Wastewater treatment and Sustainable development

Why in news?

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- International World Water Day was celebrated on March 22
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- This year’s theme was “wastewater”, which is defined as any water that has been adversely affected in quality by anthropogenic influences and as a result of domestic, industrial, commercial and agricultural activities.
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What is the global issue?

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- Population growth, accelerated urbanisation and economic development have resulted in an increase in the quantity of wastewater.
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- Most of our freshwater sources are under threat.
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- Industrial water consumption accounts for 22% of the global water used, when public awareness of pollution is limited the cost of pollution to our health and the ecosystem is huge.
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- The victims are generally the poor or socially vulnerable communities, and the end result is a high financial burden on the community and government.
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What is the problem in India?

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- By 2030, the global demand for water is expected to grow by 50%. Most of this demand will be in cities.
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- In low-income areas of cities/towns within developing countries, a large proportion of wastewater is discharged directly into the surface water drain, without or with limited treatment.
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- Traditional wastewater treatment plants may not remove certain pollutants.
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- In India, about 29,000 million l/day of waste water is generated from class-I cities and class-II towns, out of which about 45% is generated from metro cities alone.
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- A collection system exists for only about 30% of the wastewater through sewer lines, while treatment capacity exists for about 7,000 ml/d.
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- The industrial sector in India discharges around 30,730 million cubic metres of effluents, without proper treatment, into water bodies.
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- Run-off from agriculture fields is another major source of pollution.
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- India, extracts water significantly for various developmental purposes.
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- Hence, the water flow or storage capacity of water bodies has declined substantially, adversely affecting their waste assimilation/sink functions.
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What are the water Management strategies?

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- Integrated Nature conservation policies between Union and states and Water pollution should be made a punishable offence.
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- The effectiveness and power of the “polluter pay principle” should be considered.
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- Strategies to protect water resources should be Public-Private Partnership and Capacity building at local levels.
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- Market-based strategies such as environmental taxes, pollution levies should be implemented.
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- Incentive mechanisms such as subsidies, soft loans, tax relaxation should be included in installing pollution management devices.
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- In industries cleaner production-technology must be encouraged.
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- The application of eco-friendly inputs such as bio fertilizers and pesticides in agriculture and the use of natural dyes in textile industries can reduce the pollution load considerably.
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Way forward:

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- Past experience shows that significant progress has not been achieved despite legislative and policy measures being introduced with huge budgets to solve water pollution issues.
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- Water pollution is not a major topic of political debate as yet.
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- Unfortunately, most common effluent treatment plants are not performing satisfactorily due to improper operations and maintenance.
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- There is sufficient evidence to suggest that the problem, though complex, is solvable. While it is not realistic to aim for zero water pollution, a level of socially acceptable pollution, respecting the integrity of ecosystems and service provision, can be reached.
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- The benefits to our health, and in terms of economic development and environmental sustainability, business opportunities and ‘green’ jobs far compensate the costs of wastewater management.
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Source: The Hindu

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