

# Perspective building on decentralised sanitation – some additional food for thought

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# Definitions

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## What do we mean by decentralised sanitation systems?

- FSM and FSSM are decentralised systems in that these depend on collection, transportation and then treatment in local areas or smaller treatment plants
- DEWATS consists of small wastewater systems commonly 20-30 cu m/day (but can be larger eg 1000) – producing reusable effluents and little sludge
- Condominial (city block) sewerage systems (eg in Brazil) have small-bore pipes (100-250 mm diameter) and various levels of containment and treatment (eg septic tanks)
- The shift from on-site to seweraged systems depends on the density of the population. Mara speaks in terms of 250 persons per ha as a practical rule of thumb

# Reuse stimulates alternatives

- If the objective is to flush and forget or hide and forget, then creative options do not develop and society is not engaged
- But if we think in terms of reuse (of water, carbon and nutrients) then the options for sanitation systems open up
- UDDT eco-San is an example of decentralized sanitation. And shallow soil pit latrines like the Arboloo and Fossa alterna are examples of onsite and decentralized reuse systems
- Container-based systems are taking off and they can combine organic solid waste with toilet sludge to produce valuable products like briquettes for cooking (a solution to deforestation)

# On China

- China is characterised by mega-cities on the one hand and agricultural villages that are more like small towns on the other extreme, with 1000s of smaller cities in between
- There are over one million of these "villages" - that have communal shallow open pit latrines – these are poor in standard and people often choose OD; these are decentralised and the sludge is used in local agriculture; the govt is starting to remove these and opting for water-based systems (hopefully DEWATS)
- But for the cities, China has been spending big money the past 15-20 years building centralised systems; ca 3800 STPs, now pumping out >150 million cu m per day (tops in the world); but the effluent standards are still poor
- China has DEWATS as well with upwards of 50,000 units in Sichuan Province alone