



Experience and Lessons from the Promotion of Eco-san Dry Toilets in Dianchi Basin

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Background

Dianchi is listed as one of the "three lakes" our nation stresses to deal with. To control non-point pollution of Dianchi and reduce excreta pollution on water quality of Dianchi, the government of Kunming determined to promote a large scale of ecosan dry toilets in 15 towns and villages along Dianchi drainage area. The plan of eco-san toilets promotion along Dianchi basin was considered by the municipality as one of the ten concrete matters the government would do for the people, which is also a measure to prevent and control water pollution in Dianchi basin.

- ❖ The household dry toilets that Kunming municipality plans to promote and popularize in villages along Dianchi drainage area, the water source of Songhua dam and Yunlong reservoir and to carry out demonstration and initiate construction in the main drinking water sources of each county, districts and urban areas between 2005 and 2007 amounts to 100,000 households . It is no exaggeration to call it as a sweeping "toilet revolution".

- ❖ The urine diverting eco-san dry toilet is a new type of dry toilet recommended by U.N. and successfully applied in China. It has many advantages such as water saving, environment protection, comprehensive utilization of excreta and low cost of construction. However, eco-san dry toilets' using method is different from that of traditional dry toilets and waterborne toilets, therefore, during the promotion, challenge of changing habits and customs of the local people and enhancing their health concept is always existing. After one year's large scale promotion of eco-san dry toilets in Kunming, for a variety of reasons, the toilet didn't get an extensive usage, thus the project failed to reach the aim and realize the significance of ecosan dry toilets construction.

Operation of the Project

- ❖ According to *Kunming Environment Protection Administration's Implementation Advice for Ecosan Dry Toilets Promotion in the Rural Area of Kunming*, the whole city planed to build 31, 396 household eco-san dry toilets and 554 public eco-san dry toilets in 2005. Up to Jan.9th, 2006, the whole city has built 53,806 household toilets and 183 public toilets. The former exceeded the schedule 22,410, while the latter couldn't reach the expected aim, only completed a portion of 33%.
- ❖ Most household toilets construction task was over fulfilled, among which Guandu district is a typical one, its household toilets over-fulfillment scale is as far as 748%, in other words, it accomplished three years' task only within one year.

- ❖ Most eco-san dry toilets have a satisfactory quality, but some have such problems as follows: some catheter materials used are too flexible to completely discharge urine which consequently remains in catheter and causes foul smell; some exhaust pipes are not long enough to realize ideal ventilation; the public utility is not properly designed: the capacity of the excreta collecting pit cannot meet the requirement for excreta dry storage: the feces exit, without proper design, makes feces removal difficult and incomplete. One or two public toilets have poor quality, for instance, in Fubao village, ground subsidence occurred soon after the public utility was installed there.



Use and Management of Eco-san Dry Toilets

- ❖ Use of eco-san dry toilets is very poor. According to statistics from towns (districts), the average usage is only between 15% and 40% approximately. Moreover, a lower usage was found during field investigation, take the situation in Liujia village for example, there are totally 5,519 household toilets built there but only 10 of them are used, ie the usage is less than 0.2%. Some small villages even use none of them after the installation. Xiaoheju is such an example in Liujia village.



Main reasons why villagers are reluctant to use eco-san dry toilets

- ❖ **Difficulty in changing villagers' concepts and habits in a short time**
- ❖ **Inadequate publicity and training**
- ❖ **Hasty work of scaling-up resulting in less speed**
- ❖ **Unsatisfactory matched materials**
- ❖ **Coexistence of old toilets and new ones**
- ❖ **High steps which is not convenient for the aged and children**
- ❖ **Lack of such cover materials as plant ash**
- ❖ **Conflicts between the use of fertilizer from eco-san dry toilets and the traditional farm manure use.**

Experience and Lessons

- ❖ **Lack of scientific demonstration for the feasibility of the project implementation**
- ❖ **Improper organization and operation**
- ❖ **More haste, less speed**
- ❖ **Fail to adjust measures to local conditions during the operation**
- ❖ **Focus on facility construction but ignore relative management**
- ❖ **Lack of villagers' active participation**
- ❖ **Lack of corresponding measures**
- ❖ **Government's practice of undertaking everything fosters villagers' dependence**

Suggestions

- ❖ **Key emphasis in work shall be adjusted. Usage increase is the highlight in the following work. Eco-san dry toilets, which could protect environment, treat non-point Source pollution in rural area, improve living environment in countries and prevent and reduce disease, shall be brought into full play.**
- ❖ **Principle of adjusting measures to local conditions shall be insisted on during the promotion. Projects can temporally not cover those villages without proper conditions such as farmland and plant ash, but first be implemented in those with fewer toilets, poorer sanitation, farmland and plant ash.**

- ❖ Strengthen publicity and training
- ❖ Respect for villagers' will and encourage them to participate actively
- ❖ scale up eco-san dry toilets in a less wider range
- ❖ Improve the design of eco-san dry toilets, solve the problem of foul smell due to the lack of cover materials and the problem of feces dryness and sanitization, create conditions for those households who have no such cover materials as plant ash.



Thank you!

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