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Reuse of human excreta in Bangladesh: A case study

NGO Forum for Drinking Water Supply & Sanitation

Objective

- To determine ways, processes and purposes of reuse of human excreta in the rural areas in Bangladesh
- To have an understanding about the reuse of human excreta in Bangladesh
- To assess the extent to which the reuse of human excreta meet the requirement of environmental sanitation.

Use of human excreta

Human excreta is used as compost

(a) As fertilizer for production of plants particularly by Excreta with poultry, animal and other organic solid waste

Using wastewater for agriculture and

(b) For the reproduction of alternative energy through bio-gas plant.

Use of saturated pits in agriculture

- Saturated pits are better fertilizers than chemical fertilizers as the efficacy of the latrine pits fertilizer sustain for a longer period of time.
- The plants that were sowed on the saturated pit are: coconut tree, betel nut, bamboo, mango tree, *Chambal* (tree).

Human excreta used as compost

- Compost contains Human waste and Organic solid waste
- The produced compost is used in the agricultural field for the production of vegetables, fruits, nuts and trees. They produce vegetables particularly brinjils, danta, barbiti-one kind of beans, tomato, potatoes, cauliflower, cabbage, puishak, ladies finger, gourd.
- The use of compost in the production of agricultural outputs provides 60 percents higher profits than the products grown on chemical fertilizer.

Human excreta for aquaculture:

- **Fish cultured in excreta reuse systems (compost) are of high quality and are equal or even superior in taste and odour. It is widely used in shrimp culture in coastal belt of Bangladesh.**

Human excreta use as fuel

- Used for the production of alternative energy, bio-gas in particular.
- Some study findings showed that fuel cost of the selected households (using cow dung) has come down to less than half of the cost incurred earlier.

Limitations

- The residues of the biogas plants are generally managed in an unhygienic way: it is generally disposed into water bodies and open places.
- The study found that the users were not given the necessary orientation on sanitation and hygiene related issues.
- Users were found to have not enough capacities to manage even a small technical problem, which may be the result of lack of training.

Risks involved

- Safe and hygienic utilization of human excreta was not practiced, serious health risks existed for the people managing the re-using processes and for the consumers of the agricultural produces.

- The reuse of human excreta is discouraged by Islam as it was found in some literature. However, during the study it was observed that a Madrassa (Islamic religious academic institution), and a teacher of Madrassa and many Muslim families are actually reusing human excreta.

Recommendation

- The government should adopt a policy to reuse human excreta, allocate budget to develop affordable and appropriate technologies, provide subsidies to the poorest.
- The government and support agencies is recommended to consider activities to support capacity building and information sharing related to safe and hygienic waste utilization.
- It is recommended to study the extent of health risks to human beings from all aspects around the reuse of human excreta.

Recommendation

- NGOs may raise awareness for safe and effective utilization of excreta.
- Provide training to users, caretakers, and private producers
- Conduct advocacy at national and local level, and carry out action research to ensure the effectiveness of technologies and approaches.

Conclusion

- The health risks of using untreated excreta-related wastes for fertilizer should be reduced by minimizing the contact between crops and pollution as much as possible
- The government should adopt a policy for reuse of human excreta.
- The private sector could be engaged in ensuring the availability of hardware materials and the building skills in the localities.
- Community may be willing to be involved in the reuse of human excreta if simple and affordable design in Eco-San toilets, composting systems and biogas plants are developed,

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