

India's Future in Water Security

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Summary

This article look at how the newly established Indian government plans to tackle one of the most challenging governance reforms that India faces: water security. The government launched the Jal Shakti programme, which aims at providing every household with piped water, interlinking India's rivers, cleaning the Ganges and ensuring the sustainability of the country's water sources. The task is monumental and it is only partially addressing India's pressing water needs.

Introduction

Chennai faced a severe water crisis in June 2019. With low rainfall experienced in Tamil Nadu during the 2018 northeast monsoon, as well as a lack of groundwater, the reservoirs supplying the city had dried up. However, this situation was not new for the city, having faced a similarly dry spell in 2003. With water scarcity in India not only localised in the city of Chennai, but an issue faced by many other states, the newly elected Modi government signalled that it will tackle the water crisis as a priority. The government launched Jal Shakti, a project aimed at solving India's water security issues and ensuring piped water to all households by 2024. In this paper, we will discuss the prospects of the project.

The Promise

Jal Shakti, which means Hydropower in Hindi, encompasses piped water for all households, the Namami Gange project (the rejuvenation and conservation of the Ganges River), and the sustainability of water sources in India. In the BJP's 2019 election manifesto, the party also committed to further interlinking India's rivers. The project thus aims at reforming water governance in India and ensure water security for domestic, industrial and agricultural consumption.

The Problem

A key aim of the Jal Shakti project is to ensure piped water for every household by 2024, which will be executed through the Jal Jeevan Mission. This is an extremely ambitious target. Presently, the percentage of rural households receiving piped water supply in India is 18 per cent, with the rate being as low as 1 per cent in the states of Bihar, Menghalaya and [West Bengal](#). Such a rate is alarming as lack of access to piped water – and the consequent need to rely on unsafe sources such as river and communal wells, leads to the spread of water-borne diseases such as cholera, diarrhoea and typhoid. These not only leads to over 10,000 deaths a year, but water-borne diseases have also resulted in a loss of over 73 million working days in [India](#).

Aside from the proliferation of water-borne diseases, the lack of water security in general has also caused over 200,000 deaths, as well as 600 million Indians to experience advanced

levels of water stress. This is expected to exacerbate in the future, with the current state of water infrastructure only able to meet half of the projected demand in [2030](#). Climate change will further aggravate the [situation](#). Moreover, with a majority of the population dependent on groundwater, it is alarming to note that India's groundwater depletion accelerated by 23 per cent between 2000 and [2010, and 21 cities are expected to run out of water by 2020](#).

The Prospects

The government seems to have made water security one of its key priorities and has proposed several initiatives to achieve it. One is a better management of rainwater harvesting. On 1 July 2019, the government launched Jal Shakti Abhiyan, which includes a drive towards the stepping up of rainwater harvesting efforts. The timely launch of the campaign allows it to capitalise on the southwest monsoon in the collection of rainwater. Presently, India harvests only approximately 8 per cent of its annual [rainfall](#).

Another initiative aimed at increasing the supply of water and diversify its sources is to increase the capacity of desalination plants. However, apart from the constraint which requires desalination plants to be within proximity to the coast, desalination is costlier than other sources of water.

Finally, other possibilities planned include the interlinking of rivers and the ramping up of greywater treatment and reuse. However, these methods are very capital intensive and the government might prefer to prioritise the provision of piped water to households, for both developmental and political reasons. With over 100 billion rupees (S\$1.98 billion) allocated for the National Drinking Water Mission for the year [2019-2020](#) to provide piped water to all households, financial constraints will limit the availability of resources for other water-related initiatives, which will have to rely on cheaper methods to ensure water security.

Conclusion

Akin to the Swachh Bharat campaign in Modi's first [term](#), Jal Shakti is expected to receive significant attention and focus from the central government. It remains to be seen whether the ambitious target of providing piped water for all by 2024 will be achieved in such a short period of time. Previous targets were routinely not met – the National Rural Drinking Water Programme, for instance, had a target of 35 per cent of rural households to have access to piped water by 2017, but current levels are just at 18 per cent. Furthermore, while access to piped water is an important, it is by no means the only water related challenge that India needs to face. Currently, India's exports consume almost four times the water usage than its households and [businesses](#). Hence, in light of the aggravating uncertainty over water security, India would also have to assuage the water usage of its crops and industries.

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