

Fine words won't save our last wild rivers

Commitment to support only sustainable pumped hydro developments is urgently needed



JAMIE PITTOCK

Technologies to harness the power of water are touted as crucial for a low-emissions future. But over many decades, the hydropower industry has caused serious damage to the environment and people's lives.

More than 500 new hydropower dams are currently planned or under construction in the world's protected areas. And some 2,600,000 kilometres of the last wild rivers — including the Amazon, Congo, Irrawaddy and Salween rivers — are threatened by proposed dams.

The global hydropower industry says the technology's installed capacity must increase by more than 60% by 2050 if the world hopes to limit climate change. And the World Hydropower Congress, held remotely from Costa Rica last month, proposed steps to expand with minimal harm.

But stringent oversight, and a commitment from banks and governments to support only sustainable pumped hydro developments, is urgently needed. Otherwise, the expanding industry could displace millions more people, irreparably damage rivers and drive species to extinction.

New Life to Old Technology

Hydroelectricity is an old technology which involves passing water from a reservoir through a turbine, to generate electricity. One application, known as pumped storage, can store electricity generated by solar and wind. In the era of climate change, pumped storage has given new life to hydropower technology. Pumped hydro uses excess renewable energy to pump water from a lower reservoir to a higher one. The water is then released downhill to produce electricity when needed, then pumped back up when electricity returns to surplus.

Technologies such as wind and solar can only produce electricity when the sun is shining or the wind is blowing. Pumped hydro can make such generators more reliable by storing renewable energy when it's produced then releasing it as needed. Pumped hydro storage can be added to existing reservoirs on rivers. It can also be located off rivers, which can often lead to better social and environmental outcomes.

Australian National University research this year identified about 616,000 potential sites around the world for pumped hydro, including more than 3,000 in Australia. Developing fewer than 1% of these could support a fully renewable global energy system.

A Poor Record

Hydropower and associated dams have a long record of environmental and social damage. Aside from flooding ecosystems, farmlands and towns, hydropower projects significantly disrupt



IT'S HARD TO SEE THE NEW STANDARDS BEING SYSTEMATICALLY APPLIED UNLESS GOVERNMENTS OF MAJOR DAM BUILDING NATIONS — ESPECIALLY CHINA, INDIA, BRAZIL AND TURKEY — ADOPT THE STANDARDS IN THEIR PLANNING PROCESSES

river flows. This, among other harms, can deny water to floodplain wetlands, block fish migration and breeding and reduce nutrient flows.

Globally, populations of freshwater species — including mammals, birds, amphibians, reptiles and fish — have declined by about 84% since 1970, in large part due to dams. In Tasmania, inundation of the unique Lake Pedder ecosystem in the 1970s led to several species extinctions. And while hydropower is widely considered a "clean" energy, it can lead to significant amounts of greenhouse gases when flooded plants and trees decompose.

Emissions from most hydropower dams are comparable to the life-cycle emissions from solar and wind generators. But at warmer tropical sites where vegetation is more dense, reservoirs could have a higher emission rate than fossil-based electricity.

As far back as 20 years ago, dams were found to have displaced 40 to 80 million in the half century prior. And dams have damaged the livelihoods of hundreds of millions people downstream over the past century.

But new hydro projects are routinely proposed at sites where they will cause substantial damage. And social and environmental problems caused by hydropower dams continue in places as diverse as Colombia and Southeast Asia's Mekong region.

The Snowy 2.0 pumped storage project in Kosciuszko National Park, New South Wales, Australia, highlights trade-offs involved in many hydropower developments. It promises to improve the reliability of solar and wind power, helping mitigate climate change. But it also threatens two endangered fish species, and several thousand hectares of national park are being cleared for infrastructure.

An Industry Makeover

Clearly, the world hydropower industry has public relations work to do, if its global expansion is to be realised. The International Hydropower Association appears to have cottoned on to this, taking a sophisticated approach to improving the industry's social licence.

The industry has actively engaged conservationists in preparing sustainability standards. Voluntary assessment tools outline steps to minimise

damage to people and the environment, and a new sustainability certification scheme for hydropower was launched at this month's congress.

The industry has pledged not to build hydropower dams in world heritage sites. It has also offered to "avoid, minimise, mitigate or compensate" for damage in protected areas (albeit falling short on offering full protection).

However, it's hard to see the new standards being systematically applied unless governments of major dam building nations — especially China, India, Brazil and Turkey — adopt the standards in their planning and approval processes.

And how will rogue operators and irresponsible financiers be prevented from developing unsustainable projects — especially when some governments are fixated on enabling them?

It's in the interests of the International Hydropower Association, as the progressive element of the hydropower industry, to advocate for governments and financiers to assess proposed hydropower projects against the new standards.

Causing the Least Harm

Pumped hydro has an important role to play in the renewable energy transition, but only where projects cause minimal harm to people and nature.

Ensuring a sustainable industry in future could be achieved by stopping damaging conventional hydropower projects on rivers. Instead, pumped storage projects should be developed when:

- an assessment shows they meet the needs of an energy system
- environmental and social conflicts are minimal, such as at off-river sites
- for projects in tropical areas, shallow reservoirs and flooding of vegetation is avoided to minimise greenhouse gas emissions.

Pumped storage offers the hydropower industry a chance to reposition itself from villain to hero. The industry must now translate its words into practice. And financiers and government regulators must support only those hydropower projects which genuinely seek to minimise environmental and social harm.

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Times of India- 02- October-2021

Fund to tap donors for rural India water plan

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New Delhi: PM Narendra Modi will on Saturday launched a dedicated fund — 'Rashtriya Jal Jeevan Kosh' (RJJK) — where any individual, institution, corporate, or philanthropist can contribute to help provide tap water connection in rural households, school, 'anganwadi' centre, 'ashramshala', and other public institutions.

Any individual or institution, be it in India or abroad, can contribute to the fund which is expected to speed up the ongoing Jal Jeevan Mission (JJM) with private participation and help it achieve its goal of providing functional tap water connections to all rural households in the country by 2024.

It is believed that the fund would help in carrying forward the JJM as a people's movement. The audit of the RJJK account will be carried out annually by an independent auditor empanelled with the CAG.

"The PM will also launch

19L unique health IDs generated in 5 days

Over 19.45 lakh unique health IDs have been generated so far under the Ayushman Bharat Digital Mission that was launched by PM Narendra Modi on Monday, reports **Sushmi Dey**. The programme has also started the registration of doctors and healthcare facilities. While 1,542 health facilities have been approved, 3,208 doctors have also been registered.

an exclusive JJM app on the occasion of Gandhi Jayanti. The app will ensure greater transparency and accountability of schemes under the mission. People can even register their grievances on the app," said Jal Shakti minister Gajendra Singh Shekhawat.

Shekhawat said Haryana has now joined states which have covered 100% of their rural households with functional tap water connections.

Hindustan Times- 02- October-2021

{ OVER 2 MN AFFECTED } CM, DVC SPAR OVER DISCHARGE

2 dead as fresh floods sweep Bengal

HT Correspondent

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KOLKATA: At least two persons have died and over two million across nine districts have been affected as West Bengal faces another round of floods since July, amid heavy rains and increased discharge of water from upstream dams and barrages, officials familiar with the matter said.

While chief minister Mamata Banerjee held the Jharkhand government Damodar Valley Corporation (DVC) responsible for the current "man-made" flood in South Bengal, the DVC refuted all charges.

Banerjee contended that the floods in her state were caused due to the unplanned and enhanced discharge of water from dams and barrages in the



A flooded road at Howarah in Udaynarayanpur, West Bengal. ANI

neighbouring state without intimation. "This is a man-made flood. Water was released without informing us. This is a crime. This is not the first time that such things have happened," Banerjee told reporters.

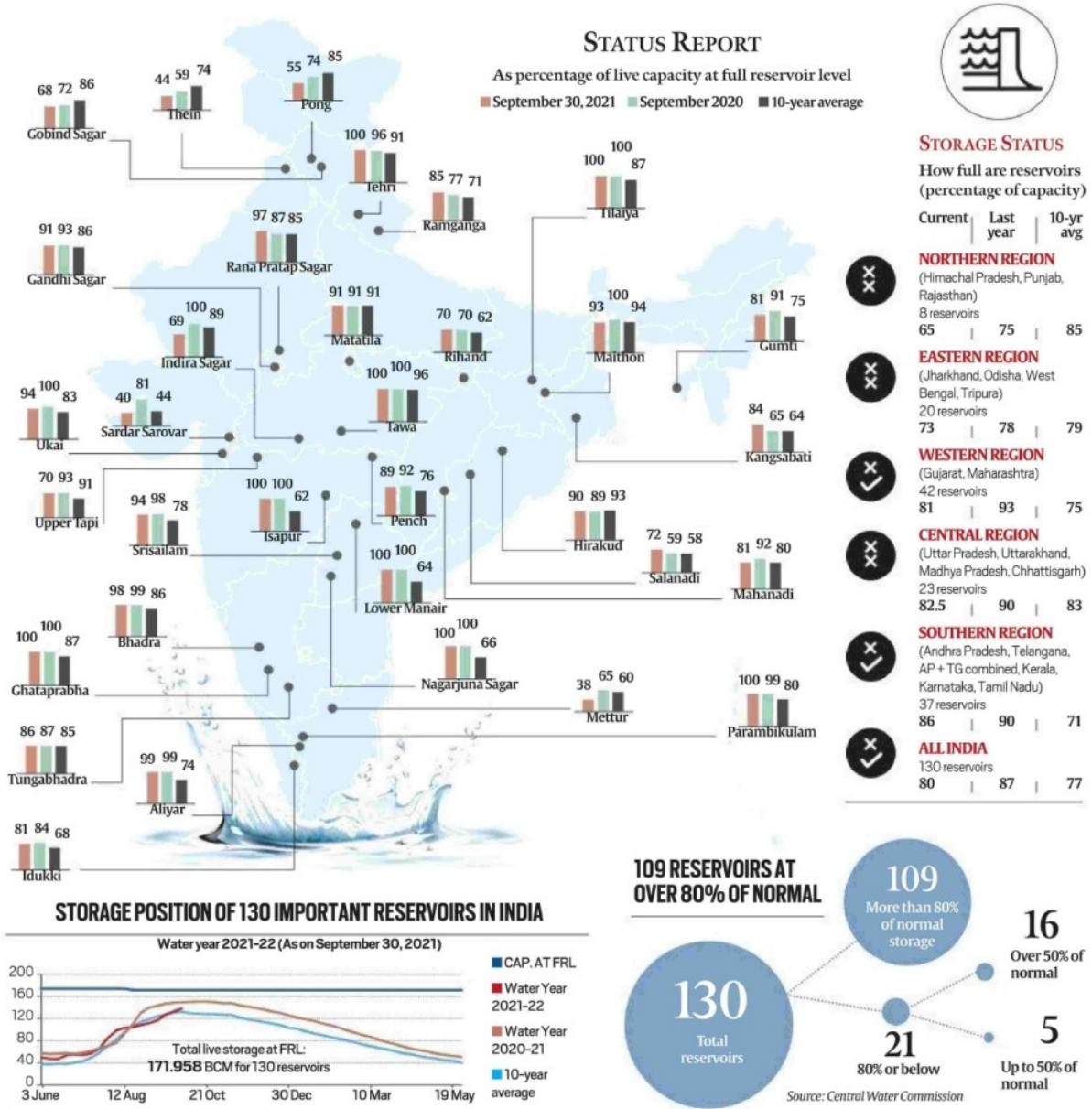
Refuting the claims, a senior DVC official said: "The DVC alone doesn't decide when and how much water would be

released. The Damodar Valley Reservoir Regulatory Committee decides it. A chief engineer-rank official from the Bengal government is a member of the committee." A low pressure system has led to extreme heavy rainfall in parts of south Bengal since September 29. Banerjee is likely to hold an aerial survey of the flood-affected areas on Saturday.

FACT CHECK, GROUND REALITY

Variable rains, optimum water

After one of the driest Augusts ever, a rainy September has left the country's 130 major reservoirs with more water than what is normal at this time. But those in the north and the east have less than normal.



AMITABH SINHA
PUNE, OCTOBER 1

BOUNTIFUL RAIN in September has ensured that the water levels in India's main reservoirs are back to their optimum levels. As on September 30, the 130 major reservoirs of the country together had water more than what is considered normal at this time of the year.

Water from these reservoirs is crucial for the needs of irrigation, drinking water and hydro-electricity through the winter months, when most of the country receives very little rainfall.

80% of capacity filled

Incidentally, the wide fluctuations in the rainfall during this monsoon season had only marginal impact on the reservoir levels. For example, August saw close to 25% deficiency in rainfall, but these reservoirs cumulatively held over 90% of their normal storage during the first week of September. That is because most of the catchment areas of the

reservoirs managed to get sufficient rainfall, even when other parts of the country went dry.

According to the latest figures released by the Central Water Commission (CWC), the 130 major reservoirs are currently holding about 138 billion cubic metres of water, which is about 80% of their combined capacity. At this time of the year, these reservoirs are expected to hold about 132 billion cubic metres.

"The live storage available in 130 reservoirs as on September 30 is 92% of the live storage of corresponding period of last year and 104% of storage of average of last ten years," the CWC said in its latest bulletin.

Regional variations

The water levels in the reservoirs vary from region to region. The reservoirs in the northern and eastern states are at lower than normal, while those in southern and western states have stored higher than normal. The central region, which includes Uttar Pradesh, Uttarakhand, Madhya Pradesh and Chhattisgarh, are showing normal levels in

their reservoirs. The biggest deficiency is being seen in Punjab, where the Thein dam, the only one from the state in the list of 130, is, as of now, storing 40% less than normal.

The CWC bulletin says that storage in the river basins of Ganga, Subarnarekha, Tapi, Godavari, Krishna, Mahanadi, Cauvery, the rivers of the Kutch was better than normal while those in Indus and Sabarmati basins were deficient.

This is not very different from the rainfall pattern that was witnessed during the monsoon months this year. While the country as a whole received 99% of normal rainfall during the four-month season, the Northeast region received only 88% rainfall while the Northwest had 96%. The Southern Peninsula, on the other hand, had rainfall that was 111% of normal while Central India received 104%.

Month by month

Despite a good start to the monsoon season, by August it had started looking as if India was headed for a drought year. This year saw one of the driest Augusts in the last

100 years. But the turnaround in September was also spectacular. September delivered 35% excess rains, a rarity, especially after a particularly dry August. This was the third consecutive year, though, when September recorded excess rainfall.

A moving equatorial wind-system called the Madden-Julian Oscillation, weakening of the negative Indian Ocean Dipole, a phenomenon similar to the El Nino oscillations in the Pacific Ocean, and, towards the latter half, cyclone Gulab all contributed to the unexpectedly high rainfall in September.

"August and September were entirely contrasting months. All unfavourable conditions that prevailed during August turned favourable in September, when consecutive low pressure systems developed in the Bay of Bengal and kept the monsoon active over most areas of the country. During September, Central and Northwest India received very good rain," said Mrutyunjay Mohapatra, Director General of the India Meteorological Department.

June had brought rainfall 110% in excess of normal, but July produced only 93%.

Indian Express- 02- October-2021

Chacha Chaudhary is now mascot of Namami Gange programme

EXPRESS NEWS SERVICE
NEW DELHI, OCTOBER 1

THE CENTRE will use Chacha Chaudhary, the popular comic book character, for sensitising children and youths about the cleaning of Ganga and other rivers, a top official of the National Mission for Clean Ganga (NMCG) said on Friday.

Speaking to *The Indian Express*, Rajiv Ranjan Mishra, Director General, NMCG, said, "Today Executive Committee of NMCG has decided upon engagement with Chacha Chaudhary character for sensitising children and youth for rejuvenation of Ganga and other rivers. Let's say 'Ganga ki Baat, Chacha Choudhary Ke Sath' is a public engagement activity under overall public outreach activities of Namami Gange mission."



Popular comic book character Chacha Chaudhary

Mishra said that the NMCG has undertaken various public outreach programmes like Ganga Quest and a television series— Rag Rag Mein Ganga, and the 'Ganga ki Baat, Chacha Choudhary Ke Sath' will be one such activity. Under this series, different comic stories will be created in which Chacha Chaudhary will talk about keeping rivers clean, he said.

He said that 5-6 months ago, Diamond Toons, the publisher of

the Chacha Chaudhary series, had submitted a proposal to work with the NMCG to spread awareness about the Namami Gange programme. The NMCG has also discussed the proposal with the World Bank, which is supporting the Namami Gange programme.

Meanwhile, a statement issued by the Ministry of Jal Shakti said the Executive Committee of the NMCG has decided to declare Chacha Chaudhary as the mascot of the Namami Gange Programme.

"At the 37th Executive Committee meeting of the National Mission for Clean Ganga (NMCG), chaired by Shri Rajiv Ranjan Mishra, Director General, NMCG, Chacha Chaudhary was declared as the mascot of the Namami Gange Programme and some major projects in Uttar Pradesh and Bihar were discussed and evalu-

ated," the statement said.

"The NMCG has been focusing on youth as part of its outreach and public communications efforts as they are the impellers of change. As a step towards this NMCG has tied-up with Diamond Toons to develop and distribute comics, e-comics and animated videos," it said.

"The content will be designed with the objective of bringing about behavioral change amongst children towards Ganga and other rivers. The total estimated budget for the project is Rs 2.26 crore. Shri Ashok Kumar Singh, Executive Director (ED), Projects, presented the project details and shared that Chacha Chaudhary can be useful in ground-level activation for Ganga rejuvenation," the statement said, adding that initially, the comics will be launched in Hindi, English and Bengali.

New Indian Express- 02- October-2021



NGT officials testing water from Amaravathi River in Karur | EXPRESS

NGT panel reinspects Amaravathi River for 'conclusive analysis'

ARAVIND RAJ @ Karur

TAKING suo motu cognisance of *TNIE*'s reports on the Amaravathi River, the committee formed by the National Green Tribunal (NGT) and Madurai Bench of the Madras High Court to check pollution level of the river, completed its two-day inspection of the river bank, dyeing units and textile industries surrounding it, here on Friday. TNPCB, PWD and Municipality officials were also present during the inspection.

This is the third such inspection by the NGT, this time with an aim to carry out a 'conclusive analysis' and take into consideration 'additional parameters'. While officials had already inspected the river, taken several samples of the water, and submitted detailed reports twice in the past, the NGT wasn't satisfied with them, said sources.

The NGT committee, headed by officials Mahima and Karthikeyan along with Karur TNPCB District Engineer

(DE) Ravichandran, Amaravathi River Drain Division PWD Executive Engineer (EE) Murugesan and Karur Municipality Engineer (ME) Nakhieran, held an inspection at various parts of the Amaravathi River and in as many as 30 dyeing units functioning near the banks of the river.

Addressing mediapersons, an official from NGT, Mahima said, "During previous visits, certain parameters were not analysed. So, this time we

wanted to carry out a conclusive analysis. We have collected samples from the river's upstream and downstream and

from the municipality area where allegations were made against the industries polluting the river. All the industries have implemented the ZLD system. Six samples have been collected and the previous inspection reports weren't rejected."

Once the final report is submitted, the NGT would hold the next hearing on the Amaravathi River pollution case on October 22, said officials.



Rashtriya Sahara- 02- October-2021

अब गांवगांव में पेयजल की शुद्धता की होगी जांच

■ संजय टुटेजा

नई दिल्ली। एसएनबी

पेयजल की शुद्धता की जांच गांव गांव में होगी। प्रत्येक ब्लाक मुख्यालय स्तर पर पेयजल जांच की प्रयोगशाला स्थापित करने के साथ साथ गांव गांव में ना केवल पेयजल शुद्धता जांच फिल्टर किट उपलब्ध कराई जायेगी बल्कि जल जीवन मिशन की समितियों से जुड़ी महिलाओं को पेयजल जांच का प्रशिक्षण भी दिया जायेगा। अब तक 7 लाख से अधिक महिलाओं को प्रशिक्षण दिया जा चुका है।

केन्द्रीय जलशक्ति मंत्री गंजेन्द्र सिंह शेखावत ने आज राष्ट्रीय सहारा से एक भेंट में बताया कि देश के प्रत्येक ग्रामीण परिवार को पेयजल उपलब्ध कराना तो जल जीवन मिशन का उद्देश्य है ही लेकिन ग्रामीणों को उपलब्ध कराया जाने वाला जल पूरी तरह शुद्ध हो इस पर विशेष ध्यान दिया जा रहा

है। उन्होंने कहा कि अब तक देश में शहरी क्षेत्र हों या फिर ग्रामीण क्षेत्र हों, कहीं भी लोगों को मिलने वाले जल की शुद्धता की जांच की कोई व्यवस्था नहीं है। जल की शुद्धता के लिये घरों में लगाई जाने वाले एक्वागार्ड व अन्य प्यूरीफाई मशीनों से शुद्ध जल मिल रहा है या नहीं इसकी भी कोई गारंटी नहीं है क्योंकि जांच की कोई व्यवस्था नहीं है।

उन्होंने कहा कि लोगों तक शुद्ध पेयजल उपलब्ध कराने के लिये जलशक्ति मंत्रालय ने गांव गांव तक पेयजल की शुद्धता की जांच की सटीक व्यवस्था की है। उन्होंने बताया कि ब्लाक स्तर पर मान्यता प्राप्त जांच प्रयोगशालाएं पूरे देश में स्थापित की जा रही हैं ताकि कोई भी व्यक्ति अपने घर पर मिलने वाले पेयजल की जांच



जल जीवन मिशन के तहत

उपलब्ध कराया जाएगा

शुद्धजल

अब तक 2010 पेयजल जांच प्रयोगशालाएं स्थापित

देश में ब्लाक स्तर पर बनेंगी पेयजल जांच प्रयोगशालाएं

अपनी नजदीकी प्रयोगशाला से करा सके। अब तक ऐसी 2010 प्रयोगशालाओं की स्थापना की जा चुकी है इन प्रयोगशालाओं में अब

तक 15, 10, 178 नमूने पेयजल के जांच के लिये आ चुके हैं और 11 लाख से अधिक नमूनों की जांच भी की जा चुकी है। शेखावत ने बताया कि जल जीवन मिशन के जरिए गांवों में लोगों तक जो पेयजल पहुंचाया जा रहा है उसकी फिल्टर जांच की भी अचूक व्यवस्था मंत्रालय ने की है और इसके लिये जल जीवन मिशन से जुड़ी महिलाओं को प्रशिक्षण देकर उन्हें फिल्टर जांच किट उपलब्ध कराई जा रही है। उन्होंने बताया कि अब तक 7 लाख महिलाओं को जल की शुद्धता की जांच का प्रशिक्षण दिया जा चुका है।

उन्होंने बताया कि अब तक 25 हजार से अधिक फिल्टर टैस्ट किट उपलब्ध कराई जा चुकी है और इन फिल्टर टैस्ट किट का प्रयोग करके ही 4,58,386 पेयजल नमूनों की जांच की जा चुकी है।

उन्होंने कहा कि लोगों तक शुद्ध पेयजल उपलब्ध कराने की दिशा में देश में यह नई क्रांति की शुरुआत है।

उन्होंने बताया कि देश में जल जीवन मिशन की शुरुआत के समय, केवल 3.23 करोड़ (17 प्रतिशत) ग्रामीण परिवारों के पास नल-जल आपूर्ति की सुविधा थी। कोरोना महामारी के बावजूद पिछले दो वर्षों में 5 करोड़ से अधिक परिवारों को नल-जल कनेक्शन प्रदान किए गए हैं। अब तक लगभग 8.26 करोड़ ग्रामीण परिवारों के लिए उनके घरों में नल-जल की आपूर्ति की जा रही है।

देश के 78 जिलों, 58 हजार ग्राम पंचायतों और 1.16 लाख गांवों में प्रत्येक परिवार को नल-जल आपूर्ति की सुविधा उपलब्ध कराई गई है। अब तक 7.72 लाख (76 प्रतिशत) स्कूलों तथा 7.48 लाख आंगनवाड़ी केंद्रों में नल-जल आपूर्ति की सुविधा प्रदान की गई है।

Hindustan- 02- October-2021

प्रधानमंत्री ग्राम जल समितियों से चर्चा करेंगे

नई दिल्ली | विशेष संवाददाता

प्रधानमंत्री नरेंद्र मोदी शनिवार को वीडियो कांफ्रेंस के माध्यम से जल जीवन मिशन पर ग्राम पंचायतों और ग्राम जल एवं स्वच्छता समितियों के साथ बातचीत करेंगे।

वह हितधारकों के बीच जागरूकता बढ़ाने और मिशन के तहत योजनाओं में अधिक पारदर्शिता और जवाबदेही के लिए जल जीवन मिशन ऐप व राष्ट्रीय जल जीवन कोष की भी शुरुआत करेंगे। जल जीवन मिशन के तहत अभी तक 25 माह में पांच करोड़ नल से जल कनेक्शन दिए जा चुके हैं।

प्रधानमंत्री मोदी 02 अक्टूबर को सुबह 11 बजे वीडियो कांफ्रेंस के जरिए जल जीवन मिशन पर ग्राम

पंचायतों और पानी समितियों, ग्राम जल और स्वच्छता समितियों से बातचीत करेंगे। वह राष्ट्रीय जल जीवन कोष का भी शुभारंभ करेंगे, जहां कोई व्यक्ति, संस्था, कॉरपोरेट या परोपकारी, चाहे वह भारत में हो या विदेश में, हर ग्रामीण घर, स्कूल, आंगनवाड़ी केंद्र, आश्रमशाला, अन्य सरकारी संस्थानों में नल का पानी कनेक्शन प्रदान करने में मदद करने के लिए योगदान दे सकता है।

प्रधानमंत्री कार्यालय के बयान के अनुसार शनिवार को जल जीवन मिशन पर राष्ट्रव्यापी ग्राम सभाएं भी होंगी। ग्राम सभा ग्राम जल आपूर्ति प्रणालियों की योजना और प्रबंधन पर चर्चा करेगी और दीर्घकालिक जल सुरक्षा की दिशा में भी काम करेगी।