

The Tribune- 17 February 2021

Ghaggar catchment area groundwater fails test

BHARTESH SINGH THAKUR
TRIBUNE NEWS SERVICE

CHANDIGARH, FEBRUARY 16
Groundwater samples from Ghaggar catchment areas in six districts of Haryana have been found non-compliant. This was revealed by the Executive Committee of the National Green Tribunal (NGT) in its consolidated report on Ghaggar pollution.

The NGT had formed the Executive Committee under Justice Pritam Pal (retd) vide its order dated August 7, 2018.

As per the report, in Ambala, six out of seven groundwater samples were found non-compliant while in Jind, one out of the two samples failed.

In Karnal district, 14 out of 15 groundwater samples were found non-compliant while the figure for Hisar district is three out of five.

In Sirsa area, 23 groundwa-

Samples from 6 dists found non-compliant; those from Panchkula, Kurukshetra okay

ter samples were analysed and 13 were found non-compliant while in Fatehabad, 14 out of 18 samples failed.

However, none of the samples failed in Panchkula and Kurukshetra.

The Executive Committee, in its report dated February 15, recommended to the Haryana State Pollution Control Board (HSPCB) to seal non-compliant groundwater sources by erecting boards mentioning "water is not fit for drinking" at the sites.

"We have erected boards. We have informed the public health and irrigation department to take necessary action. Regarding other recommendations, we are on track and

the Chief Secretary is monitoring the situation every fortnight," said S Narayanan, Member Secretary, HSPCB.

The water quality of Ghaggar, monitored by HSPCB during the period July 2020 to January 2021 indicated that the values of EColi parameter were "quite high"—35110-352500 MPN/100 ml. Also, the value of BOD -4.7 Mg/l- 7.2 Mg/l was observed from June 2020 to January 2021.

"The data indicates that the water quality of Ghaggar is Class D as per the water quality criteria prescribed by the CPCB (Central Pollution Control Board)," said the report.

As many as 255 points have been identified as pollution

sources, which are entering into main drains and ultimately into the Ghaggar. Out of these, 153 points relate to Panchayat Department, 78 to Urban Local Bodies and the rest to other departments.

Untreated sewage at the rate of 107.53 million litres per day (MLD) through 70 locations is being discharged into the Ghaggar.

For improving the water quality, the committee has recommended completing all the sewage treatment plants (STP) under construction by March 31, sewerage network in six towns and implementation of irrigation scheme for using treated sewage of towns by June 30.

Out of 59 STPs, 16 (27.1 per cent) are not complying with prescribed norms and only seven comply with EColi parameter.

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Uranium found in T'gana groundwater samples

NEW DELHI, FEBRUARY 16

The Atomic Minerals Directorate for Exploration and Research (AMD), the uranium exploration arm of the Department of Atomic Energy, has suspended work in Telangana after radioactive uranium was found in all 25 samples of water collected by it from Peddagattu region, Nalgonda district, Telangana,

in the northern part of Cuddapah basin. The AMD collected groundwater samples from 25 private tube-wells/hand pumps during the period between November, 2018, and July, 2019. Samples from four hand pumps used for domestic purpose showed uranium values in the range of six to 48 ppb (parts per billion). — TNS

Times of India- 17- February 2021

Kin still seek those who vanished in 2013 floods

Prashant Jha @timesgroup.com

Nainital: With undying hope, Saurabh Bhatt travels the 500km from Kanpur to Kedarnath every year. He has been doing that since 2013. That year, his wife Rashmi and daughter Astha, nine then, had been on the Char Dham pilgrimage route when the catastrophic floods hit. To this day, Saurabh does not know what happened to them. So, he goes looking, in search of family and closure.

"Losing your family can be devastating. But to not know what happened to them breaks me," Bhatt, now in his mid-40s, told **TOI** from Kanpur. He visits police stations and district offices, talks to locals for clues. "I can't just give up on them."



Meanwhile, the search continues for missing persons at Tapovan

► Continued on P 17

Even after 8 years, 3,300 victims of Kedarnath tragedy are still missing

► Continued from P 1

Hundreds like Bhatt have been trapped in this warped uncertainty for eight years now. In 2014, a PIL was filed in the Uttarakhand high court seeking to ensure the state found the missing bodies. The estimate at the time was of some 4,000 missing people, presumed dead. In 2018, the HC asked the Uttarakhand government to collect DNA samples, trace missing bodies and perform their last rites.

"I provided my DNA samples

Uttarakhand's progress in finding the bodies has been slow. By October last year, it had found just over 700 bodies

for reference but there has been no news," Bhatt said. In 2019, he had announced a reward of Rs 5 lakh for any information about his wife and daughter. "I am still looking." More than 900 families have shared DNA samples with district administrations but only a tiny fraction has been matched.

The state's progress in finding the bodies, meanwhile, has been slow. By October last year, the state had found just over 700 bodies. About 3,300 people are still missing. Each year, barring 2019, the state sent out search teams with widely varying degrees of success. The first year, 2013, they found 545 bodies. In 2014, they found 63. But the next year, they found just 3. In 2016, again, they found 60 and then just 7 in 2017. The following year, they found 21. In 2019, there was no search operation and last year, they found 4.

Hindustan Times- 17 February 2021

24x7 water soon, will clean Yamuna in 3 years: Kejriwal

HT Correspondent

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NEW DELHI: The Delhi government on Tuesday said it will clean the Yamuna river in three years, marking the completion of its first year in power.

Chief minister Arvind Kejriwal also released a video to let people know about the achievements of the Aam Aadmi Party (AAP) government in the first year of its third term.

"One year ago, today, you all gave your son another opportunity to serve everyone. It has been a very tough year, but all the citizens of Delhi have worked together. All of us together have made Delhi a model of success in the world. Today, the Delhi government's home isolation model, setting up the first plasma bank and oximeter distribution are getting discussed across the world," he said.

Delhi health and urban development minister Satyendar Jain said after defeating Covid-19, the Delhi government will now focus on cleaning the Yamuna in

three years.

"Nobody believed us when we promised to provide 24x7 electricity, but today, the Delhi government is providing 24x7 electricity to the people of Delhi. Soon, we will also provide 24x7 water supply as well. Kejriwal has given clear instructions to complete the Yamuna cleaning project as soon as possible and we are working day and night for this," said Jain.

The minister said 1.3 million people got zero water bills during the last year. He also said that 73% of residents got zero electricity bill during the Covid-19 pandemic. Now, Delhi's Electric Vehicle policy will help in minimising vehicular pollution, he added.

However, leader of opposition in the Delhi Assembly, Ramvir Singh Bidhuri said despite having a budget of ₹65,000 crore, the Kejriwal government "failed" to make any significant progress in all the major sectors in the Capital, including health, education, power, water, pollution and even roads.

Hindustan Times- 17 February 2021

Activists question govt's move to push on with 7 hydel plants

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JOSHIMATH: The environment ministry said in a statement on Monday that it has come up with a common policy for the seven under-construction hydropower projects in the higher reaches of Uttarakhand, a move that gains significance in the wake of the February 7 glacial lake overflow flood in the Rishi Ganga valley.

Experts and activists have however, warned that allowing construction and operation of the plants could potentially amplify disasters in the ecologically sensitive region.

The policy, which is to be presented in the Supreme Court in July, has been drafted by the environment, power and Jal Shakti ministries.

One of the seven projects is National Thermal Power Corporation's 520 MW Tapovan Vishnugad project that has been completely destroyed following the flood on February 7 and which will have to be rebuilt. As of Tuesday, the bodies of 17 workers have been recovered and 123 are missing at the Tapovan Vishnugad site.

The list includes the 444 MW Vishnugad Pipalkoti, a few kilometres downstream of Tapovan; the 99 MW Singoli Bhatwari; and the 76MW Phata Byung projects.

The Tapovan Vishnugad project is in a so-called paraglacial zone (above 2,000m in Uttarakhand), and the Vishnugad Pipalkoti, Singoli Bhatwari and Phata Byung projects are located in areas bordering para-

ONE OF THE PROJECTS IS THE NTPC TAPOVAN VISHNUGAD PLANT WHICH WAS DESTROYED IN THE FEBRUARY 7 FLOOD

glacial zones. These are landscapes that are extremely vulnerable to changes in geology related to glacial retreat.

The apex court, in its order dated January 24, 2015 in the Alaknanda Hydro Power Co. Ltd Versus Anuj Joshi & Ors, sought a common policy framework from the environment, power and Jal Shakti ministries for implementation of projects in the upper reaches of the Ganga (Alaknanda and Bhagirathi Basin). "A common policy framework has been arrived at with consensus on implementation of the following seven under construction projects," the statement from the environment ministry said.

Hydropower projects impact ecological flow in the Ganga and they can amplify disasters from extreme weather events as was seen in the February 7 glacial flood. Ecological flow is the minimum flow needed in a river to sustain life. Dams and hydropower projects create barriers to this flow.

Experts hope that the February 7 flood will be the last such reminder of the risks associated with hydropower projects in these regions.

The impact of the February 7

disaster would have been manifold had the flash floods impacted Vishnugad Pipalkoti, which is under construction a few kilometres downstream of the Tapovan Vishnugad project. Further downstream of Pipalkoti is the Srinagar hydroelectric project of 330 MW, which is already generating electricity but is vulnerable to upstream floods.

In 2013, the apex court ruled that no new hydroelectric power projects should be set up in Uttarakhand. In all, 69 projects were envisaged in the region, and 24 were granted environmental clearance; these clearances were also stayed by SC. The court sought a detailed and scientific assessment of the cumulative impact of hydropower plants in the state.

Following the SC order, a committee headed by Ravi Chopra, director of the People's Science Institute, submitted a detailed report which warned that a glacial retreat coupled with structures built for hydroelectricity generation and dams, could lead to large-scale disasters downstream.

"We had recommended that 23 of the 24 hydropower projects should be cancelled. My opinion is that those under construction should also be cancelled. Tapovan Vishnugad is already destroyed and will take years to be commissioned... Vishnugad Pipalkoti is again very close to the para-glacial zone and extremely vulnerable. Why would the government want to commission these," said Chopra. The 2013 court order came in the

wake of the Kedarnath flash floods.

"The under-construction and existing dams were the reasons for the escalated damage and impact of the 2013 disaster. Same phenomenon was seen in Asi-Ganga flash flood of 2012 and also in the recent Uttarakhand tragedy in Rishi and Dhauli Ganga. These dams must be cancelled with immediate effect and the existing dams too must be systematically decommissioned in phases..." said Mallika Bhanot, an activist from Ganga Ahvaan.

Following submission of the committee's report, the top court ordered a stay on 24 hydropower projects.

The February 7 disaster has also raised concerns about disaster preparedness. For example, early warnings weren't triggered at the 13.2 MW Rishi Ganga project and the Tapovan Vishnugad project even though systems were in place, officials said.

"We had a complete system of emergency measures. But water came with such volume and speed that reaction time was nil," said a senior NTPC official.

Locals here are divided. "Not a single person from this village has benefitted from the hydropower projects," said Bharat Singh, a resident of Raini village, known for Goura Devi, a Chipko movement icon and Mahila Mangal Dal leader.

But Bhimsingh Rawat, a cab driver in Joshimath said, "Before hydropower projects, people were poverty stricken. Let's not be impractical. Can't they [plants] function with better warning systems?"

Pioneer- 17 February 2021

Survey to collect data on drinking water in 10 cities launched

PNS ■ NEW DELHI

The Union Housing and Urban Affairs Ministry on Tuesday launched a survey to collect data on drinking water in 10 cities under the Jal Jeevan Mission (Urban).

As part of the survey, 'Pey Jal Survekshan', data will also be collected on wastewater management and condition of water bodies in the cities. In a statement, ministry secretary Durga Shanker Mishra said the mission will be monitored through a technology-based platform on which beneficiary response will be monitored.

"Pey Jal Survekshan' will be conducted in cities to ascertain equitable distribution of water, reuse of wastewater and mapping of water bodies with respect to quantity and quality of water through a challenge process," Mishra said.

As the first step, he said, the ministry has decided to launch a pilot 'Pey Jal Survekshan' in 10 cities -- Agra, Badlapur, Bhubaneswar, Churu, Kochi, Madurai, Patiala, Rohtak, Surat and Tumkur.

According to the secretary, based on the learnings of the pilot survey, this exercise will be extended to all Atal Mission for Rejuvenation and Urban Transformation (AMRUT) cities.

"Data on drinking water, wastewater management, non-revenue water and condition of three water bodies in the city will be collected through face-to-face interviews with citizens and municipal officials as per the approved questionnaire, on-call interviews, water sample collection and laboratory testing, and field survey for non-revenue water," the ministry said.

Jal Jeevan Mission (Urban) is designed to provide universal coverage of water supply to all households through functional taps in all 4,378 statutory towns, it said.

Pioneer- 17 February 2021

Despite floods, several farmers in UP manage to earn decent living

PNS ■ NEW DELHI

Despite natural calamities like floods and associated water logging problems, several small farmers like Koila Devi of flood-affected areas in Gorakhpur in Uttar Pradesh, are managing to earn a decent living from the produce of their agricultural land, thanks to the help from Science and Technology-based interventions like flood resilient farming practices and related technologies facilitated by central support project, TARA scheme of DST India.

Such support at the systemic level has helped and empowered the 64 years old from the village Rakhukhor of Jungle Kaudiya block of Gorakhpur district to cultivate 20 crops in a single year, thereby raising her annual income by 30 percent.

But just a few years ago this was not possible. Like many farmers' in northeastern Uttar Pradesh and Bihar, floods and associated water logging for more than three to four months affected her agricultural produce severely each year. Apart from this, the rising cost of seed, fertilizer, and pesticides



reduced her income over the years.

"She had been scouting for alternative income options when help came in the form of Gorakhpur Environmental Action Group (GEAG), Gorakhpur, UP, a core support group under the TARA Scheme the Science for Equity, Empowerment, and Development (SEED) Division, DST," said an official from the Science and Technology Ministry.

GEAG provided her with technical support on effective farming planning like gradient-based cropping system, multi-layered farming with time and space management, appropriate crop combination, raised bed low tunnel poly house, and appropriate utilization of weather advisory.

A total of 36 model farmers and more than 2200 other

small and marginal farmers have adopted flood resilient techniques of farming developed along with 9 community institutions on cluster level during the last two and half years with facilitation and handholding support under the Core support project being implemented by GEAG.

"This has shown a new direction towards flood-resilient livelihoods and also transformed the flood-risks into an opportunity with socio-economic gain. Since the inception of the project in 2018, proper facilitation and handholding support for adopting these resilient farming technique packages compatible with local situations has increased the average income of small and marginal farmers by 37.5 per cent by lowering the input cost (30-35 percent) in the farming system," said the official.

Such S&T-based interventions has also encouraged Koila Devi and many of her ilk in the region to take up additional activities like managing millet processing unit as a group enterprises in the flood-prone area, thus boosting their income.

Pioneer- 17 February 2021

Flash droughts to rise 7-fold by century end in India: Experts

ARCHANA JYOTI ■ NEW DELHI

At a time when India is struggling with the glacier-triggered flash floods in upper Himalayan regions, a recent study by the IIT Gandhinagar has predicted a 7-8-fold increase in the frequency of flash droughts towards the end of this century. It has blamed the concurrent occurrence of extremely dry and hot periods during monsoon and greenhouse gas emissions to the flash droughts in-waiting.

"This would pose a major risk to crop production due to soil moisture depletion and intra-seasonal monsoon variation," said the study "Anthropogenic warming and intraseasonal summer monsoon variability amplify the risk of future flash droughts in India", published in the journal Climate and Atmospheric

Science.

Flash droughts are droughts that intensify more rapidly than normal, posing a risk to agriculture, ecosystems and water availability.

Researchers explained that while the conventional droughts take months and sometimes even years to develop to full intensity, flash droughts on the other hand develop at an unusually fast rate due to extreme weather conditions and persist from a few weeks to some months. Such droughts can be localised to a specific region or can become widespread and affect a large part of the country.

Researchers Vimal Mishra, Shanti Shawrup Mahto and Saran Adhar reached to this conclusion after investigating the causes of flash droughts in India between 1951 and 2016. Based on the findings, the

researchers predict an increase in the frequency of flash droughts. They pointed out the worst flash drought in the observed (1951-2016) climate occurred in 1979, affecting over 40 per cent of India.

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Rescue operations to continue till last victim is reached: NDRF commandant

Tapovan: Amid fading hopes of the survival of those who went missing after a glacier disaster in Uttarakhand's Chamoli district 10 days ago, NDRF Commandant PK Tiwari on Tuesday said search-and-rescue operations will go on in the flood-hit hydel project sites till the last victim is reached.

Flash droughts to rise 7-fold...

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"The frequency of concurrent hot and dry extremes is projected to rise by about five-fold, causing an approximately seven-fold increase in flash droughts like 1979 by the end of the 21st century.

"The increased risk of flash droughts in the future is attributed to intraseasonal variability of the summer monsoon rainfall and anthropogenic warming, which can have deleterious implications for crop production, irrigation demands, and groundwater abstraction in India," they said.

Flash droughts can be identified either by monitoring

changes in precipitation, evapotranspiration, or soil moisture. The researchers had used a hydrology model to simulate soil moisture patterns across the country to identify the duration and extent of flash droughts.

With these and among other criteria, the researchers considered flash droughts with a minimum duration of 15 days and a maximum duration of 90 days and identified 15 flash drought events in the past. Of these, the flash drought in the year 1979 that affected 40% of the country was observed to be the most severe.

Mishra, Associate

Professor of Civil Engineering, IIT Gandhinagar, and lead author of the study, recalled that in 1979, around 125 days after the onset of the monsoon season, the soil moisture was very high. But within 10 days, the soil moisture dropped very quickly as there was a dry spell and temperatures were high, with an average increase of more than 2 degrees centigrade.

"Normally, conventional droughts take months to build up. But flash droughts can occur during the monsoon season when there are long breaks in the monsoon and the temperature is high. Soil moisture dries within 1-2 weeks, causing flash droughts," he said

in the study.

To gain an understanding of how flash droughts would occur in future climates, the researchers used the same model but fed data from a global climate model, Community Earth System Model, that provides temperature and precipitation data for the year 1900-2100, to estimate soil moisture.

The influence of anthropogenic events such as greenhouse emissions, land use-land cover change and industrial aerosols were also investigated. The study found that greenhouse emissions will significantly increase the frequency of extremely hot and dry periods, which are the main drivers of flash droughts.

Pioneer- 17 February 2021

Govt aims to clean Yamuna in 3 years, claims Jain

STAFF REPORTER ■ NEW DELHI

After containing the coronavirus outbreak, the Delhi Government will now aim to clean the Yamuna River in three years by working day and night, said Delhi Health Minister Satyendar Jain on the completion of one year of the Delhi Government.

Jain said that the Chief Minister Arvind Kejriwal has given clear instructions to complete the clean Yamuna project as soon as possible and we are working day and night for this.

"The CM asked us to complete this clean Yamuna project

within five years, out of which one year has already been exhausted. But now we will clean it up before five years i.e. three years from now. Many people who have been running the government for a long time think that it is impossible but we will make it happen. After a year we will show you the status of the clean Yamuna project. We will clean the River and set an example to the world," he said.

The minister also said that 13,66,000 people got zero water bills during the last year and 73 per cent of people got zero electricity bills during Coronavirus.

"We are pushing for Delhi's Electric-Vehicle policy to minimize the vehicular pollution in Delhi. We are also setting up 100 charging stations where 500 charging points will be made. These charging points will facilitate a person to charge its vehicle in case it gets discharged. Delhi's pollution has gone down extensively except November and December from the time our government has formed," he said.

Talking about the Delhi Government's policy for its remaining term of four years, Jain said, "Everyone is appreciating the Delhi Government

for its policies. Nobody believed us when we promised to provide 24x7 electricity but today, the Delhi government is providing 24x7 electricity to the people of Delhi.

"The world has never seen such a disaster like Coronavirus after the 1918 Spanish Flu. After almost 102 years such a disaster has taken place, which we know as Coronavirus pandemic. The Delhi Government has firmly fought the war with Corona. People of Delhi are happy that they have chosen the Delhi Government for the second term. We have provided 37 people with aid of ₹1 Cr,

which includes nine corona warriors, 19 Delhi police personnel, three army and BSF personnel," he added.

"The government also provided Pulse Oximeters to everybody so that they can monitor their oxygen levels from time to time and shift to the hospital in case their oxygen level drops. We had almost 7,000 vacant beds at the time when Delhi reported 8,600 patients in one day while the roads in New York were flooded with patients when the cases were at 5,600 cases per day," he said.

Talking about the develop-

ment and progress during Covid pandemic, he said "Almost a year is about to end and people who were getting free electricity are getting it free and those who were getting at the half rates continued to get on half rates. We have provided pension benefits to all. We have also given the aid of ₹5000 per person to 156000 auto and driver taxi drivers in Delhi. 44,000 construction workers were given ₹10000 per person. Delhi Government has fought at all fronts to provide better services to the people," he said.

Morning Standard- 17 February 2021

Will clean Yamuna in three years and set an example: Satyendar Jain

NEW DELHI: Health Minister Satyendar Jain on Tuesday said the government aims to clean the Yamuna river within three years and set an example for the world.

"The government is providing electricity round the clock to the people of Delhi. We will now provide 24x7 water supply as well. Chief Minister Arvind Kejriwal has given clear in-

structions to complete the Clean Yamuna project as soon as possible and we are working day and night for this. He has asked us to complete the project within five years. Many people who had been running the government for a long time thought it is impossible but we will make it happen. After a year we will show you the status of the project," said Jain.

He was speaking at an event to mark the completion of one year of the AAP government's third term. "After defeating the coronavirus, the government aims to clean the Yamuna river in three years from now," he said.

Jain said the government is putting emphasis on electric

vehicle (EV) policy to minimise pollution in the city.

"We are also setting up 100 charging stations where 500 charging points will be made available. We are at war against pollution. Since the formation of our government, Delhi's pollution has gone down drastically as we are



working to resolve the issue seriously," the minister said.

Briefing about the measures taken by the government to curtail spread of Covid in the national capital, the minister said it had firmly fought the war against coronavirus.

"We introduced the home isolation process and asked asymptomatic people to stay home in isolation. The govern-

ment also provided them assistance during home isolation. The patients were contacted over the phone twice. Medicines were home delivered, and on-call ambulance service was also available. We provided pulse oximeter for monitoring their oxygen levels regularly. We treated 3.12 lakh people in home isolation," the minister said.

PTI

The Hindu- 17 February 2021

Lab study to trace origin of disaster

Scientists at WIHG in Dehradun are analysing fragments of ice, rock and mud

JACOB KOSHY
DEHRADUN

A week after a landslide claimed 58 lives in Chamoli, Uttarakhand, a team of scientists at the Wadia Institute of Himalayan Geology (WIHG) in Dehradun are analysing fragments of ice, rock and mud in their labs to better understand the origins of the disaster.

On-site study

Five WIHG researchers travelled to the disaster site and later undertook aerial surveys right up to the vicinity of the Raunthi glacier, near the Nandadevi biosphere reserve, in the Himalayas.

A portion of this glacier is believed to have crumbled down and caused an avalanche that destroyed the Rishiganga and Tapovan hydropower projects in Chamoli as well as trapping at least 150, many fatally, in



On the job: The five-member team from the Wadia Institute of Himalayan Geology that visited Tapovan. •V.V. KRISHNAN

muck and slurry.

Sameer Trivedi, who was among those involved in the reconnaissance and analysis, said he and his colleagues had managed to extract several boulders of glacier – some about 25 kg – from the slurry even as rescue operations were on.

"We have collected several samples. We also have sediment samples from gla-

ciers in the region from previous expeditions. We can now compare them and be more certain of the glacial origin of the avalanche," he told *The Hindu*.

His team included Manish Mehta, Amit Kumar, Vineet Kumar and Akshaya Verma.

An outstanding research question that the scientists are poring over is what might have caused the rock

to break off.

The current hypothesis is that it was a natural process of freezing and thawing of the icy mountains over eons that might have caused cracks to develop, weakening the structure and causing it to crumble.

Another suggestion is that a heavy mass of snow may have fallen over the glacier, which was already partially melting, causing it to break off.

Loud blast

However the scientists' team reports that residents of Raini village, located near the Rishiganga, have reported hearing a loud blast just prior to the avalanche. "It could be due to an enormous volume of water, or there could be another source, we don't know yet," said WIHG Director Kalachand Sain.

Hans India- 17 February 2021

THE
HANS INDIA

Weather conditions show winter is almost over?

HANS NEWS SERVICE
BEGUMPET

IF the forecast of the night temperatures in Hyderabad during the period February 17 to 22 ranging from 20 to 21 degrees Celsius is any indication and going by the prevailing weather conditions winter is almost over.

According to the forecast listed in the IMD bulletin, the minimum temperatures from February 17 to 22 is to be 20,20,21,21,21 and 21 respectively. Simultaneously, the day temperatures are also listed as 33,33, 34,34,34 and 34 respectively is a pointer to the effect that the winter is going to end early.

Traditional people believe that the cold weather conditions are supposed to change after the Shivaratri which falls on March 11. They maintain that after the

Lowest min temp of 16.2 deg C recorded in Medak on Tuesday

- Day temperature crossed 35 deg C for the first time this season with Bhadrachalam registering 35.1 deg C
- The rising day temperatures is a pointer to the effect that the winter is going to end early

Traditionally, people believe that the cold weather conditions change after Shivaratri which falls on March 11

festival the cold breeze will give way to summer heat.

Besides the rising night and day temperatures, the cyclonic circulation over north Madhya Maharashtra and its neighbourhood now lying over Vidarbha and its neighbourhood, extending upto 0.9 km above mean sea level has also impact the current weather conditions.

Also there is a trough in low level easterlies from coastal Karnataka to the cyclonic circulation

now running from south Konkan to Vidarbha and its neighbourhood is also a contributory factor to the changing weather.

Meanwhile, according to the bulletin, the lowest minimum temperature 16.2 degrees Celsius during the last 24 ending at 8.30 am on Tuesday was recorded in Medak. They temperatures were appreciably above normal ranging from 3.1 to 5 degrees Celsius in some parts. They were below normal

by 1.6 to 3 degrees Celsius.

The other night temperatures registered elsewhere in the State were: Ramagundam 17.4, Hakimpet 18.8, Dundigal 19.8, Hyderabad 19.5, Mahbubnagar 19.1, Nalgonda 19, Bhadrachalam & Hanamkonda 20 each, Khammam 20.2, Adilabad 20.7, Nizamabad 21.9.

The day temperature during the last 24 hours crossed 35 degrees for the first time in this season, with Bhadrachalam registering 35.1 degrees Celsius. The rising temperatures in Nizamabad (34.3), Mahbubnagar (34), Adilabad, Ramagundam & Medak (33.4 each), Khammam & Hyderabad (33.2 each), Dundigal (32.8), Nalgonda (32.5), Hanamkonda (32), and Hakimpet (31.6) also indicate the possible advancing of summer.

The Statesman- 17 February 2021

**ABHIROOP CHOWDHURY AND
ARMIN ROSENCRANZ**

The Chamoli disaster is the curtain call for policy makers to prioritise environmental conservation over non-green developmental projects and admit the reality of climate change and global warming impacts.

A section of Nanda Devi glacier collapses on the morning of Sunday, 7th February, at Chamoli district of Uttarakhand, causing enormous damage. About 150 people are missing and the glacier as well as landslide have caused massive damage to the two dams on Rishi Ganga and Dhauli Ganga.

This disaster is not a sudden event, rather can be linked with the developmental activities in the biodiversity rich Western Himalayan heartland. Chamoli had already been in focus on 29 March 1999 due to the devastating 6.8 Richter earthquake that had resulted in the death of over a hundred people. Geologically this region is under severe risk due to the undergoing crustal shortening along the 2400 km long northern edge of the Indian plate. So, the whole Himalayan region is under earthquake risk. Being in an earthquake prone zone as well as in the biodiversity rich western Himalayan eco-region, these mountain tracks and valleys must be excluded from developmental plans.

The evergreen broadleaf forest of Western Himalayas is under serious risk of climate change and ever increasing anthropogenic foot print. This ecosystem is dominated by oaks. It is the home of endangered fauna such as the Asiatic black bear, leopard, the Himalayan tahr, and Himalayan serow. Around 315 species of birds inhabit these forests - notable amongst them are the white-cheeked tit, white-throated tit, spectacled finch, Kashmir flycatcher, Tytler's leaf-warbler, orange bullfinch and Kashmir nuthatch. The Himalayan quail is now debated to be extinct from this region.

Glacier melting is the major impact of global warming caused by climate change. The global land and ocean temperature is rising by 0.18 degree Celsius per decade since 1981. A National Oceanic and Atmospheric Administration (NOAA), USA report predicts that the global surface temperature will be 0.5°C warmer than the 1986-2005 average. Globally, this rise in temperature trends is melting the glaciers and ice caps. US National Snow and Ice Data Center reported that the Arctic ice sheet has melted down drastically over the decade and now only 3.74 million square kilometers remains. Greenland glaciers lost a record 532 billion metric tons of ice in 2019. The Antarctic ice sheet also got a record blow from global warm-

Chamoli a warning for Himalayan planners



ing with an ice mass loss of around 252 Gigatonnes per year between 2009 and 2017.

Climate change induced global warming is also the major reason behind massive melting of Himalayan glaciers. A 2008 report indicates that the Gangotri glacier, the lifeblood of the Ganges river system, has receded 1,500 metres in the last 70 years. Nanda Devi glacier, the reason behind the current predicament, has shrunk 217 per cent in 2017 compared to its size in 1970. Reduction of these glaciers not only foretells an environmental catastrophe but also indicates a looming shadow on the food security of the nation. Ganges basin accounts for only 26 per cent of India's land area but supports about 43 per cent of the country's population.

With all these major indications of environmental failures, the nation's developmental machine has not refrained from exploring the biodiversity rich Himalayan region. The commissioning of two hydro- electric power plants in the earthquake-prone and environmentally sensitive Chamoli region is debatable. India ranks fifth in the world in terms of its hydroelectric power generation capacity, but this accounts for only 12 per cent of nation's power production. But exploiting the hydro electric potential always comes with a note of caution because it can result in tremendous damage to the environment. A 2018 report indicated that the state of Uttarakhand has 37 operational hydroelectric power projects while 87 more are going to be com-

missioned in future.

Stone quarrying, blasting of mountains and construction activity near the Rishi Ganga and Dhauli Ganga may be the triggering point for the recent disaster at Chamoli. With recent EIA, 2020 amendment draft, small scale hydro electric projects can escape environmental clearance regulations. This can have negative impact in this region as more and more such projects can be commissioned without any environmental impact studies.

Development is taking a huge toll on the environment worldwide. In the context of the Western Himalayas, sustainable eco- friendly developmental models need to be adopted as compared to resource exploitive methods.

Yet, another disaster in the risk-prone Chamoli region is the wake-up call for policy makers to revisit their priorities for development in this biodiversity rich eco-region. Nature needs to be preserved in the pristine Western Himalayan ecosystem. Climate change is a reality and the extreme weather events across the globe are a testament to this fact. Western Himalaya needs protection and eco-friendly sustainable development rather than building hydro-electric power generation units, promoting mining or stone quarrying. Only then can recurrence of these disasters be averted.

The writers are, respectively, Assistant Professor and Dean at Jindal School of Environment & Sustainability, O.P. Jindal Global University, Haryana, India.

Deccan chronicle- 17 February 2021

Scientists reconstruct source of glacier burst

DC CORRESPONDENT
HYDERABAD, FEB. 16

A team of scientists, specialising in glacial studies, after an extensive survey, on foot and by helicopter, have reconstructed what happened on February 7 in Uttarakhand when a section of the Nanda Devi glacier broke off and caused havoc and deaths downstream in Chamoli district of the state.

According to Dr Kalachand Sain, Director of the Wadia Institute of Himalayan Geology, a team of five scientists from the Institute, Dr Manish Mehta, Dr Vinit Kumar, Dr Sameer Tiwari, Dr Amit Walia, and Dr Akshaya Verma, surveyed the area where the glacier broke off from and the path it barreled down between February 8 and 12 and have a fairly good picture of what happened on February 7.

HERE IS WHAT HAPPENED ACCORDING TO THE SCIENTISTS:

● An underlying layer of metamorphic rock, due to the constant variations in the day and night tempera-

tures, and seasonal variations in temperatures, weathered resulting in the rock becoming like a multi-layered wafer. Gravity did its part in this weakened rock breaking off from under the glacier leaving the mass of ice hanging, which ultimately broke on February 7.

● A hanging glacier with a rock mass at a height of 5,600 metres above mean sea level broke off leaving behind a signature of its fall.

● It rolled down a steep 40 degree gradient taking with it rock, soil, and moraine (rock and soil previously carried by a glacier and deposited along its course), and freshly fallen snow to 3,600 metres MSL very quickly.

● The breaking ice chunks, and other debris fell into a nala, a stream formed by glacial melt.

● This material travelled about 8.5 km downstream where the nala joined the Rishiganga river at 2,300 metres MSL, that is also fed by the glacier.

● By this time, this humongous amount of slurry of ice, rock and soil, first created a dam of sorts at this

confluence because of natural impediment along the course of the river and then it broke past this structure.

● From there it rushed down another 4 km to Reni village where the Rishiganga hydel power project is located and practically demolished this structure causing huge damages to the project.

● Carrying the fresh debris from the Rishiganga project as well as some small bridges and even more material from the sides of the steep valley, the fast-moving slurry joined Dhauliganga river (by this time, the amount of material was simply enormous, with a huge momentum, like a small tsunami, says Dr Sain).

As the slurry moved downstream, the valley slowly widened and the height at which the ice, water and slush moved came down as did its speed. By this time, the material had travelled 22 km, swamping the Tapovan Vishnugad Hydel Power Project, crossing which it slowly lost momentum and material as the slurry got deposited along the course of the Dhauliganga river.

Navbharat Times- 17 February 2021

तीन साल के भीतर यमुना को साफ कर पेश करेंगे मिसाल : सत्येंद्र जैन

कहा, 24 घंटे बिजली की तरह साफ पानी भी मिलेगा

विशेष संवाददाता, नई दिल्ली

केजरीवाल सरकार के एक साल पूरे होने पर मंत्री सत्येंद्र जैन ने कहा है कि आने वाले 3 साल में यमुना को साफ करके विश्व में एक उदाहरण पेश करेंगे। दिल्लीवासियों को 24 घंटे पानी मिल सकेगा। उन्होंने कहा कि केजरीवाल सरकार ने शिक्षा और स्वास्थ्य क्षेत्र में जो कार्य किए हैं, उसको और आगे बढ़ाएंगे।

सत्येंद्र जैन ने कहा कि जिस तरह से दिल्ली में लोगों को 24 घंटे बिजली मिलती है, उसी तरह से पानी भी मिलेगा। कोरोना काल में एक साल का समय



बर्बाद हुआ है, लेकिन हमारे काम पर कोई असर नहीं पड़ेगा। यमुना को साफ करने का जो वादा किया है, उसे तीन साल में पूरा किया जाएगा। जैन ने कहा कि प्रदूषण के खिलाफ बड़े स्तर पर अभियान शुरू

किया है। इलेक्ट्रिक वीकल पॉलिसी उस दिशा में कारगर कदम साबित होगी। दिल्ली सरकार 100 इलेक्ट्रिक वीकल चार्जिंग स्टेशन बनाने जा रही है। कोरोना काल में 73 प्रतिशत लोगों के बिजली का बिल जीरो आया है। 13.66 लाख लोगों के पानी का बिल जीरो आया है। सत्येंद्र जैन ने कहा कि होम आइसोलेशन की प्रक्रिया दिल्ली में बहुत कारगर रही है और 3 लाख 12 हजार लोगों को होम आइसोलेशन में ठीक किया गया। उन्होंने यह भी बताया कि दिल्ली सरकार की ओर से अब तक 37 लोगों को 1 करोड़ रुपये की सम्मान राशि दी जा चुकी है।

Navbharat Times- 17 February 2021

हर घर में कितना साफ आ रहा पानी, केंद्र सरकार शुरू करेगी सर्वे

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■ नई दिल्ली: क्या आपके घर में साफ और पर्याप्त पानी आ रहा है। इसका पता लगाने के लिए केंद्रीय आवास और शहरी कार्य मंत्रालय देश के 10 शहरों में स्वच्छता सर्वेक्षण की तरह ही एक पेय जल सर्वेक्षण शुरू करने जा रहा है। पहले यह पायलट प्रोजेक्ट आगरा, बदलापुर, भुवनेश्वर, चूरू, कोच्चि, मदुरै, पटियाला, रोहतक, सूरत और तुमकुर में शुरू किया जाएगा उसके बाद अटल नवीकरण और शहरी परिवर्तन मिशन के तहत आने वाले 500 शहरों में इसे शुरू किया जाएगा।

केंद्रीय आवास और शहरी कार्य मंत्रालय के सचिव दुर्गा शंकर मिश्र के मुताबिक पहले इन शहरों में यह पता लगाया जाएगा कि वहां पर पानी के स्रोत



कितने हैं। लोगों के घरों में कितनी देर पानी आता है। सिस्टम में पानी की लीकेज कितनी है जिसका रेवेन्यू वहां की सरकारी एजेंसी को नहीं मिल रहा है। घरों से पानी के सैंपल इकट्ठा किए जाएंगे। उन्हें लैब में जांच के लिए भेजा जाएगा ताकि पानी की गुणवत्ता का पता चल सके। इसके बाद जो डेटा इकट्ठा होगा उसके आधार पर यह सर्वेक्षण 500 शहरों में शुरू किया जाएगा।

- पहले 10 शहरों में शुरू किया जाएगा प्रोजेक्ट
- आगरा, बदलापुर, भुवनेश्वर, चूरू, कोच्चि, मदुरै, पटियाला, रोहतक, सूरत, तुमकुर में पायलट प्रोजेक्ट
- 2025 तक रिसाइफिलिंग पानी के जरिए 20 फीसदी तक पानी की मांग को किया जाएगा पूरा

इस योजना के तहत पैसा तीन चरण में मुहैया कराया जाएगा। इसमें 20, 40 व 20 का अनुपात होगा। जल जीवन मिशन (शहरी) के लिए कुल प्रस्तावित लागत 2,87,000 करोड़ है। इसमें अमृत मिशन के लिए 10,000 करोड़ शामिल हैं। 10 लाख से ज्यादा आबादी वाले शहरों को प्रोजेक्ट की राशि का 10 फीसदी पीपीपी मॉडल के तहत इस्तेमाल करना होगा।

Rashtriya Sahara- 17 February 2021

ऋषिगंगा नदी पर बरती जा रही सतर्कता

■ देहरादून (भाषा)।

उत्तराखंड के उच्च हिमालयी क्षेत्र में 14 हजार फीट पर बनी झील से तात्कालिक खतरा नहीं होने के बावजूद राज्य आपदा प्रतिवादन बल (एसडीआरएफ) के जवान ऋषिगंगा नदी के जलप्रवाह पर निगरानी रख रहे हैं।

कुछ दिन पहले उपग्रह की तस्वीरों से पुष्टि हुई थी कि ऋषिगंगा नदी के जलग्रहण क्षेत्र में एक झील बन रही है। उसके तत्काल बाद एसडीआरएफ की एक टीम वहां सर्वेक्षण करने गई जहां उसने पाया कि झील से जलरिसाव हो कर पानी नदी में जा रहा है जिससे तात्कालिक खतरे की आशंका नहीं है। इसके बावजूद, ऋषिगंगा के प्रवाह की निगरानी करने के लिए झील से रैणी और तपोवन तक एसडीआरएफ ने अपने जवान तैनात कर दिए हैं।

मौके पर गई एसडीआरएफ की टीम की अगुवाई करने वाले कमांडेंट नवनीत भुल्लर ने बताया कि हमारे जवान नदी के किनारे तैनात हैं जो निरंतर नदी के जलप्रवाह की निगरानी करेंगे। इसके अलावा, पूर्व



चेतावनी प्रणाली के तहत नदी के जलप्रवाह पर निगरानी रखने के लिए अलग-अलग जगहों पर सेंसर भी लगाए गए हैं। इस संबंध में, मुख्यमंत्री त्रिवेन्द्र सिंह रावत ने भी कहा कि झील पर उपग्रह के जरिए भी निगाह रखी जा रही है। चमोली जिले की ऋषिगंगा नदी में सात फरवरी को आई विकराल बाढ़ से एनटीपीसी की निर्माणाधीन 520 मेगावाट तपोवन-विष्णुगाड जलविद्युत परियोजना को भारी क्षति हुई थी जबकि रैणी में स्थित उत्पादनरत 13.2 मेगावाट ऋषिगंगा जलविद्युत परियोजना पूरी तरह तबाह हो गई थी।

Hindustan- 17 February 2021

शहरों में पेयजल के लिए सर्वे होगा

नई दिल्ली। शहरों में उचित जल वितरण व अपशिष्ट जल के पुनः उपयोग का पता लगाने और एक चुनौती प्रक्रिया के माध्यम से जल की मात्रा व गुणवत्ता के संबंध में जल निकायों की मैपिंग करने को पेयजल सर्वेक्षण किया जाएगा। शुरुआत में इसे दस शहरों में पायलट प्रोजेक्ट के रूप में चलाया जाएगा।

केंद्रीय आवासन एवं शहरी कार्य सचिव दुर्गाशंकर मिश्र ने मंगलवार को बताया कि जल जीवन मिशन-शहरी के अंतर्गत पायलट पेयजल सर्वेक्षण प्रारंभ किया जा रहा है। पहले कदम के रूप में मंत्रालय ने दस शहरों-आगरा, बदलापुर, भुवनेश्वर, चूरू, कोच्चि, मदुरै, पटियाला, रोहतक, सूरत व तुमकूर में पायलट आधार पर सर्वेक्षण शुरू करने का निर्णय लिया है। (विसं)