

1 How to Overcome Barriers in the Promotion of Ecosan

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2 The following are some of the barriers that one may face when promoting ecosan. How can they be overcome?:

1. Political - Governance - Leadership Barriers
2. Information - Educational Barriers
3. Economical - Financial Barriers
4. Cultural - Religious - Spiritual Barriers
5. Geographical - Topographic - Climatic - Environmental Barriers

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2 Barriers continued!

6. Material - Infrastructure Barriers
7. Health - Scientific Barriers
8. Technological Barriers
9. Communication Barriers
10. Logistic - Follow up Barriers
11. Expertise - Skilled manpower Barriers

3 Political / Governance / Leadership Barriers

- ◆ Recognize the existing hierarchy
- ◆ Follow the right channel of approach
- ◆ Use a good and acceptable approach (HCES)
- ◆ Get the people in authority involved

3 Political / Governance / Leadership Barriers Continued!

- ◆ Provide convincing statistics
- ◆ Demonstration toilets and tours with the community
- ◆ State the vision and long term direction

4 Information / Educational Barriers

- ◆ There should be a reason for the promotion:
 - ◆ Sweden and Germany - environmental concerns
 - ◆ Mexico and Australia- water conservation
 - ◆ China and Vietnam - nutrient recycling
 - ◆ India and South Africa - toilet convenience

4 Information / Educational Barriers Continued!

- ◆ Identify possible hygiene risks
 - ◆ 80% of pathogens are found in Faeces. Treat by drying then incineration or composting.
 - ◆ 80% of nutrients are found in Urine. Urine is a potential liquid fertilizer. State the advantage of separating!

4 Information / Educational Barriers Continued!!

- ◆ Good timing in appropriate areas
- ◆ Introduce ecosan education in schools, collages and universities

5 Economic / Financial Barriers

- ◆ Technology or concept should be affordable
- ◆ Locally available material should be used
 - ◆ The story of the Ox- Cart and its punctured tyre.
- ◆ Train Local craftsmen
 - ◆ The creativity of the locals should be promoted.

5 Economic / Financial Barriers!

- ◆ Preach that human waste is a resource
 - ◆ We can not solve problems with the same thinking that created them. Conventional sewer systems were created on the premise that urine and feaces are waste suitable only for disposal. Now we know better and thus must act accordingly.

6 Cultural / Religious / Spiritual Barriers

- ◆ Identify cases of caste
- ◆ Get to know the culture
- ◆ Respect peoples culture
 - ◆ Gunder story - The man who refused to use a urinary!?
 - ◆ Drangert story - The fear to let babies use the pit latrines!?

7 Geographic / Topographic / Climatic / Environmental Barriers

- ◆ Use appropriate technology
 - ◆ is it a sandy or rocky area?
 - ◆ Is it water logged?
- ◆ Adopt technology to local conditions. eg solar drying in the polar region?
- ◆ A vacuum tanker in crowded peri-urban area with no roads!

8 Material / Infrastructure / Technological Barriers

- ◆ Use locally available materials/technologies
 - ◆ Thatching instead of iron sheets, Mud bricks instead of cement bricks etc
- ◆ Easily repairable technology
 - ◆ Do not use sophisticated vacuum systems if the locals can not repair it if it breaks down, other wise teach them and ensure continuity through

8 Material / Infrastructure / Technological Barriers Continued!

- ◆ Materials should be affordable by locals
 - ◆ Thatching instead of Iron sheets or mud bricks instead of cement bricks.
- ◆ Use materials craftsmen are familiar with
- ◆ Materials should be affordable by the locals

9 Health / Scientific Barriers

- ◆ Teach hygiene - Hand washing
 - ◆ Use of fertilizer on appropriate crops
- ◆ Carry out research and give reasons
 - ◆ How long does it take to sanitize the human excreta
- ◆ Easy to sanitize when separated

10 Follow up / Logistic Barriers

- ◆ Use some local people as contact persons
- ◆ Form community committees

11 Communication barriers

- ◆ Learn the local language
- ◆ Take an interpreter
- ◆ Involve the community (participation)

12 Expertise / Skilled manpower Barriers

- ◆ Train people (capacity building)
- ◆ Use technologies people are familiar with if not equip them with the required expertise

13 Concluding Remarks

- ◆ In dealing with issues of sanitation we should realize that even though going to the toilet is a private thing, what happens to what we leave in the toilet is of public concern. Human beings do not excrete sewerage, it is a mess and should be avoided at all costs.

13 Concluding Remarks Continued!

- ◆ Most if not all sewerage treatment plants work on the premise of separating what we mixed initially to produce sewerage, so what is the purpose of mixing. It is cheaper to treat the separate “*waste*” components separately.

Thank You for Your Attention