

भारत सरकार
जल शक्ति मंत्रालय
जल संसाधन नदी विकास एवं गंगा संरक्षण विभाग
केंद्रीय जल आयोग
जल प्रणाली अभियांत्रिकी निदेशालय



Government of India
Ministry of Jal Shakti
Dept. of Water Resources, RD&GR
Central Water Commission
Water System Engineering Directorate

दिनांक: 1/1/2020.

विषय - समाचार पत्रों की कटिंग का प्रस्तुतीकरण।

जल संसाधन विकास और संबद्ध विषयों से संबंधित समाचार पत्रों की कटिंग को केंद्रीय जल आयोग के अध्यक्ष और सदस्य (कार्य योजना एवं परियोजना / अभिकल्प एवं अनुसंधान / नदी प्रबंध) के अवलोकन के लिए संलग्न किया गया है। इन समाचारों की कटिंग की सॉफ्ट कॉपी केन्द्रीय जल आयोग की वेबसाइट पर भी अपलोड की जाएगी।

अर्पित
01.01.2020
वरिष्ठ कलाकार

जल प्रणाली अभियांत्रिकी निदेशालय

संलग्नक: उपरोक्त

उप निदेशक, (ज. प्र. आ.) निदे०

विवेक
01/01/2020

निदेशक, (ज. प्र. आ.) निदे०

प्रोफ. डा०
01-01-2020

सेवा में,

अध्यक्ष, के. ज. आ., नई दिल्ली

प्रतिलिपि

सदस्य (जल योजना एवं परियोजना/ अभिकल्प एवं अनुसंधान / नदी प्रबंध) और

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Business Line, Delhi

Promises to keep during the decade 2020-2030

The consensus among scientists worldwide is that environmental concerns have to be addressed with urgency if we are to save Planet Earth. The concerted effort needs to cover several priority areas — from water, air pollution and afforestation to the shift to clean energy and a circular economy. To arrest the damage, here's what we must focus on in the next ten years

Air pollution, an emergency

PREETI MEHRA

Even of the 12 most polluted cities in the world on the World Health Organisation list of 2018 are in India. This is borne out by an air pollution emergency being called out every summer and winter in many cities, with Delhi being one of the worst. To combat this, in January last year, the country rolled out its National Clean Air Programme (NCAP) through which actions will be taken to prevent, reduce and control air pollution and improve air quality in the entire country.

The promise is to reduce fine particulate (PM_{2.5}) and particulate (PM₁₀) air pollution by 20 to 30 per cent by 2024.

As a significant step, in June, India joined the global Climate and Clean Air Coalition (CCAC), becoming the first country to join the partnership. Through this, the country hopes to gain in solutions and technologies to combat air pollution and learn from best practices followed in other nations and also share with them what is being innovated in the country.

An integrated approach is required to re-

duce air pollution, hence the country's effort at encouraging clean energy and reducing vehicular emissions — the latter is being achieved by raising vehicle standards to BS VI and giving a push to an electric vehicle ecosystem.

However, clearly these measures may not be enough. In March last year, an independent study by the International Institute for Applied Systems Analysis (IIASA) in Austria and the Council on Energy, Environment and Water (CEEW) in New Delhi cautioned that over 674 million Indian citizens are likely to breathe air with high concentrations of PM_{2.5} in 2030 even if India were to comply with its existing pollution control policies and regulations.

Legal mandate
The researchers said, "a significant share of emissions still originates from sources associated with poverty and underdevelopment, such as solid fuel use in households and waste management practices". Their suggestion is that NCAP be backed by a legal mandate for ground-level implementation of emission control measures and also that, in the long term, the programme be "scaled up significantly".

Water security needs a smooth flow of processes

PREETI MEHRA

To achieve the 2030 Agenda for Sustainable Development, water-related goals are one of the most challenging to attain. They deal with an entire gamut of objectives: universal access to safe and affordable drinking water, access to adequate and equitable sanitation and hygiene for all, including an end to open defecation; improvement of water quality by reducing pollution and eliminating dumping of hazardous chemicals and materials; halving the proportion of untreated wastewater; by increasing its recycling and reuse. In short, it means putting in place integrated water resources management in all spheres, including arresting the depletion of ground water, protecting and restoring water-related ecosystems such as wetlands, aquifers, lakes, rivers and even the mountains and forests.

Groundwater depletion
Due to the country's rainfall pattern and low surface storage, around 63 per cent of India's irrigated agriculture and 85 per cent of drinking wa-

ter supplies are dependent on groundwater. The last few decades have been the worst on this count as they have seen intense exploitation of groundwater for every activity — agriculture, industrial production and urban development. According to the government's own admission, this has led to high levels of depletion of groundwater in Uttar Pradesh, Gujarat, Haryana, Karnataka, Madhya Pradesh, Maharashtra, and Rajasthan. These seven States together represent about 25 per cent of the total number of over-exploited, critical, and semi-critical blocks in terms of groundwater in the country.

In May 2018, a National Groundwater Management Improvement Programme (NGMIP), christened Atal Bhujal Yojana, was approved to help reduce groundwater level decline and improve groundwater resources in selected States. The objective of this five-year-long, ₹5,000-crore, World Bank-assisted programme is to arrest the country's depleting groundwater levels and strengthen groundwater institutions. Last week, on Atal Bihari Vajpayee's 95th birth anniversary, the initiative was formally launched to improve groundwater management in 8,350 villages of 78 districts in the seven States.

To tackle water-related issues, in May 2019, a new umbrella Ministry of Jal Shakti was formed by merging the Ministry of Water Resources, Ministry of Drinking Water and Sanitation and River Development & Ganga Rejuvenation.

A month later, a country-wide water security and conservation campaign was launched — the Jal Shakti Abhiyan. However, there have been no targets announced that need to be achieved to gauge its efficacy, not even in the 256 water-stressed districts where groundwater availability has reached critical levels.

The one area where a target has been set is under the Jal Jeevan Mission. The government has promised piped water supply to all rural households by 2024. Experts, however, feel that more critical than piped water to households is water security, which can be achieved by going all out to put in place extensive water harvesting in the stressed areas.

There is also demand from environmentalists for a comprehensive water policy for both urban and rural areas. Industry consumes around 12 per cent water in the country and its sustainable use, reuse and recycling could make a substantial difference.

The bottom line, say experts, is recognising that only people's participation can strengthen both water and sanitation management.

Renewables look for project push

V RISHI KUMAR

As India works towards achieving various Sustainable Development Goals (SDGs) by 2030 and meet commitments under the Paris Agreement, energy efficiency and renewables become key factors. At a recent meeting of 600CS energy ministers, it was disclosed that India has an installed capacity of 83,000 MW and about 31,000 MW is under execution; a capacity of about 35,000 MW is under the bidding process. Along with an installed capacity of about 45,000 MW of hydel power and another 12,000 MW under construction, India has the potential to cross the 200,000 MW of renewable energy capacity, thereby surpassing the target set for 2022.

This is significant as the government had set a total renewable installation target of 175 gigawatts (GW) by 2022 and as of mid-2019, the total renewable installed capacity is nearly 80 GW and projected to soon cross 100 GW.

Wind, solar scene
According to a mid-year review by the Central Electricity Authority, solar and wind power generation capacity is expected to constitute about 440 GW watts of the total expected projected capacity of 811 GW by 2030. As against 72 per cent of the current power generation coming from fossil fuel power generation plants by 2030 it is expected that renewables would contribute nearly 50 per cent of total generation capacity. While there have been headwinds for wind energy, solar power generation too faced numerous problems, including dumping of solar modules from China and other markets, and issues of payments and defaults by discoms.

There is some sort of parity in terms of costs when one evaluates renewable energy projects and fossil fuel projects. The cost has progressively come down to ₹2.40-₹2.50 per unit. Even if one were to peg it at, say, ₹3 a unit, it works out to just about the same that fossil fuel power costs. The current electric grid manages total installed capacity of about 365 GW, with renewables at 82.5 GW, accounting for about 23 per cent of total installed capacity. India needs to take up development of renewable in a concerted manner and push implementation of projects.

Time to step up forest cover pace

PREETI MEHRA

Where forest cover is concerned, India has set itself a target of afforestation in the coming years that needs a much higher rate of afforestation in the coming years than the current 0.5 per cent of forest cover per year carbon dioxide equivalent. The country has committed to the United Nations Framework Convention on Climate Change (UNFCCC) as part of its Nationally Determined Contribution (NDC) that, besides reducing emission intensity of its GDP by 33-35 per cent by 2030, it will create an additional carbon sink of 2.5 to 3 billion tonnes of CO₂ equivalent through additional forest cover and trees. To achieve this, in August 2018, it unveiled a National REDD+ (Reducing Emissions from Deforestation and Forest Degradation) Strategy which sets up the green goals of the government. These include building "all actions and activities by all stakeholders on a common platform making it feasible to ensure a comprehensive monitoring and assessment of the performance of forest management and development at different levels of administration". REDD+ implementation would entail coverage of natural forests as well as trees outside the forests (TOF). The document stated that "synergies well with the socio-economic development of local communities, raw material requirement of wood-based industry need for conservation of biodiversity including plants and animals, providing a green environment for people, and enhancing the forest carbon sink."

Currently, the country has about 1,73,000 forest fringe villages (MoEF, 2006) where local tribes and communities are traditionally dependent on forests for all their needs, including food, fodder, energy, livestock grazing, housing and traditional medicines. In the nineties, a Joint Forest Management (JFM) programme comprising local communities and State forest departments was conceived. The REDD+ strategy was to take this forward through JFM committees. In 2018, in the Second Biennial Update Report to the UNFCCC, India reported that its forest and tree cover had increased, from 24.01 per cent of the total geographical area as reported in India State of Forest Report (ISFR) 2013, to 24.39 per cent as reported in ISFR 2017. This, however, is work in progress. In the December Parliament session, the MoEFCC said that under its National Afforestation Programme (NAP) scheme, it has utilised over 21 lakh hectares sanctioned area. Critics, however, say there have been no significant independent studies to assess achievements in afforestation towards NDC targets.

Affordable green is way to go

V RISHI KUMAR

From baby steps in 2001, India has come a long way in the green building movement. The Indian Green Building Council (IGBC) aims to make India a global leader in energy-efficient buildings by 2025. Earlier last year, India crossed the magical 1 billion sq ft of green building footprint and aims to go past 1 billion sq ft by 2022, potentially seeking to displace the US and China to take pole position. The 7 billion sq ft green footprint covers 4 million homes (1.9 billion sq ft), over 250 factories, 1,400 offices, 48 townships, 12 cities and even 24 villages. In going green, these have contributed to energy savings of 15,000 MW of energy per million sq ft per annum, reduced CO₂ emissions by 12,000 tonnes per million sq ft per annum, brought about savings of 4,57,00,000 litres of water per million sq ft and diverted 450 tonnes of construction waste from landfills every year, according to IGBC data. CHIGBC, a 2012 and GreenPro certification for industrial and consumer products/technologies.

Construction cost down
Most green building products are available in India at a competitive price, leading to reduction in cost of construction. By 2025, CHIGBC estimates that the market potential for green building products/technologies will grow to about \$300 billion. The incremental cost of a green building is 23 per cent, down from about 15 per cent two decades ago. And the pay-back for additional costs is within 2-3 years. While the estimates for green buildings and products have been made for 2022 and 2025, their contribution towards the SDGs is likely to be significant by 2030.

Electric mobility requires incentives charge

V RISHI KUMAR

The country's electric mobility mission is moving gingerly. Big plans have been set out but it is time to implement the plans by incentivising early adoption. The near-term plan for 2020 focuses on creating an environment to develop manufacturing in the country. The long-term plan is to bring down greenhouse gas (GHG) emission intensity by 33-35 per cent below 2005 levels, by 2030, with electric mobility as a key enabler. The National Electric Mobility Mission Plan 2020 has been designed to enhance national fuel security and provide affordable, environment-friendly transportation. The Department of Heavy Industry charted out a scheme — Faster Adoption and Manufacturing of (Hybrid

Electric vehicles in India (FAME India) — in 2015 to pave the way for manufacture of electric and hybrid vehicles and ensure sustainable growth. Phase I of FAME launched in April 2015 was extended up to March 2019 with focus on the creation of demand and a technology platform, taking up pilot projects and creating charging infrastructure. It aimed at incentivising 23-4-wheelers, light commercial vehicles and buses. This was followed by the NEMMP 2020, which set out with a target to achieve sales of 6.7 million hybrid and electric vehicles by 2020. During March 2019, the Department of Heavy Industry notified the Phase II FAME scheme with an outlay of ₹10,000 crore for a three-year period. As a part of the scheme, the Government brought electric vehicles under 12 per cent GST without cess as against 28 per cent GST rate with cess up to 12 per cent for commercial vehicles. It also envisages deployment of over 5,000 electric buses by State Transport undertakings. NITI Aayog, in its Zero Emission Vehicles (ZEVs): Towards a Policy Framework, says India has a lot to gain by converting internal combustion engine (ICE)-powered vehicles to EVs at the earliest, which will help reduce the oil import bill.

Experts expect some sort of parity between ICE and EV by 2022. If the government comes up with some incentives, including a scrappage policy for old vehicles when they take up EVs, it could spur a new growth phase for electric mobility.

Circular economy, a half-a-trillion dollar opportunity for India

PREETI MEHRA

The statistics say it all and cry out for an urgent remedy. Of the 62 million tonnes of garbage generated in the country annually, 45 million tonnes go untreated. With landfills in major cities brimming over and an annual growth rate of trash at 4 per cent, it is believed that by 2030 we could face a severe garbage crisis. And by 2047, it is estimated that 1,400 sq km of landfill area would be required for dumping this municipal solid waste. Of the dry waste generated in urban areas, paper accounts for 50 per cent, followed by plastic (14 per cent), glass (6 per cent), textile (5 per cent), wood (3 per cent), metal (1.5 per cent) and residue (20 per cent). And it is this dry waste that could be turned into a resource if waste management is taken seriously, decentralised and micro-managed involving local citizens, traditional rag-pickers and the larger community. Besides this, e-waste collection and recycling of plastic hold great potential for a robust circular economy — one that closes the loop on 'reduce, recycle and reuse'.

Untapped potential
In fact, a 2018 report of the Federation of Indian Chambers of Commerce & Industry (FICCI) says that "half-a-trillion dollars of economic value can be unlocked" through circular economy business models by 2030 in India. It gives the example of waste and how extracting gold from it can yield a business opportunity of \$0.74 billion. FICCI points out that scrap plastics and end-of-life vehicles (ELVs) are the other sectors that can grow massively. It says that 40 per cent of plastic waste that is currently uncollected, if properly managed, represents a \$2-billion opportunity. And that over 8 million tonnes of steel can be recovered from ELVs in India by 2025, representing a \$2.7-billion opportunity. The Ellen MacArthur Foundation's 2018 study too offers a positive direction. It says: "A circular economy development path could significantly mitigate negative environmental externalities. For example, greenhouse gas emissions could be 23 per cent lower in 2030 and 44 per cent lower in 2050 compared with the current development scenario, helping India deliver on its targets promised in the recently ratified Paris Agreement."

This too has been the effort of the government's Swachh Bharat Mission when it launched in 2014, with 100 per cent collection and scientific processing, disposal, reuse and recycling of municipal solid waste as a clear demarcated aim. It has also put in place a 'polluters pay' policy, which has led to some action among the corporates, but clearly not

enough. However, the pressure of policy has led to some top global and Indian corporations reiterating their commitment to work towards circular business models, integrating resource efficiency in the life cycle of a product — from design stage to the end-of-life stage. According to experts, the circular economy is essentially locked with the 28-reuse and recycle and pushing the innovation in resource recycling will make the circular economy a true infinite economy.

One way to ensure that the economy goes circular, they say, is by governments providing institutional support, developing policies that incentivise industries and by extending tax incentives initially.

No water beneath the ground and no hope around the corner

The concluding part of a three-part series looks at recharge efforts in a Haryana village even as some farmers in Rajasthan neither have water nor hope

JYOTI MUKUL

Udaipuria/Bhasaita Khurd/Deroli Ahir

Women coming out to talk is usually not the case in most parts of Rajasthan and Haryana. So, when Prem Devi of Udaipuria village in Chomu tehsil of Jaipur district starts to speak, she is not sure whether she should sit or stand while narrating her woes.

Just outside her courtyard is a papaya tree, with plastic wrapped around its fruit that appear big but are yet to ripen. After being prodded to sit, she

narrates how two borewells in her holding of less than 0.5 hectare stopped pumping water about six years earlier. Her family now depends on rain-fed irrigation to grow some bajra (local millets) for household consumption and fodder for goats. Her son works on construction projects as an artisan to eke a living.

Among her many complaints is grid electricity. The family used to get a subsidy of ₹833 in the power bill itself but the rules have changed and there is cash transfer into the bank account. "The cash no more comes," she says, as officials clarify that this could be due to non-linking of their bank account.

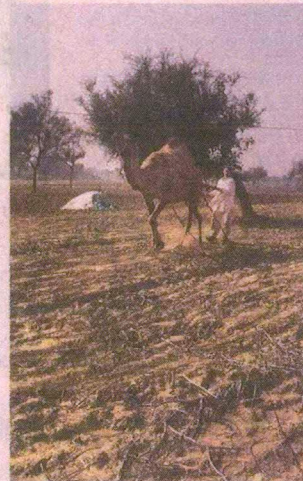
About eight km from the National Highway 52, which connects Jaipur and

Agra, Murli Dhar in Bharni village of Sri Madhopur tehsil of Sikar district has a similar challenge of dried farmland. His family of 12 survives on the earnings of his labourer-sons. All he can grow after the rainy season is bajra and taramira, an oilseed grown in drier regions of north-western India.

In fact, taramira is close to the mustard crop that is traditionally grown in Rajasthan and Haryana. Dharamveer Dudi, assistant director in the horticulture department, Jhunjhunu district,

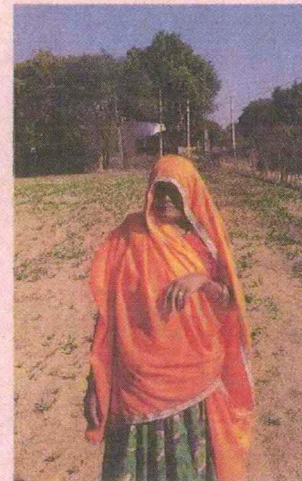
says as compared to wheat, a better crop for the region is mustard. "If wheat gives ₹2,000 a quintal, mustard gives around ₹4,000. Besides, wheat requires more fertiliser and at least six to seven watering cycles. Mustard requires only three and very little fertiliser," he explains. Also, mustard foliage helps to produce micro organisms which are good for soil health.

Across Jhunjhunu district, right up to Haryana's Mahendragarh, a number of khejri (prosopis cineraria) trees can be seen within the farms. These traditional ones fix nitrogen content in soil and are considered good for the area. "You will mainly see these trees in Rajasthan. Once you cross the border on to Haryana, they won't be seen," says Dudi.



Kashi Ram (left) of Bhasawata Khurd wonders if this road work (pictured) could turn around his fate while Prem Devi of Udaipuria village narrates how two borewells in her holding of less than 0.5 hectare stopped pumping water about six years ago

The road that leads to Narnaul in Haryana is abuzz with six-laning of National Highway 11. Kashi Ram of village Bhasawata Khurd is wondering if this road work could turn around his fate — his dry farmland is along the route and agriculture earns him no



income. His family gets water for drinking from a village well; for irrigation, he banks on rainwater. Some years before, he had set up a small poultry unit but it did not last. "I let out the (poultry) shed for weddings now," he says.

Since water scarcity knocks at the

GROUND WATER PROFILE

Figures in bcm*

	Rajasthan	Haryana
Annual groundwater recharge	13.21	10.15
Annual extractable groundwater resource	11.99	9.13
Annual groundwater extraction	16.77	12.50
Stage of groundwater extraction (%)	140	137

* Billion cubic metre

Rajasthan

Total assessed blocks
295

Over-exploited	185
Critical	33
Semi-critical	29
Safe	45
Saline	3

Haryana

Total assessed blocks
128

Over-exploited	78
Critical	3
Semi-critical	21
Safe	26

Source: National Commission on Dynamic Ground Water Resources of India, 2007, CGWB

doors of most areas in Rajasthan and Haryana, the state governments have made micro irrigation practices mandatory with solar powered pump scheme. With power bills virtually nil for irrigation, there is always a danger of over exploitation of groundwater.

V Saravana Kumar, director (horticulture) in the Rajasthan government, says the state will be promoting universal solar water pump controller to incentivise use of solar power for non-irrigation productive use like thrashing, atta chaki, etc. "It will be one connection for irrigation and three for other uses." Besides, component C of the Centre's KUSUM programme will enable farmers to sell the extra power to power distribution companies. This is intended to disincentivise over exploitation of ground water.

The Deroli Ahir village of Mahendragarh district in Haryana has presented another plausible scenario for areas that are close to some irrigation canals. "The dry land problem has been reversed partially," says Bhoop Singh. The village panchayat gave about 1 hectare land to make a pond and to two recharge wells. Overflow from the nearby Narnaul irrigation canal is directed into this land, besides collecting rain water. "This has become a lifeline in the 5-km radius," says Singh who is busy getting a new house ready next to his old house in preparation for his son's wedding in the coming year. He is rather unconcerned that the shadow of the new structure is reducing the output of his solar panels next doors.

Series concludes



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Groundwater Gets ^{GT-1/1} The Priority It's Due

The Centre's initiative to shore up groundwater resources pan-India, deploying community-focused participatory management is pathbreaking. The idea is to arrest rapidly falling water tables, and to reverse rising dependence on groundwater with more sustainable usage practices, rainwater harvesting and aquifer recharge.

The Atal Jal Yojana, spread over 8,350 villages and across 78 districts in seven states, where groundwater levels are already critically low, seeks to institutionalise sustainable ground-



water management with focused demand-side changes at the community level. The various projects under the scheme would be formulated and implemented locally by panchayat-level committees. The way ahead is to have 50% representation of women in these committees, as women suffer the most from water scarcity and often trudge long

distances for fresh water. The policy intention is that gram panchayats chalk out village-level water action plans, firm up water budgets, and grow crops accordingly. There is provision in this ₹6,000-crore multi-year scheme for better performing panchayats to be allocated more funds.

There is scope to make extensive use of sensors and information technology to augment water data and make water usage patterns transparent, leading to district and state-level best water usage practices. Water-use efficiency must go up in agriculture, households and industry, helped along by startups that innovate solutions using the rich water data ecosystem. Focused, economical use of water resources would strengthen the local economy and improve livelihoods.

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All water drains as earthen[#] bund breaches in Telangana ^{1/1/20}

Saralasagar project irrigates about 4,500 acres

B. CHANDRASHEKHAR
HYDERABAD

Saralasagar, a minor irrigation project in Wanaparthy district, suffered a major breach on its earthen bund early on Tuesday, emptying about 0.5 tmc ft water, its full storage capacity, completely.

According to Irrigation officials, a piping was noticed in the bund in the morning, which within an hour developed into a breach washing away the bund for about 20 feet.

50-year-old project

The minor irrigation project was constructed during 1947-60 with the siphon system, wherein the water in excess of its full reservoir level would automatically flow out of the reservoir into the surplus channel, across Chinnavagu, a rivulet in the Krishna basin, near Shanka-



Taking stock: Agriculture Minister S. Niranjan Reddy at the Saralasagar breach site in Wanaparthy district on Tuesday.

raiahpet of Madanapur mandal.

The project has been serving an ayacut of about 4,500 acres under its left and right canals.

The left canal has about 4,200 acres ayacut, while the right canal has only about 300 acres ayacut. Though it had served the ayacut on and off till 2009, it did not receive water

meet the needs of the ayacut because of poor rainfall in its catchment area.

After being empty for about 10 years, the reservoir has been filled with water pumped from the Kalwakurthy Lift Irrigation Scheme.

Engineers attributed the breach to cracks developed in the layers of the bund owing to lack of hydrological pressure for about a decade.

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<input type="checkbox"/> The Statesman (New Delhi)	<input type="checkbox"/> Deccan Chronicle	<input type="checkbox"/> नव भारत टाइम्स (नई दिल्ली)	<input type="checkbox"/>
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and documented at WSE Dte, CWC.

Himalayan danger T-111

Formation of glacial lakes calls for monitoring

ENVIRONMENTAL alarm bells have rung with studies indicating an increase in the number of glacial lakes within a short span of one year in the higher Himalayan region due to the adverse effects of climate change. These glacial lakes have formed in the river basins with the highest increase of 127 reported in the Sutlej basin, with all its future impact open to assessment in the downstream areas in the shape of floods and the pressure on the storage capacity of the dams. Glacial lakes have also formed in the Chenab, Ravi and Beas river basins, but it is the increase in the Sutlej basin— of 16 per cent in a year — that has caused concern. Snow-clad mountains are usually good news for it ensures the flow of water in the rivers most of which are perennial in nature — the source of irrigation and drinking water. The mountains have their own ecology, habitation, flora and fauna that adapt to life there. Crops like apples and apricots are grown and tourism is a major business proposition. There is a nature-man-spirit complex about the surroundings and its inhabitants with a discernible distinctness.

But the Himalayan range has been sensitive to climate change, while being crucial for India's weather pattern. Erratic rainfall and rising temperatures have created problems. The 2013 tragedy in Uttarakhand was said to have been caused due to the bursting of a lake in front of the Chorabari glacier; and the creation of the huge Parechu lake in Tibet in 2004 had also caused a major threat. The mountain areas witness devastation caused by cloudburst and landslides. The devastation in Ladakh during the 2010 floods and the flood threat in Arunachal Pradesh and Assam after China warned of discharging water from the Tsangpo are still recent in memory. India is known to release excess water of the Sutlej into Pakistan.

Rivers like the Sutlej and Brahmaputra have a course running through different countries and the development will have a connotation for them too. Regular monitoring of the catchment areas can help avert any natural disaster. Coordination between different climate agencies as well as the countries concerned will not be out of place in this regard.

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SC bats against transfer of community resources

'Essential to safeguard Article 21'

KRISHNADAS RAJAGOPAL
NEW DELHI

The Government has no right to transfer "invaluable" community resources like village water ponds to a few powerful people and industrialists for commercialisation of the property, when many areas of the country perennially face water crisis and access to drinking water is woefully inadequate, the Supreme Court has held.

"Protection of such village commons is essential to safeguard the fundamental right guaranteed by Article 21 of our Constitution. These common areas are the lifeline of village communities, and often sustain various chores and provide resources necessary for life," a Bench of Justices Arun Mishra and Surya Kant observed in a recent judgment.

'Exploited for long'

The court said the State cannot divest villagers of their existing source of water even if it promises to provide them an alternative site where the water body can be replicated. Such an attitude would display "a mechanical application of environmental protection," the court said. There is no guarantee that the adverse effect of destroying the existing water body would be offset and people would be compelled to travel miles to access the alternative site, said the SC.

"Since time immemorial,



Common areas are often the lifeline of village communities, said SC.

certain common lands had vested in village communities for collective benefit... Such protections, however, remained on paper. Since Independence, powerful people and a corrupt system had appropriated these lands for personal aggrandisement," Justice Kant observed.

The judgment came on a plea by activist-lawyer Jitendra Singh against the transfer of village ponds' sites of Saini Village in the National Capital Region to some private industrialists by the Greater Noida Industrial Development Authority.

The National Green Tribunal had refused to intervene on Mr. Singh's plea that excavators and other heavy machinery were attempting to take over a common pond used by the villagers for a century.

Setting aside the Tribunal's order, the apex court ordered the authorities and the industrialists to remove all obstructions and restore the water bodies within three months.

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Rainwater harvesters now in 3,496 institutions: DJB

HC was hearing a PIL initiated on its own to improve groundwater condition in city

SOIBAM ROCKY SINGH

NEW DELHI

To revitalise the “over-stressed” groundwater resource in the Capital, the Delhi Jal Board (DJB) has informed the High Court that rainwater harvesting systems have been implemented in 3,496 schools and colleges here.

The DJB also said it will levy a penalty on consumers with a plot size of 500 square metres or more and whose water bills are up by 1.5 times for not implementing rainwater harvesting system.

The Jal Board, in its affidavit filed before the High Court, said 11,958 consumers have been penalised and an amount of ₹56.71 crore imposed as penalty between Ju-

ly 1, 2017 and August 2019. On the other hand, 1,559 consumers have also been provided rebate for installing functional rainwater harvesting system.

To promote implementation of rainwater harvesting, Jal Board gives 10% rebate in water bills for plot size of 100 square metres and above for having adequate and functional rainwater harvesting systems.

The submission of the Board came while hearing a public interest litigation (PIL) initiated by the High Court on its own to improve the groundwater condition in Delhi.

Taking note of the submission of the Jal Board, a Bench of Chief Justice D.N. Patel and

Justice C. Hari Shankar said there was no reason for it to further monitor the case.

It, however, remarked that the provision for “rainwater harvesting” in the Master Plan for Delhi-2021 and Unified Building Bye-Laws for Delhi-2016 will be “scrupulously followed” and in case of any violation, action will be initiated against the erring persons in accordance with law.

Growing water demands

In the affidavit, the Jal Board said that “groundwater resource in Delhi is over-stressed to meet its ever growing water demands”.

“Construction of three upstream storages on the Yamuna and its tributaries in time-

bound manner are of utmost importance to meet drinking water requirements of Delhi and to reduce dependence on groundwater to large extent,” it had said. These three projects – Renukaji, Kishau and Lakhwar & Vyasi Dams – have been declared as national projects.

The Jal Board in consultation with Delhi government has initiated the process for revival and rejuvenation of 155 waterbodies, which are owned by the various departments and government agencies in Delhi. Besides this, a list of 559 government buildings has been shared with the heads of the departments with a request to implement rainwater harvesting systems in these buildings, it said.

VA Tech Wabag signs ₹1,187-cr wastewater project in Bihar

OUR BUREAU

Chennai, December 31

VA Tech Wabag Ltd, a leading player in water treatment projects, has signed a ₹1,187-crore agreement with the Government of Bihar to build sustainable wastewater infrastructure in Patna under the Namami Gange Programme.

The company will build sustainable wastewater infrastructure for safe discharge of treated sewage into the river Ganga.

The agreement was signed among National Mission for Clean Ganga (NMCG), Bihar Urban Infrastructure Development Corporation Ltd (BUIDCO) and DK Sewage Project Pvt Ltd (a special arm



Rajneesh Chopra, Global Head, Business Development, VA Tech Wabag

of VA Tech Wabag), according to a statement.

The scope of the project includes the development of sewage treatment plants

(STPs) of 150-million litres a day capacity along with sewerage network of over 450-km in the Digha and Kankarbagh zones of Patna, one of

the most populous cities on the banks of the Ganga river. The VA Tech-arm will design, build and operate for a value of ₹940 crore and hybrid annuity worth around ₹247 crore, totalling ₹1,187 crore.

The STPs will produce renewable energy from biogas to run the plants leading to lower operational expenses. VA Tech will also be responsible for the operation and maintenance of the STPs and the sewerage infrastructure for a period of 15 years. The project will be implemented by BUIDCO with financial assistance from the World Bank under NMCG.

"This is a progressive step in realising the vision of ensuring 100 per cent sewage

As part of the Namami Gange Programme, it will build sewage treatment facilities and sewerage network in Patna, one of the most populous city on the Ganga river

collection and treatment in Patna," said Rajneesh Chopra, Global Head, Business Development, VA Tech Wabag.

VA Tech Wabag will now be responsible for sewerage infrastructure in four of the six zones of Patna. The company is already executing projects for BUIDCO in Pahari and Karmalichak. All these pro-

jects, on completion, will ensure a cleaner and a healthier ecosystem for over 50 per cent of the population of Patna.

In Digha, the scope comprises designing and building a 100-mld STP, interception and diversion work, sewage pumping stations of 262-mld and survey, redesigning and building new sewerage network of about 300 km. In Kankarbagh, the scope comprises designing and building a 50-mld STP, sewage pumping stations of 200-mld, flow diversion works and all appurtenant structures and the survey, redesigning and building new sewerage network of about 150 km.

मुश्किल में दर्जनों गांव

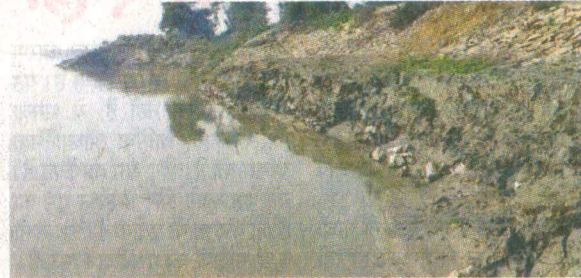
एक साल में ही टूटा घाघरा नदी पर बना तटबंध

**ग्रामीणों ने कहा की गई
मानकों की अनदेखी,
डीएम ने तलब की
रिपोर्ट**

पत्रिका न्यूज नेटवर्क
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बस्ती. जिले के चांदपुर कटरिया में घाघरा के कटाने को रोकने के लिए बने बंधे के टूट जाने से हजारों ग्रामीणों के सामने नई मुसीबत आ गई है। ग्रामीणों का आरोप है कि तटबंध के निर्माण में घटिया सामग्री लगाई गई थी जिस कारण बंधा टूटा है। अब इनकी मुसीबत ये है कि जैसे ही बारिश के पानी से घाघरा नदी उफान पर आई वैसे ही हजारों घरों को डूबने का खतरा बढ़ जाएगा।

बता दें कि चांदपुर कटरिया गांव



से होकर घाघरा नदी गुजरती है। बारिश के समय में कटान हो जाने से चांदपुर समेत दर्जन भर गांव के लोगों बाढ़ की चपेट में आ जाते थे। जिस कारण इन्हें हर साल परेशानी का सामना करना पड़ता था। ऐसे में 20 साल पहले इलाके के लोगों की मांगकर तत्कालीन डीएम ने सरकार से अनुरोध कर यहां कटान को रोकने के लिए एक बंधे की स्वीकृति कराई।

90 मीटर लंबे और 45 एमएम

चौड़े इस बंधे के बन जाने के बाद इलाके के लोगों को बड़ी राहत मिलने लगी। लेकिन बंधा पुराना होने के साथ ही इन्हें फिर से परेशानी सताने लगी की कहीं बंधा टूटकर उनके लिए फिर मुसीबत न पैदा कर दे।

ऐसे में 2017 में सूबे में भाजपा की सरकार बन जाने के बाद इलाके के लोगों ने इसके मरम्मत के लिए सरकार से गुहार लगाई। मुख्यमंत्री की विशेष निगरानी में इस बंधे को

मुश्किल में ये गांव

पत्रिका से बातचीत में मंगरू, समरनाथ, देवन्द्र समेत दर्जनो लोगो ने कहा कि अगर जल्द इसे दुरुस्त न कराया गया और बांध ऐसे ही गिरता रहा तो घाघरा का पानी गुलौरी बुजुर्ग, हरिवंशपुर, दुबौलिया खास, सुकूलपुरा, चरकेला, शिमुकपुरा, समेत दर्जन भर गांवों को अपनी चपेट में ले लेगा। जिससे हजारों लोगों को मुश्किल होगी।

दुरुस्त कराने के लिए 4.30 करोड़ रुपये स्वीकृत कर दिये गये। 2018 में बारिश से पहले ही कटान को देखते हुए तेजी से काम लगा दिया गया और बंधे को फिर से दुरुस्त कर दिया गया।

लेकिन निर्माण के समय ही गांव वालों ने इसे लेकर विरोध जताया था

क्या कहा डीएम ने

जिलाधिकारी आशुतोष निरंजन ने कहा कि तटबंध गिरने की जानकारी हमें मिली है। इसके लिए हमने एक्सीएन ग्रामीण को निर्देश दिया है, वो मौका का जायजा लेकर हमें रिपोर्ट जल्द देंगे। जिलाधिकारी ने ये भी कहा कि एक साल पहले ही बने तटबंध का गिर जाना बड़ी लापरवाही की तरफ इशारा कर रहा है। उन्होंने कहा कि जल्द इसकी जांच कराई जाएगी। साथ ही डीएम ने कहा कि जल्द ही इसके मरम्मत के लिए काम लगाया जाएगा ताकि किसी तरह की असुविधा न हो।

कि तटबंध के मरम्मत में जो सामग्री लगाई जा रही है वो घटिया है जिसका बाद में नुकसान उठाना पड़ सकता है।