

Title	How to overcome barriers to the promotion of Ecological Sanitation
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<p>Abstract: (State whether this is intended for an oral or poster presentation) Oral Presentation</p> <p>Ecological sanitation wherever it is practiced has evolved due to a number of reasons. This has to be remembered each time someone tries to promote the concept. For example, in China it evolved due to the need by the local farmers to recycle the nutrients in human excreta for agriculture. In Mexico water conservation was the main motivating factor for people to try ecological sanitation while in Sweden it was brought about mainly due to environmental concerns. In South Africa and India the need for a convenient toilet was the main selling point for ecosan. So the reasons why people will adopt ecosan will be different for different areas and the right argument should be used when promoting it. However, in the promotion of ecosan a lot of barriers should be expected as this concept requires a lot of behaviour change and a realisation that the conventional sanitation systems of <i>'flush and discharge'</i> and the <i>'drop and store'</i> are really an economic and environmental disaster.</p> <p>People should realise that the conventional flush toilet was built on the premise that the environment could purify the wastewater being discharged into in. However, this is not the case as wastewater treatment plants are now overloaded as the populations they were constructed for have expanded yet the plants have remained the same size. As for decentralised sewer systems of septic tanks the cost of vacuum pumping the sludge from the settling tank has proved too expensive for most households. Ecosan looks at human excreta as a resource unlike the conventional sanitation systems that considers human excreta as waste suitable only for disposal. In promoting ecosan we should show people that human excreta is a resource and should be treated as such so that economic benefits can be derived from it after adequate sanitisation.</p> <p>The promotion of any new concept that requires a great deal of behavioural change is not an easy task as a lot of barriers can be encountered. Unless these barriers are overcome, any effort in promoting the concept will result in failure. Ecological Sanitation is a relatively new concept in many parts of the world although it has been practiced for many years in some countries like China and Vietnam. One of the greatest barriers in the promotion of ecosan in the modern civilised world is political will. Politicians and other government officials have to be convinced that the concept can work and is good for the economy if properly promoted and executed. Unless the politicians and other government officials governing the country embrace the concept, all efforts to promote ecosan will be met with great resistance. For this reason accepting ecosan as a technical sanitation solution within governmental sanitation policy is a small but vital first step in convincing the public that the concept is workable. The leaders of a country have a tremendous influence on the people they govern, so getting them on the ecosan <i>'band wagon'</i> will have very positive results to any promotional activities. The leadership at the lowest levels in the community should also not be taken for granted or sidelined. These should be acknowledged before any promotion activities are started. Failure to do so will lead to the leadership feeling sidelined and may jeopardise the promotion</p>	

activities.

Once the people in authority have been convinced of the applicability of ecosan, another barrier that has to be overcome is that of Cultural, Religious/Spiritual orientation. These factors determine the type of ecosan toilets the people will accept and also determine their attitudes to the whole ecosan concept. The ecosan technology that can be promoted in areas of different Cultural, Religious/Spiritual orientation will have to be adapted to the practices in these areas. Once these have been taken into consideration the promoters of ecosan may then be faced with information/educational barriers. This is to say that if people have no technical and scientific know how of what the concept is all about it will not be easy for them to understand and appreciate it. All the technical and scientific aspects of ecological sanitation have to be explained to all the stakeholders for them to embrace it. This will require an explanation of why we need a Paradigm Change in the world of sanitation highlighting why the modern flush toilet is an economic as well as an environmental disaster.

The economic status of a country will influence the kind of ecosan technology that can be promoted in it. Some ecosan technologies are highly advanced and require highly skilled manpower to produce, install and maintain. Unless the community is willing and able to pay for the sophistication associated with the ecosan technologies they choose or adopt, then the system is not sustainable. Ecosan technologies promoted in different economies should be in conformity with the economic/financial status of the area. The technologies should be affordable by the use of locally available materials engaging locally trained craftsmen who can easily be reached when the system breaks down. In addition to the economic/financial barriers material/infrastructure barriers may be encountered. It is best to use as much of the locally available materials as possible so that there is no question of failing to obtain spares in case the system breaks down.

Another eminent barrier in the promotion of ecosan is the Health/Scientific aspects of the concept. Promoters of ecosan requires that all the health and scientific aspects of the concept are explained and people are convinced that the concept can work. To do this a great deal of research is required where scientific experiments are performed and tests are done to ensure that what is claimed in literature about the sensitisation of the excreta is true. Small demonstration plots or projects can help clear the stigma associated with ecosan toilets and all the required practices. People should be convinced that after the treatment process what they will end up with is not faecal matter but compost. It should be realised that the treatment or sensitisation of human excreta would be far much easier if the `waste` components were collected separately. Actually, most if not all waste water treatment plants work on the premise of separating what we had initially mixed, so there really there is no point of mixing if the components will have to be separated at the treatment plant. Human beings do not excrete sewerage it is a mess and should be avoided at all costs.

The urge for improved sanitation comes about due to care about human health as well as the care about nature itself. Not until sanitation systems are environmentally friendly they will not be sustainable because the cost of repairing or preventing the environmental damage they cause will make them unaffordable for most people not only in developing countries but the world over. So in the promotion of ecosan we should realise that we are promoting a concept that requires that we take care not to transfer the problems of treating excreta to the man next door but we do something ourselves as near as possible to the source of production of that excreta. Conventional sanitation systems hide the consequences of un sanitised excreta from the people producing them to the man next door. Ecosan makes us more responsible for our own actions which is very good for the environment as the problems are not transferred to the future but are dealt with before they get too big. Ecosan appreciates the fact that the world is experiencing a `water crisis` and good quality treated drinking water can no longer be used for transporting human excreta from residential areas only to end up polluting the same water bodies from which we get our drinking water.

The promotion of ecological sanitation will bring a lot of challenges and the ones stated above are by no means the only ones that one should expect. Promoters should always be on the look out for these and indeed any other obstacle not stated above that may arise as the promotion work progresses. The important thing to bear in mind is that people will accept ecosan for different reason and these should be capitalised on if the best is to be made for each different situation. Whatever is done ecosan should never be imposed on people and never should they feel that it is something someone else wants them to try. As much as possible people should feel that the concept is part of them and not a concept '*derived out of this world.*' Realising that we are '*factories*' of nutrients for our own food requirements will lead to improved food security in many poor countries that have a problem obtaining fertilisers for the crop production. It is high time we contributed to closing the loop between food production and excreta management so that nutrients in human excreta can safely be returned to the soil where they belong and not to our water bodies. Ecosan offers a very good opportunity of doing this as it offers a wide range of technologies that can suit the divers situations in different parts of the world.

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