Ecosan – some unresolved challenges

SuSanA India meeting – Feb. 21st, 2018 in Goa Lucas Dengel, Auroville

www.ecopro.in / www.facebook.com/ecoproauroville



Contents

Background: EcoPro promotes the use of UDDTs, hence the perspective

- (1) Core issue: sanitisation by desiccation
- (2) Design of squatting pans

Ecosan-specific & non-specific:

- (3) Hygiene management
- (4) General ignorance on ill-effects of lack of sanitation
- (5) Lack of system thinking
- (6) Socio-cultural reservations
- (7) Urban ecosan



(1) Core issue: sanitisation / hygienisation by desiccation

As per WHO, 12 months required – which necessitates moving of non-hygienised feces containers or two toilet pans plus two non-movable feces receptacles.





- (1) Core issue: sanitisation / hygienisation by desiccation
- As per WHO, 12 months required which necessitates moving of non-hygienised feces containers or two toilet pans plus two non-movable feces receptacles.
- The fact that dried feces after six months does not look different from dried feces after 12 months is no sign for freedom from pathogens.
- Methods of hygienisation (eliminating pathogens, not eliminating microorganisms): drying by ambient temperatures 20-40 degree C, alkaline milieu, heat.
- In order to reduce building volume & costs, to employ solar heat to speed up drying & reduce the drying period to a few hours handling to be convenient.

(2) Design of squatting pans

Depth, length, slope of urinal

Rim of the fecal drop hole Foothold for squatting

Choice of material:

Plastics, fiber-reinforced

plastics

Ferrocement

Ceramics



(3) Hygiene management – ecosan-specific & non-specific

Most of issues non-specific i.e. they apply to flush and non-flush toilets;

however (only) in discussion on ecosan, bad hygiene is used as argument against the system.





(3) Hygiene management – ecosan-specific & non-specific

Different hygiene levels in different households are reflected in hygiene of toilet rooms.

Use & storage of brush. Use of EM (or eco-friendly soaps).

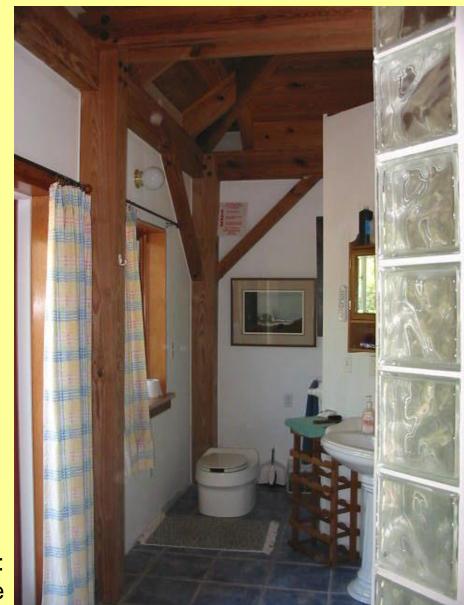
User-friendliness? – Competing with convenience of flush!





(3) Hygiene management– ecosan-specific &non-specific

Different hygiene levels...



Ecosan in bathroom: Scandinavian example

(4) General ignorance on ill-effects of lack of sanitation

Cause & effect chain from OD to spread of pathogens – in particular during monsoon times;*

Feces & sewage spread diseases – not just impurity;

Financial losses due to expenses for doctors, hospitals, pharmaceuticals, transport; due to wages and salary losses; due to productivity loss; due to loss of schooldays;

Impact on nutritional health & on brain development in early childhood.*











The wrong combination

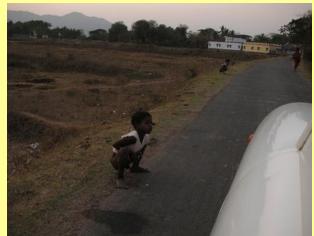
(5) Lack of system thinking

In public services & offices, and among NGOs and corporate expertise.

Conventional flush tech is implemented without understanding of the system – examples.

Ecosan is also part of a system: fecal sludge or fecal compost & urine to be integrated — many are built without concern for follow-up & closing the loop.





Term hides a lot of issues we do not want to define nor to address.

In spite of daily media reports on SBM, plain talk on feces & raw sewage still almost taboo –

Examples: phone call with highly educated / radio script of students of 9th & 10th grade in urban private school.

Underlying dilemma: Puritypollution gradient in a caste-conditioned society;

Refusal of backward class and villagers to adopt toilets is based on clarity of insight.*



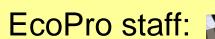




Dirty work with waste & human excreta disliked everywhere;

Waste & sewer workers not everywhere well equipped and well paid.

But no-one has a right to regard oneself superior to the job.





















Dirty work with waste & human excreta disliked everywhere;

Waste & sewer workers not everywhere well equipped and well paid.

But no-one has a right to regard oneself superior to the job.

Examples like
Mr. Parameshwaran
lyer's required on
a daily base.



(7) Not yet addressed:

Ecosan in urban context;
Services for urban ecosan maintenance: retrieval & collection, storage & transport to users i.e. farmers.



Thank you. lucasdl@auroville.org.in