Waste water

Why in news?

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March 22 is celebrated as the World Water Day with this year's theme being 'Waste Water'.

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What are the dangers of waste water?

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- The sources of waste water are many: domestic, industrial, commercial, agricultural, surface run-off or storm water, and sewer inflow.
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- Untreated waste water is contaminated with urban waste containing not only a mix of chemical and biological pollutants, but also high levels of pathogens from excreta.
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- This generally impacts human health.
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- Waste water is discharged directly into water bodies, overloaded rivers, lakes and the ground with toxic chemicals and wastes.
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- This consequently poisons water resources and supplies.
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- These toxins feed their way into plants and animals, causing severe ecological toxicity at various levels, including in the human food chain.
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- This leads to biological magnification i.e the increasing concentration of a substance, such as a toxic chemical, in the tissues of organisms at successively higher levels in a food chain.
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- e.g The River Ganga receives roughly 500 million litres per day (MLD) of partly treated or untreated industrial effluents from over 700 polluting industries, and about 3,000 MLD waste water from urban bodies.
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- Globally, only 10% of waste water is treated.
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- In India, about 69% of water is untreated
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- 39% of its actual operating capacity does not meet the regulatory standards.
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What are the various uses of waste water?

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- Waste water is a resource in a circular economy.
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- Waste water, once treated, can be recycled and/or reused for drinking purposes, in industry, in the artificial recharge of aquifers, in agriculture, in the rehabilitation of natural ecosystems and so on.
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- Recycling waste water is not just an ecological imperative.
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- By 2050, it is estimated, India will be water-scarce in terms of per capita availability of water per year.
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- India’s demand for water is growing in all sectors, given continuing economic growth and improving lifestyles.
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- Climate change, due to human induced interventions, will affect the variability of water supply in many countries, including India.
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- This is difficult to achieve unless water is conserved, recycled and reused.
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- It is also crucial to the growth of smart cities.
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What is the international practice?

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- One of the best international examples in urban water recycling is Yokohama in Japan.
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- About 99% of Yokohama’s population is connected to sewers.
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- It’s treated waste water is precious, and is being supplied to various locations of the city.
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- Indian smart cities could take a lead from the Yokohama example for maximising their waste water management.
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What is the situation in India?

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- The National Water Policy 2012 recognises that “recycle and reuse of water should be the general norm”.
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- Waste water is emerging as a thrust area for investment opportunities and is expected to grow in value and volume.
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- But the current waste water treatment market is largely unorganised with small and medium-sized domestic players.
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- Market mechanisms need to improve for recycling waste water.
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What should be done?

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- The governments, at the Centre as well as in the States, should give incentives to various players in this regard.
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- In the case of waste water treatment it is imperative to follow WHO guidelines in India.
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- e.g These guidelines prescribe discontinuation of irrigation with untreated waste water for a few days before harvesting of crops in order to allow pathogens to die in sunlight.
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- These regulatory norms should be strictly enforced.
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Source: Business Line

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