

Looming Crisis for Humanity Not Oil but Water: The Indian Example

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Abstract

Almost four billion people face severe water scarcity worldwide. India provides a type example for the causes of this crisis and possible solutions. "Sensible" steps taken at one time to raise the standards of living and provide plentiful food for the population appear to have worsened the crisis many years later. Population growth, increased living standards, growing urbanization (considered public good) have all contributed to the water crisis, not just in India, but worldwide. In 1951 the Indian population stood at 361million; by 2025 it is expected to exceed China's at 1,461million. During this period the per capita water availability would have decreased almost four fold! The urban population has more than doubled (from less than 20% to 40%) causing metropolitan areas to grow outwards and upwards reducing the recharge areas to provide for the water needs of the cities. To feed the growing population, during the "Green Revolution" in 1960s, government provided incentives to farmers to use mechanical pumps (subsidies for electricity and fuel), for water from canals, and for fertilizers. All of this made India not only self sufficient in food but the world's top producer of rice and the second biggest producer of wheat. However, it also made India number one out of 170 countries in total freshwater withdrawal (170 Trillion Gallons). The water table is dangerously low in many of the aquifers. Pollution of surface and ground water, lack of storage capacity for the available water, and weakening of monsoons have added to the water crisis. Although, India issued a "National Water Policy" in 2012, and created a Water-Power ministry in 2019, it is not clear that water crisis is being treated as a national emergency. Steps to manage the surface waters by interlinking river systems, harvesting rain water, improved irrigation methods, changing crop patters to reduce the use of groundwater and improved wastewater treatment all may be parts of the

solution. However, the key factors would be political will and economic realities if the problem is to be tackled in a timely manner.

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