charge of India's water must go to drinking water, followed by crop and then industrial production. Furthermore, placing water on top of the conservation pyramid automatically leads to conservation of soil and forests, and forests make water. The mantra of water conservation is age-old and simple: hold it where it falls, in pits, wells, trenches, reservoirs or ponds. This prevents run-off and soil erosion, recharges aquifers and replenishes sub-soil moisture, critical for plant growth and survival. I speak from my experience in the early 1990s when I spent five years of my youth in rural India espousing soil and water conservation.

Living in New York, I marvel at the city's water supply system, which provides the world's best potable water. Even restaurants serve tap water. The city has a network of conservation watersheds, reservoirs and aqueducts with almost 95% water supplied by gravity, conserving energy. Institutional frameworks exist for every aspect, be it conservation of the watershed, reservoirs, distribution and pricing. Watershed conservation is the central principle for providing drinking water. Even corporate water bottlers such as Poland advertise the watersheds they protect to promote their products. It is not a pipe-dream to expect such a reality in India.

Many states have already undertaken path-breaking work. Telangana's Bhagiratha project is worth emulating across India. Maharashtra's Jalyukt Shivar Abhiyan has undertaken water conservation work in 16,522 villages. Unfortunately, rainfall has been poor this year, so the impact of the work is not felt. However, this is bound to change in the coming years when real water harvesting kicks in.

There is also a great synergy between bringing water to all households and the socio-cultural-spiritual movements gaining ground in India around saving the rivers, spearheaded by people such as waterman Rajinder Singh and Jaggi Vasudev. As Vasudev recently said, "Jal Shakti is a landmark step for revitalisation and conservation of our rivers and water bodies." They are opinion makers and have far reaching influence on people. The merger of their objectives with national priorities augurs well for India. On the lines of the International Solar Alliance that India pioneered, we may lead the world on water conservation from Jal Shakti to Bharat Shakti to Vishwa Shakti.

News item/letter/article/editorial published on 28-06-2019 in the **Danik jagaran** and documented at WSE Dte, CWC.

रिपोर्ट | केंद्रीय जल आयोग के अनुसार भारत में उपलब्ध है 1999.20 बिलियन क्यूबिक मीटर जल

देश में बढ़ी पर गंगा बेसिन में घटी जल उपलब्धता

हरिकिशन शर्मा • नई दिल्ली

कई जिलों में गहराते जलसंकट के बीच राहत की खबर यह है कि भारत में जल उपलब्धता बढ़कर 1999.20 बिलियन क्यूबिक मीटर (बीसीएम) हो गई है। हालांकि, गंगा बेसिन में जल उपलब्धता घटी है और यह 525.02 बीसीएम से घटकर 509.52 बीसीएम पर आ गई है। खास बात यह है कि गंगा बेसिन के प्रवाह क्षेत्र में भी कमी आई है।

यह अहम जानकारी केंद्रीय जल आयोग की ताजा रिपोर्ट में दी गई है। 'रिअसेसमेंट ऑफ वाटर अवेलेबिलिटी इन इंडिया यूजिंग स्पेस इनपुट्स' शीर्षक वाली यह रिपोर्ट बुधवार को जारी हुई। इसमें सेटेलाइट का सहारा लेकर 1985 से 2015 तक के आंकड़ों के आधार पर देश में जल की उपलब्धता का आकलन किया गया है। रिपोर्ट के अनुसार, देश में कुल जल उपलब्धता 1999.20 बीसीएम है। इससे पूर्व 1993 में भी जल उपलब्धता का आकलन किया गया था और उसमें यह 1869.35 बीसीएम बताई गई थी। इस तरह ताजा रिपोर्ट के अनुसार देश में उपलब्ध जल पहले से अधिक है। एक

गंगा बेसिन में जल उपलब्धता घटकर 509 बीसीएम हुई, प्रवाह क्षेत्र में भी आई कमी, रिपोर्ट में इसके कारणों का स्पष्ट रूप से नहीं किया गया है उल्लेख

बीसीएम में एक हजार अरब लीटर होता है। सीडब्ल्यूसी के ताजा अध्ययन के अनुसार गंगा बेसिन में जल उपलब्धता 509.52 बीसीएम बताई गई है, जबकि 1993 में यह 525.02 बीसीएम बताई गई थी। इस तरह गंगा बेसिन में जल की उपलब्धता में तकरीबन 16 बीसीएम की कमी आई है। गंगा बेसिन में जल उपलब्धता में कमी क्यों आई है, इसके बारे में रिपोर्ट में स्पष्ट रूप से कुछ नहीं कहा गया है। लेकिन, इसमें इतना जरूर बताया गया है कि 1985-2015 की अवधि में गंगा बेसिन में औसतन 914 बीसीएम बारिश हुई, जबकि 1965-1984 की अवधि में गंगा बेसिन में 947 बीसीएम बारिश हुई थी। इस तरह माना जा रहा है कि गंगा बेसिन में जल उपलब्धता घटने की एक वजह बारिश में कमी आना है। केंद्रीय जल आयोग के पूर्व अध्यक्ष एवी पांड्या का कहना है कि हाल के वर्षों में जलवायु परिवर्तन के चलते तापमान बढ़ने से वाष्पीकरण होने और भूजल के अतिदोहन के चलते जल की उपलब्धता पर असर पड़ा है। नए अध्ययन के अनुसार, गंगा बेसिन का प्रवाह क्षेत्र यानी कैचमेंट एरिया भी 8,38,803 वर्ग किलोमीटर होने का अनुमान है, जबकि 1993 में यह 8,61,452 वर्ग किलोमीटर बताया गया था। इस तरह नई रिपोर्ट के अनुसार गंगा बेसिन का क्षेत्रफल भी कम हुआ है। गंगा बेसिन में गंगा नदी के अलावा यमुना, गोमती और रामगंगा सहित कई नदियां शामिल हैं।

नए अध्ययन के अनुसार, ब्रह्मपुत्र बेसिन में भी जल उपलब्धता 527.28 बीसीएम बताई गई है, जबकि 1993 के अध्ययन में यह 537 बीसीएम बताई गई थी। हालांकि, बराक नदी बेसिन में जल उपलब्धता पूर्व के अनुमान की अपेक्षा ताजा अध्ययन में अधिक है। रिपोर्ट में कहा गया है कि भारत में पानी की कमी नहीं है, लेकिन उपेक्षा और जल संसाधन विकास परियोजनाओं की निगरानी के अभाव के चलते देश के कई इलाकों को आज पानी की कमी का सामना करना पड़ रहा है। अगर इस क्षेत्र को ऐसे ही नजरअंदाज किया गया तो भविष्य में पानी की कमी का सामना करना पड़ेगा।

News item/letter/article/editorial published on 28-06-2019 in the **Millennium Post, Delhi** and documented at WSE Dte, CWC.

DRY DAYS

Access to resources that are critical for the sustenance of communities should be recognized as rights. It is thus heartening to note that Madhya Pradesh is seeking to enact the Right to Water Act, a first-of-its-kind legislation, which seeks to guarantee a certain quantum of water to every citizen on a daily basis. The prime minister, too, has expressed his resolve to make piped water available to every household by 2024. Such initiatives, even though they are ambitious, are laudable. Yet, there is a case to argue that the transformation of natural resources into commodities meant for public consumption in a populous country like India often leads to wastage and, subsequently, scarcity. The pressure exerted by populism on policy compounds shortages in precious resources. Incidentally, sops to agriculturalists for the use of groundwater as well as the unregulated extraction of water for industrial purposes are not uncommon in the country.

India is all set to pay a heavy price for such lapses. Niti Aayog's Composite Water Management Index states that 600 million Indians reside in high or extreme water-stressed zones and that the creaking water supply system is on the verge of collapsing. The think tank has also expressed the apprehension that 21 Indian cities would run out of groundwater by 2020. The scale of the imminent crisis can perhaps be adjudged from Chennai's present troubles. Scanty rainfall, a scorching summer and — most importantly — apathy and myopia of successive administrations have brought untold suffering to the city and its people. Time is of the essence. India must address the problem of water scarcity on a war footing and on multiple levels. Practices that lead to the exploitation of water in agriculture — the sector uses 78 per cent of the nation's water — and industry must stop. The unregulated use of groundwater, the primary source of drinking water for rural India, must be checked. Distribution systems in metropolitan areas suffer from leakages: they need to be modernized. Equally significant is the conservation and regeneration of resources. A law may not always be enough in this context. Tamil Nadu had made water harvesting compulsory; yet Chennai is now bone dry. The real challenge, therefore, would be to sensitize citizens to the criminal wastage of water. Only then can they claim to have a right over this valuable resource.

News item/letter/article/editorial published on 28-06-2019 in the **Millennium Post, Delhi** and documented at WSE Dte, CWC.

Dearer than gold

As many scurried to government tankers to collect their share of those priceless droplets, others who could not join the winding queue cried in chorus. Chennai is facing a severe water shortage as the southern city becomes the latest in India to be caught up in a nationwide crisis. Photographs of rows of women with plastic buckets have emerged waiting for the tankers. IT firms have asked their employees to work from home, several restaurants have shut down, the realty sector is struggling without water and even clashes have been reported from some parts of the state. Satellite images reveal the stark shrinking of one of the main rain-fed reservoirs that serve Chennai. In an image taken by satellite on June 15 last year, the city's largest reservoir, Lake Puzhal, resembles a dark blue patch amid a densely crowded cityscape. In another, taken exactly a year later, the lake is a small grey fraction of its earlier self. One of the city's other important reservoirs, the smaller Chembarambakkam Lake, is also running dry. All four reservoirs serving the city had mostly dried up as of last month, with storage only about one-hundredth of the levels recorded by the same time the previous year. Recently, during a short duration debate in the Upper House on water crisis, CPI(M)'s T K Rangarajan said Chennai is the first Indian city "to have gone dry" with the Central Water Commission reporting a rainfall deficit of 41 per cent in Tamil Nadu till June 13 this year. "Most of the Chennai population today depends on water tankers, municipal supply and private supply for drinking water. A tank of private water costs more than one gram of gold. Now gold is cheaper in Chennai than water. This is the truth," he stated. The southern city's water crisis has drawn international attention. Oscar-winning Hollywood star Leonardo DiCaprio, known for his environmental activism, has raised awareness about the ongoing water crisis in Chennai. The 44-year-old actor, who is one of the most vocal environmentalists in Hollywood, shared a post on Instagram with the title: "Only rain can save Chennai from this situation". Experts opine that last year's failed monsoon, shoddy desilting and large-scale concretisation along with the indiscriminate sinking of bore wells have reduced the re-charging of groundwater and resulted in the water table touching new lows. Many feel it is time for the state government to revive rainwater harvesting programmes that were mandatory in the early 2000s. Still, others believe that it is time for the Centre to initiate the interlinking of rivers, keeping in mind the growing water crisis throughout the country.

News item/letter/article/editorial published on 28-06-2019 in the **Pioneer, Delhi** and documented at WSE Dte, CWC.

GROUNDWATER LEVELS DIP ACUTELY IN N INDIA

New Delhi: Northern India has registered a critical fall in groundwater levels ranging between 75 and 85 per cent, a monitoring report by the Central Ground Water Board said.

News item/letter/article/editorial published on 28-06-2019 in the **DNA, Mumbai** and documented at WSE Dte, CWC.

Marathwada has 0.24% water left

Water in all of the state's reservoirs nears rock bottom

Sudhir Suryawanshi
sudhir_s@dnaindia.net

Mumbai: Maharashtra is staring at an unprecedented water crisis, and the worst hit are Marathwada and North Maharashtra, which are left with 0.24% and 3.9% of their water stock.

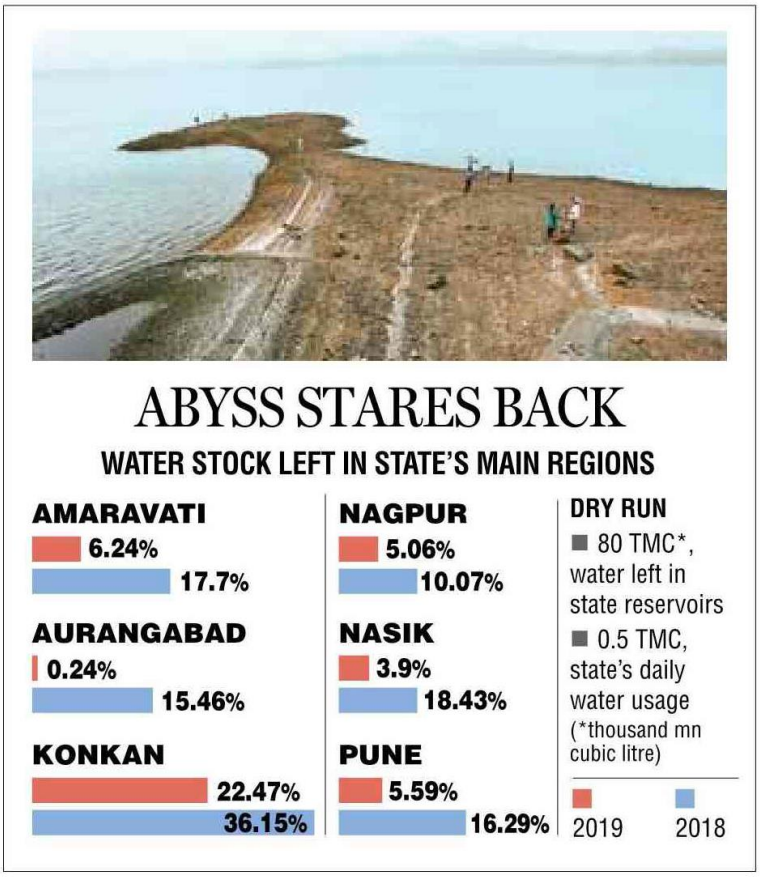
As of Thursday, all the reservoirs in the state collectively held 6.15% of the water stock they are capable of holding. Last year, around the same time, the steepest plunge the stock took was 16.71%.

Most reservoirs that supply drinking water across the state have only dead stock left. Dead stock, as opposed to live storage in a dam, is the residual water that can't be released through sluices and has to be drawn out.

Data from the state's irrigation department shows that Marathwada and North Maharashtra are left with 0.24% and 3.9% stock respectively. Last year, the two regions had 15.7% and 18.43% water in storage.

"Konkan region dams have got the highest water stock, which is 22.47% this year, followed by reservoirs in Amravati at 6.24%, Pune at 5.56% and Nagpur at 5.06%," a government report states.

It says that state's mid-size reservoirs had 9.22% water stock as of Thursday, against 19.93% last year. While in small dams, there is 4.47% left against 10.43% last year.



A senior official from the irrigation department told DNA that all major reservoirs that provide potable water across the state had 80,000 million cubic litre (TMC) of water on Thursday, which is 5.97% of the total capacity of the lakes. Last year, this stock was 17.49%.

"The state's daily demand is 0.5 TMC, so we have enough water in our reservoirs," said the official, who did not wish to be named. "Marathwada is the worst affected. It will tide through 10-15 days at best. Dams in Western Maharashtra have 20 TMC, and most of them are in Satara and Kolhapur. We are banking on rains, or there will be a major water crisis," he said.

Levels in major water-supplying dams, like in Vaitarna (-5.47%) and Jayakwadi (-8.81%), have dipped well below their dead stock.

The state has decided to carry out cloud seeding to meet basic water needs. It has issued a tender to invite bids for the process that will cause artificial rains in Aurangabad. Vidarbha and Marathwada, with their catchment areas, will be targeted next.

News item/letter/article/editorial published on 28-06-2019 in the **Jansatta, Delhi** and documented at WSE Dte, CWC.

समुद्री जल को पीने योग्य बनाने वाले संयंत्र का शिलान्यास

चेन्नई, 27 जून (भाषा)।

तमिलनाडु के मुख्यमंत्री के पलानीसामी ने पड़ोस के कांचीपुरम जिले में समुद्री जल को पीने योग्य बनाने के लिए 1,259 करोड़ रुपए की लागत से तैयार होने वाले संयंत्र का गुरुवार को शिलान्यास किया। शहर की पेयजल आपूर्ति की जरूरतों को पूरा करने के लिहाज से यह शहर का तीसरा ऐसा संयंत्र होगा।

पलानीसामी ने कहा कि सरकार कांचीपुरम जिले के पेरुर में 40 करोड़ लीटर प्रति दिन जलशोधन की क्षमता वाले संयंत्र को स्थापित करने का काम तेजी से कर रही है। एक आधिकारिक विज्ञप्ति में बताया गया कि 15 करोड़ लीटर प्रति दिन जलशोधन की क्षमता वाला एक संयंत्र पड़ोस के जिले के नेम्मेली में लगाया जाएगा।

News item/letter/article/editorial published on 28-06-2019 in the **Business Standard, Delhi** and documented at WSE Dte, CWC.

Rains 24% below normal, says IMD

REUTERS
Mumbai, 27 June

Monsoon was below average for the fourth straight week, with rainfall scanty over central and western parts of the country in the week ended on Wednesday, raising concerns about major crop production and the impact on the nation's economy.

Monsoon is crucial for the country's farm output and economic growth. About 55 per cent of India's arable land is rain-fed, and agriculture makes up about 15 per cent of a $2.5 trillion economy that is Asia's third-biggest.

And the country's economy, which grew at its slowest in more than four years over the January-March quarter, isn't in any condition to take a big hit from a poor monsoon. If the rains don't improve over the next two to three weeks, India could be facing a crisis that hammers crop harvests and rural demand. Companies that sell everything from tractors to fertiliser to consumer goods to farmers would be vulnerable.

"Sowing has already been delayed by three weeks. If the monsoon doesn't revive in two, three weeks, then the entire season could be wiped out," said Harish Galipelli, head of commodities and currencies at Inditrade Derivatives & Commodities in Mumbai.

India received 24 per cent less rainfall than the 50-year average in the week ended on June 26, data from the India Meteorological Department (IMD) shows. In some areas, such as the eastern part of Madhya Pradesh, known for growing soybean, the deficit was as high as 69 per cent, the data shows.

Sowing of summer crops down 12.5% due to scanty rains, says govt

The sowing of summer crops such as rice, soybeans and corn has been lagging as a result.

Farmers had planted summer-sown crops on 9.1 million hectares as of June 21, down 12.5 per cent compared with the same time last year, according to provisional data from the ministry of agriculture.

Wet monsoon critical

The country needs a good monsoon this year, as in 2018 a drought had ravaged crops, killed livestock, emptied reservoirs and drained water supplies to city dwellers and some industries.

Hardest hit were the western states of Maharashtra and Gujarat, along with Tamil Nadu, Karnataka, Andhra Pradesh and Telangana in the south, and Madhya Pradesh in central India.

Some municipalities like Chennai, Mumbai, and Hyderabad were forced to cut water supplies to ensure their reserves lasted until monsoon rains replenished reservoirs.

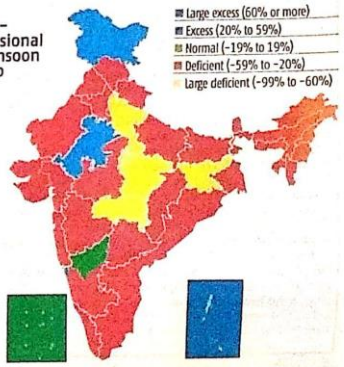
The IMD has forecast average rainfall in 2019, while the country's only private forecaster, Skymet, has predicted below-normal rainfall. A normal, or average, monsoon means rainfall between 96 per cent and 104 per cent of a 50-year average of 89 cm (35 inches) during the four-month monsoon season from June to September, according to the IMD's classification.

Farmers like Baburao Tadas from Wardha district in Maharashtra are praying for normal monsoon after their incomes were hit by erratic weather and lower crop prices over the past few years. "I will plant cotton if we get rainfall in the next fortnight, otherwise I will switch to short duration crops such as corn or soybean," Tadas said.

REVIVAL NEEDED

Monsoon has delivered lower-than-normal rainfall since the start of the season on June 1, due to a delay in the onset of monsoon, according to data compiled by IMD. Monsoon revival needed in 2 weeks to save season, says analyst. Monsoon arrived in the southern state of Kerala on June 8. However, cyclone Vayu developed in the Arabian Sea drew moisture from the monsoon and weakened its progress REUTERS

Sub-divisional monsoon map



News item/letter/article/editorial published on 28-06-2019 in the **Hindustan Times, Delhi** and documented at WSE Dte, CWC.

K'taka mulls ban on tall buildings to tackle water crisis

HT-2c

BENGALURU: Deputy chief minister of Karnataka G Parameshwara on Thursday said the state government was contemplating banning construction of apartment buildings in Bengaluru for a period of five years as the state was facing acute water shortage.

Parameshwara said many residential buildings were being constructed in Bengaluru without much attention being paid to basic amenities, such as water supply. "We will hold meetings with stakeholders and seek their opinion on this issue," he said.

Karnataka is reeling under severe drought and with a delayed monsoon, the situation is likely to worsen. »P13

K'taka may ban construction of new flats in Bengaluru for 5 yrs

HT-2c

Vikram Gopal
letters@hindustantimes.com

BENGALURU: In view of the acute water shortage in Bengaluru, the Karnataka government is contemplating a five-year ban on the construction of apartment buildings in the state capital, deputy chief minister G Parameshwara said on Thursday.

Many buildings were being constructed in Bengaluru without paying any attention to the basic amenities required for residents, he told reporters.

"Traffic and facilities cannot be regulated. In large constructions with about 3,000 flats there are equal number of vehicles but approach roads are not provided," said Parameshwara.

"In terms of drinking water, it is brought from some lake and given to the people, without checking if it is clean or not. Some people have complained that they are getting skin diseases because of this," he added.

"This is the reason we are thinking of enforcing a five-year ban on new apartment constructions," the minister said. Karnataka is reeling under a severe drought and a delayed monsoon has played truant with the state. Additionally, Bengaluru's population has increased manifold over the past three decades, with governmental sources pegging current estimates at 12 million, up over 2 million from 2011, when the Census recorded Bengaluru district's population at 9.6 million. Parameshwara said that he would ask the Bruhat Bengaluru Mahanagara Palike (BBMP) to check if all the buildings in the city had installed sewage treatment plants to make better use of water resources.

Responding to the proposal, Bharatiya Janata Party spokesperson S Prakash said the statement showed the incompetence of the state government in ensuring that new projects adhered to norms. "The question is what was the government doing when developers flouted the rules in this manner. How were no objection certificates issued to these projects? In the absence of any concrete steps, this threat seems to be a means to negotiate with the builders," he claimed.

News item/letter/article/editorial published on 28-06-2019 in the **Hindustan Times , Delhi** and documented at WSE Dte, CWC.

WATER CRISIS GRIPS INDIA

Groundwater levels down: Govt

GOVT DATA Tamil Nadu has the highest number of blocks in the over-exploited category due to groundwater extraction HT-28 II

Jayashree Nandi
• letters@hindustantimes.com

NEW DELHI: Tamil Nadu has the highest number of blocks in the over-exploited category – 358 – due to groundwater extraction, according to data released by Rattan Lal Kataria, minister of state for Jal Shakti, in the Lok Sabha on Thursday. About 52% wells being monitored in the country are recording declining groundwater levels, he said.

Out of 6,584 blocks assessed in the country, 1,034 are in the over-exploited category, 253 in the critical category, 681 in the semi-critical category, 96 in the saline category, and 4,520 in the safe category. Kataria was answering a question seeking details of the districts or blocks identified and marked as dark zones by the Central Ground Water Board (CGWB), particularly in Aurangabad district of Maharashtra.

"Groundwater levels in various parts of the country are declining because of continuous withdrawal due to reasons such as increased demand for fresh water for various uses, vagaries of rainfall, increased population, industrialization and urbanization..." Kataria said.

The CGWB carries out groundwater monitoring four times a year across the country. To assess groundwater-level trends on a long-term basis, pre-monsoon groundwater data for 2018 has been compared with the decadal average (2008 to 2017).

"Analysis of the data indicates decline in groundwater level in about 52% of the wells being monitored," Kataria said.

In Maharashtra, out of a total of 353 talukas or blocks, nine have been categorized as over-exploited. But Tamil Nadu has the highest number of talukas in the over-exploited category (358), followed by Rajasthan (164), Uttar Pradesh (113) and Punjab (105).

However, Tamil Nadu has a very large number of blocks that have been assessed, while in the rest of the states, fewer blocks have been assessed but a relatively large number has been found to be in the over-exploited category. In reply to another question on groundwater levels, Kataria said out of 14,243 wells analysed in the country, 52% or 7,412 are showing a declining trend while 6,786 are showing a rising trend. The categorization of blocks was conducted in 2013 but comparative data is being shared only now, while the trend analysis was done by CGWB in 2018. The comparative data is relevant because Tamil Nadu is experiencing one of its worst water crises in years. The state repealed the Tamil Nadu Groundwater (Development and Management) Act, 2003 – meant to ration and regulate groundwater extraction – in 2013 on protests from farmers. It was never replaced by another law.

"It was not the right move. Groundwater extraction is extremely high in rural areas. The crops we grow are extremely water-intensive like sugarcane and paddy. Repealing the act may have aggravated the problem," said retired IAS officer Santha Sheela Nair, the municipal administration and water supply (MAWS) secretary in 2003 who was instrumental in making rainwater harvesting mandatory in Tamil Nadu.

• A protest against water crisis in Chennai, Tamil Nadu. PTI FILE

Groundwater depletion: Worst-affected states

State	Talukas assessed	Over-exploited talukas	Saline talukas
Tamil Nadu	1139	358	35
Rajasthan	248	164	3
Uttar Pradesh	820	113	0
Punjab	138	105	0
Haryana	119	64	0

Govt data shows steep decline in groundwater levels

Jayashree Nandi HT-28 I
• letters@hindustantimes.com

NEW DELHI: Tamil Nadu has the highest number of blocks in the over-exploited category – 358 – due to groundwater extraction, according to data released by the government in the Lok Sabha. About 52% wells being monitored in the country are recording declining groundwater levels, the government said. Out of 6,584 blocks assessed in the country, 1,034 are in the over-exploited category, 253 in critical category, 681 in semi-critical, 96 in the saline category, and 4,520 in the safe category. »P13

News item/letter/article/editorial published on 28-06-2019 in the **Rajasthan patrika, Delhi** and documented at WSE Dte, CWC.

अधिकांश जलाशय सूखे, आवड़ी झील में बचा है कुछ पानी

RP 28/6

चेन्नई. महानगर में जलापूर्ति करने वाले प्रमुख चारों जलाशय सूख चुके हैं। केवल महानगर के उत्तर इलाके के आवड़ी में एक झील में ही कुछ पानी बचा हुआ है। शहर पानी के संकट का सामना कर रहा है। 85 एकड़ में फैली परतुपट्टु झील जिसमें अतिक्रमण हो चुका था इसे नया रूप दिया गया है। इसे साफ किया गया है तथा इसे बायो पार्क के रूप में विकसित किया गया है। 28 करोड़ रुपए की परियोजना से इसे तैयार किया गया है। साथ ही तीन किमी लम्बा वाकिंग ट्रेक भी विकसित किया गया है। साथ ही झील के पास 35 करोड़ की लागत से ट्रीटमेंट प्लान्ट तैयार किया गया है। आवड़ी नगरपालिका के सीवेज को यहां रिसाइकिल किया जा सकेगा। यह पानी औद्योगिक इकाइयों के काम आ सकेगा।

पानी से लबालब भरा है मरुंदीश्वरर मंदिर का टैंक

चेन्नई. जल संकट से जूझ रहे महानगर में एक स्थान ऐसा भी है जहां तालाब पानी से पूरे भरे हुए हैं। तिरुवान्म्यूर स्थित मरुंदीश्वरर मंदिर के दोनों टैंक पानी से लबालब भरे हुए हैं। स्थानीय लोगों को टैंकों को भरा देखकर आश्चर्य हो रहा है। इनमें से मंदिर के अहाते के अंदर स्थित टैंक पांच फीट गहरा है और दूसरा टैंक जो पूवी दिशा में स्थित है 10 फीट गहरा है। कार्यकारी अधिकारी के. अरुलसेल्वम का कहना है कि एक दशक से ज्यादा समय पहले दोनों जलस्रोत कीचड़ और अवसाद से भरे हुए थे। इन टैंकों की सफाई करवाई गई जिसके बाद से टैंकों का जल कभी नहीं सूखा। मंदिर प्राधिकरण ने ऐसी व्यवस्था कर रखी है जिससे बारिश का पानी सीधे टैंकों में आकर जमा हो जाता है। बड़े वाले टैंक में चार बोरवेल और छोटे वाले में दो बोरवेल लगाए गए हैं ताकि पानी कम होने पर इनसे टैंकों में पानी भरा जा सके। टैंकों में पानी भरा रहने से इलाके का भूजल स्तर भी काफी ऊपर रहता है। टैंकों का पानी गंदा न हो इसलिए इनको अधिकांश समय लॉक कर रखा जाता है। इन टैंकों में मछली की कुछ प्रजातियां काफी समय पहले से हैं। टैंकों के मुआयने के दौरान उनमें कुछ बतख व अन्य प्रकार के पक्षी जायजा लेते दिखे। गौरतलब है कि गर्मी के इस मौसम में मईलापुर के कपालीश्वर मंदिर और ट्रिप्लीकेन के पार्थसारथी मंदिर का टैंक बिलकुल सूख चुका है।

News item/letter/article/editorial published on 28-06-2019 in the **Hindustan Times, (Hindi) Delhi** and documented at WSE Dte, CWC.

तकनीक : चार दिन पहले मिल सकेगी नदियों में बाढ़ की सूचना

4/28/6

हिन्दुस्तान एक्सक्लूसिव

देहरादून | मनमीत

वर्ष 2024 के बाद गंगा के साथ ही उत्तर पूर्वी राज्यों की नदियों को बाढ़ के नुकसान से बचाया जा सकेगा। केंद्रीय जल संसाधन मंत्रालय द्वारा बनाया जा रहा 'नेशनल वॉटर इंफॉरमेशन सिस्टम' चार दिन पहले बता देगा कि बाढ़ संभावित क्षेत्र में कितना पानी आएगा। इससे बचाव के इंतजाम में आसानी होगी।

थ्रीडी सर्वेः विश्व बैंक द्वारा वित्त पोषित नेशनल हाइड्रोलॉजी प्रोजेक्ट के तहत सर्वे ऑफ इंडिया वर्ष 2020 तक इस परियोजना का थ्रीडी सर्वे मंत्रालय को सौंपेगा। उसके बाद चार साल में नदियों के किनारे बसे गांवों और शहरों में उपकरण लगेंगे, जो सटीक सूचना देंगे।

पिछले साल यूपी में 225 की जान गईः यूपी में पिछले साल 225 से ज्यादा लोगों की बाढ़ में डूबने से मौत हो गई थी। अभी मौसम विभाग ये तो पूर्वानुमान लगा देता है कि संबंधित इलाकों में बारिश होगी और बाढ़ की समस्या हो सकती है। लेकिन यह पता नहीं लग पाता कि गांव और शहरों में कितना पानी आएगा।

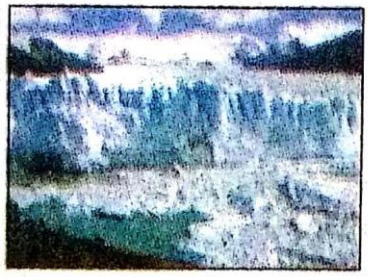
जल संकट का समाधान हो सकेगा

नेशनल हाइड्रोलॉजी प्रोजेक्ट दुनिया की पहली ऐसी परियोजना है, जो भारत के बड़े हिस्से का जल संकट खत्म कर सकती है। सर्वे जनरल ऑफ इंडिया ले. जनरल गिरीश कुमार सिंह बताते हैं कि केंद्रीय जल बोर्ड के जरिए यह डाटा मिल जाएगा कि इन इलाकों में भूजल स्तर कितना है। वहीं, सर्वे ऑफ इंडिया के थ्री डी वॉटर लेवलिंग से पता चलेगा कि नदियों में कहां, कितना गहरा पानी है। इससे जहां गहरा रुका पानी होगा, वहां से पानी दूसरे इलाकों में भेजा जा सकता है।

News item/letter/article/editorial published on 28-06-2019 in the **Panjab Keshri, Delhi** and documented at WSE Dte, CWC.

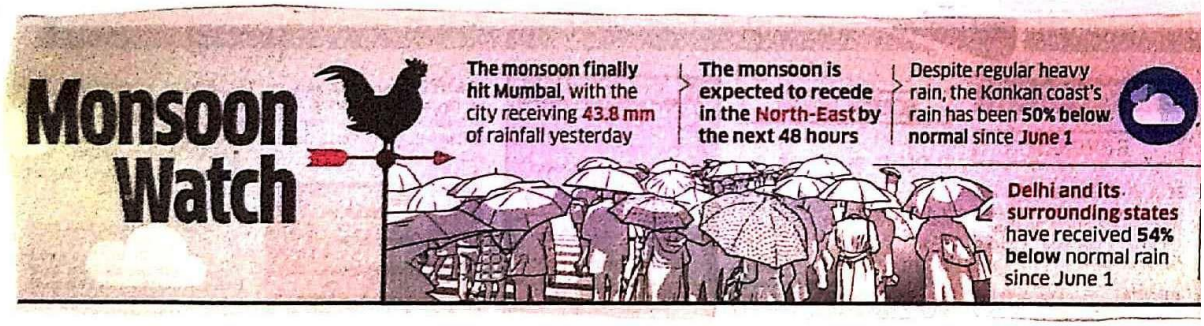
ग्लेशियरों के तेजी से पिघलने से नदियों में जलस्तर बढ़ने की आशंका, अलर्ट जारी

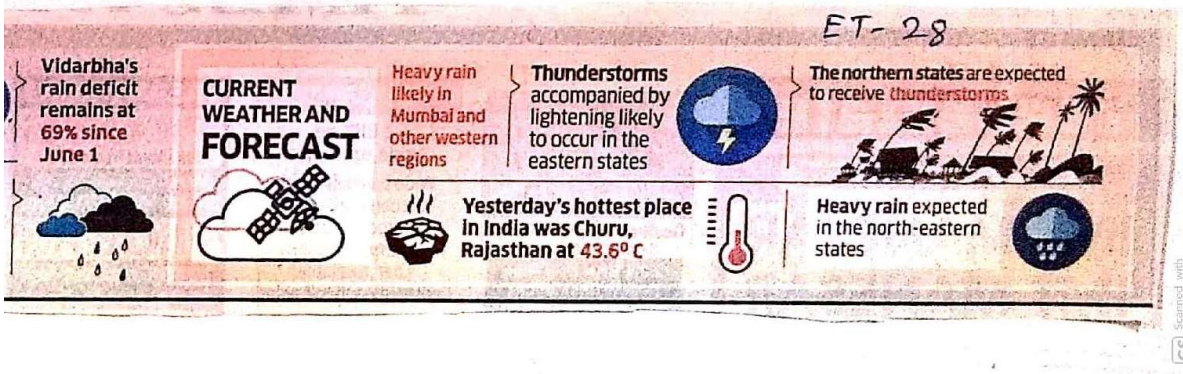
कुल्लू, (वार्ता): हिमाचल प्रदेश के ऊंचाई वाले इलाकों में बरसात के मौसम के मद्देनजर नदी-नालों के किनारे रहने वाले लोगों और पर्यटकों से विशेष ऐहतियात बरतने की अपील की गई है।उपायुक्त डॉ.ऋचा वर्मा ने जिला के चारों उपमंडलों के एसडीएम, लोक निर्माण विभाग और नेशनल हाईवे के अधिकारियों तथा पर्यटन विभाग के अधिकारियों को अपने-अपने क्षेत्रों में नदी-नालों के आसपास के इलाकों को लेकर सावधानी बरतने के निर्देश दिए हैं। उन्होंने कहा कि जिले के ऊंचे इलाकों में ग्लेशियरों के तेजी से पिघलने के कारण



आजकल नदी,नालों का जलस्तर लगातार बढ़ रहा है जिससे पहाड़ पर बारिश की स्थिति में इन नदी-नालों में अचानक बाढ़ की स्थिति बन सकती है। इसलिए पर्यटकों को पानी के पास सेल्फी खींचने या मौज-मस्ती न करने दें और ऐसे स्थानों पर चेतावनी बोर्ड लगाएं। इसके अलावा नदी किनारे बसे लोगों को अलर्ट करें तथा पानी के नजदीक झुग्गी-झोपड़ियों के अतिक्रमण को रोकें।उपायुक्त ने कहा कि जिला में जलविद्युत परियोजनाओं के जलाशयों से पानी छोड़ने से पहले लोगों को सूचित तथा अलर्ट करें। पर्यटन विभाग के अधिकारी रिवर राफ्टिंग, पैराग्लाइडिंग और अन्य साहसिक गतिविधियों पर नजर रखें। डा। वर्मा ने नेशनल हाईवे और लोक निर्माण विभाग के अधिकारियों को जिला के मुख्य सड़क मार्गों पर भूस्खलन संभावित क्षेत्रों को चिह्नित करने तथा वहां पर्याप्त मशीनरी तैयार रखने के निर्देश भी दिए। PK 28/6

News item/letter/article/editorial published on 28-06-2019 in the **The Economics Times, Delhi** and documented at WSE Dte, CWC.





News item/letter/article/editorial published on 28-06-2019 in the **The Hindu, Delhi** and documented at WSE Dte, CWC.

NOTEBOOK

Drought teaches people the value of water

Tamil Nadu has become receptive to the idea of water conservation only now

T. RAMAKRISHNAN

Twelve years ago, I asked the then Agriculture Secretary of Tamil Nadu whether his department was undertaking any programme to promote the concept of water conservation without compromising on yield. I had just returned from the U.S. where I had seen people conserve water in different ways. I told the officer that in Minnesota, the place of origin of the Mississippi river, farmers were taking to sprinkler irrigation in a big way.

The officer clearly did not like my question, nor did he like the U.S. example. He curtly replied that his department was doing everything it could. The implication was that he did not need a lecture on water conservation.

The officer's attitude was not an isolated case. Around the same time, I went to Mayiladuthurai in Nagapattinam district in Tamil Nadu and asked a relative whether he would be receptive to the idea of water conservation, even while maintaining the same level of yield. The relative, a post-graduate and a resourceful farmer, shrugged off the question. "We are used to utilising water in a particular way, whether there is enough water in the Cauvery or not. This is how society has been treating water for thousands of years," he replied. Would people be willing to change their ways even after experiencing droughts and trying times, I wondered.

Thankfully, changes do happen. Over the last couple of weeks, I have been in touch with farmers from different regions in Tamil Nadu. The State is now facing a severe water crisis. I broached the subject of water conservation with them, just like I did with the State Agriculture Secretary and my relative more than a decade ago.

I was in for a pleasant surprise with the relative. The tables had turned. This time he gave me a lecture on how to save water while raising paddy. He is an avid practitioner of the System of Rice Intensification (SRI), a method of cultivation involving less water and seeds. The spell of drought that the Cauvery delta had faced seven years ago had convinced him of the idea of using water efficiently. He realised that he could no longer rely on the "traditional" practice of using more water than what was required.

R. Muthukumar, a young farmer of Tiruvannamalai district, which is not known to be a water surplus area, said he could not spot anyone who was interested in concepts such as SRI six or seven years ago, despite the groundwater in their lands going down steeply. But this has changed, he said. Now the people in his village are interested in knowing about the various ways in which water can be conserved. Drought teaches people the value of water.

Micro-irrigation is gaining currency in several parts of Tamil Nadu due to a host of factors including the support from the State government. Sugarcane, banana, coconut, and vegetables like brinjal and tomato are being raised through this method. Drip irrigation for sugarcane is becoming popular in many parts of the State.

This is not to say that the problem has been solved. There continues to be enormous scope for efficient utilisation of water. But in a moment of crisis such as this, the silver lining is that no one now, whether a farmer or an officer, scoffs at the idea of water conservation.

People are waking up to reality now, and hopefully it's not too late.

News item/letter/article/editorial published on 28-06-2019 in the **Hindustan Times, Delhi** and documented at WSE Dte, CWC.

EPS lays foundation for desalination plant

HT-25

HT Correspondent
letters@hindustantimes.com

CHENNAI: Tamil Nadu chief minister Edappadi K Palaniswami on Thursday inaugurated a project for expanding the capacity of the Nemmeli desalination plant, as the state government seeks to ease Chennai's chronic water shortage by increasing the supply of seawater converted into potable water.

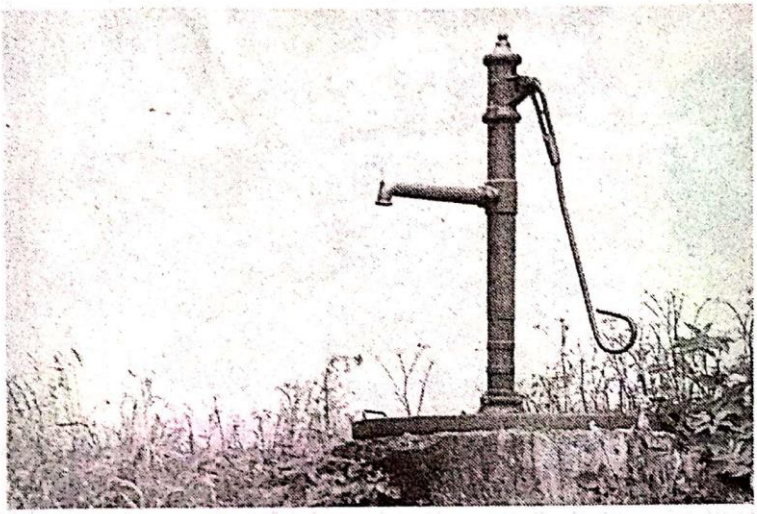
Nemmeli is located about 48 kilometres to the south of the Tamil Nadu capital and the second phase, to be implemented at a cost of ₹1,689 crore; would be ready by 2021. Once completed, the project would increase water supply to the city by desalinating 150 million litres per day (MLD) of seawater. "When the Nemmeli desalination plant's phase two works are completed, 150 million litres of seawater can be converted as the drinking water. We expect the project will be completed in 2021 and will sort out Chennai's water crunch," Palaniswami told the media.

Tamil Nadu is experiencing a severe water crisis this year, partly a result of a delayed monsoon and partly because of the depletion of groundwater, prompting the state government to first order 33,000 temples, owned by the Hindu religious and charitable endowments to conduct special rituals to appease the rain gods, and then propose cloud-seeding to bring artificial rain to the parched state.

News item/letter/article/editorial published on 28-06-2019 in the **The statesman, Delhi** and documented at WSE Dte, CWC.

Groundwater levels dip acutely in north India

ST-28



IANS
NEW DELHI, 27 JUNE

Northern India has registered a critical fall in groundwater levels ranging between 75 and 85 per cent, according to a monitoring report by the Central Ground Water Board (CGWB).

The newly set up Jal Shakti Ministry furnished the CGWB data to Parliament in response to a query from Haryana BJP MP Ramesh Chander Kaushik.

The Board usually carries out groundwater monitoring four times in a year in different states. "In order to assess the declining/rising trend in water level on a long-term basis, pre-monsoon water level data 2018 has been compared with the decadal average (2008-17) water level. Analysis of data indicates decline in ground water level in about 52 per cent of the wells being monitored," said the Parliament statement. Punjab, a leading agrarian state, suffered the highest 84 per cent decline in groundwater levels in the 216 wells monitored followed by Uttar Pradesh, which recorded 83 per cent dip in 563 wells.

Jammu and Kashmir came third place (81 per cent fall in 244 wells). The groundwater crisis is also acute in the national capital and neighbouring states. Delhi, Haryana, Chandigarh, Himachal Pradesh and Uttarakhand have recorded a sharp fall in the groundwater levels, ranging from 70 to 80 per cent.

Rajasthan, a semi-arid state, reported 49 per cent dip in the groundwater level. Maharashtra and Madhya Pradesh recorded a decline of 53 to 59 per cent.

The CGWB analysed 14,243 wells across the country. Of this, 6,786 recorded a rise in groundwater levels but 7,412 wells showed the opposite result.

"Ground water levels in various parts of the country are declining because of continuous withdrawal due to reasons such as increased demand of fresh water for various uses, vagaries of rainfall, increased population, industrialization and urbanization," cited the Jal Shakti Ministry.

The Ministry also cited the example of states which have done well in water management. These include Rajasthan, Maharashtra, Gujarat, Telangana and Andhra Pradesh.

The southern states of Kerala, Telangana and Puducherry recorded a decline of 40 to 46 per cent. Andhra Pradesh and Tamil Nadu, which is facing a huge water crisis, saw a 60 per cent tumble.

News item/letter/article/editorial published on 28-06-2019 in the **Times of India, Delhi** and documented at WSE Dte, CWC.

Water supply in 3 key river basins dips

But Slight Increase In Water Availability In 17 Basins In Last 26 Years: Study

Vishwa.Mohan
@timesgroup.com

New Delhi: In the last 26 years, there has been a marginal increase in India's average annual water resource from 1,869 billion cubic metres (BCM) in 1993 to 1,999 BCM in 2019, but there is a worrying decline in water availability in three key river basins of Indus, Ganga and Brahmaputra.

A new scientific study by the central water commission (CWC) concludes that India is not a water-deficit country but several regions face scarcity due to "severe neglect" of water resources and their storage and conservation.

The small increase in annual water resources is more due to use of advanced methodology in slightly bigger catchment areas. While the three major river basins show a decline, the other 17 saw an increase. Unlike other river basins that depend on rainfall for annual water resources, the three big systems — located in north India — are fed by Himalayan glaciers as well, raising the concern that their decline may be linked to climate change-induced conditions in the Himalayas.

Figures in the study, 'Reassessment of Water Availability in India Using Space Inputs', show that the Indus river basin (the part lying in India) reported the highest fall. The average water potential of this northernmost basin fell almost 40% from 73 BCM in 1993 to 45 BCM.

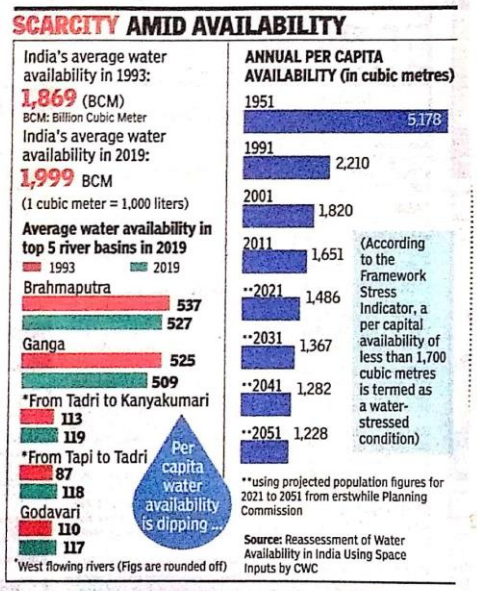
The river basins that reported increase in water availability include Narmada, Godavari, Krishna, Cauvery, Mahanadi, Pennar, Sabarmati, Mahi and Subarnarekha among others. This is reassuring news for southern states that often face severe water scarcities but highlight the need for better conservation and use.

The study released by the government on Wednesday was conducted by CWC in collaboration with ISRO's National Remote Sensing Centre (NRSC), Hyderabad. It used various input datasets like hydro-meteorological (rainfall) data for a 30-year period (1985-2015), soil texture and land use data from 2004-05 to 2014-15.

The study also shows how a rising population and mismanagement of water resources has reduced the annual per capita availability of water substantially from 5,178 cubic metre in 1951 to 1,651 cubic metre in 2011, pushing the country into a water-stressed situation despite increase in annual average water potential.

Though another study done by the National Commission for Integrated Water Resource Development also shows increase in average water availability (1,953 BCM in 1999), the latest research is considered the most reliable.

The CWC study in its conclusion warns that business as usual way of water utilisation would push the country towards a critical phase.



News item/letter/article/editorial published on 28-06-2019 in the **Business Standard, Delhi** and documented at WSE Dte, CWC.

Rains 24% below normal, says IMD

REUTERS
Mumbai, 27 June

BS-28

Monsoon was below average for the fourth straight week, with rainfall scanty over central and western parts of the country in the week ended on Wednesday, raising concerns about major crop production and the impact on the nation's economy.

Monsoon is crucial for the country's farm output and economic growth. About 55 per cent of India's arable land is rain-fed, and agriculture makes up about 15 per cent of a $2.5 trillion economy that is Asia's third-biggest.

And the country's economy, which grew at its slowest in more than four years over the January-March quarter, isn't in any condition to take a big hit from a poor monsoon. If the rains don't improve over the next two to three weeks, India could be facing a crisis that hammers crop harvests and rural demand. Companies that sell everything from tractors to fertiliser to consumer goods to farmers would be vulnerable.

"Sowing has already been delayed by three weeks. If the monsoon doesn't revive in two, three weeks, then the entire season could be wiped out," said Harish Galipelli, head of commodities and currencies at Inditrade Derivatives & Commodities in Mumbai.

India received 24 per cent less rainfall than the 50-year average in the week ended on June 26, data from the India Meteorological Department (IMD) shows. In some areas, such as the eastern part of Madhya Pradesh, known for growing soybean, the deficit was as high as 69 per cent, the data shows.

Sowing of summer crops down 12.5% due to scanty rains, says govt

The sowing of summer crops such as rice, soybeans and corn has been lagging as a result.

Farmers had planted summer-sown crops on 9.1 million hectares as of June 21, down 12.5 per cent compared with the same time last year, according to provisional data from the ministry of agriculture.

Wet monsoon critical

The country needs a good monsoon this year, as in 2018 a drought had ravaged crops, killed livestock, emptied reservoirs and drained water supplies to city dwellers and some industries.

Hardest hit were the western states of Maharashtra and Gujarat, along with Tamil Nadu, Karnataka, Andhra Pradesh and Telangana in the south, and Madhya Pradesh in central India.

Some municipalities like Chennai, Mumbai, and Hyderabad were forced to cut water supplies to ensure their reserves lasted until monsoon rains replenished reservoirs.

The IMD has forecast average rainfall in 2019, while the country's only private forecaster, Skymet, has predicted below-normal rainfall. A normal, or average, monsoon means rainfall between 96 per cent and 104 per cent of a 50-year average of 89 cm (35 inches) during the four-month monsoon season from June to September, according to the IMD's classification.

Farmers like Baburao Tadas from Wardha district in Maharashtra are praying for normal monsoon after their incomes were hit by erratic weather and lower crop prices over the past few years. "I will plant cotton if we get rainfall in the next fortnight, otherwise I will switch to short duration crops such as corn or soybean," Tadas said.

REVIVAL NEEDED

Monsoon has delivered lower-than-normal rainfall since the start of the season on June 1, due to a delay in the onset of monsoon, according to data compiled by IMD. Monsoon revival needed in 2 weeks to save season, says analyst. Monsoon arrived in the southern state of Kerala on June 8. However, cyclone Vayu developed in the Arabian Sea drew moisture from the monsoon and weakened its progress REUTERS

Sub-divisional monsoon map