30 June 2021 (Wednesday)

7.00pm-8.30pm (SGT) (GMT +8)
Session 3.14 – Wastewater Treatment for Developing Countries

Session Chair(s): Dayanand Panse, Ecosan Services Foundation (India), Nupur Bahadur, The Energy and Resources Institute (TERI), New Delhi (India)

Technologies/Case Studies To Achieve Safe Reliable Drinking Water In Resource Constrained Communities

G. Hawkins

Presenter is an invited speaker. No executive summary is available

Co-treatment Of Faecal Sludge With Wastewater In Bijnor, India To Achieve Sanitation For All -- A Case Study

S. Padhi, B. Luthra, S. Rohilla. Centre for Science and Environment (India)

Wastewater (WW) and Faecal Sludge (FS) management is an integral component of improved city-wide sanitation. Cities/towns that have Sewage Treatment Plants (STPs) with adequate spare capacity are presented with a low hanging fruit of utilising existing infrastructure to manage faecal sludge and septage (FSS) at the STP. Though, FSS is more concentrated in strength than domestic sewage, its constituents are similar to municipal WW thereby making it amenable for co-treatment. In fact, cotreatment of FSS with domestic sewage at an STP can prove to be a cost-effective option in terms of both capital as well as operational expenditure. In this regard Shit Flow Diagram of Bijnor city, a small town in Ganga basin, India, was developed to understand the gaps along the sanitation service chain. Thereafter, characterisation of WW and FS was done and analysed to study the feasibility for cotreatment of FSS at the upcoming STP.

Innovations in Decentralised Wastewater Treatment

S. Pillay. Water Research Commission of South Africa (South Africa)

Presenter is an invited speaker. No executive summary is available

Integration of MBR and Hybrid Constructed Wetlands for Enhanced Treatment of Rural Domestic Wastewater

J. Zhang CITIC Envirotech Ltd (Singapore)

Decentralized wastewater treatment systems have drawn increasing attention in recent years, especially in the rural communities of China. In this study, a combined MBR and hybrid constructed wetlands (CWs) system was proposed to achieve the aforementioned goals. The combination leveraged the ability of MBRs to remove organic pollutants and all suspended solids effectively. The CWs are able to achieve high NH3-N removal which contributes to substantial total nitrogen (TN) removal in a cost-effective manner. The combined MBR and hybrid CWs system could be an effective and affordable technology for wastewater management in rural areas and developing countries.