

Dewatering and drying workshop	
Organiser of session	Linda Strande , Stanley Sam , Santiago Septien Stringel and Edwina Mercer
Other organisations	EAWAG-SANDEC and WaSH R&D Centre UKZN joint workshop
Overview	<p>Non-sewered sanitation solutions serve one third of the world’s population, acting as an affordable alternative to conventional wastewater treatment. These systems function as intermediate storage facilities, requiring emptying and transport to centralised facilities for safe treatment. However, the high-water content of faecal sludge matrices remains a challenge causing high emptying and transport costs and dilutes its resource recovery potential. Current water removal processes such as thickening, dewatering and drying are burdened by large footprints, high energy demand and fouling due to sticky sludge. Therefore, aligning the current research that is taking place on one platform allows for the exchange of ideas, fruitful discussion, and the identification of a way forward. Particularly since research in faecal sludge characterisation is accelerating, we are beginning to understand which parameters cause poor dewaterability (e.g. particle size, extracellular polymeric substances, dissolved solids) and dryability (e.g. bound water), what causes stickiness and poor flowability and with this knowledge, how to mitigate such issues. We can now provide examples of the possible resource recovery opportunities of faecal solids due to research evidencing energy densities comparable to fuel woods, nutrient content, and stability comparable to chemical fertilizers and pathogen inactivation due to a sufficiently dried product. As such, faecal sludge solids could provide circular economic opportunities for local communities to enable a sustainable sanitation value chain.</p> <p>Presentation about the latest research discoveries will be followed by panel discussion. After the presentations, the participants will have the opportunity to share key issues based on their experience / research and brainstorm solutions based on the lessons learned. This will also encourage the showcasing of research and solutions from the participants which may not have been covered by the research at EAWAG or UKZN.</p>
Programme	<p>11:15 – 11:45: Dewatering</p> <ol style="list-style-type: none"> 1. Research highlights in dewatering 2. Scientific lessons in dewatering 3. Advances in dewatering solutions 4. Panel discussion <p>11:45 – 12:15 – Drying</p> <ol style="list-style-type: none"> 1. Research highlights in drying 2. Scientific lessons in drying 3. Advances in drying solutions 4. Panel discussion <p>12:15 – 12:45 – Audience participation</p> <ol style="list-style-type: none"> 1. Breakout groups to discuss key issues in dewatering and drying 2. Breakout groups to discuss dewatering and drying solutions