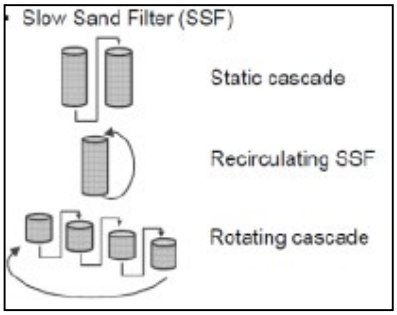
Technology	Improving wastewater treatment by Constructed Wetlands (CW) via integrating slow sand filtration
Research organization	The Helmholtz Centre for Environmental Research - UFZ, Germany, was established in 1991. Founded in response to the severe pollution prevailing in Central Germany, the UFZ has become a world-wide acknowledged centre of expertise in the remediation and re-naturation of contaminated landscapes.
Description of the technology being developed	Comparison of pathogen indicator removal efficiency in effluent from CW by 4 different Slow Sand Filters (SSF): Standard, Recirculating, Static series of two and Rotating cascade. The aim is to improve SSF performance by an enhanced use of the biologically active Schmutzdecke layer(s) by: i. Increasing the contact time between the wastewater and the active layer via partial recirculation of the effluent ii. Formation of several active layers when operating multiple SSFs either in a static series or as a rotating cascade.  Effluents from Slow Sand Filters in static cascade and a rotating cascade system complied with European standards for *E. coli* and *Enterococci* water concentrations, achieving mean log removal of 2.7-4.7 and 2.1-2.4, respectively.
Benefits	Pathogen removal from wastewater using natural resources
Financial viability	The financial benefit depends on the actual water availability and the actual costs of traditionally used treatment methods but are likely to be lower than conventional disinfection techniques like UV treatment.
Potential users	Rural communities, municipalities
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