



## Virtual water trade and India's water future 2050

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Virtual water trade is increasingly recognized as a tool to address national and regional water scarcity. In the context of international (food) trade, this concept has been applied with a view to optimize the flow of commodities considering the water endowments of nations. Using the principles of international trade, it suggests that water-rich countries should produce and export water guzzling commodities (which indirectly carry embedded water needed for producing them) to water-scarce countries, thereby enabling the water-scarce countries to divert their precious water resources to alternative, higher productivity uses. While much progress has been made on quantifying virtual water flows between countries, there exists little information on virtual water trade within countries. This paper provides a first-cut estimate of virtual water trade between states in India in the backdrop of growing regional water scarcity and widespread policy concern.

The government of India has proposed a gigantic inter basin transfer project to transport water from the eastern states to western and peninsular India to mitigate the problems of floods and droughts and to ensure continued national food security. The National River Linking Project (NRLP) envisages linking 37 Himalayan and Peninsular rivers at a projected cost of US \$ 120 billion. In the process, it proposes to form a gigantic south Asian water grid which will handle 178 billion cubic metres of inter-basin water transfer per annum; build 12,500 Kms of canals; generate 34 giga-watts of hydro-power; add 35 million ha to India's irrigated areas and generate inland navigation benefits.

This paper provides a preliminary assessment of the potential of virtual water trade to act as an alternative to the proposed inter-basin water transfer and assesses policy options for promoting and enhancing water saving trade within the country.