

Ecological Sanitation for Chepangs in Nepal

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Brief Overview of Project



- The project site lies in Gorkha district, central development region of Nepal.
- Practical Action Nepal set up the concept of Renewable Energy Village (REV) in 2005 in Bhumlichowk VDC, Gorkha.
- Ecological Sanitation is one of the main component of REV.
- Chepangs are the main residents of the project site.

Objective of the Project

❖ Overall objective:

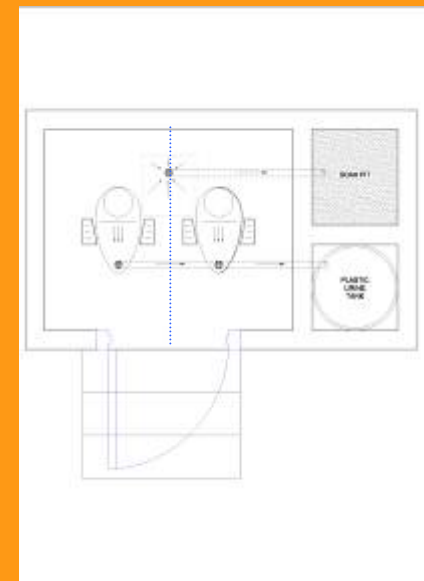
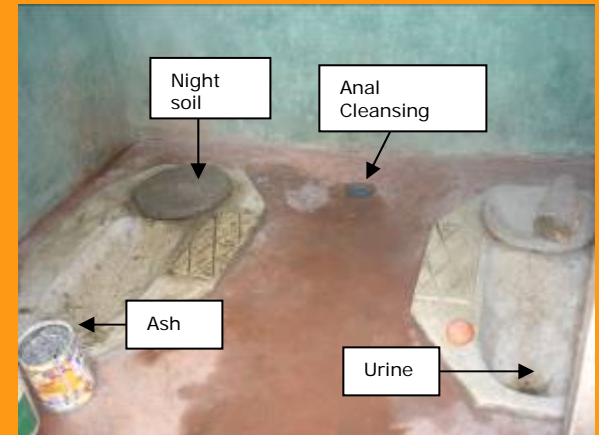
To demonstrate an environmental friendly sanitation solution to the local people (Chepangs) of project site.

❖ Other specific objectives:

- Increase health and sanitation awareness.
- Decrease the practice of open defecation in the street, river banks and forest.
- Increase awareness of the use of human waste (urine and night soil) as an organic fertilizer in agriculture.
- Avoid pollution of the source of drinking water.
- Optimal use of water for sanitation.
- Capacity development of the local people to construct and properly use the ECOSAN toilet.

Introduction of ECOSAN

- ❖ Onsite sanitation.
- ❖ Loop between sanitation and agriculture.
- ❖ Nutrient contain in urine is easily assimilated by plants.
- ❖ Urine shall be diluted with water before use.
- ❖ Night soil too contain nutrient but also contain harmful pathogens.
- ❖ Elimination of pathogens of night soil can be destroyed by dehydration.



Introduction of ECOSAN contd-

- ❖ Traditional belief: Only night soil contain nutrient.
- ❖ In fact: Urine has more nutrient and safe to handle.
- ❖ Collection of urine of 1 person for one year is sufficient to use as fertilizer in 5476 (1 ropani) square feet of farm.
- ❖ Approximately a person produces 500 liters of urine per year which is equivalent to 4 kg of nitrogen and 0.4 kg of phosphorus.
- ❖ Similarly, a person produces 56 liter of night soil which is equivalent to 0.6 kg of nitrogen and 0.2 kg of phosphorus.



Methodology of project implementation

- ❖ Orientation and preparatory visit to feel what ECOSAN actually is.
- ❖ Training to construct the ECOSAN toilet.
- ❖ Construction phase and orientation to use the toilet.
- ❖ In total 10 units were built in the project site.



Findings of the project

- ❖ Chepangs of project site starts using toilet for defecation.
- ❖ Chepangs starts using urine as fertilizer in the farm.
- ❖ Reduction of open defecation in the street, farm and river bank.
- ❖ Raised awareness of sanitation and environment.
- ❖ It took some time to adopt for using toilet.
- ❖ Also it took some time for social acceptance to use human waste as fertilizer.



Merits of ECOSAN

- ❖ ECOSAN toilet reduces the health risks related to sanitation, contaminated water and waste.
- ❖ It helps to improve the quality of surface and groundwater.
- ❖ It does not require sewerage connection. Hence saves the cost of sewerage and treatment before final disposal of the human waste.
- ❖ It improves soil fertility as human waste can be used as a fertilizer.
- ❖ It optimizes the use of water. The amount of water required is very less in compare to other toilets.
- ❖ It saves the cost of chemical fertilizer to the farmer.

Demerits of ECOSAN

- ❖ It needs different types of pan which is not locally and easily available.
- ❖ It is costlier than the ordinary type of toilets.
- ❖ It needs to make aware the users about the use of such toilets as night soil and urine has to be separated.
- ❖ It is tedious to use the toilet as one has to defecate in one place and has to move to other position for anal cleansing.
- ❖ There is a problem of social acceptance to use human waste as a fertilizer.

Challenges to promote ECOSAN

- ❖ Newer solution of sanitation. Hence difficult to assimilated by the society.
- ❖ The concept of human waste as harmful matter has been deeply rooted in the conscious mind of the people.
- ❖ In sufficient awareness dissemination regarding ECOSAN.
- ❖ Problem of waste utilization for non farmers.
- ❖ Lack of information regarding ECOSAN among stakeholders like general people, politicians and policy makers.
- ❖ No academic courses regarding ECOSAN for the students.
- ❖ Cost of ECOSAN is higher than other type of simple toilets like pit latrine or sulav two pit toilets.

Recommendations

- ❖ The investment in the dissemination of ECOSAN is very minimal. As this solution is new, some solid investment shall be made on ECOSAN toilets so that it can be replicated more effectively.
- ❖ There is no academic course regarding the ECOSAN. The dissemination will be fast and effective if it can be kept in the course book of students.
- ❖ There should be local research regarding the use of the dosage of urine. The soil type and the climatic condition effect the requirement of fertilizer.
- ❖ Further, there should be a research and well documentation on how the urine is more effective than the chemical fertilizer. Otherwise, it is difficult to promote the ECOSAN toilet.

Recommendations contd-

- ❖ The awareness rising regarding the ECOSAN is indispensable for its promotion. Media can be a good source to disseminate the information regarding ECOSAN to the wider scale of stakeholder.
- ❖ The government shall also promote ECOSAN while fulfilling the requirement of the target 10 of the millennium development goal.
- ❖ A single donor or an organization can not promote the concept of ECOSAN. An integrated approach can be instrumental to promote the concept in wider scale.
- ❖ In fact, the design of integration shall takes place in two ways – by bringing together a set of activities that are mutually supportive and bringing together a range of partners to carry out these activities.

Thank You