

BusinessLine

We're fast running out of water

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More crop per drop: That's what SRI rice is all about

Promoting water saving technologies in paddy and shifting to pulses and oilseeds can ma

The UN has selected “water and jobs” as the central theme for this year’s World Water annually throughout the world on March 22. But, water resources are under more seri before. Water is reportedly the world’s most exploited natural resource.

As per the latest National Aeronautics and Space Administration (NASA) satellite data largest aquifers are running too fast to be replenished. This is extremely troubling, con about a third of world’s water from the aquifers.

The United Nation’s World Water Development Report on Water for a Sustainable Wc claim that world would face a 40 per cent shortfall in freshwater in as soon as 15 years.

The water tables are also dropping globally at an alarming rate. For instance, NASA’s f water table is declining alarmingly at a rate of about 0.3 metres per year. Falling water users to use expensive deep-water equipment which has consequently put the groundv

At the backdrop of such a precarious situation, the World Economic Forum in its Glob water crisis as one of the three biggest challenges of the world.

A latest study has backed up these findings estimating that about four billion people face them about one billion live in India.

So scarce is the global water supply that the United Nations World Water Development Sustainable World (2015) has reportedly warned that by 2030 only 60 per cent of the demand will be met by the existing resources at the current rate of use.

Climate change is expected to worsen the situation further by distorting the geographical distribution of rainfall resulting in floods and excessive dry seasons.

Alarming withdrawals

As per a very crucial study by Mekonnen and Hoekstra (2015) of the University of Twente, about 20 per cent of Indians face a severe scarcity of water for at least a month every year. And as per the United Nations World Water Development Report about 22 out of 32 Indian cities face daily water shortages.

The precious groundwater resources are alarmingly under severe stress today. Of the 1,500 Central Ground Water Board (CGWB) wells, about 802 are over-exploited, about 523 are severely over-exploited and 175 are critical.

Indiscriminate withdrawals have been reported from the agriculturally well-developed states of Andhra Pradesh, Uttar Pradesh, Punjab and Haryana.

Water scarcity is most likely to threaten the country's food security as well. Farmers in rural areas are unable to manage their crop cycles due to unavailability of both surface and groundwater.

In some regions, such as in Marathwada region of Maharashtra, acute water scarcity has forced farmers to sell off their lands and migrate to cities in search of better opportunities. Is this a sign of a major disturbance in the demand and supply curve or is it due to the mismanagement of water resources?

Besides increased population pressure, constant competing demand for water from housing, industry and energy sectors reportedly contribute to declining water availability.

According to the data published by the Ministry of Water Resources, the annual groundwater recharge is 221 BCM which 221 BCM is for irrigation use and 22 BCM is for domestic and industrial use. It is estimated that farmers are overdraw groundwater by keeping their pump sets switched on for long periods as they do not know when to interrupt the water flow.

As a result, inadvertently they often flood their fields that are causing further distress to the farmers. How can we do to bring this down dramatically?

More yield with less water

In order to secure the future of India's water resources, it is very important that certain measures be taken, especially in agricultural sector which consumes about 85 percent of the available water. Efficient water management is the need of the hour.

There is an urgency to compute the water requirements of different crops and introduce water-saving techniques like drip irrigation, sprinkler and system of rice intensification for irrigation on large scale.

The Economic Survey 2015-16 has also underlined that it is imperative that the country of water use in agriculture in the form of adopting such water saving technologies.

Various field level investigations prove that these technologies besides bringing about productivity, also save about 50 per cent of water and electricity per acre. In States such as Maharashtra and Tamil Nadu the drip irrigation method is found to be working very well.

Crop distribution needs a drastic change wherein the water-stressed states can shift from crops like paddy and sugarcane to pulses and oilseeds which would require less water,

Climate experts have predicted that there will be fewer rainy days but in those days there are chances of flooding. Therefore it is imperative for India to develop capacity to store and manage water.

In this regard the International Water Management Institute (IWMI) suggests that a number of ways to increase water availability include groundwater aquifer recharge, restoring natural wetlands, enhancing soil moisture and small ponds, and reservoir storage to increase water availability. Rainwater harvesting is one of the cheapest and most effective ways of augmenting water stock.

Despite an existing regulation which makes rainwater harvesting mandatory for all new buildings more than 100 square meters, few do it.

Let us pledge to conserve and manage tomorrow's water more sustainably that is being wasted today.

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Today is World Water Day

(This article was published on March 21, 2016)

Printable version | Mar 24, 2016 9:33:12 AM | <http://www.thehindubusinessline.com/opinion/were-fast-running-out-of-...>