Published Date:	23 Mar 2023	Publication:	The Economic Times [Mumbai]
Journalist:		Page No:	14
Circulation:	261,000		

An impending water crisis can cripple our agriculture sector if collaborative action isn't taken ASAP

It's Still World Water Day

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The world is heating up as climate change looms large, destroying lives and livelihoods. From a significant drop in food and water security, to energy crises and erosion of natural life, global warming is a bane impacting every aspect of human life. According to an India-specific fact derived from data in an October 2022 Lancet report, between 2000-04 and 2017-21, India saw a 55% increase in annual heat-related deaths of people older than 65 due to extreme heat. Globally, heat-related mortality for the same vulnerable cohort rose by about 68% during the same period.

Then there is the dual issue of frequent floods and extreme droughts that has seen the subcontinent's poor suffer the most as most recently witnessed in Pakistan's devastating floods last year. In India, this twin menace directly affects over 60% of its population dependent on agriculture for their livelihood. All this makes it critical for nations to take concrete action to tackle climate change. And a large part of that action is focused on water resources.

Consuming over 80% of the country's freshwater, agriculture in India is one of the key areas being disrupted by climate change. Farmers often rely on groundwater resources to secure their crops against uncertain weather patterns. According to the Water Resources Group (WRG), by 2030, India will only have 50% of the water it needs. This imminent crisis is likely to be the worst in India's history and will disproportionately impact agriculture.

GoI has already taken up several initiatives to address this approaching crisis. It has launched initiatives ranging from national action schemes such as the National Rural Employment Guarantee Scheme and National Water Mission, groundwater management programmes like the Atal Bhujal Yojana, and schemes to promote responsible water use in agriculture such as the Pradhan Mantri Krishi Sinchayee Yojana (PMKSY).

Businesses, too, are increasingly adopting responsible and sustainable practices to lessen their environmental and water footprint. Hindustan Unilever Limited (HUL), through the Hindustan Unilever Foundation (HUF) and its partners, for instance, is working with farmers in agriculture and water-dependent communities, and has created nearly 693 billion litres of water potential in 2021-22.

While this is a small step towards securing a water future in agriculture, a lot more needs to be done. Significant action must be taken to drive behaviour change among communities. Helping promote regenerative farming systems is another way to achieve large-scale benefits and deliver better outcomes, especially to small farmers.

About 2.5 million farmers in India are already practising regenerative agriculture, which reduces dependence on external inputs by adopting indigenous and locally relevant farming techniques. Industry and the private sector need to back up government schemes by developing and sustaining local markets where farmers produce crops ecologically suited to the region.

Any work done around water and food security requires farmers and village communities to change their behaviour and approach to cultivation. This takes time. But the impact it leaves behind is lasting. If we de-risk farmers' produce and help them get a good price, they will be more willing to adopt sustainable practices and technologies, reduce water intake and make agriculture viable in the long term. The concerted focus on crops such as millets, which are known to be hardy, nutritious and water-efficient, is a step in this direction.

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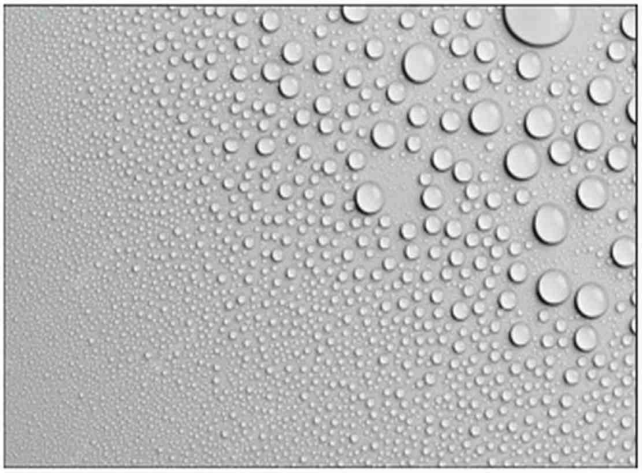

High on the moist-do list

According to the Water Resources Group, by 2030, India will only have 50% of the water it needs for agriculture

Collaborative action involving multiple stakeholders, right from government departments to grassroots-level organisations, is necessary for building scale around models that have been effective in regional contexts. For instance, the MGNREGA scheme approach of leveraging technology through Bhuvan, the Indian Space Research Organisation (Isro)-developed web-based utility that allows users to explore a set of map-based content, using remote sensing (RS) and global information systems (GIS) to plan water conservation structures along with effective government and community engagement models needs to be replicated across the country.

The startup ecosystem is nimble and throws up innovative solutions that directly impact water consumption in farming. An Internet-of-Things (IoT)-enabled soil moisture tool, for instance, switches off pumps when the desired level of saturation is reached. Industry, which often has a close involvement with relevant local stakeholders, can help these startups reach the farmers with their solution.

Finally, there is immense wisdom in many indigenous practices. Marrying these with best practices and technology has been a potent mix of enhancing productivity while consuming significantly lower levels of water. With concerted, integrated efforts, we will be able to help and support our farmers to make informed choices on what they produce and *how*, alongside enabling the right networks that fetch them fair prices for their produce.

Let's work towards ensuring that WRG's 2030 projection remains just that — a projection, and not dire, impending reality.

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