

Government of India  
Ministry of Jal Shakti  
Department of Water Resources, River Development and Ganga Rejuvenation  
(National Water Mission)

**Proceedings of the Twenty- Fourth (24<sup>th</sup>) Water Talk held on 19<sup>th</sup> March 2021**

- National Water Mission (NWM) has been organizing a seminar series-‘Water Talk’ -to promote dialogue and information sharing among participants on a variety of water-related topics. The ‘Water Talk’ is intended to create awareness, build capacities of stakeholders and encourage people to become active participants in the conservation and saving of water. NWM has so far organized 23 ‘Water-Talks’ on a range of topics dominating the sector concerns.
- **Twenty -Fourth(24<sup>th</sup>) Water Talk** in this series was held on 19<sup>th</sup> March 2021 on a virtual platform- ‘CISCO WEBEX’ due to outbreak of Covid-19 pandemic in the country. The talk that witnessed more than 650 participants was organized by NWM with the support of Water Digest, the official media partner for the webinar. The talk was delivered by **Shri Ravindra Desai, Director(Operations), Govt & Corporate Relationships, Art of Living’s River Rejuvenation Projects**. Shri G. Asok Kumar, Additional Secretary and Mission Director, NWM and officials of NWM attended the webinar along with more than 650 participants. The webinar included participants from across the country from various spheres of life. The talk was also live-streamed through Facebook on the 11 social media platforms of various organizations under DoWR. It was noted that there were over 15,000 total viewers in this e-water talk
- Shri G. Asok Kumar, Additional Secretary & Mission Director, NWM welcomed the participants and introduced NWM along with its 5 goals, 39 strategies and the successful campaigns like ‘SahiFasal’ and ‘Catch the Rain’. NWM, in collaboration with Nehru Yuva Kendra Sangathan (NYKS), recently launched “JSA - Catch the Rain” awareness campaign which will be implemented across 623 districts of the country. With the switch from the physical to digital platform, the reach of the talks have exponentially grown both geographically & numerically with people participating from all across the world from countries like Australia, China, Nigeria. Many water aficionados, eminent personalities including Padma awardees and individuals having done tremendous work in the water sector have been invited to deliver the talk in the past. The theoretical and practical experts shared their experiences on they transformed the lives of local communities through motivation and people engagement.
- The topic of the e-talk by **Shri Ravindra Desai** was “**River Rejuvenation at Art of Living**”. Water crisis subject and water-related problems have been prevalent for quite some time. The speaker congratulated the Ministry of Jal Shakti for its latest ‘Catch the Rain’ initiative. India is a tropical country with high dependence on rainfall. River Rejuvenation process involves the reviving or rejuvenating of the entire riverine ecosystem including the set of rivers, streams, rivulets, from catchment area to valley. Along with it other water bodies, tanks and forest cover, collectively establish a continued hydrological cycle which helps maintain all the said ecological assets in the

riverine system. The invisible entity that impacts the cycle is groundwater which is interconnected with the flow of surface water. However, not much efforts are being made towards balancing the hydrological cycle. Water problem must be addressed holistically.

- The 'Art of Living', an organization with lakhs of volunteers started working towards river rejuvenation and developed a good action plan for 'Kumudhvathi' river's revival. Lakhs of volunteers started working towards the rejuvenation of river Kumudvathi in Bangalore after Guruji's call for a "Better India" campaign. Huge number of volunteers started cleaning old water pools, ponds, tanks and Kalyanis (stepwells in the area), thus turning the people's movement into a massive campaign. Many weekend volunteers helped raise funds through their company's CSR funds. The organization had eight CSR partners including Intel and HIL, that funded almost 70% of the project. Parellely, Shri Desai and his colleague started working in villages to help farmers with the water crisis.
- They started working in a rain shadow area which received very low rainfall and receding groundwater levels in Chikmagalur, Karnataka. To eradicate the problem, a couple of recharge structures and water pools were made, streams and water networks were cleaned and greywater treatment was carried out. The efforts saw a drastic improvement in water availability beyond monsoon. The movement soon turned into a gained attention and of people from neighbouring villages. Similtaneously, two major activities were being undertaken; the rejuvenation of Kumudvathi river of 468 sq km and rejuvenation of Vedavathi river in Chikmagalur. The massive Vedavathi river was 5547 sq km in area and flows across five districts covering more than 1000 villages. Almost an amount of Rs 11 lakh was spent in each village to work towards revieal of the river. Corporate funds were used to revive water pools, rivulets and undertake greywater treatments. An entire watershed approach was taken up under the guidance of the national director of the organisation.
- Arrangement of funds was a huge task at hand and the organistaion had to knock the doors of government agencies, 'Jal Nigams', water resource officers and ministries for support. A lot of convincing had to be done at their end to prove their capacity to work in water as 'Art of Living' was primarily viewed as a 'Yoga' organisation. A concrete plan was presented by the orngnaisation. Rejuvenation work of 'Kumudvathi' began after the organisation sought Ministry's approval. The 200 crore worth project was funded through CSR and MGNREGA funds, a first of its kind. The team worked relentlessly to understand the problems on ground in its entireity and propose solutions to the Ministry accordingly. The Vedavathi is a massive river covering an area of 5447 sq km and flowing through five districts namely; Chikmagalur, Chittrakoota, Hassan, Tumkur and Davanagere.
- The work was started after interaction with local farmers and understanding the issues of the area. The Rural Development and Panchayati Raj from the state and centre visited the site to monitor the progress of phase one of the campaign. Their work gradually stretched beyond Karnataka and spread across 47 rivers located in th states of Maharashtra, Karnataka and Tamil Nadu. The organisation's work has touched more than 6000 villages in the country. Presently, they are in talks with the governments of Uttar Pradesh, Odisha, Rajasthan and Gujarat.
- Many believe that the reason for the lack of water is the lack of rainfall. However, if the data of overall amount of rainfall is studied thoroughly it will be realized that our

country receives the same amount of rainfall as it used to perhaps 20, 50 or even 100 years ago. As the 'Art of Living' team conducted studies to understand the deeper water crisis, they learnt that the natural hydrological cycle has been disrupted leading to the disruption of natural processes of evaporation, precipitation and condensation. The average amount of rainfall is the same around the year as it used to be 100 years ago. However, the time duration has become erratic, meaning the amount of rainwater falling in a span of 45-50 days in a rainy season, now it falls just within 10 days. The quanta of rainwater is the same but the distribution is a problem. This means that after raining heavily for one day there may be no rainfall in the next 10 days. There are longer intervals between two rainy days causing the whole hydrological cycle to be disrupted. Also, the lack of green cover and grasslands leads to the erosion of the whole top soil with siltation occurring in the water bodies and hence, decreasing water percolation. In an ideal hydrological cycle, the rainwater should percolate into the ground and continue to flow as rivers, streams and filling up water bodies. Although dependency on groundwater has been constantly increasing, the percolation capacity, storing capacity and catchments have been disturbed due to green cover loss. Parellely, global warming has contributed to change in weather patterns, rainfall patterns, causing massive disruption in the natural cycle.

- Almost 80% of farming water requirements are met by extracting groundwater leading to depletion of underground aquifers. Due to the drastic changes in rainfall patterns, a massive downpour on a single day causes a huge run off. Hence, it is pertinent to slow down and contain the run off to create natural balance. In earlier times, the presence of grasslands, trees, and humus content allowed adequate percolation in the soil. This calls for the inclusion of soil conservation measures under water conservation. It should be ensured that the water flows slow and percolates at every point in time as it flows and not just at one place in an area. Percolation of rainwater is pertinent in maintaining water bodies.
- In order to slow down the run off, the 'Art of Living' volunteers created boulder check dams to slow down the water speed and reduce soil erosion. Benefit of creating boulder check dam is that it's a permeable media that allows water to flow. They are put into a position where they get interlocked which helps in reducing the speed of water. Another way of achieving this is through drainage treatment of streams in the river basin. As a result of gravity, the water would flow all over the region percolating at every point in time. The best solution achieve this is by constructing recharge structures in the basin and let water flow naturally without it getting spread across.
- The 'Art of Living' team constructed recharge structures to conduct drainage on the streams and rivulets after considering the width of the stream or rivulet. The 20 feet deep constructed recharge and injection wells(or recharge shaft) enabled the flow of water and let the parched earth suck the water in and rejuvenate the shallow area and the aquifer zones(unconfined and semi-confinedfeet). In case of deep aquifer zones, a tubewell was created within the same recharge well which lets water percolate upto 200-300 feet. In places like Tumkur, Chitradurga and Kolar where there are large number of tanks and water bodies, water from just one rainfall gets distributed into these huge water bodies. Percolation is however less due to the presence of silt and since it's a thin surface distribution, gravity doesn't help in percolation either. Hence, in the case of erratic rainfall patterns, small water pools are created in the entry of the huge water tanks. This allows the water to get collected and stored in the water pool rather than

getting distributed over the thin surface. This improves water percolation and helps even avoid evaporation losses by retaining the water for a longer period of time (even during summers). Groundwater saturation occurs and water stays in small water pools. The idea is to slow down the run off, ensuring recharge across the basin area. This is a sample solution in case of hard rock terrain.

- All restoration activities were undertaken with the help of MGNREGA funds and CSR funds put together. In most urban and semi-urban area where MGNREGA funds couldn't be put to use, CSR funding had supported the project. The entire hydrological basin of Vedavathi river was rejuvenated through MGNREGA funds. The organization has also worked with plenty farmers on cultivation lands by creating bunds, trenches, farmer ponds based on the type of soil, slope and hydrological geology of the area. Tree plantation is by far the best approach towards water percolation or groundwater upswell. All river rejuvenation activities undertaken by the organisation have included tree plantation across the entire basin. Tree plantation across the river basin was supported by many departments, public institutions and saw participation from various companies and corporates. An eco-restoration cell should be established in every gram panchayat to promote plantation and improve green cover.
- The 'Art of Living' has revived 47 rivers, constructed 21,000 structures, increased water storage capacity by 25 crore Litres and benefitted the lives of 17 million people across 6000 villages. They are presently working on the Indo-Gangetic plain and also partnered with the Karnataka government to worked on water-related issues in the entire state. The talk was followed by a session of questions and answers wherein members from the audience were invited to discuss their queries with the speaker. The webinar saw some interesting and unique questions from people across the country.

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