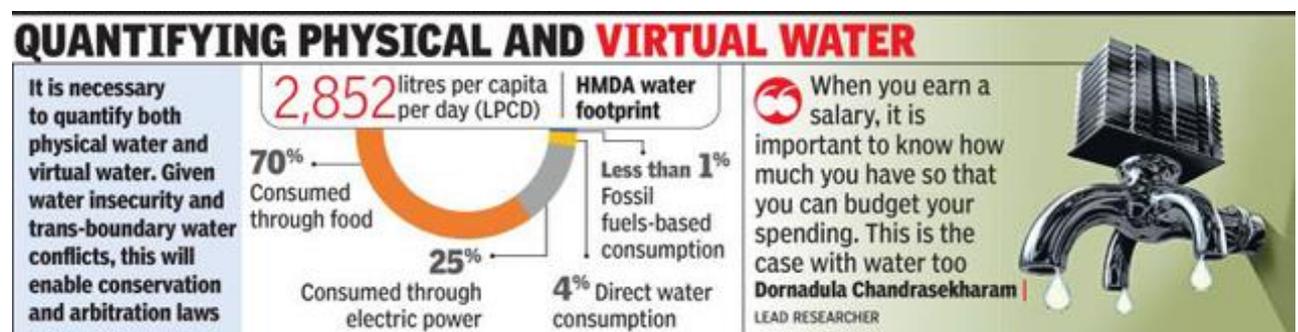


# IIT study examines city's hidden water guzzlers



The Study was led by Prof. Dornadula Chandrasekharam and his research scholar Dagoni Koteswar Rao

HYDERABAD: Residents of the city and surrounding areas are consuming more 'virtual water' than physical water, according to a study by IIT, Hyderabad. Virtual water is that which is consumed indirectly through food, agriculture, energy, and commercial products which are imported as well as sourced locally. The consumption-oriented study focuses on the Hyderabad Metropolitan Development Authority (HMDA) region. It finds that 96% of water is consumed as virtual water, and only 4% is ingested directly.



The average water footprint, which measures water that has gone into goods and services that we use, for the HMDA region stands at 1,041 m<sup>3</sup>/cap/year or 2,852 litres per capita per day (LPCD), states the study.

Of virtual water, most consumption was from the food industry (70%), followed by the electric power sector (25%). Surprisingly, fossil fuel sector used only 1% of the total water consumed.

The study was led by Professor Dornadula Chandrasekharam, visiting professor, department of civil engineering, IIT Hyderabad, and his research scholar Dagani Koteswar Rao. It was published in the reputed peer-reviewed international journal Sustainable Cities and Society.

Chandrasekharam said, “The obvious image of water consumption is direct water ingestion by human beings, but water footprint of humankind extends far beyond. Every single item that we use in our daily life, has used water at some part of its lifecycle. Water that is hidden in non-obvious human commodities is called ‘virtual water’.” The study also found that agriculture accounts for nearly 70% consumption of ‘physical’ water, urban areas consume 20 times more virtual water.

The variation of the water footprint across economic classes of consumers is also analysed. In absolute household food consumption as well as energy consumption, economic classes whose expenditure was Rs 2,460 a month and Rs 4,280 a month had most water footprint. This, the study says, is because maximum population of HMDA lies in these classes.

Speaking on the need for developing ways to quantify water usage, Dagani Koteswar Rao, said, “While there has been much research on managing direct water footprint in cities across the world, there are significant gaps in our understanding of indirect water footprint in Indian cities.”

The study does not focus on industries. It cites a lack of adequate trade data at city scale.

*Source: Times of India*

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