

# It's time to tax groundwater use

Author - A Narayanamoorthy, P Alli , Published on - 15.1.2019



**With groundwater touching alarmingly low levels, the proposed Water Conservation Fee should help curb over-extraction**

In an attempt to discourage overexploitation of groundwater and ensure a more robust groundwater regulatory mechanism in the country, the Centre has proposed to slap for the first time a Water Conservation Fee (WCF) on groundwater extraction by all users of groundwater in the country, barring the armed forces, farmers and individual households.

As per the draft guidelines prepared by the Ministry of Water Resources, apart from the industrial units, all business establishments and infrastructure projects, such as residential complexes, office buildings, hotels and hospitals, have to pay WCF, which could vary from ₹1 to ₹100 per cubic metre of water extracted.

The enforcement of WCF comes close on the heels of the report of the Parliamentary Committee on Restructuring the Central Water Commission and the Central Ground Water Authority (2016) which highlighted the unsustainable over-extraction of groundwater. At a time when close to 32 per cent of the blocks have been classified as semi-critical or over-exploited by the Central Groundwater Board (CGWB), WCF is definitely a watershed moment in the groundwater sector.

Considering the pivotal role of groundwater in the country's food security and in alleviating poverty, WCF is definitely the much-awaited reform. Over the past three decades, groundwater has become the main source of irrigation and now accounts for over 65 per cent of the irrigated area in India.

The World Bank's report on *Deep Wells and Prudence: Towards Pragmatic Action for Addressing Groundwater Exploitation in India*(2010) underlined that groundwater-irrigated farms have twice the crop productivity than that of surface water-irrigated farms.

Who draws and how much

India is the world's largest user of groundwater, withdrawing about 250 cubic kilometres per year, more than twice that of the US. As per the latest assessment of the Central Ground Water Board, out of 447 billion cubic metre (BCM) of total replenishable groundwater available annually, 228 BCM is currently being used for irrigation, while 25 BCM is being used for domestic, drinking and industrial purposes.

The 5th Census of Minor Irrigation (2017) has underlined that in 661 districts of the country about 13 million dugwells and shallow tubewells and five million medium tubewells and deep tubewells irrigate about 38 million hectares (mha) and 23 mha of land, respectively.

Besides, the Standing Committee of Water Resources in its 23rd report on *Socio-Economic Impact of Commercial Exploitation of Water by Industries* (2017-18) has highlighted that about 85 per cent of rural drinking water schemes in about 17.14 lakh habitations in the country are based on groundwater as source; nearly 7,426 licences have been given to packaged drinking water plants in the water-stressed States of Andhra Pradesh, Gujarat, Karnataka, Tamil Nadu and Uttar Pradesh.

Not only this, many multinational beverages and packaged drinking water companies in various States reportedly draw about 6.5-15 lakh litres of groundwater per day against the permissible limit of 2.4 lakh litres. It is estimated that as much as 50 lakh litres of groundwater is extracted illegally on a daily basis by tanker mafia in most metropolitan cities.

The rate of groundwater extraction is so severe that NASA's findings suggest that India's water table is declining alarmingly at a rate of about 0.3 metres per year. According to a latest survey by the Central Groundwater Board (CGWB), Andhra Pradesh, Tamil Nadu, Kerala and Karnataka are in a worse state as far as groundwater decline is concerned.

The Standing Committee of Water Resources in its 23rd report (2017-18) underlined that by 2020, 21 major cities, including Delhi, Bengaluru and Hyderabad are expected to reach Zero Ground Water levels affecting access for 100 million people. The NITI Aayog in its *Report on Composite Water Management Index* (2018) has revealed that about 54 per cent of the country's groundwater wells have declined and most of the States have achieved less than 50 per cent of the total score in the augmentation of groundwater resources. Given such an alarming situation, what could be the possible consequence of over-extraction of groundwater?

If the present rate of groundwater depletion persists, India will only have 22 per cent of the present daily per capita water available in 2050, possibly forcing the country to import its water. The NITI Aayog's water report has warned that if the situation persists, there will be a six per cent loss in the country's GDP by 2050.

Falling groundwater tables will result in escalation of irrigation costs and, thereby, a rise in cost of cultivation. Up to a quarter of India's harvest has been estimated to be at risk due to groundwater depletion.

### **Way forward**

There is an urgent need to change the status quo with tough regulations. Besides appropriate pricing of groundwater, we require policies that promote judicious use of groundwater in agriculture as well. One of the ways to reduce groundwater extraction is by encouraging the adoption micro-irrigation techniques (drip and sprinklers). Drip and sprinkler irrigation can save about 50 per cent of water compared to conventional method of irrigation in water-intensive crops.

The Swaminathan Committee report, *More Crop and Income Per Drop of Water* (2006), has also recommended this option. Efforts also needed to institutionalise and strengthen community-based groundwater management. Generating awareness about the status of local groundwater resources, education and social mobilisation should form the core elements of community-based groundwater management. State governments need to take policy action to facilitate formation of Groundwater Users' Associations which possess the power to manage, maintain and distribute water resources efficiently. A groundwater literacy movement should be launched to highlight the irreparable consequences of its over-exploitation.

These proposed interventions have to be implemented diligently within the current framework along with WCF, as groundwater is too critical a resource to continue to be left unmanaged.

First published by [The Hindu](#) on 14 Jan. 2019