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By 2025, acute water scarcity in India likely

Re-using waste water need of the hour

From Keya Acharya KYOTO, March 19

India will face an acute scarcity of water by 2025, more than most nations in the developing world, expert panelists said on Sunday at the 3rd World Water Forum being held in this ancient, once-capital city of Japan.

"It is imperative that under these circumstances, re-use oriented sanitation and new types of toilets are introduced", Prof. Ralf Otterpohl of the Institute of Municipal and Industrial Wastewater Management of Hamburg Technical University said.. "Engineers have unfortunately learnt to construct just one pipe and flush everything out", he rued.

Charting out a variety of low-water-consumption sanitation systems for developing countries having health, engineering and ecological challenges, Prof. Otterpohl's design of the 'separation toilet', with separate bowls for urine and solids looked a suitable model for public toilet systems. 'Vacuum toilets' involving low-water consumption are in use in Germany and some European countries, but could prove expensive unless locally manufactured.

The best method for housing tenements and urban apartments would be the treatment of 'grey water' from baths and kitchen sinks to be treated with reverse osmosis membrane technology and either reused or sent back to recharge groundwater. 'Blackwater' from toilet flushes has a system, patented by Ulrich Braun in Germany, whereby it is highly concentrated and dried into fertiliser. 'Dry sanitation', low-cost composting toilets are currently being used successfully in Mexico. The method involves 2 chambers below-ground used for solid-collection for composting, each used in a one-year cycle.

About 70 per cent of India's water pollution is due to untreated sewage while 2.4b people around the world do not have access to sanitation facilities. WHO estimates 5 million people die from polluted water every year. "And the scandal is the media is not reporting this", says Prof. Otterpohl. The Swedish International Development Institute (SIDA) is planning to expand its ecological sanitation model showcase into India shortly. "The objective is to protect human health, cut down water-usage in toilets and recycle the nutrients from excreta to reduce the need for artificial fertilisers", says Arno Rosemarin of the SIDA-sponsored eco-sanitation model (EcoSanRes) programme in the Stockholm Environment Institute, working currently in China, Mexico, and parts of Africa. Low-cost ecological sanitation alternatives are being offered for dissemination at the 3rd World Water Forum as one way to reach the UN's target of halving the the world's 2.4b population without access to sanitation by 2015. This works out to over 100,000 eco-sanitation installations per day for the next 12

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THOUGH FOR THE I

"All wars are fought for money."

Socrates

years.

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Bangalore - 560001
Tel: +91 (80) 5880000 Fax No. +91 (80) 5880523