New Technology for Namami Gange

What is the issue?

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- The high cost of refining units slows down the progress of Namami Gange project with continued inflow of untreated wastewater.
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- A new technology by the Water Technology Centre (WTC) of the Indian Agricultural Research Institute needs consideration for adoption.
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What is the new WTC technology?

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- It is a novel biological water purification technique that uses plants and micro-organisms to sequester impurities and decontaminate wastewater.
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- The perennial plant used in this system is Typha latifolia which naturally absorbs pollutants.
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- The plant boosts oxygen content of the watery medium around its roots to cleanse the dirty water.
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- Besides, it also encourages proliferation of water decontaminating micro-organisms.
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- And thus averts the need for using chemicals and aerators to improve water quality as is usually done in the conventional methods.
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What are the relative advantages?

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- **Effective** - The system requires no chemicals, no energy, no skilled manpower and no inputs, barring seeding the plants.
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- It removes even the metallic residues to the extent of 80 to 99%, something that the conventional methods are unable to do.
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- **Economic** - The cost of refining the untreated sewage released into the Ganga would come down roughly by 8 times as against the conventional methods.
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- It also generates revenue to make sewage treatment a profitable activity.
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- The economic returns from the treatment plants can be enhanced further by incorporating fisheries into these ventures.
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- Notably, planktons and zooplanktons, which serve as nutritious feed for fish, thrive well in the water ponds of these units.
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- The fish output of such integrated sewage treatment enterprises is relatively high and of good quality, being free of toxic residues.
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- Also, these units can be transformed into environment-friendly eco-parks, boosting tourism by attracting migratory birds.
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- **Biomass** - Instead of producing sludge, the Typha-based treatment units produce biomass.
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- This can further be converted into good quality particle boards or energy briquettes and pellets for use as clean fuel.
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- The upper parts of Typha can be cut every 4 months or so for this purpose and the plant regenerates again.
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- **Land** - The land requirement for setting up the WTC treatment units is comparatively far meagre than conventional plants.
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- **Odour** - Unlike the normal sewage treatment plants, the WTC treatment units do not emit any unpleasant odour.
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- This is because the decontamination process occurs under the soil surface without the use of chemicals which generate smelly gases.
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Source: Business Standard

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