



Sanitation revolution: from waste to resource

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Received 29 November 2016; Accepted 16 February 2017

ABSTRACT

Excretion is one of the most natural and frequent human biological processes that has existed since human beings first evolved. However, the lack of access to basic sanitation in many parts of the world makes it clear that current sanitation practices need to be improved. Accordingly, adequate and equitable access to clean water and sanitation for all, as per the sixth item of the United Nations' Sustainable Development Goals (SDG6), is not possible using current sanitation systems. In this paper, different sanitation practices that have been used throughout history are reviewed and compared based on water consumption, wastewater generation, and resource utilization. The ideal sanitation practice might be one that uses no (or less) water and considers excreta a resource, as has been practiced in East Asian countries for thousands of years. Research trends and ways to overcome cultural and technical barriers are introduced and suggested. To achieve SDG6, a sanitation revolution is required that considers human excreta a resource instead of waste, as learned from past sanitation practices.

Keywords: Resource-oriented sanitation; Separation and recycle; Sustainable development goals; Sustainable sanitation; Urine source separation

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Presented at the 13th IWA Specialized Conference on Small Water and Wastewater Systems & 5th IWA Specialized Conference on Resources-Oriented Sanitation, 14–16 September, 2016, Athens, Greece.

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