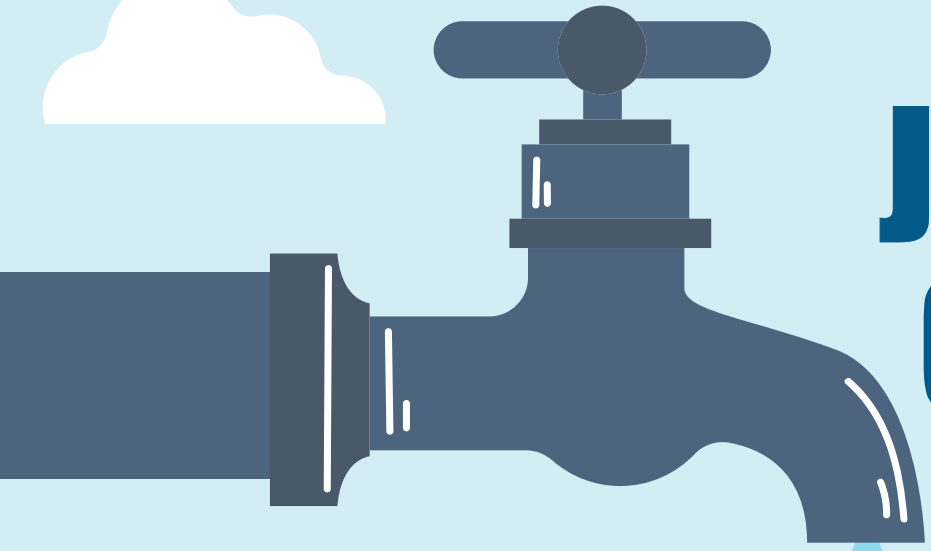
जल शक्ति मंत्रालय
जल संसाधन, नदी विकास और गंगा संरक्षण विभाग,
भारत सरकार
MINISTRY OF JAL SHAKTI
DEPARTMENT OF WATER RESOURCES,
RIVER DEVELOPMENT & GANGA REJUVENATION,
GOVERNMENT OF INDIAN

Azadi Ka Amrit Mahotsav

Save Water

जल है तो कल है



Jal Charcha

March-April 2023

जल चर्चा

जल शक्ति मंत्रालय
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Publisher : B.H.T. Vaiphei
[as Under Secretary (IEC), Ministry of Jal Shakti, Do WR, RD & GR, Shram Shakti Bhawan, Rafi Marg, New Delhi -110001]

INSIDE PAGES...

भीकाजी की बावड़ी

भारत में जल प्रबंधन की परंपरा को प्राचीन काल की सबसे अद्भुत तकनीक के रूप में देखा जा सकता है। पौराणिक ग्रंथों में भी जल संचित करने की सबसे उच्चतम विधियों के बारे में बताया गया है, जैसे तालाब, बांध, नहर, झील और बावड़ियां। समय, काल, परिस्थितियों के अनुसार, इन तकनीकों का इस्तेमाल सदियों से हमारा समाज करते आ रहा है।

Architect reinvigorates 17th Century Stepwell and brings it back to life

Stepwells are a very common phenomenon in India. It traces its existence back to the Indus Valley Civilization, when wells were dug deep and, for practical reasons, had steps. Stepwells, as their name suggests, are wells that have steps descending into them.

Gram Panchayat, Balua

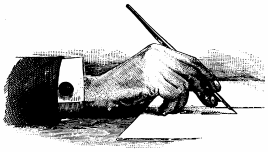
Balua Gram Panchayat is located in Baragaon block of Varanasi district of Uttar Pradesh. The total geographical area of this Gram Panchayat is 3.50 sq km and is inhabited by 2500 people as per census 2011. Varanasi is the nearest town of Balua. In the last few years, the village reported decline in the water table due to exploitative usage of the water resources.

Towards reduced Carbon Footprint and Sustainable Growth
GAIL (INDIA) LTD.

GAIL (India) Limited was incorporated on 16th August, 1984 as a Central Public Sector Undertaking under the Ministry of Petroleum & Natural Gas, Government of India. From its humble beginning as a gas transmission company, in a little over three decades, GAIL has emerged as the leading player in Indian hydrocarbon sector and today,....

ग्लोबल ग्रीन्स एनजीओ

जल है तो कल है इस बात की जानकारी सबको है लेकिन इसके संरक्षण पर अमल हर कोई नहीं करता। हमें यह नहीं भूलना चाहिए कि जल-संकट का समाधान जल के संरक्षण से ही है। हम हमेशा से सुनते आये हैं "जल ही जीवन है"। जल के बिना सुनहरे कल की कल्पना नहीं की जा सकती, जीवन के सभी कार्यों का निष्पादन करने के लिए जल की आवश्यकता होती है।



From the Chief Editor's Desk

Dear Readers,

Rivers are the arteries of human civilization. It is our duty to take care of the health of rivers. The National Mission for Clean Ganga is working relentlessly through the Namami Gange program for effective abatement of pollution, conservation and rejuvenation of river Ganga and its tributaries. Recently, the United Nations recognized Namami Gange initiative as one of the top 10 World Restoration Flagships to revive the natural world. You can read about it in this issue.

Community participation in the cleanliness of our rivers is key to success as the local populace is the primary stakeholder. The Jal Shakti Abhiyan 2023, launched on 4th March, 2023 by Hon'ble President is for promotion water conservation through jal andolan. Whether it is the rejuvenation of our river bodies, creation of 'amrit sarovars' or the mission of providing tap water connections to every household in India, we are making endeavours towards water security in the amrit kaal.

This edition of Jal Charcha brings you another round of stories and articles on efforts made by the people of our country in conserving precious water. Read about the story of Kalpana Ramesh, an architect by profession, who was a part of a monumental project to restore the 17th century built Bansilalpet stepwell in Hyderabad. You can also appreciate how community participation has played a major role in improving the water level in Balua Gram Panchayat, Varanasi district.

This edition carries interesting information on 400 year old Bhikaji ki Baodi near Ajmer and Kopili river in the north eastern region of the country. Information on Malaprabha dam, given in the form of infographics, may kindle your curiosity. Information on various activities undertaken by different organizations and bodies of the Department is also included.

We hope that our readers shall find these stories interesting and share with us their valuable feedback.

Happy reading to you all!

Warm Regards

(Pankaj Kumar)

भीकाजी की बावड़ी

Water Heritage of India

भारत में जल प्रबंधन की परंपरा को प्राचीन काल की सबसे अद्भुत तकनीक के रूप में देखा जा सकता है। पौराणिक ग्रंथों में भी जल संचित करने की सबसे उच्चतम विधियों का उल्लेख है, जैसे तालाब, बांध, नहर, झील और बावड़ियां। समय, काल, परिस्थितियों के अनुसार, इन तकनीकों का इस्तेमाल सदियों से हमारा समाज करते आ रहा है। हमारे पूर्वज जल का महत्व जानते थे यही कारण है कि उन्होंने बूंद-बूंद पानी को सहेजने पर जोर दिया। जल संरक्षण के क्षेत्र में उनके किए कार्य आज भी ऐतिहासिक कुओं और बावड़ियों के रूप में मौजूद हैं।

बावड़ियां वो सीढ़ीदार कुएं या तालाब हैं, जहां से जल भरने के लिए सीढ़ियों का सहारा लेना पड़ता हैं। भारत के कई राज्यों में इनका इस्तेमाल अलग-अलग नामों से होता रहा है, जैसे महाराष्ट्र में 'बारव', गुजरात में 'वाव', कर्नाटक में 'कल्याणी' आदि। ऐसी ही एक ऐतिहासिक बावड़ी है भीकाजी की बावड़ी जिसके बारे में जल चर्चा के इस अंक में हम प्रकाश डालेंगे। राजस्थान के अजमेर से लगभग 13 किमी की दूरी पर स्थित गगवाना में 400 वर्ष पुरानी बावड़ी मौजूद है, जिसे 'भीकाजी की बावड़ी' के नाम से जाना जाता है।

पुरातात्विक महत्त्व की इस बावड़ी में पानी तक पहुंचने के लिए सीढियां बनी हुई हैं। इस बावड़ी में कई प्राचीन शिलालेख मौजूद हैं, जिन पर उस समय की महत्वपूर्ण घटनाओं का वर्णन किया हुआ है और प्रत्येक शिलालेखों में फारसी भाषा का इस्तेमाल किया गया है। भीकाजी की बावड़ी मुगलकालीन है। इस बावड़ी के पानी से दिल्ली-आगरा और जयपुर की तरफ से आने वाले राहगीर अपनी प्यास बुझाया करते थे।

Kopili River

River

The river Kopili is one of the important major tributaries of the Brahmaputra on its left bank. It originates in the Saipong Reserve Forest situated in south east of Meghalaya and passes through the borders of Meghalaya, North Cachar hills and KarbiAnglong and enters the plains in Nagaon district of Assam and finally joins the Brahmaputra at Kopilimukh.

Its total length is 256 km of which 78 km form the common border of Meghalaya and Assam and the remaining 178 km lie in Assam.

Farmers in two districts of Bihar get water for irrigation

Water Conservation

The construction of two canals in Rohtash and Kaimur districts of Bihar on Durgavati River has helped the local farmers get adequate supply of water for irrigation. The canals have been made under Pradhan Mantri Krishi Sinchai Yojana (PMKSY) being implemented under the aegis of Department of Water Resources, River Development and Ganga Rejuvenation, Ministry of Jal Shakti.

Whereas 34.08 kilometer long canal enables irrigation of 5572 hectares of land in Kaimur district, 22.16 kilometer canal in Rohtash district takes water to irrigate 10695 hectares of land. The canals have been constructed as part of the Durgavati Canal Project.

To ensure that no water is wasted and reaches the tail-end farmers, Water User Association has been formed to maintain correct distribution and to effectively manage the water resources. Farmers are rejoicing the construction of the canals and are now willingly irrigating their lands owing to adequate supply of water round-the-year. The lives of the farmers have progressed because of the Durgavati Dam Project.

Rejuvenation of Dhanauti River

River Rejuvenation

Figure1:Before

Dhanauti river starts at Gahiri in Nautan and travels for 75-80 kms to reach Bardaha in Motihari. It has its origin near Gandak River in West Champaran and it terminates into Budhi Gandak river (aka Sikrahana River) in East Champaran. This river is the lifeline for agriculturists and fishermen because of its fresh water.

In Banajariya and Turkauliya blocks, the river caused floods every year. The main reason was the deposition of silt in the bed of river. In the survey of a team of District Administration East Champaran, it was observed that at some places agricultural/farm fields were made in the bed of river. People were practicing crops like paddy, sugarcane, maize and turmeric in the bed of river. At many places, the river was reduced to a canal like channel.

The river was found filled with common water hyacinth throughout its stretch. The river was losing its importance due to negligence. Subsequently, the District Administration swung into action and a plan was made for its rejuvenation. Under the direction of the DM, the rejuvenation of this river was started under MNREGA at Chailaha, Sapahi and Bijulpur panchayats. A total length of 6.3 km was rejuvenated. The major works included de-siltation of river, making embankments strong and planting trees afterwards. Cadastral maps were used to gauge length and breadth of the river at different locations. Land encroachments were removed beforehand. In addition, a 2 km long river front is developed at Chilaha Village near Motihari township which is center of attraction.

Intensive afforestation of more than 5000 Jamun and Arjuna trees has been done at this site to protect its embankments from flood, erosion and encroachment. DM took this work at priority and frequently inspected work sites. In the recent visit of Joint Secretary, Government of India regarding Catch the Rain campaign, this site was selected for observation. East Champaran district also received 3rd National Water Awards in East Zone from honorable President of India. The river now has taken a shape. Several flora and fauna is seen to be developed. The locals of Motihari are rebounding again themselves with Dhanauti, whose name is derived from the word Dhan-wati meaning which "Provider of Resources".

Figure1:After

Architect reinvigorates 17th Century Stepwell and brings it back to life

Water Warrior

Stepwells are a very common phenomenon in India. It traces its existence back to the Indus Valley Civilization, when wells were dug deep and, for practical reasons, had steps. Stepwells, as their name suggests, are wells that have steps descending into them. Considering the importance of these stepwells in our ancient times, Bansilalpet stepwell in Hyderabad which once turned into dumpyard went through a restoration process and is now one of the most beautiful heritage spots in Hyderabad. Architect Kalpana Ramesh was part of a monumental project to restore this ancient stepwell, alongside Shri Arvind Kumar, Special Chief Secretary, Municipal Administration and Urban Development Department, Government of Telangana. The six-layer stepwell, built in the 17th Century is said to bear footprints of the Kakatiya dynasty as well as traces of the Nizam and British empires, can hold nearly 22 lakh litres of water.

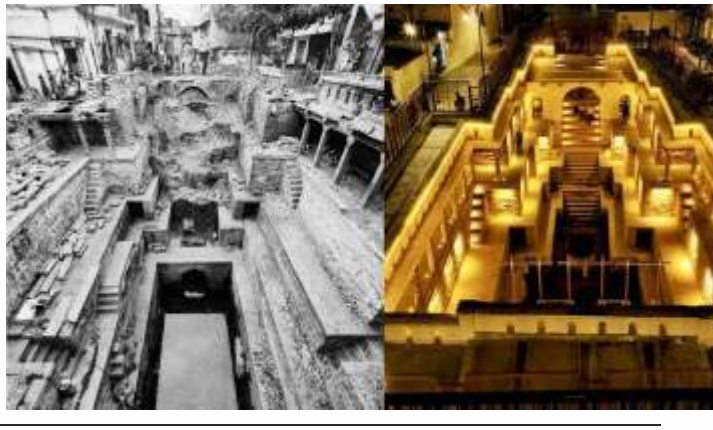
Being neglected for decades and unrepaired, this stepwell was filled with nearly 2,000 tonnes of debris. However, thanks to the efforts of Architect Kalpana Ramesh along with the support of Municipal Administration and Urban Development (MAUD) this stepwell is now a beautiful blend of modernity and heritage. Its restoration process included cleaning, dewatering and desilting the well, as well as structural strengthening of retaining walls, rebuilding and finishing works.

The stepwell after restoration now has an annual rainwater harvesting capacity of up to 35 lakh litres. The rejuvenated stepwell has an interpretation centre, tourist plaza, and amphitheatre and a café. The stepwell is surrounded by a cobblestone-paved pathway with gorgeous electrical light poles fitted by the government. The project took around 500 days, 100 professionals and 1000 workers to become a grand success. It was inaugurated by the Telangana Municipal Administration Minister K T Rama Rao on 5th December 2022.

This stepwell received Big 5 Construction Impact Award in Dubai for 'Sustainable Revitalization'. This project was the brainchild of Kalpana Ramesh, Hyderabad's water warrior and founder of Rain Water Project who has restored 8 wells before this in the city. Reports state that the government spent about Rs 2 crore on the project. Alongside, Kalpana raised an additional Rs 2 crore. Gandipet Welfare Society also played a huge role with their support and donations. "These ancient step-wells had such a far-sighted approach. They are great sources to recharge groundwater indirectly, and a great solution for urban flooding. I wanted to ensure that complete justice is done for this well. We have built water channels across the well for rainwater harvesting. These channels will collect water and drain through the pits we've built. The pits go into an aquifer," explains the water warrior.

"The idea is that if people feel economic value and benefit in the whole effort, it will become a people's project and they will preserve it," IAS Arvind Kumar.

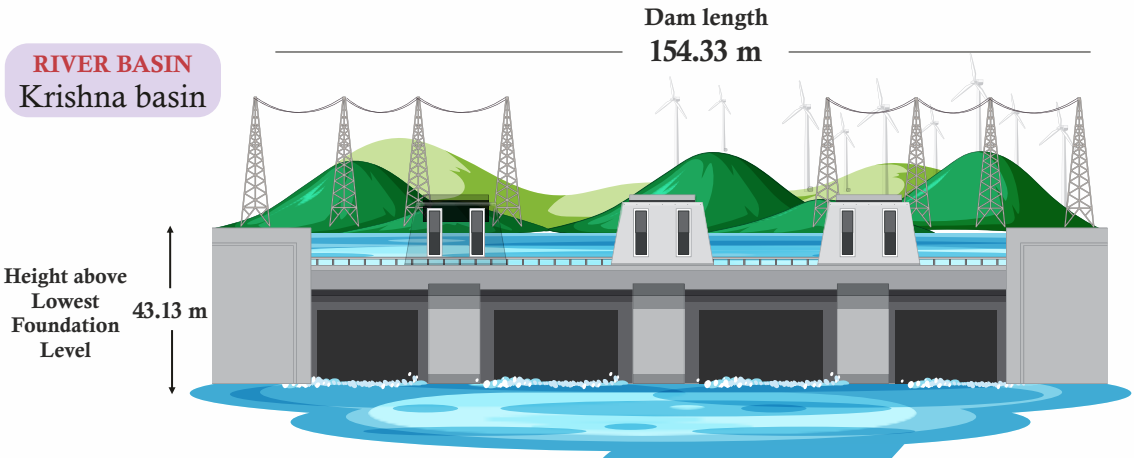
While the project began initially with the intent of restoration of the stepwell, it has become much more than that. It is an initiative to boost the local economy and make it a "people's project" and provide impetus to tourism. What began as a modest effort to reinvigorate a stepwell blossomed into a beautiful celebration which added to the city's soul. However such projects are not merely beautification projects but is a project that calls for community efforts to keep its beauty and maintenance intact.



Malaprabha Dam

Dam

The construction of Malaprabha dam was completed and the project commissioned in the year 1973. It is constructed across Malaprabha river flowing in Krishna basin near Naviluteertha village of Saundatti taluka in Belagavi district.



RIVER BASIN
Krishna basin

RIVER
Malaprabhariver

DAM TYPE
Masonary gravity dam

Naviluteertha village, Saundatti taluka, Belagavi district, Karnataka

Effective Storage Capacity
830250000 m3

Designed Spillway Capacity
5236 m^3/sec

Gross Storage Capacity
1068000000 m3

Reservior Area
135780000 m^2

भानगढ़घाट जतिलेश्वर कृषि उद्यम, जल उपयोगकर्ता संघ

Water User Association

भानगढ़घाट जतिलेश्वर कृषि उद्यम जल उपयोगकर्ता संघ ने समुदाय आधारित भागीदारी दृष्टिकोण के साथ सिंचाई का मानक स्थापित किया है। जल सिंचाव की वजह से मयनागुरी ब्लॉक के हिस्से में पानी की कमी रहती है। डब्ल्यूयूए के पास एक बिजली से चलने वाला मीडियम ड्यूटी ट्यूबवेल है जो 20 हेक्टेयर कमांड क्षेत्रों के साथ 60 किसानों जोकि अनुसूचित जाति और अनुसूचित जनजाति वर्ग के हैं, उनको पानी प्राप्त कराते है।

उत्तरी क्षेत्र में डब्ल्यूयूए को लाइटहाउस के रूप में जाना जाता है जो सिंचाई योजना, प्रौद्योगिकी अपनाने व नवाचार तकनीक को प्रभावी एवं कुशल कामकाज का प्रदर्शन करने के लिए महत्वपूर्ण भूमिका निभाता है। अपनी सिंचाई योजना को बनाए रखने के लिए डब्ल्यूयूए के पास पर्याप्त वित्तीय संसाधन हैं जोकि सदस्यता के माध्यम से आने वाले शुल्क, जल शुल्क, मत्स्य पालन, और कृषि मशीनरी से कस्टम किराया शुल्क आदि है। डब्ल्यूयूए के पास बिजली बिल, पंप ऑपरेटर, संचालन और रख-रखाव शुल्क से संबंधित कोई वित्तीय देनदारी नहीं है।

डब्ल्यूयूए सिंचाई और अन्य सेवाओं का विस्तार करने के लिए सक्रिय रूप से आगे आ रहे हैं और अभिसरण के माध्यम से अन्य विभिन्न विभागीय योजनाओं का लाभ दिलाने में भी सक्षम हैं। डब्ल्यूयूए ने निजी बंजर भूमि में विभिन्न बेहतर जल प्रबंधन प्रथाओं को अपने उच्च मूल्य फसलों के फसल उत्पादन और मिश्रित फलों के रोपण की शुरूआत किया और मसाले की खेती एवं काली मिर्च की खेती की तरफ भी झुकाव रहा है।

विभिन्न प्रकार की मछली उत्पादन प्रथाओं से कमाई करने वाले जीवंत मत्स्य हित समूह, जिनमें से कुछ मछली उत्पादन उद्यमी बन रहे हैं। इन्होनें ग्रामीणों को प्रेरित किया और लोग उन्हें अपनाने लगे है। उनके द्वारा विकसित प्रणालियाँ और प्रक्रियाएँ अद्वितीय व पारदर्शी हैं और WAU सदस्यों के साथ-साथ ग्रामीणों की भी सेवा करते हैं।

COVID-19 के दौरान WUA के सदस्यों ने सामाजिक जिम्मेदारियों को संबोधित करते हुए प्रदर्शन किया व मुख्यमंत्री/प्रधानमंत्री राहत कोष में योगदान देने के लिए आगे भी आए। लगभग 60% सदस्य रोजगार के अवसरों की तलाश में बाहर प्रवास करते थे जो अब स्थानीय मजदूरी अवसर, बेहतर भोजन और घरेलू स्तर पर वित्तीय सुरक्षा की उपलब्धता के कारण काफी कम हो गए हैं। डब्ल्यूयूए के ये तमाम प्रयास सिद्ध करते है की अगर सामूहिक रूप से प्रयास किए जाए तो कोई भी कार्य मुश्किल नही है।

WUA is imparting training at exposure visit

Regular grading and internal assessment

UN Recognizes Namami Gange Initiative As One Of The Top 10 World Restoration Flagships To Revive The Natural World

Namami Gange

DG, NMCG Receiving Award At A Function In 15th Conference Of Parties To The Convention On Biodiversity In Montreal, Canada

The United Nations (UN) has recognized Namami Gange initiative to rejuvenate India's sacred river Ganga as one of the top 10 World Restoration Flagships to revive the natural world. The Award was received by Shri G. Asok Kumar, Director General, Namami Gange at a function in the 15th Conference of Parties (COP15) to the Convention on Biodiversity (CBD) in Montreal, Canada on 14th December 2022, the World Restoration Day.

Namami Gange was selected from over 150 such initiatives from 70 countries across the globe. They were selected under the banner of the United Nations Decade on Ecosystem Restoration, a global movement coordinated by the United Nations Environment Programme (UNEP) and the United Nations Food and Agriculture Organization (FAO).

It is designed to prevent and reverse the degradation of natural spaces across the planet. The recognized initiatives, including Namami Gange, will now be eligible to receive UN support, funding or technical expertise.

- Namami Gange selected from over 150 such initiatives from 70 countries across the globe
- Recognition bears testimony to the concerted efforts being made by the National Mission for Clean Ganga, Government of India for the restoration of the riverine ecosystem: DG, NMCG, Shri G Asok Kumar
- Prime Minister, Shri Narendra Modi, recognizing the need to rejuvenate River Ganga, started Namami Gange Programme in 2014 and committed over 5 billion dollars to ensure that the river gets clean
- The unwavering commitment to the Namami Gange program is such that it is closely monitored by the National Ganga Council chaired by the Prime Minister, Shri Narendra Modi himself and regularly reviewed by Shri Gajendra Singh Shekhawat, the Union Minister for Jal Shakti
- The gifts received by the Prime Minister are annually put to public auction, all proceeds of which are given to the Clean Ganga Fund specially set up to encourage public contribution in Government's endeavor to clean river Ganga

Director General, Namami Gange, Shri G. Asok Kumar said "The recognition of Namami Gange as one of the top-10 ecosystem restoration initiatives in the world bears testimony to the concerted efforts being made by the National Mission for Clean Ganga, Government of India for the restoration of the riverine ecosystem. I hope that our endeavours provide a roadmap for other similar interventions across the globe."

Shri Kumar said that NMCG adopted a holistic and multi-sectoral approach, which introduced innovative models for comprehensive conservation of the riverine ecology and its health. "Our projects are designed to ensure that no untreated water- sewage or industrial effluent flows to Ganga River. 176 STPs with capacity to treat over 5000 Million Litres per Day are being constructed. The concerted efforts of the Mission have resulted in significantly enhanced capacity for treatment of sewage and industrial effluents in the Ganga basin; improvement in river water quality and biodiversity, manifested as increased population of Dolphins and its juveniles, Turtles, Otters, Gharials and fishes like Hilsa; and over 30000 hectare afforested among others," he added.

The DG, NMCG further said that an integral component of Namami Gange is Arth Ganga for

UN Recognizes Namami Gange Initiative As One Of The Top 10 World Restoration Flagships To Revive The Natural World

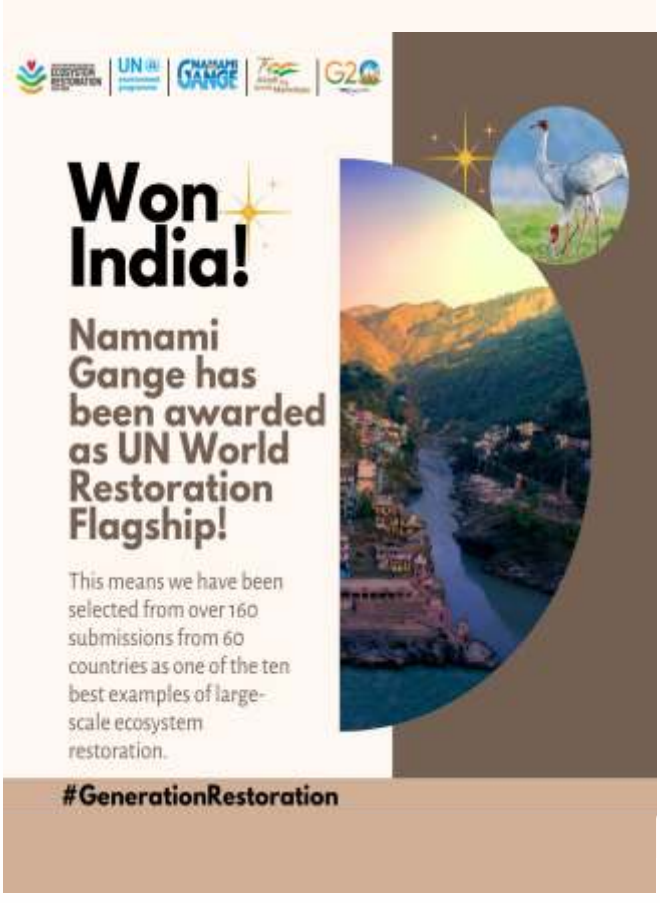
Namami Gange

strengthening the socio economical- river people connect. This has transformed the Mission into a Jan-Andolan or people's movement. With many innovative project management practices like HAM and One City One Operator successfully evolved, NMCG is preparing the road map for cleaning other rivers in the country and world. The DG asserted that the Namami Gange programme is driven with full commitment from our top political executives, which is essential for the success of such a large-scale environmental restoration programs.

The unwavering commitment to the Namami Gange program is such that it is closely monitored by the National Ganga Council chaired by the Prime Minister Shri Narendra Modi himself and regularly reviewed by Shri Gajendra Singh Shekhawat, the Union Minister for Jal Shakti. "The gifts received by Hon'ble PM is annually put to public auction, all proceeds of which is given to the Clean Ganga Fund specially set up to encourage public contribution in Government's endeavor to clean river Ganga," he added.

Speaking on the importance of connecting with youth for the programme, he said: "India is the youngest country with largest young population and we have to connect with the youth and women to ensure that the problem of bad water management is addressed." He added that youth and women in India today are aware of the water security issues and are being taught to respect water. "If we can get the youth to respect water, it will automatically stop misuse and mismanagement of our water resources." He said that recycling of water is being pushed very hard as part of the circular economy and steps are being taken to conserve biodiversity and protect spring sheds etc.

"The youth are engaged in diverse activities through trained volunteer cadres like Ganga Praharis, Ganga Doots, Ganga Quest etc. who through sheer passion have joined us in protecting the biodiversity of River Ganga. The rescue of Dolphins by these volunteers in the Ganga Basin is a case in point which has resulted in increased sighting of the aquatic species in the river," he



said. Shri Kumar added that various activities like rafting expedition, cyclathons, hackathons, webinar on 'Igniting Young Minds: Rejuvenating Rivers' are taken up to rope-in the younger generation and said that under Namami Gange we are aware of the necessities to involve people, particularly youth, in the process. He concluded by saying that Namami Gange is not just an inspiration for us but also a humble offering to Mother Ganga for environment protection and restoration in our endeavor to leave behind a better world for the youth of today and next generation.

UNEP Executive Director Mr. Inger Andersen said: "The Namami Gange is an ambitious effort to rejuvenate the Ganga, a lifeline for millions of people in India. At a time when it is critical that we transform our exploitative relationship with nature, the positive impacts of this restoration cannot be underestimated."

43rd Water Talk

The 43rd Water Talk, organized by the National Water Mission on 20th Jan 2023, was delivered by Dr. Sonali Shinde, Managing Trustee, Gram Gaurav Pratisthan, New Delhi on the topic "Watershed Management Through Pani Panchayat Model".

Ms. Archana Varma, Additional Secretary & Mission Director, National Water Mission, welcomed the speaker and stated that water is nature's product and the problems related to the water sector cannot be addressed in silos as it is a politically sensitive subject as well.

The water policy framework requires harnessing the potential of the communities, public participation, and not only Government intervention. She further highlighted the setting up of the Bureau of Water Use Efficiency in October 2022, which will facilitate in achieving Goal 4 of the National Water Mission i.e., to Increase Water Use Efficiency by 20%. She further added that the community has a very crucial role to play in water conservation. She also talked about the political will which plays a vital role in the operation, maintenance of self-sufficiency, and equity of the water resources.

At the outset, Dr. Sonali Shinde highlighted the fact that we need a robust policy framework for the execution of various projects and water conservation works so that it becomes available to marginal farmers. She stated that Gram Gaurav Pratisthan is to make water available to most marginal farmers of the village. The speaker gave a presentation highlighting the work undertaken by Gram Gaurav Pratisthan since 1972 and the concept of "Pani Panchayat".

She mentioned that it was difficult to take up water conservation work 40 years back due to the unavailability of technology and electricity but with technological advancement and knowledge at hand, the water conservation work can be taken more

efficiently at the village level. She mentioned that the Gram Gaurav Pratisthan started a movement in 1972 for the people and the community which later become famous as "Pani Panchayat". Panchayats play a very important role at the village level. So, it's necessary to involve the village panchayat at all levels of decision making and the people of the village should be given the right to find solutions for their own problems.

India is very diverse geographically and geologically. Some areas receive low rainfall and some receive very high rainfall. But as a result of climate change, we have been seeing a lot of discrepancies in original rainfall patterns, resulting in extreme floods in some areas and droughts in others.

The Gram Gaurav Pratisthan has been working in Purandar since 1972. The area was facing grave drought conditions. The Gram Gaurav Pratisthan took up the initiative of training the farmers and encouraged them to build small water harvesting structures to collect rainwater so that it can be utilized and conserved for long periods of drought. Several technical and engineering students were taken on board and a sustainability study of the area was conducted.

The government programs were mostly focused on minor and major irrigation at that particular time and no efforts were taken to issues related to the migration of people from villages to the cities. Gram Gaurav Pratisthan took the initiative of addressing all these issues. All the CCT works were done and percolation tanks and other water conservation structures were constructed resulting in the creation of a small forest in the region. The farmers become self-sufficient and it also helped to increase the yield of crops in the area.

Purandhar consists of 65 villages and Gram Gaurav Pratisthan aims at making all 65 villages self-sufficient. The organization has been holding water talks for farmers where they exchange ideas and best practices among themselves. Pani Panchayat has four main focus areas which include a) sustainable water b) local leadership development c) sustainable agriculture and d) holistic healthcare. The organization has been sharing its knowledge with other NGOs. The organization has also been focusing on lift irrigation, awareness generation, organic farming, and awareness programs/water literacy.

Water crisis and income disparity are still major issues that need to be addressed as water cannot be treated as someone's personal property and must belong to the community. Local leadership in association with government, NGOs, and village-level representation is also very necessary for the existing ecosystem. Political leadership that is non-bias and understands government policies and practices is very important. Water should become good of economic importance and steps must be taken to harness the economy again from this precious gift of nature. Water rights must become a trade commodity in India and even the smallest and most marginal farmer must get their water rights.

The Water Talk was followed by a session of questions and answers where members of the audience were invited to discuss their queries with the speaker. The webinar saw some interesting and unique questions from people across the country.

AS & MD, NWM in her closing remarks stated that ideas are very powerful and even the smallest idea if implemented rightly, can transform the lives of many. But most importantly the success of any model relies on the fact that the ultimate ownership should be handed to the common people and to people at the grass-root level. Treating water as a community resource is a great idea and providing it to the landless and most marginal population of the community will actually help to strengthen the future of water conservation for sustainable development.

36th Edition of Dialogue with District Magistrates (DMs)

Dialogues with DM's

National Water Mission (NWM) has been organizing a webinar series- Dialogues with DMs since 27th August 2020, to promote dialogue and best practices sharing among the participants on a variety of water-related topics.

Ms. Archana Varma, AS & MD, NWM welcomed all the participants to 36th Edition of Dialogue with DMs and mentioned the steps being taken by National Water Mission for water conservation, recharge, and management. She mentioned that the main motto of National Water Mission is to break the silos existing in the water sector. Water is a precious natural resource and it cannot be restricted within boundaries.

Water is a product of nature which becomes economic goods when it enters our household. She further mentioned that to address these issues NWM organized 1st All India Annual State Ministers' Conference at Bhopal on 5th and 6th January 2023. State Ministers for Water Resources, PHED and irrigation and Seniors Secretaries from 33 States participated in the Conference. Hon'ble Prime Minister addressed the conference where he mentioned that water crisis is a national issue as no development can take place without water and so water conservation is need of the hour.

She further mentioned that National Water Mission has set up Bureau of Water Use Efficiency which will act as facilitator to States in promoting good practices in saving, recycling, reusing and most important of all respecting water. She further mentioned that NWM launched "Jal Itihas" portal during the Bhopal Conference which contains a lot of knowledge related to the traditional water bodies of India and requested the DMs to introduce it to children especially at school level so that they can learn from it.

Further she mentioned that NWM has formulated a framework on "Jal Shakti Kendras" which has been made a part of the booklet on Best Practices under JSA:CTR-2022 and the framework has been formulated with a view to make the JSK's a "One Stop Solution" to all water related problems in the district. She further mentioned that to achieve any idea we need good water warriors at filed level and the DMs/DCs/CDOs can bring a much bigger change by connecting to people and making "Jal Andolan" a "Jan Andolan".

Thereafter Ms. Saumya Pandey, Chief Development Officer (CDO), Kanpur Dehat, Uttar Pradesh and Ms. Varnali Deka, District Collector, Kokrajhar, Assam presented the initiatives taken up under Jal Shakti Abhiyan for water management in the district.

Ms. Saumya Pandey, gave a presentation on the initiative taken up to make the district water efficient. She mentioned that in 2017 the water resources in the 4

blocks of the districts were under semi-critical category which increased to 7 blocks in the year 2020. An urgent need to take up water conservation was felt and eventually the "Jal Shakti Abhiyan" and "Jalabhishek" programmes were taken up in the district. 13-point action plan was created and all the departments related water resources directly or indirectly were involved in it. A GIS plan for the district was developed in collaboration with GIZ (German-Indo Collaboration Institute).

In all government buildings rooftop rainwater harvesting was taken up. Around 585 groundwater recharge potential sites were recognized. River restoration works of four major rivers of the district have also been taken up. The Pandu River has been restored and DPR is being prepared for Rind and Sengar Rivers whereas for Yamuna River the work is under consideration. Drip and Sprinklers irrigation have been introduced to the farmers to increase water use efficiency.

Jal Chaupals have been organized in the district to increase community participation and water budgets have been prepared for the district. 43,000 functional household taps connections have also been installed under "Jal Jeevan Mission". Positive impact was created as a result of afforestation, rainwater harvesting and various water conservation activities. The data were also collected from the piezometer with the help of Central Ground Water Board which showed a positive result with overall increase in the groundwater level.

She also mentioned that the "Jal Itihas" portal and the framework on "Jal Shakti Kendra" is a great initiative of National Water Mission and will provide great help in planning the success of implementation of "Jal Shakti Abhiyan" in the district. Thereafter, Ms. Varnali Deka, District Collector, Kokrajhar briefly described the Geography/ Demography /Rainfall pattern/Land holding pattern/ Topography of Kokrajhar district and mentioned that based on the complex topography of the area it was necessary to develop a different approach for water conservation in the area. The area lies in the Himalayan Bhabbar region which has a very rocky substratum. Though the area receives a lot of rainfall but most of it is lost in runoff due to lack of any major water bodies and low percolation rate of the groundwater.

The local population had to travel long distances for their need of portable water. So, the best solution for this problem was to combine the scientific and traditional ways of water conservation in the area. So, it was decided to take up the measure to establishing Dongs-Bandh. Dongs are basically canals and the check-dams are called Bandh. The age-old tripod-shaped structures named "Tinikhuti" which were made up of tree branches on the tiered structures (Chang) with boulders were made to ensure implantation on fast flowing river beds. All these measures helped to create balance between traditional and modern technology of water conservation for the area.

"Poshan Clubs" tasked with changing community empathy towards sustainable development including sanitation and water conservation have also been created It aims at bringing behavioral changes among the children and making them aware for the need of water conservation. Wetland conservation, river conservation and soil conservation measures have also been taken up in the district. The problems related to encroachment have also been dealt decisively by mapping and geotagging of water bodies. SHGs have also been trained and participated in restoration of Amrit Sarovars in the district. The restored water bodies have also helped to bring in economic benefit to the community through development of fishery activities.

She also mentioned that while she was working in the Goalpara Distict of Assam major Rainwater Harvesting activities were taken up in collaboration with "Anganwadis". Restoration of "Urpad Beel" was also taken up through community participation which also helped to create livelihood options. It also helped to create an eco-friendly elephant corridor, eco-friendly environment for migratory birds and better conservation activities.

In her closing remarks AS & MD, NWM mentioned that water conservation and water management should be our priority but at the same time we must also focus on creating economic benefit out of it. Water is a precious gift of nature and it should not be treated as personal goods but the ownership should be given to the community to make "Jal Andolan" a "Jan Andolan" in true sense.

कृषि में जल की बचत कैसे करें ?

फसलों को कितना जल देना चाहिए?

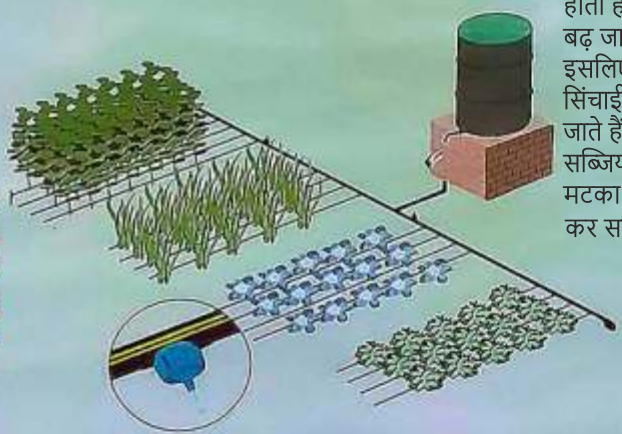
फसलों के लिए जल की आवश्यकता कई कारकों पर निर्भर करती है। मिट्टी का प्रकार, तापमान, आद्रता, फसल का प्रकार, जड़ की गहराई और फसल वृद्धि की अवस्था आदि बातों से तय होता है कि फसलों को कितना जल देना चाहिए।

शोध करें!

- अपने क्षेत्र में उगाई जाने वाली प्रमुख फसलों और सब्जियों की सूची बनाएं।
- किसानों से चर्चा करके (या इंटरनेट पर ढूंढकर) यह पता लगाएं कि किस फसल को अधिक और किस फसल को कम जल की आवश्यकता पड़ती है।
- पता लगाएं कि फसलों को कब सबसे अधिक जल की आवश्यकता पड़ती है।

फसलों की सिंचाई कैसे करें?

खेत में सीधा जल छोड़ना (बाढ़ सिंचाई) सिंचाई का अति सामान्य तरीका है। इससे बहुत सारा जल बर्बाद होता है और खेत में खरपतवार बढ़ जाती है।
इसलिए ड्रिप और स्प्रिंकलर सिंचाई जैसे विकल्प सुझाए जाते हैं। फलदार पौधे और सब्जियों को उगाने के लिए मटका सिंचाई का उयोग कर सकते हैं।



फसल को जल की आवश्यकता है यह कैसे पहचानें?

मिट्टी का अनुमान : अपनी उंगलियों को जमीन में दो से तीन इंच गाड़कर मिट्टी का अनुमान लगाएं। यदि मिट्टी सूखी हो तो फसल को जल की आवश्यकता है।

पत्तियों का निरीक्षण : यदि फसल की पत्तियाँ पीली पड़ गई, सूख गई या उनके किनारे सूख गए हों तो समझें कि फसल को जल की आवश्यकता है।

यह करके देखें :

अपने क्षेत्र में पेड़ों को जल देने के लिए ड्रिप या मटका सिंचाई का उयोग करें।

प्रयोग करें!

दो समान क्यारियों या दो बड़े ट्रे में सब्ज़ी या जल्दी उगने वाली कोई फसल लगाएं (धनिया या मेथी जैसी भाजी उगाना आसान है)। दोनों स्थानों पर एक ही प्रकार की मिट्टी का उपयोग करें। एक क्यारी/ट्रे में ड्रिप या मटका सिंचाई की व्यवस्था करें।

दूसरी क्यारी/ट्रे में पारंपरिक (बाढ़) सिंचाई पद्धति का उपयोग करें। पौधे की आवश्यकता के अनुसार दोनों क्यारी/ट्रे में जल दें। मापें कि हर बार आप कितना जल दे रहे हैं।
दो सप्ताह बाद दोनों की तुलना करें।

Gram Panchayat, Balua

Village Panchayat

Balua Gram Panchayat is located in Baragaon block of Varanasi district of Uttar Pradesh. The total geographical area of this Gram Panchayat is 3.50 sq km and is inhabited by 2500 people as per census 2011. Varanasi is the nearest town of Balua. In the last few years, the village reported decline in the water table due to exploitative usage of the water resources. To overcome this problem, various measures like rain water harvesting, rejuvenation of the traditional water bodies, water recharge structures, and tree plantation drive has been adopted.

Community participation has played a major role in improving the water level in Balua Gram Panchayat. Various community participation and awareness programs were conducted to achieve the goal with the help of SHG platforms, Rojagar Sewak, Panchayat Secretary, Gram Sabha and other community platforms. A dedicated tree plantation drive was organized around community ponds, individual ponds, private ponds and on fallow land of Gram Panchayat to get community together. Various medicinal and other useful tree plantations also took place in the gram panchayat in this period. Additionally, to reduce the crop failure due to the flooding of the Varuna River, an embankment has been constructed along the Varuna River upto a length of around 2 km.

Various tangible benefits like revival of water tables, tree plantation providing medicines, fruits and woods have assisted in diversifying livelihoods and this augments income security of households. Newly constructed and rejuvenated farm ponds help the community in securing the livelihoods of people with fish production and also help to improve the water table of Gram Panchayat. With the help of interdepartmental convergence various initiatives were taken, in which MGNREGA helped to construct total 25 new soak pits for better utilization of waste water and rain water for ground water recharge. Farmers are utilizing mostly ground water for the irrigation purpose, which demands lots of water, hence to reduce the excessive reliance on groundwater for irrigation purposes farmers were sensitized to make a switch to less water intensive crops. They are further trained and made aware about sustainable cropping pattern.

Through concerted efforts of community and sustainable practices, Gram Panchayat Balua has become a role model for other gram panchayats in the block and the district, as

Farm ponds

to how to adopt environmentally beneficial practices for traditional and scientific revival of water bodies, ground water recharge and income augmentation.

The work on water conservation, rain water harvesting, rejuvenation of traditional water bodies, establishment of recharge structures and large-scale tree plantation projects in the Village has been done by making integrated action plan in which self-motivation, participation and leadership of the local people were channelized for community benefits. The contribution of local women's self-help groups in the village's water conservation activities has been immense. Coordinated efforts have been made in the Gram Panchayat Balua to conserve scarce resources like water by scientific and practical methods, effective and efficient management. Rainwater Harvesting and artificial recharge have adopted local and economical but innovative methods of groundwater augmentation.

CommunityParticipation

Guwahati Metropolitan Development Authority (GMDA) uses Vaidic Science to Rejuvenate Heritage Pond, Jorpukhari-Pond1 at Maa Ugratara Temple

Case Study

Pre-Treatment pics DTD. 18th June 22

Jorpukhuri, the erstwhile Ugratara Temple Pond is said to be built by Swargdeo Siva Singha in the service of the temple. The pond was a medium for commuting to the temple as it was connected to the mighty Brahmaputra through the Naojan Channel. The British constructed a road in the middle of the pond, dividing it into two, and earning it the name Jorpukhuri, meaning twin ponds. Jorpukhuri is the center for nesting ground for several beautiful species like Cranes, Herons and Egrets, building nest in the nearby trees.

Rapid urbanization had taken a toll on the twin ponds and the ecological status started deteriorating. Due to this there were many changes like deterioration of water quality, foul smell, mosquitoes, and so on. Under the Central Government's Mission "Amrit Sarovar", all ULBs were mandated to restore their Waterbodies and therefore the focus was renewed for restoration of this 17th century heritage which is considered a sacred Waterbody too.

Following the chain of events, a detailed site survey was done for Jorpukhuri, Silpukhuri and Padampukhuri in Guwahati and a thorough proposal for ecological rejuvenation of the said water bodies was submitted to the GDMA. After a comprehensive process, finally the work started on 9th July, 2022 at Jorpukhuri, Pond1, by M/s. Cygnus Information Services, Kolkata, headed by an engineer from IIT, Kharagpur. The project was assigned by Guwahati Metropolitan Development Authority (GMDA) for "in-situ" remediation and resurrection of the native ecology of the waterbody through Vaidic Science based technology invented by Vaidic Srijan LLP.

It was a critical work since the native biodiversity was to be restored and rejuvenated along with the Water quality and preserving & conserving the Aquatic Life e.g., Fishes, Turtles, Swans & Ducks at Jorpukhuri Pond 1. It was a major concern area of the Authority as the Public sentiment is associated with these nature's creatures which means the vendor had to understand the agro-climatic zone, the contamination, the flora & fauna, the species of fishes, turtles, swans, ducks and eradicate the problems of the location. The CIS team visited the Jorpukhuri and observed the pre-treatment condition which was duly recorded in form of videos and photos at RHS and LHS of the ghat thereafter which Water Tank installations was done at site for the dosing purposes. After regular timely dosing, behavioural changes were observed in ducks and swans. The ducks waited for the dosing which indicated conditioning. After dosing, the ducks and swans were observed to get into water and spent more time playing in the water.

The Water level receding was observed in pond and for the first-time shoals of fishes and few turtles were observed which indicated that transparency had increased. It was also observed that froth at the dosing point has reduced substantially, which means the phosphates, nitrates, nitrites and ammonical nitrogen has been reduced substantially and the froth level have gone down. After a considerable time, clear reflection of sky was observed and the reflection of rainbow could be seen. This solution has proven its mettle by passing the toughest challenge for all "IN-SITU" treatment technologies in the world –Conservation of the Biodiversity.

Life is flourishing for all native flora & fauna, in fact fishes are breeding and growing too, and turtles have been laying eggs too – something that no other technology has proven for any natural Waterbody. The preservation and conservation of the aquatic life e.g., Fishes, Turtles, Swans & Ducks at Jorpukhuri, Pond 1 is successful which was a major concern area for the authorities as the Public sentiment is associated with these nature's creatures. With the improvement of Water quality, they have become more agile and exuberant. The local people have expressed their satisfaction on the overall improvement of the Waterbody.

Post Treatment on 19th August

Towards reduced Carbon Footprint and Sustainable Growth

GAIL (INDIA) LTD.

Industry

GAIL (India) Limited was incorporated on 16th August, 1984 as a Central Public Sector Undertaking under the Ministry of Petroleum & Natural Gas, Government of India. From its humble beginning as a gas transmission company, in a little over three decades, GAIL has emerged as the leading player in Indian hydrocarbon sector and today, it is a flagship natural gas company of India having presence in entire India gas sector and moving India towards a gas based economy.

Region Pipeline Network Headquarters and the Regional Gas Management Centre Vadodara, operates and manages 1440km regional pipeline network of the entire Gujarat region. Keeping a conscious approach towards water conservation, GAIL has taken various initiatives to set an example for the other industries. It has enhanced the recycling water pipeline network at GAIL HVJ Vijaipur which led to saving of 3,00,000 litre per day of water. With Rain Water Harvesting System, the industry has managed to charge the groundwater annually. The enhancement of water recycling network at GAIL Vijaipur has resulted in total fresh water saving of 3,50,000 litres per day. With the help of an in-house modification, the Fire Water Pump House reduced the running hours and frequent start-stop of jockey pumps saving a colossal amount of energy and financial savings. With the adoption of drip irrigation and water harvesting system in pipeline, it benefitted with green belt development, less water consumption for the green belt and increase of groundwater level.

As a part of its initiative towards reducing carbon footprint and creating a path of sustainable growth, GAIL has built a portfolio of renewable businesses and successfully set up wind energy power projects of 118MW across the state of Gujarat, Tamil Nadu and Karnataka and 5 MW Solar plant in Rajasthan.

Water being an essential commodity, GAIL has understood the effects of scarcity of water in the society and has set up systems and explored technological advancements with quantifiable impact on conserving water through innovation. Being mindful of the ways water is utilized in several operations, the organization has pledged to use natural resources effectively and efficiently. The company has encouraged innovative approaches to conserve water at our sites through initiatives such as

Rainwater Harvesting, fresh-water consumption and minimization, monitoring and management of waste-water discharge, waste treatment and recycling based on our Environmental Policy, National, Local and regional guidelines. It has developed zero discharge facilities to strictly limit our wastewater discharge to promote the practice of recycling and re-use of the produced water.

Keeping these in mind, Headquarter Vadodara installed rainwater harvesting systems at 17 locations at the existing facilities as a way of giving back to the society. GAIL have 135 installations/terminals out of which 16 terminals have been identified as large terminals where Rain Water Harvesting Systems have been implemented. There were various tangible and intangible impacts of these efforts. Tangible impacts were reduced water dependency from the Public Water Systems and thus had significant savings on Water Bills at the aforementioned installations. The intangible impacts include improving the ground water levels of the areas, captured rainwater and reduced the abundant amount that avoided floods. Significantly reduced reliance in dams, reduced the ecological stress on the area, increased soil moisture and urban greenery, reduced the burden of new investments to replace the ageing systems and adding water supply infrastructure.

गांधीनगर नगर निगम, शहरी स्थानीय निकाय

Urban Local Body

पानी सबसे महत्वपूर्ण पदार्थों में से एक है। हम पानी के बिना अपने दैनिक जीवन का नेतृत्व नहीं कर सकते। पानी हमारे शरीर के आधे से अधिक वजन को बनाता है। हम पानी के बिना जीवन की कल्पना नहीं कर सकते। पीने और घरेलू उद्देश्यों के अलावा, पानी हमारी दुनिया के अस्तित्व के लिए भी महत्वपूर्ण है। हमारी अच्छाई और आने वाले भविष्य के लिए जल का संरक्षण महत्वपूर्ण है।

जल चर्चा के इस अंक में हम गुजरात की राजधानी गांधीनगर में जल संरक्षण के लिए किए गए प्रयासों पर बात करने जा रहे है। गांधीनगर नगर निगम ने जल संरक्षण के क्षेत्र में जन के साथ मिलकर महत्वपूर्ण कार्य किए है। शहर से निकलने वाले अपशिष्ट जल को सीवेज ट्रीटमेंट प्लांट में उपचारित किया गया। रिचीर्ज वेल के निर्माण कराए गए है, जिसमें 51 में से 27 रिचार्ज वेल का काम पूरा हो गया है। 2019 में 20 विभिन्न स्थानों पर नवीनतम तकनीक के रिचार्ज वेल के निर्माण कराएं गएं है। इन कुओं में प्रति घंटे 25000 लीटर पानी भूमिगत जमा करने की क्षमता है। निकट भविष्य में 50 अन्य पुनर्भरण कुओं के निर्माण की योजना है। मानसून के दौरान 2.50 करोड़ लीटर बारिश का पानी मिट्टी में जमा हुआ था। इसके अलावा 50 और रिचार्ज वेल बनाने की योजना बनाई गई है। जल ए जीवन (जल ही जीवन है) का नारा बोर्डों पर लिखा गया है जो की जीवन में जल के महत्व को दर्शाता है। गांधीनगर नगर निगम की ओर से जल संरक्षण विषय पर गोष्ठी भी आयोजित की जा चुकी है।

सार्वजनिक जल संरक्षण अभियान समाज के सभी स्तरों में पानी की कमी से निपटने और स्थिरता सुनिश्चित करने के लिए पानी की बचत के महत्व के बारे में जागरूकता बढ़ाते हैं। इसका उद्देश्य जल उपयोग दक्षता में सुधार के लिए नागरिकों के दृष्टिकोण और व्यवहार को बदलना है।

Andhra Pradesh on the path to Water Security

State

Andhra Pradesh is located in the southeastern part of the subcontinent. It is bounded by the Indian states of Tamil Nadu to the south, Karnataka to the southwest and west, Telangana to the northwest and north, and Odisha to the northeast. The Government of Andhra Pradesh has taken up Water Conservation Mission with a vision to make the State a drought-proof State and eradicate poverty and reduce economic inequalities through better "water conservation and sustainable management". It is committed to providing "Water Security to Irrigation, Drinking, and Industries".

From time to time, the state has taken path-breaking initiatives following which major achievements have been realized. The works done benefitted the drought-prone areas; enhance the stretch of irrigation facilities by introducing new irrigation techniques like Drip and Sprinkler Irrigation, enhancing the ground water levels and prioritizing the National Program of Jal Jeevan Mission.

Keeping the vision of water security ahead, the Government of Andhra Pradesh has taken various initiatives such as implementation of Polavaram Project which is the lifeline project for the state being executed by the financial assistance from the Central Government. There are around 60 ongoing projects, out of which 6 Projects are categorized as high priority projects and being tracked with time bound schedules for completion. The list of 6 high prioritized projects were taken up to complete on fast track mode and weekly progress was being monitored with special emphasis on solving critical issues. Those high prioritized projects included Nellore Barrage, Sangam Barrage, Owk Tunnel, Poola Subbiah Velligonda Project, Vamsadhara- Nagavalli Link, B.R.R Vamsadhara Project Phase II of Stage II.

With the effort of interlinking of Rivers, the existing Godavari Krishna, Godavari Yeleru & Krishna Penna are successfully managed to ensure that the flood waters are transferred to the needy areas. The mission of this program is to ensure greater equity in the distribution of water by enhancing the availability of water in drought-prone and rain-fed areas.

In order to ensure effective utilization of water which is otherwise flowing into sea, interlinking of rivers is planned by transferring water from surplus basins to deficit basins i.e from Godavari to Krishna to Penna. It has formulated a scheme for transfer of flood waters from Godavari River to Krishna river and to Rayalaseema region to ensure sustainable water resources development, improvement in health and living conditions. The implementation of this

project has brought several benefits, such as drought mitigation in the region, significant improvements in the protection of human health due to delivery of safe drinking water, improvement in quality of life by ensuring availability of organized and flexible schemes and plans for implementing short-term and long-term water supply infrastructure improvements suitable for future development within each uncovered area and reduction of labour migration through creation of additional livelihood opportunities through the reduction of uncertainty in crop cultivation and establishment of new industries. The project also ensured cross cascading the tanks for optimum utilization of water availability.

The state has also worked for the implementation of Jal Jeevan Mission with the objective to provide drinking water taps to the rural areas of Andhra Pradesh. The state is encouraging the treatment and reuse of wastewater for aquaculture, cultivation of fodder and recharging of groundwater through injection wells. With the help of Ground Water Monitoring, the water inflows, storage and outflows were kept in check followed by robust water accounting and auditing by the nodal agency.

The state has been forefront in adopting technology to the best interest of conserving water and tracking projects for completions. Dashboards, mobile applications, sensors for tracking discharge flows, monitoring reservoir and ground water levels etc. have been proven successful to a larger extent. A significant amount of work has been completed for the betterment of water conservation and management to achieve the objective of making Andhra Pradesh a water-secure and drought-free state.

News in Brief

118th meeting of Technical Advisory Committee - Farakka Barrage Project was held on 21st December 2022 in the Committee Room of CWC HQ New Delhi, under the chairmanship of Member D&R. Officers from CWC, GFCC, CWPRS, SPM Port Trust, Irrigation Department Govt of Bihar and FBP participated in the meeting.

27th International Conference on"Hydraulics, Water Resources, Environmental and Coastal Engineering" was held from 22-24 December, 2022 in Civil Engineering Department, Punjab Engineering College, Chandigarh. Five officers from D&R and RM wing were nominated and attended the conference.

A two day visit on 20.12.2022 and 21.12.2022 for the Monitoring of on going Saryu Nahar Pariyojana Ph-III CADWM works in the Districts of Bahraich and Gonda was undertaken by M&A, Lucknow, UGBO. In the visit Sh. B C Vishwakarma (Director M&A, Lucknow) was accompanied by DD and AD M&A Lucknow along with the officers of state CADA.

मुख्य अभियंता न.बे.स., अधीक्षण अभियंता (सम.), अधिशासी अभियंता (नर्मदा मंडल), के.ज.आ., भोपाल द्वारा मध्य नर्मदा उपमंडल-I, नर्मदापुरम के अधीनस्थस्थल नर्मदापुरम, स्थल सांडिया , स्थल बरमान, स्थल बेल्खेडी एवं स्थल गाडरवारा पर डिस्चार्ज लिया गया एवं निरीक्षण किया गया.

Chief Engineer, C&SRO, Coimbatore inspected 5 newly installed telemetry-RTDAS sites at Chennai under Adyar and Coovum basin. Accompanied by Director, Monitoring Dte, CWC, Chennai and EE, Hydrology Division, CWC, Chennai.

Shri Harish Umbarje, Director and Shri Karan Raghuvanshi, Deputy Director Monitoring Dte., MCO, CWC Nagpur visited various components of Gosikhurd (National-Major) Irrigation Project viz Right Bank Canal, Left Bank Canal, Ghodazari Branch Canal, Mokhabardi LIS, Akot LIS, Nerla LIS and their command for monitoring the physical and financial progress of the project components included under PMKSY-AIBP (National Projects) & CADWM on 15.12.22 to 16.12.22. Officials of Water Resources Department, Maharashtra accompanied CWC officers during the visit. The project is included in PMKSY-AIBP (National Projects) & PMKSY-CADWM and has received so far ₹3862.475 crore& ₹11.917 crore respectively as Central Assistance. The overall progress of works is reported to be about 69%.

News in Brief

दिनांक 22.12.2022 को सुश्री देबाश्री मुखर्जी, Special Secretary, DoWR, RD & GR की अध्यक्षता में सर्किट हाउस अहमदाबाद में सरदार सरोवर प्रोजेक्ट में CADWM स्कीम की प्रोग्रेस के सम्बन्ध में समीक्षा बैठक हुई। बैठक में केन्द्रीय जल आयोग, गांधीनगर के मुख्य अभियंता श्री दत्तकुमार सोपान चासकर, श्री योकी विजय, निदेशक (प्रबोधन), श्री के ए पटेल, सचिव जल संपदा विभाग, गुजरात सरकार, श्री विवेक कपाड़िया, निदेशक(तकनीकी), सरदार सरोवर नर्मदा निगम सम्मिलित हुए। विशेष सचिव महोदया द्वारा CADWM की धीमी प्रोग्रेस के कारणों के बारे में अधिकारियो से चर्चा की गयी जिसके सन्दर्भ में श्री विवेक कपाड़िया निदेशक (तकनीकी) ने विस्तृत रूप में बताया एवं प्रोजेक्ट को तय समय सीमा में पूर्ण करने का आश्वासन दिया।

माही एवं तापी बेसिन संगठन, केन्द्रीय जल आयोग, गांधीनगर में श्री दत्तकुमार सोपान चासकर, मुख्य अभियंता की अध्यक्षता में माही, साबरमती और बनास बेसिन के लिए अंतर-राज्यीय पोस्ट मानसून 2022 "बाढ़ पूर्वानुमान व्यवस्था" विषय पर केन्द्रीय जल आयोग, गांधीनगर में आज दिनांक 21.12.2022 को बैठक संपन्न हुई। राज्य सरकार के अधिकारियों ने बैठक में मानसून 2022 के दौरान केंद्रीय जल आयोग द्वारा दी गई बाढ़ पूर्वानुमान सेवाओं की सरहना की।

CSMRS Instrumentation team visited Vyasi Dam Project, Uttarakhand from 12th to 14th Dec under MoU signed with UJVNL.

CSMRS officers attended Indian Geotechnical Conference from 15-17 Dec at Kochi

CSMRS organized a 2 days Training Course on "Geotechnical Instrumentation and Numerical Modeling" on 8th & 9th December, 2022.

A lecture on "Expansive Soils and its stabilization" was delivered by Shri N. Janaki Raman, Scientist 'B', CSMRS on 05.12.2022

News in Brief

Scientists of CGWB, SER, Bhubaneswar Conducted APT at Kunjamura village, Natkidaula Block, Sambalpur district, Odisha.

Geophysicist of CGWB, WR, Jaipur, conducted VES at Khatoo village, Danta Ramgarh, Sikar district, Rajasthan.

Scientists of CGWB, NR conducted Step Drawdown Test at variable discharge and Aquifer Performance test at 1268 LPM Discharge for determination of Aquifer Parameters and Chemical Quality of Aquifer Group II at Thanagaon, Kothawan Block, Hardoi District under NAQUIM.

Ground Water Exploration activity under NAQUIM was conducted in Maliberuar village of Jharsuguda district, Odisha, having a discharge of 2.18 lps.

DWLR(with Telemetry) installed and tested at Banke bajar pump unit site, Gaya district, Bihar with CGWB officers and Engineers of Four ITS Pvt. Ltd.

Sh. A K Biswal, HOO, Sh. N K Jatav, and Ms. Lata Udsaiya, had a meeting with Honorable Minister of Jal Shakti Sh. Gajendra Singh Shekhawat during 'SUJALAM-International Water Conference' held at Ujjain district, Madhya Pradesh.

News in Brief

Sh. Pankaj Kumar, Secretary (DoWR, RD&GR), along with Sh. Subodh Yadav, Joint Secretary, Ministry of Jal Shakti interacted with the Regional Directors and officers of Central Ground Water Board.

Regional Directors' Meeting at Central Ground Water Board, CHQ, Faridabad chaired by Sh. Sunil Kumar, Chairman, CGWB.

The 11th SGWCC meeting for the State of Maharashtra for approval of NAQUIM area of 33995.13 sq. km. covered during 2021-22 under the chairmanship of Sh. Sanjeev Jaiswal, IAS, Principal Secretary, Water Supply and Sanitation Department, Govt. of Maharashtra held at MJP, Nagpur.

Scientists of CGWB, SER shared and presented the outputs of Aquifer Mapping and Management Plan of Nabarangpur district, Odisha with District Administration.

Ravi Kumar Gumma, Scientist, AP SUO, Visakhapatnam presented and shared the NAQUIM findings and report of Konaseema District, Andhra Pradesh with Shri Himanshu Shukla, IAS District Collector & Magistrate, DR. BR Ambedkar Konaseema District, Andhra Pradesh.

Shri Shasinlo Kent, Scientist presented and shared report of Aquifer Mapping and management plan of South West Garo Hills district, Meghalaya to Smti. A.V.D. Shira, Addl. Deputy Commissioner (DC i/c), Ampati, South West Garo Hills District, Meghalaya.

News in Brief

Scientists of CGWB, NER, shared NAQUIM report of Morigaon district, Assam with Shri Devashish Sharma, IAS, Deputy Commissioner.

Sh. Santhana Subramani, Sc D presented and shared the outputs of NAQUIM of Kasaragod district, Kerala with District Collector Smt Bhandari Swagat Ranveerchand, IAS.

Scientists of CGWB, NCR shared NAQUIM Report of Annupur district with District Administration, Dindori. The meeting was chaired by Sh. Abhay Singh Ohariya, District Collector Annupur, M.P. Officials from various state departments were present during the meeting.

Scientists of CGWB, CR shared and presented the outputs of Aquifer Mapping and Management Plan of Pune district with District Collector, Pune. District Collector has accepted to utilize the outcomes of NAQUIM in ongoing schemes.

CGWA, HQ organized two days training program on "NOCAP software and related issues" at CGWA, HQ, New Delhi with CGWA regulated Regions in 2 batches. The training program was inaugurated by Chairman, CGWB.

Inaugural session of mandatory training on "Maintenance Management of Drilling of Ancillary Equipments" is organised at Auditorium of RGNGWTRI, Naya Raipur.

CGWB, SUO-Delhi organized a Public Interaction Programme Under Azadi ka Amrit Mohotsav 2.0 on "Ground Water Conservation & Management" at Pandara Park area, New Delhi.

वेटलैंड्स (Wetlands)

डॉ ज्योती पी पाटील, वैज्ञानिक, राष्ट्रीय जलविज्ञान संस्थान, रुड़की

वेटलैंड यानी आर्द्रभूमि/ नमभूमि, जहां पानी और भूमि आपस में मिलते हो और जहां वर्षभर पुर्णरूप या आंशिक रूप से जल भरा रहता हो, जबकि कई ग्रीष्म ऋतु में सूख जाते हैं। Ramsar Convention के व्याख्या के अनुसार वेटलैंड मतलब "दलदल, फेन (fen), पीटलैंड या पानी के क्षेत्र, चाहे प्राकृतिक हो या कृत्रिम, स्थायी या अस्थायी, जो स्थिर पानी या बहने वाला पानी के साथ, ताजा, या समुद्री जल के क्षेत्रों सहित, जिसकी गहराई low tides पर छह मीटर से अधिक नहीं होती है"। वेटलैंड एक विशिष्ट प्रकार का ecosystem है जो जैव विविधता का एक हिस्सा भी बनता है। सामान्य भाषा में वेटलैंड ताल, झील, पोखर, जलाशय, मैंग्रोव, दलदल आदि के नाम से जाने जाते हैं। वेटलैंड न केवल जल भंडारण का कार्य करते हैं, अपितु बाढ़ की विभीषिका कम करते हैं और पर्यावरण संतुलन में सहायक होते हैं। विश्व में केवल 5-8% भूमि पर वेटलैंड्स होने के बावजूद भी वे अनुमानित 1,500 Pg (Petagram of carbon) के 20 से 30% के बीच मृदा कार्बन संग्रहित करते है। वेटलैंड्स अनेक लोगों को आजीविका (मछली पालन, मखाना, शहद व धान आदि का उत्पादन) प्रदान करने में महत्वपूर्ण भूमिका निभाते हैं। वेटलैंड्स कार्बन अवशोषण व भूजल स्तर में वृद्धि जैसी महत्वपूर्ण क्रियाओ में भूमिका भी निभाते हैं। ये पक्षियों और जानवरों, indigenous पौधों और कीटों को आवास उपलब्ध कराते हैं।

वर्तमान में प्रदूषण, बढ़ते शहरीकरण, बाँध निर्माण, जलाशयों में अपशिष्ट के प्रवाह के कारण वेटलैंड्स पर संकट के बादल मंडरा रहे हैं और धीरे-धीरे ये कम हो रहे हैं। इसी के साथ वेटलैंड्स में रहने वाले जानवरों, पक्षियों और पौधों का अस्तित्व भी खतरे में आ रहा है। वेटलैंड संरक्षण के लिए अन्तर्राष्ट्रीय प्रयास में 'रामसर संधि' (Ramsar Convention on Wetlands of International Importance) प्रमुख है। यह एक अन्तर-सरकारी संधि है, जो वेटलैंड्स और उनके संसाधनों के संरक्षण और उपयोग के लिए राष्ट्रीय योजना और अंतर्राष्ट्रीय सहयोग के लिए एक रूपरेखा प्रदान करती है। 2 फरवरी 1971 में कई देशों ने ईरान के रामसर में विश्व के वेटलैंड्स के संरक्षण हेतु एक संधि पर हस्ताक्षर किए थे। इस दिन को 'विश्व वेटलैंड्स दिवस' (02February: World Wetlands Day) के रूप में आयोजित किया जाता है। वर्ष 2023 विश्व वेटलैंड्स दिवस की थीम 'It's Time for Wetlands Restoration: Revive and restore degraded wetlands' है।

भारत के रामसर सूची में शामिल वेटलैंड्स की कुल संख्या अब 75 हो गई है. भारत के अधिकांश वेटलैंड्स गंगा, ब्रह्मपुत्र, कावेरी, कृष्णा, गोदावरी और ताप्ती जैसी प्रमुख नदी घाटियों से प्रत्यक्ष या अप्रत्यक्ष रूप से जुडे हुए हैं। भारत सरकार के पर्यावरण, वन और जलवायु परिवर्तन मंत्रालय (MOEF&CC), वेटलैंड्स डिवीज़न का उद्देश्य देश के वेटलैंड्स का संरक्षण करना है। वेटलैंड्स प्रभाग ने केंद्र प्रायोजित जलीय ecosystems के संरक्षण हेतु राष्ट्रीय योजना (National Plan for Conservation of Aquatic Ecosystems-NPCA), केंद्र

सरकार और संबंधित राज्य / केंद्रशासित प्रदेश सरकारों के बीच cost sharing basis पर देश में वेटलैंड्स के संरक्षण और प्रबंधन के लिए लागू किया है। इस योजना का उद्देश्य जैव विविधता और पारिस्थितिक तंत्र में सुधार के अलावा, वांछित जल गुणवत्ता वृद्धि प्राप्त करने के लिए वेटलैंड्स का समग्र संरक्षण और बहाली करना है। इसका उद्देश्य एकीकृत प्रबंधन योजनाओं, क्षमता विकास और अनुसंधान के निर्माण और कार्यान्वयन का समर्थन करके राज्यों के साथ विकासात्मक प्रोग्रामिंग में वेटलैंड्स की मुख्यधारा को बढ़ावा देना है। भारत का पर्यावरण संरक्षण कानून 1986 वेटलैंड्स के संरक्षण के बारे में कहता है। राष्ट्रीय पर्यावरण नीति, 2006 भी ecosystem conservation में वेटलैंड की भूमिका दर्शाती है। इस नीति में वेटलैंड्स conservation के लिए रेगुलटरी बॉडी को स्थापित करने का उल्लेख किया गया है। वर्ष 2017 में पर्यावरण, वन और जलवायु परिवर्तन मंत्रालय ने वेटलैंड्स संरक्षण और प्रबंधन नियम बनाये जो कि पर्यावरण संरक्षण कानून 1986 के तहत किये गये है। इन नियमों की मदद से वेटलैंड्स के प्रबंधन की योजना तैयार की गई है । वेब पोर्टल 'वेटलैंड्स ऑफ़ इंडिया' (https://indianwetlands.in/) देश के वेटलैंड्स, परियोजनाओं, पहलों और प्रशिक्षणों के बारे में जानकारी प्रदान करता है।

भारत में बड़ी संख्या में स्थानिय पशु और पौधों की प्रजातियां वेटलैंड्स पर निर्भर हैं और उनके निरंतर अस्तित्व के लिए वेटलैंड्स आवश्यक हैं। वेटलैंड्स से हमारा जीवन प्रत्यक्ष-अप्रत्यक्ष रूप से प्रभावित होता है इसीलिए वेटलैंड बचाने में हमारा भी योगदान होना चाहिए।

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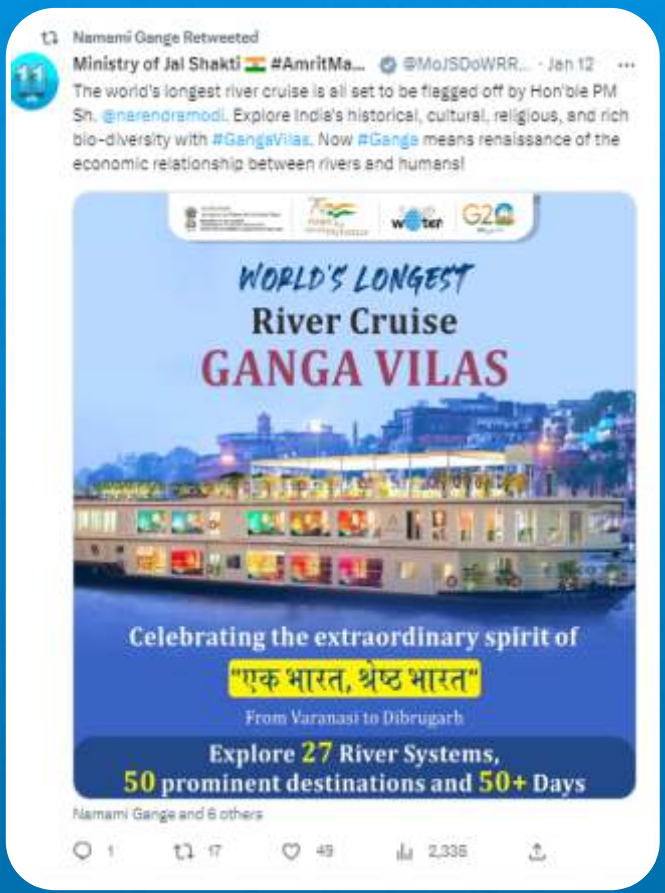
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Don't underestimate the power of RRR. Reduce wastage, Reuse wastewater and Recycle the used water is the mantra to conserve water. Kudos to #NaatuNaatu for the Golden Globes. #RRR
RRR
and RESPECT the existing resources!
Ram Charan and 2 others

In Newspaper

Adopt 'whole of govt, whole of country' vision: PM to states

Urges States To Join Hands To Attain Water Conservation Targets

Modi says Water Vision at 2047 important for next 25 yrs

PM seeks help to save water

DC CORRESPONDENT

Prime Minister Narendra Modi interacts with Microsoft CEO Satya Nadella in New Delhi on Thursday.

ALL INDIA CONFERENCE ON WATER

Centre, states to brainstorm over Water Vision 2047 from January 6

The move aims at making India a developed nation by 2047

OUR CORRESPONDENT

"In the blueprint for India-2047 plan, water assumes special significance which will take India to greater heights of development as water is not only intrinsic to life but also to growth and sustainable development"

जन भागीदारी से ही हो सकते हैं जल संरक्षण के प्रयास सफल

• पीएम ने राज्यों के जल मंत्रियों के पहले राष्ट्रीय सम्मेलन को वीडियो कांफ्रेंस के जरिए किया संबोधित

शेखावत से मिले मनोहर

चंडीगढ़। सतलुज-यमुना लिंक नहर के मुद्दे पर हरियाणा और पंजाब के मुख्यमंत्रियों की बैठक हुई। इससे पहले मुख्यमंत्री मनोहर लाल ने केंद्रीय जल संसाधन मंत्री गजेंद्र सिंह शेखावत से भेंट की। बैठक में कई मुद्दों पर चर्चा की गई। इस मौके पर वरिष्ठ अधिकारी मौजूद रहे।

Meeting on SYL ends in stalemate as Punjab, Haryana stick to old stance

Punjab CM Mann reiterates 'not a drop to share'; Haryana counterpart Khattar says 'will inform SC'

EXPRESS NEWS SERVICE

EXPLAINED: The canal of contention

Significant goals achieved under Namami Ganga plan: Jal Shakti Minister

OUR CORRESPONDENT

NEW DELHI: While chairing the National Ganga Council meeting, Prime Minister Narendra Modi spoke about ways to enhance cleanliness efforts, including expanding the network of sewage treatment plants in smaller towns.

Emphasising ways to enhance various forms of herbal farming along the Ganga, the PM said that the purity of Maa Ganga is our common heritage and also our responsibility as our forefathers have given us a precious heritage and it is our destiny to hand over this heritage to future generations in the same condition and with same purity.

PIC: MPOST

The Ganga council meeting was held on December 30 in Kolkata and PM Modi chaired the meeting through video conferencing.

On the occasion, Union Jal Shakti Minister Gajendra Singh Shekhawat said that under the leadership of PM Modi significant improvement has been achieved in all verticals under the Namami Ganga programme.

The minister further said that several major initiatives have been initiated under Arth Ganga that primarily aims to establish a people-river connection through the "bridge of economy" and develop Namami Gange as a self-sustainable river rejuvenation model for the entire country.

Shekhawat said that novel initiatives have been undertaken including the promotion of natural farming, reuse of treated water and sludge, livelihood generation, institutional capacity building, etc.

In Newspaper

शिवराज बोले–जल प्रबंधन का ऐतिहासिक उदाहरण है भोपाल

भोपाल। मध्य प्रदेश के मुख्यमंत्री शिवराज सिंह चौहान ने कहा, भोपाल जल प्रबंधन का ऐतिहासिक रूप से अनूठा उदाहरण रहा है। राजा भोज द्वारा 10वीं शताब्दी में बनाई गई बड़ी झील आज भोपाल की एक तिहाई जनता को पेयजल की आपूर्ति कर रही है।

प्रदेश के बुंदेलखंड क्षेत्र में दो हजार जल संरचनाएं विद्यमान हैं। यह हमारा सौभाग्य है कि प्रधानमंत्री नरेंद्र मोदी का नेतृत्व हमें प्राप्त हुआ और जल संरक्षण एवं प्रबंधन के लिए भी हमें उनका मार्गदर्शन प्राप्त हो रहा है।

सीएम चौहान ने कुशाभाऊ ठाकरे सभागार में जल संरक्षण और संचन के प्रतीक स्वरूप छोटे घड़ों से एक बड़े घड़े में जल अर्पित कर कार्यक्रम की शुरुआत की। शिवराज ने कहा, मध्य प्रदेश में जल संरक्षण और उसके मितव्ययी उपयोग के लिए संवेदनशीलता के साथ गतिविधियां संचालित की जा रही हैं। प्रदेश में वर्ष 2003-04 में सिंचाई क्षमता सात लाख 50 हजार हेक्टेयर थी, जो अब बढ़कर 43 लाख हेक्टेयर हो गई है। हमारा लक्ष्य 65 लाख हेक्टेयर क्षेत्र में सिंचाई क्षमता का है। जल के मितव्ययी उपयोग के लिए पाइप लाइन और स्प्रिंकलर सिंचाई सुविधा उपलब्ध कराई जा रही है। एजेंसी

जल संरक्षण कार्यक्रम की शुरुआत करते सीएम शिवराज। एजेंसी

पानी को लेकर ग्राम पंचायतें अगले पांच साल के लिए योजना तैयार करें: मोदी

उद्योग और खेती सेक्टर्स को पानी बचाने के लिए जागरूक करने की जरूरत

जल संरक्षण के लिए राज्यों के प्रयास सामूहिक लक्ष्य को पाने में सहायक होंगे

जल-प्रबंधन का ऐतिहासिक और अनूठा उदाहरण है भोपाल

माइक्रो स्तर पर करना होगा जल का प्रबंधन

आज पेड़ लगाएंगे और नाम देंगे वाटर विजन गार्डन

India's groundwater governance is in better shape

Subodh Yadav
is Joint Secretary, Department of Water Resources, River Development and Ganga Rejuvenation, Ministry of Jal Shakti, Government of India

Data show that India, with nearly 18% of the world's population, occupies about 2.4% of the total geographical area and consumes 4% of total water resources. A World Bank report says that India is the largest groundwater user. A rapidly growing economy and population are straining the country's groundwater resources.

As a vast country, India has distinct and varying hydro-geological settings. Groundwater is the backbone of India's agriculture and drinking water security in rural and urban areas, meeting nearly 80% of the country's drinking water and two-thirds of its irrigation needs. Groundwater is pivotal to India's water security. The fact that the theme of UN World Water Day 2022 was 'Groundwater, Making the Invisible Visible' is a reflection of the importance given to the resource across the globe.

The central government is working to achieve the goal of sustainable groundwater management in collaboration with States and Union Territories. In this process, certain important deliverables have been identified that include a reduction in groundwater extraction to below 70%, increasing the network of groundwater observation wells, installing digital water level recorders for real-time monitoring, periodic monitoring of groundwater quality, aquifer mapping and data dissemination, having better regulation of groundwater extraction by industries, and promoting participatory groundwater management and even periodic groundwater resource assessment.

In May 2019, a much-needed step of policy reform was done under the leadership of the Prime Minister with the creation of Jal Shakti Ministry (a merger of the erstwhile Ministries of Water Resources, River Development and Ganga Rejuvenation along with Drinking Water and Sanitation). This was to give impetus to the management of water resources with special focus on demand and supply management. Realising the importance of community participation, the Jal Shakti Abhiyan was launched subsequently to transform Jan Shakti into Jal Shakti through asset creation, rainwater harvesting ('Catch the Rain' campaign) and extensive awareness campaign.

A scientific approach

Initiatives have also been taken for the effective management and regulation of groundwater, examples being the Atal Bhujal Yojana (ABY) and the National Project on Aquifer Management (NAQUIM). With the goal of "participatory groundwater management", ABY looks to inculcate behavioural change made possible by incentivisation. NAQUIM, which is nearing completion, envisages the mapping of sub-surface water bearing geological formations (aquifers) to help gather authentic data and enable informed decision-making. Around 24 lakh square kilometres of the country has been mapped from the available mappable area of nearly 25 lakh sq. km. A heli-borne based survey (state-of-the-art technology), has also been used along with traditional exploratory methods for rapid and accurate aquifer mapping. The remaining area is likely to be mapped by March 2023. Region-wise aquifer management plans are being prepared and shared with States.

There are around 65,025 monitoring stations in India, which include 7,885 automated stations. The numbers are set to go beyond 84,000; in this, the number of automated stations will rise to over 35,000, with a special focus on identified high groundwater extracting industrial and urban clusters and groundwater stressed regions. Besides other quality-related exercises, samples from fixed locations are obtained to check for the presence of heavy and trace metals. Dynamic groundwater assessments will be done annually now and a groundwater estimation committee formed to revise the assessment methodology. A software, 'India Groundwater Resource Estimation System (IN-GRES)', has also been developed.

The completion of groundwater assessment in 2022 in about five months (against the two to three years) shows that a time-bound and scientific approach is being adopted to monitor precious water resources. The findings of the groundwater assessment also indicate a positive inclination in the management of groundwater.

According to the latest assessment, there has been a 3% reduction in the number of 'overexploited' groundwater units and a 4% increase in the number of 'safe' category units as compared to 2017. There was an improvement in groundwater conditions in 909 units. The assessment also showed a reduction in annual extraction (of about 9.53 billion cubic meters); the data for irrigation, industrial and domestic use, respectively, is 208.49 BCM, 3.64 BCM and 27.08 BCM. Overall extraction now a declining trend, of about 3.25% since 2017.

Some of this success may be attributed to implementation of comprehensive groundwater guidelines in 2020 for regulation in various sectors and making the processes of issuing a no-objection certificate transparent and time-bound using a web-based application. The government's interventions in enabling a positive impact on the overall groundwater scenario in India, reflect the spirit of cooperative federalism in managing this precious resource. That around 9.37 BCM of additional groundwater potential was created through artificial water conservation structures is an example of this impact.

Need for source sustainability

As one of the fastest growing economies, India will need adequate groundwater resources to manage anthropogenic pressures. It is important to ensure source sustainability to provide safe drinking water to all rural households by 2024, under the Jal Jeevan Mission.

Communities will have to manage their groundwater resources better with the help of various government agencies and non-governmental organisations. In the context of climate change, as uncertainties will increase with connection with groundwater resources, efforts must be made to find solutions that are essential for sustainable development. The groundwater resource assessment report 2022 shows a brighter future for groundwater situations in the country as the initiatives taken by various governments have begun yielding results. This is a new beginning and steps must be taken to make India a water surplus nation, thus fulfilling the objective of a key United Nations Sustainable Development Goal, of water for all.

केंद्रीय जलशक्ति मंत्री गजेंद्र सिंह शेखावत ने कहा...

16 हजार करोड़ का निवेश भारत पानी के क्षेत्र में कर रहा

यूपी में 25 फीसदी ग्रामीण परिवारों तक अब नल से जल

‘A drop of water is worth more than a sack of gold to a thirsty man.’

School

More recently, water shortage has become an issue of growing importance all over the world. It is now known that water has become one of the most debatable resources of the future, whereas it is becoming limited and requires better and more cautious consumption in the future. Managing our use of water in a sustainable manner should positively contribute to the goals of sustainable development.

Allenhouse Public School, Panki, Kanpur (U.P.) is guided by the principles of conservation, maintenance of water quality, sustainability and equitable access. Sustainable and judicious use of water has been ensured by cultural adaptation to water availability through water conservation technologies. Only 8% of the water received from rains in the entire year is harvested in our country and our school is proudly contributing to it.

Water education in the school is integrated into environmental education, with a special focus on inculcating critical thinking among students on ideas around sustainability and equity, and to generate a curiosity among children about the natural environment. The school imposes regulatory measures to prevent the misuse of water.

The roof catchment where rain water is collected in simple vessels at the edge of the roof and land surface catchment involves improving runoff capacity of land surface through various techniques including collection of runoffs with drain pipes and storage of collected water. The school has two storage tanks/ground water-recharge systems for collecting the rainwater using gutter below the ground. A conveyance System is used to collect rain water, water droplets from Air-conditioners, and rejected water from the RO system to the storage tanks

The school has a swimming pool with a water recirculation system i.e. the water is recycled from a water purification system. The pool is filled with water only once during the season. Floating particles are removed from water in a sand-filter. The sand-filter is back-flushed periodically. Finally, pollutants are discharged into the sewer. The school has prioritised and designed a water saving solution in its washrooms. The washrooms here are equipped with water saving products that include self-closing taps and sophisticated flushing systems. The school is situated in one of the lush green locations of the city. There are 37 big trees, 505 plants; and 175shrubs inside the premises. 37 big trees add to the beauty of the school surrounding its boundary wall. It also has a vegetable garden within the school campus where they grow seasonal vegetables.

Apart from the above, the students are conditioned with the habit of conservation and re-use the plain water and also spread information about the same. Quick showers, fixing of leaky taps at home, using one utensil for drinking water, not filling the water cup to the brim, and using waste water for cleaning utensils at home and collecting rainwater are some of the crucial activities promoted for water conservation. Despite the pandemic caused by Covid-19, in the current session (2020-2021), the school has organised a number of competitions (virtually) related to water conservation for our students- Poster Making on the theme ‘Water, water everywhere, nor any drop to drink’; along with Inter-house Essay Writing Competition and Inter-Class Debate Competition on the theme of “There is only life till there is potable water on our blue planet, Earth”.

ग्लोबल ग्रीन्स एनजीओ

NGO






जल है तो कल है इस बात की जानकारी सबको है लेकिन इसके संरक्षण पर अमल हर कोई नहीं करता। हमें यह नहीं भूलना चाहिए कि जल-संकट का समाधान जल के संरक्षण से ही है। हम हमेशा से सुनते आये हैं "जल ही जीवन है"। जल के बिना सुनहरे कल की कल्पना नहीं की जा सकती, जीवन के सभी कार्यों का निष्पादन करने के लिये जल की आवश्यकता होती है। ग्लोबल ग्रीन्स नामक NGO ने जल संरक्षण, स्वच्छता व पर्यावरण के क्षेत्र में कई कार्य किए गए है, जिस पर जल चर्चा के इस अंक में आज हम बात करेंगे।

ग्लोबल ग्रीन्स को 22 दिसंबर 2010 को एक पंजीकृत समाज के रूप में स्थापित किया गया था। ग्लोबल ग्रीन्स संस्था ने पर्यावरण को प्रदूषित करने वाले प्रत्यक्ष या अप्रत्यक्ष रूप से जिम्मेदार कारकों के बारे में समाज के बड़े वर्ग में जागरूकता फैलाने का कार्य किया है। इसके साथ ही गंगा नदी की गुणवत्ता को बनाएं रखने के लिए, ग्लोबल ग्रीन्स ने विश्व प्रसिद्ध कुंभ मेला 2013 के दौरान राष्ट्रीय गंगा नदी बेसिन प्राधिकरण के साथ काम कर अपना अहम योगदान दिया। ग्लोबल ग्रीन्स एनजीओ के तहत पवित्र नदी गंगा के संरक्षण के बारे में जागरूकता फैलाने के लिए "संगम से उद्गम यात्रा" (मूल से संगम तक की यात्रा) का आयोजन किया और इसके साथ ही "गंगा रन" व वर्षा जल संचयन नामक कार्यक्रम भी आयोजित किए। ग्लोबल ग्रीन्स संगठन ने विकास प्राधिकरणों, नगर निगमों, स्कूलों, कॉलेजों, अस्पतालों और गेस्ट हाउस आदि जैसे निकायों के छतों पर रूफ टॉप वाटर हार्वेस्टिंग सिस्टम स्थापित करने के आयोजन बनाएं। ग्लोबल ग्रीन्स ने नगर निगम, इलाहाबाद के सहयोग से "नमामि गंगे" परियोजना को सफलतापूर्वक पूरा किया। संस्थान ने यूएनडीपी 2009-2011 द्वारा प्रायोजित "स्वस्थ नदी जल सूचकांक" पर एक परियोजना को सफलतापूर्वक पूरा किया। संगठन की प्रमुख उपलब्धियों में उत्तर प्रदेश में मूर्ति विसर्जन पर प्रतिबंध और उच्च न्यायालय की मदद से प्लास्टिक और पॉलीथीन पर प्रतिबंध के कार्य किए गए। नगर निगम इलाहाबाद की नोडल एजेंसी के समन्वयक के रूप में स्वच्छ गंगा के लिए एक राष्ट्रीय मिशन शुरू किया व गंगा, यमुना की स्वच्छता के क्षेत्र में सराहनीय कार्य संस्थान द्वारा किए गए।

हम इस संस्था के बेहतर, उज्जवल और जल समर्थ भविष्य की कामना करते है और आशा करते है कि देश के अन्य संस्था और नागरिक ग्लोबल ग्रीन्स संस्थान से जल समर्थ भारत बनाने की प्रेरणा ज़रूर लेंगे।

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वर्षा

मेघों से बूंदों की बौछार
देती धरा पर जीवन को विस्तार
बूँद – बूँद जीवन, बूँद – बूँद यौवन
बूँद – बूँद सावन, बूँद – बूँद उत्सव अपार
क्या यही है मर्म जीवन का ?
क्या यही नहीं चरम सृष्टि का ?

मेघों से बूंदों की बौछार
देती धरा पर जीवन को विस्तार

बरसे घटा तो भरें जलाशय
नव जीवन को देते आश्रय
भर जाता धरती का आँचल
जलचर – नभचर पुलकित चंचल
प्रकृति का यही नैसर्गिक उपचार

जब मेघों से बूंदों की बौछार
देती धरा पर जीवन को विस्तार

किन्तु क्यों यह प्राकृतिक तंत्र, अब ध्वस्त हुआ जाए
वर्षा का यह अमृत जल, अब क्यों न प्यास बुझाए
मेघ वही बरखा वही, पर चातक अकुलाए
रिमझिम झरता यह पावन जल, भूतल क्यों पहुँच न पाए

सावन बरसे भादो बरसे, संचय न हो पाए
प्राकृतिक इस जल चक्र को, किसने दी नज़र लगाए
कहीं बाढ़ तो कहीं सुखाड़, विपदा गहराती जाए
जल संकट या जल से संकट, यही समझ न आए

अब मानव की लघु दृष्टि ने, उसके दंभ को गिरा दिया
शहरीकरण, औद्योगिकरण ने अपना कलुष रंग दिखा दिया
हमने जल जीव तंत्र को स्वयं ही दूषित कर दिया
और तालों के तल स्त्रोतों को गाद जमा बाधित किया

हमने ही स्वार्थी बन भूजल का अतिदोहन किया
सारे जलस्त्रोतों का अपिष्ट जल से शोषण किया
जिस क्षण जल तंत्र को हमने मूल तृण तक भेद दिया
उस पल ही जल संकट को भी स्वयं निमंत्रण भेज दिया

अब किसको दोषी ठहराएँ, किस पर यह अभियोग लगाएं
अपने ही कुत्सित कर्मों का नाम वैश्विक ताप बताएं
हमने अपनाई जीवन शैली कितनी मलिन और कितनी मैली
प्रकृति के स्त्रोतों का जब हमने अतिभोग किया
जीवन की इस सतत गति का स्वयं ही अवरोध किया

बचा मात्र अब एक उपाय, करना होगा हमें प्रायश्चित,
पुनः जीवन की गति को करना होगा हमें सुनिश्चित,
जलस्त्रोतों के पारिस्थितिक तंत्र को पुनः सुदृढ़ करना होगा,
साफ़ नहीं, अब जल को फिर से जल करना होगा,

वैदिक विज्ञानाधारित रचनात्मक विकास,
से फिर देश हो जाए सज्ज,
प्रकृतिनिष्ठ सतत उत्थान से
पुनः विश्वगुरु का लहराए ध्वज,
वर्षा फिर से बने फुहार, फिर से दे जीवन विस्तार,
फिर से वही खुशहाली हो, फिर से वही दीवाली हो,

फिर वही हो वैदिक सृजन,
फिर वही पावन चिंतन,
पञ्चमहाभूतों का प्रण,
पुनः प्रबल हो मूल तृण,

फिर मेघों से बूंदों की बौछार,
दें पुनः धरा को जीवन को विस्तार
पुनः हो धरती प्रसन्न, पुनः जल से बने अन्न ॥

Abhineha Shrivastava
Vaidic Srijan LLP