Significance of Re-Invented Toilets

Why in news?

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Bill and Melinda Gates Foundation (BMGF) has introduced reinvented toilets and Omni processor waste treatment plants.

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What is the toll of unclean toilets on health?

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- According to UNICEF, 22.2% of children, or 151 million, under five years were stunted globally in 2017.
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- The World Bank says annual healthcare costs from lack of sanitation in developing countries is a staggering $260 billion.
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- In India about 30% or 40% of the kids end up malnourished that is because faeces containing pathogens lie exposed.
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- Open defecation has a high health cost as it spreads disease, stunts children and prevents them from achieving normal physical and mental development.
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What is the all new re-invented toilet about?

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- Bill and Melinda Gates Foundation (BMGF) has introduced reinvented toilets and Omni processor waste treatment plants at the Reinvented Toilet Expo.
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- Omni Processor is a name proposed for a group of physical, biological or chemical treatment processes to process fecal sludge (a mixture of human

excreta and water) in developing countries.
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- Innovation involves a shift away from the gold standard of flush toilets connected to sewers.
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- In the new order, there will be stand-alone facilities that are aesthetically designed, finely engineered and equipped with reliable chemical processes that produce nothing more than ash from solids, while reusing the liquid as non-potable water after treatment.
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What is the significance of the innovation?

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- The reinvented toilets is special since it expel nothing and turn liquid waste into clear water for flushing, and solids into pellets or ash that is fertilizer.
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- The purpose of the innovation is to decentralize sanitation as fast-expanding cities cannot have massive sewage treatment plants.
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- Such cities need stand-alone processors, which will help communities and individuals.
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- Success will depend on making large community deployments, and developing cost-effective models for individuals.
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- These “zero emission” processors will end dumping of faecal sludge taken from septic tanks into rivers, lakes, farms and open spaces.
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- They can also prevent the death of workers in septic tanks.
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- Some models also attach a gasifier that can use municipal solid waste, providing a solution to handle that urban waste stream as well.
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What are the concerns with sanitation treatment in India?

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- India is further behind on sanitation than on other issues, which is reflected in the high levels of stunting.
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- India’s record in treating urban sewage is poor at 30%, and a third of about 847 large sewage treatment plants are not functional.
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- Even in an advanced State such as Tamil Nadu, which is working to upgrade its infrastructure, only 30% of urban sewage is treated.
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- On the other hand, in 3,500 small cities, very little gets treated.
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What measures needs to be taken in this regard?

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- The recent innovation aims to take up issues that may not otherwise get attention, and to lower the barriers for governments to act.
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- With re-invented toilet the technology is ready with a “zero effluent” toilet, national policy should make it accessible to everyone.
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- India has contributed a lot by way of taxes for sanitation, and the money should be spent on the new technology.
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- In India the priority should be to put all these plants to full use, and equip them to handle faecal sludge by adding Omni processors to them.
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- Large and often idle sewage treatment plants can be put to dual use, by adding a faecal sludge treatment plants FSTP, preferably with an Omni processor.
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- In the case of small towns, a cluster approach will help, and two or three of them can come together to share treatment plant capacity.
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- It is now up to politicians and policymakers to make decisions to adopt them, especially because the Sustainable Development Goal of sanitation and clean water for all by 2030 is not far away.
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Source: The Hindu

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