Times of India 10-February-2021

Delhi's right can't override that of Haryana, SC told

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New Delhi: The Haryana government told the Supreme Court on Tuesday that right to drinking water of its people could not be overridden by that of Delhi residents and accused Delhi Jal Board (DJB) of chronically making false claims about high ammonia level in Yamuna water to seek a much larger quantity than its allocated share.

Appearing for Haryana, senior advocate Shyam Divan told a bench of Chief Justice SA Bobde and Justices AS Bopanna and V Ramasubramanian that DJB wasted around 35-50% of water and its claims about high ammonia level, examined promptly by the Central Pollution Control Board and the Upper Yamuna River Board, were found to be false.

The Haryana government said, "Since years, DJB has claimed that its water treatment plants have capacity to treat water with ammonia levels of a maximum of 0.9 ppm only, whereas in Agra and various other places, water treatment plants have capacity to treat water containing ammonia levels of 25-30 ppm. Instead of increasing the capacity of treating water, DJB, under the garb of increased ammonia level, wants additional water from Haryana, specifically when the state is already supplying unpolluted water of 1,049 cusecs against Delhi's allocated share of 719 cusecs."

The state faulted the Delhi government for moving a writ petition and said it pitted the rights of people in Delhi against that of the residents of Haryana. At the request of additional solicitor general Aishwarya Bhati, the bench made the Jal Shakti ministry a party in DJB's petition.

Haryana said, "DJB has alleged that it is filing the writ petition for the protection of

File photo

TROUBLED WATERS

right to life of residents of Delhi, which is against the federal structure of the Constitution of India. If a statutory body of a particular state is permitted to maintain the petition under Article 32 of the Constitution against another state, which in turn also represents its own citizens, that will result in demolishing the established principles of law, as the right to life of residents of a state cannot supersede the right to life of residents of another state.

"If a state has grievances against another state, the same can be resolved by maintaining a suit under Article 131 of the Constitution of India and if the dispute is in the nature of a water dispute, that can be resolved in terms of Article 262 of the Constitution of India read with the Inter State River Water Disputes Act, 1956, and the mechanism set up under the different inter-state agreements."

Haryana said it had always maintained the quantum of supply of drinking water to Delhi. "Contrary to the impression being created by DJB, raw water supply from Haryana to Delhi never gets affected or reduced even in the lean season. The inflows of river Yamuna may go down to even drastically low levels, yet Haryana keeps releasing the same quantity that is nearly 1,050 cusecs from Munak for Delhi, which is completely insulated from vagaries of nature as far as supplies of raw water from Haryana is concerned."

The Haryana government also accused DJB of massive mismanagement of water, leading to wastage of over 30% of the water supplied to it. "It is the duty of the DJB to manage its affairs in proper manner and to protect leakages and distribution losses of treated water in their supply system, which are admittedly about 30% as per the Economic Survey of Delhi for the year 2017-2018," it said.

Times of India 10-February-2021

Not Enough Water, Delhi Banks On Treated Wastewater For UP Supply

Feasibility Study Says Neighbouring State Can Give 270 Cusecs Ganga Water

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New Delhi: Under a project worth Rs 6,932 crore, Delhi is planning to exchange 140 million gallons per day of treated wastewater for fresh water from its neighbour. A feasibility report commissioned by the Uttar Pradesh irrigation department noted that 270 cusecs of water from the Ganga can be shared with the capital from the Murad Nagar regulator while the treated water can be released from Okhla, a Delhi Jal Board official confirmed on Tuesday.

"We are urgently following this up with UP officials so that a memorandum of understanding between the two states can be finalised," the DJB official said. "Numerous meetings and field inspections have already been undertaken." The treated water can be used for irrigation.

Earlier, DJB had secured the nod of Upper Yamuna River Board (URYB) to implement the Singapore NeWater model for Delhi. In this, highly treated wastewater from the Coronation Park water treatment plant will be released in Palla and blended with raw water in the expectation that it will then flow with the river and become filtered naturally downstream.

CHALKING OUT THE WATER ROADMAP

DEMAND-SUPPLY GAP 350-400MGD IN PEAK SUMMER **SOLUTION** REUSING WASTEWATER

THE PLAN

1 140 MGD EXCHANGE WASTEWATER WITH UP
Delhi to give treated wastewater for irrigation while getting raw water from Murad Nagar regulator

Status: Proposal found feasible by UP irrigation dept; 270 cusecs of raw water may be given to DJB from Murad Nagar regulator and DJB will release the same quantity of treated effluent at Okhla; DJB has given in principle approval; urgent follow-up being done

ESTIMATED COSTS
Construction of 2nd plant at Sonia Vihar ₹1,161cr
31km pipeline from Murad Nagar to Sonia Vihar ₹2,261cr
Restoration of network (Murad Nagar- Bhagirathi) ₹509cr
Supply via pumphouses and pipelines ₹3,000cr

2 70 MGD SINGAPORE NEWWATER MODEL
High-quality treated water from Coronation Pillar to be pumped to Palla and released into the river; to be lifted from Wazirabad and reused for drinking

Status: In principle approval granted by Upper Yamuna River Board, 2-3 years needed to execute

3 20 MGD EXCHANGE WASTE WATER WITH HARYANA | Delhi to supply treated wastewater for irrigation, in lieu of additional fresh raw water by Haryana at Auchandi and Jaunti regulators

Status: Pending

Delhi is water-deficient, with a daily water production of 930 MGD against a peak demand of 1,250 MGD. The exchange of 140 MGD water with UP will increase the water production of the city by 15%. DJB estimates that the project and development of associated infrastructure are likely to cost Rs 6,932 crore, with Rs 3,000 crore being the cost for infrastructure to carry the treated effluent to UP, Rs2261 crore for creating 31-km of pipeline network from Murad Nagar to Sonia Vihar and Rs 1,161crore for setting up a second 140 MGD water treatment plant in Sonia Vihar, which currently has one 140 MGD treatment plant.

Another exchange of 20 MGD wastewater with Haryana is also being pursued. DJB has submitted a proposal for providing irrigation water at the Auchandi and Jaunti regulators in Haryana and in lieu getting the same amount of raw water via the Carrier Lined Canal and Delhi Sub Branch CLC/DSB canals. If UYRB approves the project, it can be implemented in a mere 18 months, say DJB officials.

Despite being a water stressed city, Delhi reuses less than 20% of its treated wastewater resources. Of the 500 million gallons of treated wastewater produced by the city's 20 sewage treatment plants every day, the capital is able to utilise only 90-95 MGD of this treated water in areas like Sanjay Van, Bhalswa golf course and as coolant in thermal power plants.

DJB is obligated to release 267 MGD of this treated waste water in Yamuna to maintain the return e-flow. Besides planning to use 230 MGD water for these three projects, the water utility also plans to divert another 46 MGD for reviving waterbodies with the ultimate aim being to improve groundwater levels. "In areas where groundwater extraction is feasible, the drawn water can be used for augmenting the normal water supply," an official of DJB said.

Times of India 10-February-2021

India inks MoU to build dam for safe drinking and agri water to Kabul

TIMES NEWS NETWORK

New Delhi: India and Afghanistan signed an MoU on Tuesday for construction of the proposed Shatoot dam that India will build to provide safe drinking and irrigation water to Kabul residents. Presiding over the virtual ceremony with Afghan President Ashraf Ghani, PM Narendra Modi said no external power can come in the way of India-Afghanistan friendship.

Modi also expressed concern over increasing violence in Afghanistan and the "cowardly manner" in which innocent civilians and journalists were being targeted in Afghanistan. While calling for comprehensive ceasefire in Afghanistan, he said as close neighbours and strong strategic partners, both India and Afghanistan want to see the region free of extremism and terrorism. Referring to the Afghan peace process, he said unity within the country was important and hoped that a "united Afghanistan" will be capable of dealing with any challenge facing it.

In his remarks, Ghani said India's development assistance to Afghanistan is iconically marked on the country's landscape. The MoU for Shatoot dam was signed by foreign minister S Jaishankar and his counterpart Hanif Atmar. The government said the project was a part of the New Development Partnership between India and Afghanistan. "The Lalandar (Shatoot) dam would meet the safe drinking water needs of Kabul city, provide irrigation water to nearby areas, rehabilitate the existing irrigation and drainage network, aid in flood protection and management efforts in the area, and also provide electricity to the region," said a government statement.

This is the second major dam being built by India in Afghanistan, after the India-Afghanistan Friendship Dam [Salma Dam], which was inaugu-

SECOND DAM PROJECT

rated by Modi and Ghani in June 2016.

"Signing of the MoU on Lalandar (Shatoot) dam is a reflection of India's strong and long-term commitment towards the socio-economic development of Afghanistan and the enduring partnership between two countries. As a part of our development cooperation with Afghanistan, India has completed over 400 projects covering all 34 provinces of Afghanistan," said the statement. In his remarks, Modi highlighted the civilisational relationship between India and Afghanistan and gave an assurance of India's continued support for a peaceful, united, stable, prosperous and inclusive Afghanistan.

Deccan Chronicle 10-February-2021

In-depth safety audit of major infrastructure projects on cards

DC CORRESPONDENT
NEW DELHI, FEB. 9

- **HOME MINISTRY** sources said there was considerable concern in the government regarding the safety of infrastructure being carried in hilly terrain particularly after the Uttarakhand glacier burst.
- **EXPERTS FROM** NDRF and even external agencies like IIT, Indian Institute of Science and others would be roped in for this exercise.

In view of the Uttarakhand glacier tragedy home ministry's National Disaster Response Force (NDRF) will conduct a fresh "safety and security audit" of all major infrastructure projects in high altitude and hilly areas and suggest corrective measures.

Home ministry sources said there was considerable concern in the government regarding the safety of infrastructure being carried in hilly terrain particularly after the Uttarakhand glacier burst. So this incident is being used as an opportunity to do an in-depth safety audit.

Officials said all projects being carried in Uttarkhand, Himachal Pradesh, Jammu & Kashmir and the North-Eastern states would be thoroughly reviewed. A detailed report and analysis would be submitted within the next two months.

"As of now this survey would be conducted in hilly states as they are more vulnerable to such disasters as was witnessed in Uttarakhand," a senior ministry official said.

Experts from NDRF and even external agencies like IIT, Indian Institute of Science and others would be roped in for this exercise. A number of power projects, dams, roads and bridges are being constructed in these states which would be examined. Ministry sources said NDRF teams with assistance from the SDRF would be deployed close to these infrastructure projects so that immediate relief and rescue operations can be carried out in case of any future disasters.

The Tribune 10-February-2021

India inks pact to build dam in Afghanistan

TRIBUNE NEWS SERVICE

NEW DELHI, FEBRUARY 9

India on Tuesday signed an MoU with Afghanistan for the construction of a dam that will provide safe drinking water to 20 lakh people of Kabul city. The MoU was signed by Foreign Ministers S Jaishankar and Hanif Atmar in the presence of Prime Minister Narendra Modi and Afghan President Mohammad Ashraf Ghani.

However, it does not mean the final word has been said on the dam. The $250 million Shatoot Dam project has been pending for two years following objections from Pakistan as it fears impediment to the regular flow of water. Last November, Jaishankar had announced an agreement with Afghanistan for building the Shatoot Dam was close at hand, while speaking at an international conference on Afghanistan.

In tandem, India will launch the fourth phase of the high impact community development projects in Afghanistan involving over 100 projects. This is the second major dam being built by India in Afghanistan, after the India- Afghanistan Friendship Dam (Salma Dam).

"India has invested heavily in peace and development in Afghanistan and will want the gains of the past two decades to be preserved.

Narendra Modi, PRIME MINISTER

PENDING FOR TWO YEARS

- The $250 million Shatoot Dam project has been pending for two years following objections from Pakistan as it fears impediment to the regular flow of water.
- The dam is proposed to be built on the Maidan river, a tributary of the Kabul river which flows into Pakistan from Afghanistan.

The Tribune 10-February-2021

Fresh spell of snow expected in higher reaches of Valley

SRINAGAR, FEBRUARY 9

The minimum temperature increased in Kashmir, except in Gulmarg, on Tuesday, even as the Meteorological Department has forecast a spell of light rain or snowfall at a few places in the higher reaches of the Valley, officials said.

Srinagar, the summer capital of Jammu and Kashmir, recorded a low of minus 1.2 degrees Celsius on Monday night against the previous night's minus 2 degrees Celsius, the officials said.

Qazigund, the gateway town to the Valley, recorded a low of minus 4.3 degrees Celsius, up from the previous night's minimum of minus 5.5 degrees Celsius, they said.

Pahalgam tourist destination, which also serves as a base camp for the annual Amarnath Yatra in south Kashmir, recorded a low of minus 2.2 degrees Celsius — up over three notches from minus 5.3 degrees Celsius the previous night.

The minimum temperature at Gulmarg in north Kashmir's Baramulla district settled at minus 3.5 degrees Celsius on Monday night, one notch down compared to the previous night's low, the officials said.

Kupwara town in north Kashmir recorded a low of minus 1.6 degrees Celsius, while Kokernag, in the south, minus 2.5 degrees Celsius.

The MeT office has said there is a possibility of a spell of light rain or snowfall at a few places in the higher reaches of the Valley on Tuesday, while the weather in the plains is expected to remain mainly dry. — PTI

SRINAGAR HIGHWAY SHUT AFTER LANDSLIDE

- **Jammu:** The Jammu-Srinagar national highway was blocked on Tuesday due to a landslide in Ramban district, traffic officials said.
- Hundreds of vehicles have been stranded following the landslide in the Marog area on the highway.
- The men and machines are engaged in the landslide clearance operation and efforts are afoot to ensure early restoration of traffic, they said. There is only one-way movement of traffic from Srinagar towards Jammu. PTI

The Tribune 10-February-2021

In Lahaul-Spiti, outrage over proposed hydel projects

DIPENDER MANTA
TRIBUNE NEWS SERVICE

MANDI, FEBRUARY 9

Apprehending an Uttarakhand-like catastrophe, residents of Lahaul-Spiti district have raised their pitch against the proposed hydel projects in the ecologically fragile Chenab river basin.

Himachal has allocated several power projects in the Chenab basin to prominent companies like the SJVNL, NHPC, HPCL and NTPC. In addition, several hydropower projects are in the pipeline for Tandi, Rashil, Bardang, Miyar and Jispa in Lahaul-Spiti. Petrified by the Chamoli mishap, residents of Tandi and Goshal panchayats held a meeting to oppose the proposed projects on the Chenab banks. Tandi panchayat pradhan Virender Kumar said: "We oppose the decision of the government to set up power projects in Lahaul-Spiti as it will adversely affect the ecology of the area. We have passed a resolution against the Tandi project."

Voicing similar fears, vice-president of NGO Save Lahaul Samiti Vikram Katoch said residents of the district were united in their opposition to setting up of more hydel projects in the Chenab basin. He added that campaigns would be held across the district to spread awareness about the ill-effects of power projects.

Rigzin Semphel Heyreppa, president of the Jispa Dam Sangharsh Samiti, said, "In Kinnaur, projects have been set up indiscriminately, causing severe damage to the ecology. People in Lahaul-Spiti will not allow a repeat of Kinnaur."

DEMAND TO SHELVE CHENAB PROJECTS

- Himachal has allocated several power projects in the Chenab basin to SJVN, NHPC, HPCL and NTPC
- An association of NGOs, Himdhara, has demanded a complete moratorium on new projects in the fragile Himalayan regions of Kinnaur & Lahaul-Spiti

File No.T-74074/10/2019-WSE DTE

The Tribune 10-February-2021

A revival of Chipko spirit needed in Chamoli

DINESH C SHARMA
SCIENCE COMMENTATOR

Ironically, at the centre of the latest disaster is Raini village, which was the site of the Chipko movement that sowed the seeds of people-centric environment activism in India. In the past two decades, local movements against large hydel projects have sprung up in Uttarakhand. Several public interest petitions, court orders and fast-unto-death by environmentalists have not had any impact on the attitude of governments at the Centre and in Uttarakhand towards hydropower.

THE Himalayas once again witnessed a massive disaster on Sunday morning. The analysis based on satellite imagery of the region from Planet Labs, a company formed by former NASA scientists, shows that the flash flood was triggered by a rock slope that got detached from a large glacier, resulting in an avalanche of rocks and ice which moved downwards at a high speed.

According to some Indian experts, the avalanche was caused by the detachment of a hanging glacier from the bedrock hosting it, some 20 km upstream of the Rishiganga hydel power project. Yet another explanation is that the detached rock slope slipped into a glacial lake or accumulated melt water held together by natural rocks and debris.

Irrespective of whether it was a massive landslide or a Glacial Lake Outburst Flood (GLOF), the event caused colossal destruction downstream and nearly washed away two hydroelectric power projects.

While the exact sequence of events will become clear over the next few days following field surveys, the connection of any such disaster with climate change and environmental destruction is inevitable. In the past six decades, the entire Himalayan range has recorded a rising trend of extreme warm events, drop in extreme cold events and increasing variability in Western disturbances as well as snowfall in certain regions in the western Himalayas, according to report of climate change in the Hindu Kush region prepared by the Kathmandu-based International Centre for Integrated Mountain Development.

CATASTROPHIC: Proponents of hydropower projects keep inventing new ways of circumventing environmental norms which can amplify the impact of a disaster. PTI

These climatic changes affect availability of water in glacier-fed rivers and also result in formation of lakes of glacier melt water. Warming temperatures play a role in glacial destabilisation and help in basal melt which can trigger 'wasting' events like the one seen on Sunday morning. Both the number and size of glacial lakes has shown an increasing trend in the past three decades, enhancing the risk of GLOFs. The melting of high mountain permafrost due to warming too is increasing the probability of rock avalanches from steep slopes. Such avalanches can reach glacial lakes and trigger GLOF. Studies have put the number of glacial lakes between 4,000 and 8,000 spread across the entire Hindu Kush Himalayan region. In the central Himalayas, this number has risen from 644 in 1990 to 796 in 2010.

In view of this scenario of climate change and increasing threat of landslides and GLOFs occurring due to it, a two-pronged policy response is required. First and foremost, we need to study and monitor glaciers and glacial lakes on a continuous basis. A beginning has been made in this regard. Some glacial lakes are being monitored. For instance, the south Lhonak glacial lake in Sikkim has been ballooning. It has spread to 126 hectares from 18 hectares in 1976. The size of the Geepang Gath glacial lake in Chandrabhaga basin in Himachal Pradesh is estimated to be expanding by 0.025 square kilometre every year.

The number of glacial lakes in the Ravi, Chenab, Sutlej and Beas basins has also gone up between 2013 and 2015. Such monitoring studies have to be intensified and made widespread. It can happen under the overarching existing framework of the National Mission for Sustaining Himalayan Ecosystem.

India has gained considerable experience in polar research through multiple research laboratories in the two poles: the Arctic and the Antarctic. This can be leveraged to develop permanent research bases and stations in the third pole — the Himalayas. A beginning has been made in this direction by the National Centre for Polar and Ocean Research of the Ministry of Earth Sciences which has established a high-altitude station, Himansh, in Spiti, at an altitude of 13,500 ft. The third pole research endeavour should cover all aspects of climate change, glaciology, hydrology, livelihoods, agriculture and so on.

For the mitigation of natural disasters such as glacial lake bursts and landslides, early warning systems have to be developed and implemented. Engineering solutions such as siphoning water from identified glacial lakes is also an option, as experimented in the south Lhonak glacial lake in Sikkim. It is a logistically challenging task involving the transport of pipes etc to points in inhospitable terrain. In Himachal Pradesh, scientists are monitoring changes in the Parechu glacial lake.

The evidence coming from research should form the basis of policymaking and planning of development projects in the hills. For this, climate change and environmental concerns will have to be mainstreamed in all development activities, be it the construction of hydroelectric power projects or grand projects like the Char Dham Pariyojana.

It has been observed that hydropower projects can amplify the impact of catastrophes such as the one that occurred this week, besides disturbing ecological conditions in the construction phase. Proponents of projects keep inventing new ways of circumventing environmental norms. The Char Dham project was broken into 53 smaller projects just to evade the mandatory environment impact assessment (EIA) studies.

A series of smaller hydropower projects is proposed in one valley for the same reason. While the EIA process may be fudged, the cumulative environmental impacts of such projects can't be avoided. For instance, springs are getting dried as the natural hydrology that brings water to them is disturbed. Landslides have been more common. Projects are sanctioned, subject to observance of certain environmental conditions, but compliance is not monitored. For instance, muck from the construction of roads and other development works is routinely dumped on slopes and riverbeds.

Ironically, at the centre of the latest disaster is Raini village, which was the site of the Chipko movement that sowed the seeds of people-centric environment activism in India. In the past two decades, local movements against large hydropower projects have sprung up in Uttarakhand. Several public interest petitions, court orders and a fast-unto-death by environmentalists like Prof GD Agrawal have not had any impact on the attitude of governments at the Centre and in Uttarakhand towards hydropower, irrespective of the party in power. It is time to revive the spirit of Chipko in the hills to prevent cascading disasters from happening in future.

File No.T-74074/10/2019-WSE DTE

The Hindu 10-February-2021

'Crashing rock mass may have caused flash floods'

Scientists blame a weak zone for collapse

PRESS TRUST OF INDIA
NEW DELHI

A rock mass, weakened from years of freezing and thawing of snow, may have led to the creation of a weak zone, triggering its collapse that resulted in flash floods in the Chamoli district on Sunday, initial observations by scientists of the Wadia Institute of Himalayan Geology (WIHG) suggest. The crashing rock mass also brought earth and mounds of snow with it. The friction may have resulted in heating, which could have caused the floods, the observations suggest.

Scientists from the institute conducted a helicopter survey to find clues what led to the deadly flash floods that swept everything in its way.

Kalachand Sain, Director of the WIHG, said the glaciers where the incident occurred feed the Rishiganga river that ultimately joins the Dhauliganga.

"This region has a very steep gradient. Our observations suggest that the rock mass may have weakened due to freezing and thawing. This sometimes leads to the development of a weak zone and fractures," he said.

Dams and damages

The Uttarakhand government continues to ignore evidence that hydropower projects in the fragile region exacerbate disasters

KAVITA UPADHYAY

In 2018, while travelling through the villages near the India-China border in Niti Valley in Uttarakhand's Chamoli district, I stopped at Reni village, the birthplace of the iconic Chipko movement. The way to Reni was dotted with hydropower projects that were marred by controversy. The villagers complained about the rampant flouting of norms by the hydropower developers, which forced them to protest against such projects.

Flouting all norms

On February 7, two such hydropower projects located close to Reni suffered damages from flash floods that left 31 dead and 175 people missing. The barrages of the 13.2 MW Rishiganga hydropower project, which is located on the river Rishiganga, only a few metres from Reni, and NTPC's 520 MW Tapovan-Vishnugad hydropower project, on the River Dhauliganga, about 4 km from Reni, were completely damaged. It is important to note here though that dams are not victims of disasters; they, in fact, exacerbate disasters.

While the actual cause of the February 7 floods is under investigation, pegging it as a natural disaster may be incorrect. A June 26, 2019 order of the Uttarakhand High Court questioned the use of explosives on the Rishiganga site – that too for illegal mining in the name of dam construction. The use of explosives has repeatedly been questioned for dam construction, and the construction of other infrastructure projects, such as roads, in the fragile Himalayan State.

Other than this, deforestation takes place when dams are constructed. While compensatory afforestation is the norm, it is often flouted. The construction material that is supposed to be dumped on separate land is often dumped into the rivers. It would be naïve to assume that a disaster in Uttarakhand that involves dams was 'natural'.

The Chopra Committee report of 2014 brings more clarity on how dams exacerbate a disaster such as floods. The committee was formed in October 2013 after the Supreme Court ordered the Union Environment Ministry to constitute an expert body to assess whether dams exacerbated the 2013 floods in the State where over 4,000 people were killed, mainly in the Kedarnath Valley. The committee was headed by environmentalist Ravi Chopra and comprised 10 other members including geologists and biodiversity experts. Its report mentions how dams exacerbated the 2013 deluge, mainly as riverbeds were already raised from the disposed muck at the dam construction sites, and could not contain the sudden increased flow from floodwaters. The report presents evidence to prove that dams are not only damaged in floods, they also cause immense damage in downstream areas. This is because as floodwaters damage a barrage, they increase the destructive capacity of the water that flows downstream of the barrage. The Chopra Committee suggested that 23 of the 24 proposed dam projects it reviewed be cancelled for the potential damage they could do. However, even after all these years, the matter remains pending in the Supreme Court, and environmental norms for dam construction continue to be flouted in Uttarakhand.

In an affidavit submitted on December 5, 2014 in the Supreme Court, the Union Ministry of Environment, Forest and Climate Change acknowledged the adverse impact of dams in the 2013 floods, but to no effect.

Impact of climate change

To make matters worse, Himalayan glaciers are receding and disintegrating as a result of climate change, and the snow cover in the Himalayas is also thinning. Research also shows how an increased number and volume of glacial lakes should be expected as a direct impact of increased temperatures. For dams, this means rapid increase or decrease in the reservoir water level. It also means that the projections on the life of a dam reservoir may not stand due to erratic events, such as floods, that could rapidly fill a reservoir with muck and boulders brought along with the floods.

There is also the threat of earthquakes. In terms of earthquake risk, Uttarakhand lies in Seismic Zone-IV (severe intensity) and Seismic Zone-V (very severe intensity). Ignoring this, many dams have been constructed in zones that are under high risk of witnessing severe earthquakes.

Irrespective of the evidence, the Uttarakhand government plans on continuing to build dams as a source of revenue. The State plans to construct up to 450 hydropower projects of 27,039 MW installed capacity. Clearly, the Uttarakhand government has chosen to ignore the disastrous impacts of rampant dam-building. It is clear that dams worsen disasters, and for this to be ignored by the State authorities is unfortunate.

Kavita Upadhyay is a journalist from Uttarakhand, who has extensively reported on the State's environmental disasters. She's a graduate in Water Science, Policy and Management from the University of Oxford

Asian Age 10-February-2021

Playing with God's world: 'Growth' has a high price

Sanjeev Ahluwalia

Senior BJP leader Uma Bharati's first reaction to the terrible news of the Chamoli glacier break/avalanche disaster on Sunday — "I told you so" — fully aligns with the reservations of all those who put a higher value on conservation than on the development of natural resources for economic growth.

On Sunday, a part of the Nanda Devi glacier broke off and avalanched down, causing a flash flood in the Rishiganga and Dhauliganga — the upper riverine stretches of the Alakananda, which feeds into the mighty Ganga — washing away back-to-back dams diverting water into a privately-owned hydro project on the Rishiganga stretch and seriously damaging an under-construction government-owned power generation project at Tapovan.

As minister for water resources in the first BJP government of Narendra Modi, Ms Bharati had dragged her feet on the development of the upper reaches of the Ganga in Uttarakhand — much to the dismay of gung-ho advocates of development and growth. Conservationists cite the "fragile" structure of the Himalayas to caution against over-exploitation of the riverine system for electricity generation.

Others go so far as to blame the recent much-publicised widening of the highways connecting the Char Dham — the four pilgrimage shrines in Garhwal — Badrinath, Kedarnath, Gangotri and Yamnotri. Construction of roads is still done the old way, by simply carving additional road width out from the mountain side, causing significant soil erosion both above and below the road. Measures to bind the exposed mountainside using nets or by planting fast-growing ground cover are only a sideshow, rarely given prominence, in already overloaded road construction budgets.

But then, isn't it always "the growth-wallahs" who stick their necks out by measuring risk versus rewards, even in the playground of the gods — as the Himalayas are believed to be. On the other hand, it is "safe" to be a conservationist, simply because there are so few downsides to the belief that only the sparing use of natural resources is sustainable. Multiple alternative sources of growth do remain unexploited, like higher productivity in the use of existing resources or the use of alternative "clean" technologies for power generation, like solar or offshore wind.

At times like the present one, in the immediate aftermath of a human tragedy, calculating the trade-off between lives cruelly snatched away from loved ones and the potential economic gains from development seems particularly pointless.

It is also unclear to what extent the disaster is the outcome of over-exploitation of resources in the back-to-back construction of dams to divert water into tunnels to run turbines for electricity generation. The shearing-off of glaciers, causing an avalanche and a flash flood in downstream riverine systems, is a natural calamity. After all, avalanches do happen, and lives are lost.

Doubtless, lessons must and will be learnt, with respect to continuous monitoring of the higher reaches for signs of fragility. Assessing the geological safety of hill development — extending road access, urban sprawl and related projects — is no longer a choice. Coupled with the depredations of climate change, already fragile ecosystems could tumble over the edge much faster if the rate and style of intrusive development is not carefully regulated.

How much of a say should local communities have in large projects being created in their midst is another vexed question — on which there are no clear answers. The "wisdom and public interest orientation" of NIMBY (not in my backyard) communities varies and is often romanticised. In comparison, centralised planning is easy to vilify as representing the cruel, uncaring impositions of rules made by "outsiders". Ultimately, help must come from science in guiding the government on project site selection and regulations for risk minimisation and occupational safety for project workers.

In 2013, PM Narendra Modi made history as chief minister of Gujarat by arranging transport for Gujarati pilgrims stranded in the Kedarnath flash floods. In a similar vein, within a day of the incident, R.K. Singh, Union minister for power, visited the damaged NTPC-owned Tapovan hydro generation project.

VIP visits are a traditional, albeit a much-reviled, device for speeding up the release of funds for relief work and energising those engaged in the onerous on-site task of rescue, relief distribution and rehabilitation. But it is a tradition that a politician ignores only at his peril — after all "we are like that only". Happily, the minister, previously a civil servant who retired as India's home secretary — did more than just that. He was on the button when he commented that the structural safety of glacier formations around large project construction sites in mountainous regions should be monitored for geological stress, much more so than they are done now. Early advance warnings of incipient trouble can enable the evacuation of workers, at the very least.

Some go so far as to blame the recent much-publicised widening of the highways connecting the Char Dham — the four pilgrimage shrines in Garhwal

Adroit operational steps to minimise the downstream damage also mitigated the scale of the disaster. Reportedly, emergency measures to release water stored in downstream dams at Rishikesh and Srinagar helped create the required space to absorb the upstream water shock. All these actions speak to our improving capacity for the safe operation of large water systems. To the credit of the civil administration, households along the affected stretch of the river, potentially under threat from flood waters, were reportedly evacuated as a precaution, though the waters subsided subsequently.

National Disaster Management Authority personnel were also visibly in attendance, although it is unclear whether more boots on the ground, in an area chock-a-block with the security forces, is of additional value. The NDMA, sadly, remains a neglected cousin of the military and the police in terms of their technical capacity, rescue equipment and surge capacity for assisting the local civil authorities.

The bulk of the casualties are of on-site contract workers — mostly migrants from Uttar Pradesh and Bihar. Hopefully, once these two hydro projects are completed, the memories of those who laid down their lives during their completion will be commemorated in a suitable manner.

The CM of Uttarakhand announced ₹4 lakhs as relief for the families of each of the victims. An additional ₹2 lakhs each would be given from the Prime Minister's Relief Fund.

The question which remains unanswered, however, goes far beyond the welfare of the families of the deceased. The jury is still out on what is an acceptable societal trade-off between the risk of mortality and morbidity and the compulsions of economic development.

The writer is adviser, Observer Research Foundation

Millennium Post 10-February-2021

Collapse of rock mass weakened due to freezing may have caused U'khand flash floods: Scientists

NEW DELHI: A rock mass weakened over a period of time due to freezing and thawing of snow must have led to the creation of a "weak zone", triggering its collapse, which resulted in the formation of a temporary dam that eventually breached, causing the deadly floods in Uttarakhand's Chamoli district on Sunday, initial observations by scientists of the Wadia Institute of Himalayan Geology (WIHG) suggest.

Kalachand Sain, Director of the WIHG, said the incident occurred adjacent to the Raunthi glacier. The area also has glaciers that feed the Rishi Ganga river, which ultimately joins the Dhauli Ganga.

Sain said the avalanche must have taken place in the wee hours of Sunday while the temporary dam must have breached between 10-11 am.

Two teams comprising five glaciologists of the WIHG are at the site conducting observations. The teams carried out a helicopter survey of the area on Tuesday to find clues as to what led to the massive flash floods that swept everything on the way.

Rescue operations underway at Tapovan Tunnel, two days after a glacier broke off in Joshimath causing a massive flood in the Dhauli Ganga river, in Chamoli district of Uttarakhand, on Tuesday

So far, the flash floods have claimed 31 lives.

"Our observations suggest that the rock mass may have weakened due to freezing and thawing over a period of time. This sometimes leads to the development of a weak zone and fractures," Sain said.

The area also witnessed precipitation in the preceding three days, followed by clear weather on the day of the event, which caused a freezing and thawing effect.

"The event occurred due to a slide of a large rock mass beneath the hanging glacier at 5,600 metres above sea level. It was observed that a huge rock and glacial ice masses collectively moved rapidly down the valley, taking away along with them all the snow and other loose material coming their way," Sain said.

The steep slopes of the mountains in the region further increased the intensity of the crash. The stretch of the avalanche was about three kilometres with an average slope of 37 degrees, before reaching the "Raunthi Nala/Gadhera" floor at an altitude of about 3,600 metres.

Thus, the rock-and-snow avalanche was able to entrain a vast amount of water and sediment.

"It seems that the materials blocked the water to the Raunthi Nala stream, causing a temporary water impoundment. The impounded water was eventually breached, which might have caused the catastrophic flash floods," Sain said.

An institute under the Department of Science and Technology (DST), the WIHG studies the Himalayan environment and its geology. Sain said an initial report will be sent to the DST. MPOST

Millennium Post 10-February-2021

PSPCL hydel projects surpassed CEA targets during April 2020 to January 2021: A Venu Prasad

PATIALA: A Venu Prasad, CMD PSPCL, disclosed that the hydel projects of Punjab State Power Corporation Limited (PSPCL) has surpassed the electricity generation target set by the Central Electricity Authority for the period April-2020 to January-2021 by generating 110.79 percent of the stipulated target.

CMD said that the hydel Projects of corporation has generated 4117.10 million units of energy against the target of 3716.46 million units for the period April-2020 to January-2021.

In a message, A Venu Prasad appreciated the commendable and untiring efforts of the PSPCL officers and employees for maintaining their excellence for surpassing targets during Covid-19 lockdown period.

CMD also added that with a

capacity of 206 MW Shahpurkandi Hydro Electric Project is being constructed on River Ravi, 11 km downstream of the existing Ranjit Sagar Dam . The letter of award for construction of civil works of power houses was issued by Water for Resources, Department Punjab Govt to L-I firm on January 21, 2021, as such, the project is likely to be commissioned by August, 2024. MPOST

Rashtriya Sahara 10-February-2021

चमोली की तबाही छोड़ गई कई सवाल, तथ्य चौंका रहे

■ प्रदीप फरस्वाण

देहरादून। एसएनबी

सर्दी के मौसम में ग्लेशियर का खिसकना, पिघलना या फिर एवलांच (हिमस्खलन) आने और रॉक फाल होने से ग्लेशियर लेक टूटने जैसी बात को लेकर हर किसी के जेहन में सवाल उठ रहा है। दो दिन पहले ऋषिगंगा घाटी में तपोवन के रैणी गांव क्षेत्र में अचानक सैलाब आने से मची तबाही भी अपने पीछे ऐसे ही कई अनसुलझे सवाल छोड़ गई है। यद्यपि इसकी पड़ताल के लिए वाडिया हिमालय भूविज्ञान संस्थान व डीआरडीओ के वैज्ञानिकों की टीम मौके पर डट गई है।

वहीं इंडियन इंस्टीट्यूट ऑफ रिमोट सेंसिंग (आईआईआरएस) ने भी ऋषिगंगा कैचमेंट एरिया की सैटेलाइट इमेज जारी कर काफी हद तक रहस्य से पर्दा हटाया है। फिर भी सैलाब आने के वास्तविक कारणों की तह तक पहुंचने के लिए वैज्ञानिकों की रिपोर्ट के लिए अभी कुछ दिन और इंतजार करना होगा। इसके बाद ही घटना घटित होने का असली कारण साफ हो पाएगा। इससे पहले उठते सवालों पर विशेषज्ञ जिस तरह का जवाब दे रहे हैं

चमोली : धौली गंगा नदी का पुल ढह जाने के बाद ग्रामीणों के लिए रोपवे बनाते पीडब्ल्यूडी के कर्मचारी।

ग्लोबल वार्मिंग व रॉक फाल भी माना जा रहा है ऋषिगंगा में आए सैलाब का कारण

उससे कई तरह के चौंकाने वाले तथ्य सामने आ रहे हैं। कोई कह रहा है कि हिमालय की गोद में बसे ये टाइम बम यानी ग्लेशियर लेक ग्लोबल वार्मिंग के कारण प्रभावित हो रहे हैं। यही नहीं मौजूदा समय में उच्च हिमालयी क्षेत्रों में जिस तरह तापमान बढ़ रहा है वह भी ग्लेशियरों के पिघलने या फिट टूटने का मुख्य कारण है। सर्दी में ग्लेशियर टूटना या एवलांच आने की संभावना कम रहती है। जिस तरह इन हिमालयी क्षेत्रों में निरंतर मानवीय हस्तक्षेप बढ़ रहा है और खामोश रहने वाले क्षेत्रों में बड़े-बड़े बांध व बैराज बनाए जा रहे हैं वह प्रकृति में असंतुलन पैदा कर रहे हैं।

विशेषज्ञ कहते हैं कि ग्लोबल वार्मिंग का हिमालय पर व्यापक असर पड़ रहा है। पिछले लंबे समय से किए जा रहे शोध भी इस बात की तस्दीक देते हैं कि हिमालय के कई ग्लेशियर साल दर साल बड़ी तेजी से पिघल रहे हैं। जनवरी-फरवरी में ही बर्फ से ढकी ऊंची पर्वत चोटियों पर मई-जून जैसा तापमान दर्ज किया जा रहा है। सैटेलाइट डाटा के आधार पर वैज्ञानिकों ने यह निष्कर्ष निकाला है कि बीते साढ़े तीन दशक में हिमाच्छादित क्षेत्र में 26 वर्ग किमी की कमी आई है। पहले जो स्थाई स्नो लाइन 5200 मीटर पर थी वह अब पीछे खिसककर 5700 मीटर तक पहुंच गई है। ग्लेशियरों में करीब 10 फीसद की गिरावट दर्ज की गई है।

नंदा देवी बायोस्फीयर की बात करें तो वर्ष 1980 में यहां पर 243 वर्ग किमी क्षेत्र बर्फ से ढका रहता था, लेकिन वर्ष 2020 तक यह एरिया घटकर 217 वर्ग किमी हो गया है। उत्तरी ढलान की अपेक्षा दक्षिणी ढलान के ग्लेशियर ज्यादा प्रभावित हुए हैं। वैज्ञानिक अपनी रपट में यह चेतावनी दे चुके हैं कि यदि इस क्षेत्र के ग्लेशियर इसी तरह से पिघलते रहे तो आने वाले समय में कुदरत और भी कहर बरपा सकता है। मानव के साथ ही वन्य जीव-जंतुओं व वनस्पतियों पर भी इसका बुरा असर पड़ेगा। कुल मिलाकर यदि समय रहते उच्च हिमालयी क्षेत्रों में बढ़ते मानवीय हस्तक्षेप पर विराम नहीं लगता और प्रकृति के साथ छेड़छाड़ इसी तरह बढ़ती रही तो आने वाले समय में कुदरत के और भी बड़े कहर का सामना करना पड़ सकता है। वैसे भी 2013 में केदारनाथ घाटी और अब जोशीमठ की ऋषिगंगा घाटी में प्रकृति के रौद्र रूप दिखा दिया है। इन आपदाओं के जख्म लंबे समय तक भरने वाले नहीं हैं।

नंदादेवी बेसिन में 15 छोटे बड़े ग्लेशियर : हिमालयी क्षेत्र के ग्लेशियरों के विशेषज्ञ माने जाने वाले डा. डीपी डोभाल भी इस बात से इनकार नहीं करते हैं कि हिमाच्छादित क्षेत्रों में ग्लोबल वार्मिंग का असर नहीं पड़ रहा है। हां, सर्दी के मौसम में ग्लेशियर टूटने या फिर एवलांच आने की घटना से वह थोड़ा हैरत में पड़ जाते हैं। कहते हैं कि सर्दियों में भी कभी-कभी एवलांच खिसकते हैं। ऐसा तब होता है जबकि चोटियों पर अधिक हिमपात होता है। ऐसे में उपर की ताजी बर्फ निचले परत पर भारी दबाव बनाती है। इस बार कम बर्फबारी हुई है। इससे यह कहना सहीं नहीं होगा कि अधिक बर्फबारी के कारण एवलांच ब्रेक हुआ होगा बल्कि ग्लोबल वार्मिंग के कारण ऐसी घटना घटित हो सकती है।

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गांवों में हर परिवार के पास होगा स्मार्ट पोर्टेबल वाटर टेस्टिंग टूल

■ संजय टुटेजा

नई दिल्ली। एसएनबी

जलजीवन मिशन के तहत सरकार ने गांवों में न केवल प्रत्येक परिवार तक पानी के नल का कनेक्शन देने का लक्ष्य निर्धारित किया है बल्कि सरकार ने एक कदम और बढ़ाते हुए प्रत्येक परिवार तक शुद्ध पेयजल पहुंचाने की कवायद शुरू की है। इसके लिए प्रत्येक परिवार तक स्मार्ट पोर्टेबल उपकरण होगा जिससे ग्रामीण अपने घर में नल से आने वाले पेयजल की गुणवत्ता को स्वयं जान सकेंगे।

देश के प्रत्येक ग्रामीण परिवार तक पानी के नल का कनेक्शन देने के लिए चलाए जा रहे जलजीवन मिशन के तहत सरकार अब केवल पानी का कनेक्शन देने के साथ साथ शतप्रतिशत शुद्ध पेयजल पहुंचाने की योजना तैयार की है। गांवों में लोगों के नल से गंदे पानी की समस्या उत्पन्न होने पर समय रहते

ग्रामीणों को शुद्ध पेयजल पहुंचाने के लिए सरकार ने बनाई योजना

योजना के प्रथम चरण में प्रत्येक गांव में एक वाटर टेस्टिंग उपकरण देने की योजना

अलग-अलग प्रकार के पोर्टेबल टेस्टिंग

समस्या का पता चल जाए और उसका समाधान हो जाए इसके लिए जलजीवन मिशन के तहत स्मार्ट पोर्टेबल डिवाइस उपलब्ध कराने की योजना बनाई गई है।

जलशक्ति मंत्रालय में सचिव पंकज कुमार तथा अतिरिक्त सचिव भरत लाल ने बताया, मंत्रालय की ओर से उद्योग व वाणिज्य मंत्रालय के साथ मिलकर इस योजना पर काम किया जा रहा है। कुछ कंपनियों के साथ मिलकर अलग अलग प्रकार के स्मार्ट पोर्टेबल उपकरण विकसित किए जा रहे हैं। यह उपकरण पानी का पीएच स्तर, टीडीएस स्तर बताने के साथ साथ पानी के अंदर अन्य घातक तत्वों की पहचान भी करेगा। उन्होंने बताया, प्रथम चरण में प्रत्येक गांव में इस तरह का एक उपकरण पहुंचाया जाएगा और एक मोबाइल एप के जरिए इसका संचालन किया जाएगा। यह उपकरण गांव में किस व्यक्ति के पास है इसकी जानकारी मोबाइल एप में होगी और कोई भी ग्रामीण एप से जानकारी हासिल कर अपने घर में आने वाले पानी की जांच करा सकेगा। इसके बाद प्रत्येक परिवार तक यह उपकरण पहुंचाने की योजना है।

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शारदा नदी में उफान का खतरा, 50 से अधिक गांव में अलर्ट

लखीमपुर खीरी जिला प्रशासन सतर्क, डीएम बोले- चिंता की बात नहीं

उत्तराखंड पहुंचे योगी के मंत्री, हेल्पलाइन भी शुरू

पत्रिका न्यूज नेटवर्क
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लखीमपुर खीरी. उत्तराखंड त्रासदी के जख्म अभी भरे भी नहीं हैं। राहत कार्य चल रहा है। अचानक, एक नई मुसीबत की आहट ने डरा दिया है। नेपाल की झील में दरार आने से प्रदेश की शारदा नहर में उफान आ सकता है।

इसे देखते हुए लखीमपुर खीरी और पीलीभीत में शारदा नदी के किनारे स्थित 50 से अधिक गांवों के निवासियों को सतर्क कर दिया गया है। साथ ही, अपर जिला अधिकारी सभी उपजिलाधिकारी, तहसीलदार, बा? से जु? अधिकारी और सभी खंड विकास अधिकारियों को भी अलर्ट कर दिया गया है।

हालांकि, लखीमपुर खीरी के अधिकारियों का कहना है कि चिंता की कोई बात नहीं है। जिला प्रशासन लगातार जल स्तर पर नजर बनाये हैं। जरूरत पड़ने पर गांवों को खाली कराया जा सकता है।

उत्तराखंड के चमोली में रविवार को ग्लेशियर फटने के बाद भारी तबाही आ गई थी। इस आपदा में अभी तक करीब 30 लोगों की मौत हो चुकी है जबकि 200 के आसपास लोग अभी भी लापता हैं। इनमें बड़ी संख्या में उत्तर प्रदेश के लोग भी शामिल हैं। उत्तराखंड सरकार से समन्वयय के लिए गन्ना विकास मंत्री सुरेश राणा की अगुवाई में तीन सदस्यीय टीम गठित की गई है जो मंगलवार को चमोली पहुंची। सुरेश राणा के अलावा इस टीम में आयुष मंत्री धर्म सिंह सैनी और बाढ़ राहत राज्यमंत्री विजय कश्यप शामिल हैं वहीं, एसीएस गृह अवनीश अवस्थी के नेतृत्व में उत्तराखंड शासन और प्रशासन से समन्वय के लिए अफसरों की टीम बनाई गई है। सीएम योगी के निर्देश के बाद राज्य मुख्यालय पर राहत आयुक्त कार्यालय में राज्य स्तरीय इमरजेंसी ऑपरेशन सेण्टर शुरू किया गया है। प्रदेश के लापता व्यक्तियों के परिजन लापता व्यक्ति का विवरण राहत हेल्पलाइन-1070 तथा व्हॉट्सएप नम्बर 9454441036 पर दर्ज करा सकते हैं और इस सम्बन्ध में जानकारी भी प्राप्त कर सकते हैं। आपदा प्रभावित यूपी के जनपदों में भी कंट्रोल रूम स्थापित किए गए हैं, जहां जिला प्रशासन, पुलिस और सिंचाई विभाग के कर्मचारी 24 घंटे अपनी सेवाएं दे रहे हैं। एक कंट्रोल रूम हरिद्वार में भी स्थापित किया गया है।

उत्तराखंड के पिथौरागढ़ की सीमा से लगने वाले नेपाल के दार्चूला में स्थित महाकाली नदी पर बनी झील में दरार आ गई है। इस बाबत नेपाल के कंचनपुर जिले के अधिकारियों की ओर से लखीमपुर के अफसरों को एक अलर्ट भेजा गया है, जिसमें कहा गया है कि धारचूला में नदी के पास स्थित झील के चारों ओर का कॉन्क्रीट कमजोर पड़ गया है जिस पर अभी मरम्मत का काम चल रहा है। इसकी वजह से नेपाल में महाकाली के नाम से जानी जाने वाली शारदा नदी में उफान आने की भी संभावना है।

लखीमपुर खीरी के जिलाधिकारी शैलेंद्र सिंह ने कहा कि घबराने की कोई बात नहीं है। हम लगातार जलस्तर की निगरानी कर रहे हैं और बैराज के अधिकारियों के संपर्क में हैं। फिलहाल तक तो किसी बड़ी लीक के होने की संभावना नहीं है। किसी भी प्रतिकूल मामले की स्थिति में हमारे पास गांवों को खाली कराने के लिए पर्याप्त समय है।