

HANDBOOK ON **TOILET OPTIONS** FOR RURAL HOUSEHOLDS IN BHUTAN

RURAL SANITATION & HYGIENE PROGRAMME



SNV
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Australian Government
AusAID



Public Health Engineering Division
Department of Public Health
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MINISTER

Foreword

Globally 2.6 billion people do not have access to proper sanitation facility. Sanitation is defined as hygienical separation of human excreta from human contact. This kills 1.8 million people mostly children, every year. Diarrhoea also remains the second leading cause of death among children under five and it kills five times as many children in the developing world as HIV/AIDS. That is 5000 children dying every single day. The majority of the illness in the world is caused by faecal matter and the lack of sanitation.

In Bhutan there is significant improvement in the sanitation coverage over the years but there is no proportionate reduction in water, sanitation & hygiene related diseases. This is mainly due to unhygienic conditions of the latrines and no proper usage of the accessible facilities. The simple solution to prevent this from happening is to build and use latrines properly and practice hand washing. Till date only simple pit latrine technology was promoted in the rural areas.

Keeping in mind the overall goal to improve the health of the general public by reducing the incidence of water, sanitation & hygiene related diseases through the provision of safe drinking water, improved sanitation & hygiene facilities, Public Health Engineering Division (PHED), Department of Public Health under the Ministry of Health had been implementing the Rural Sanitation and Hygiene Programme (RSAHP) in selected areas in Bhutan with technical assistance from Netherlands Development Organisation (SNV). I am very happy to note that PHED is now coming up with a handbook on improved variety of toilet technology options for rural households in Bhutan.

I believe this handbook developed with field experiments would be very useful to engineers, health staff and other field workers who are promoting better sanitation and hygiene in the rural villages in Bhutan. I also hope that this handbook will be helpful in the implementation of sanitation related programmes, particularly construction of toilets in rural Bhutan, which can contribute substantially to the health and well being of people.

Tashi Delek!

(Zangley Dukpa)
MINISTER



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1. Introduction

Poor sanitation is one of the leading causes of diarrhoeal diseases, which kill hundreds of people including children around the world everyday. The story in Bhutan is not any different either. The sanitation coverage in terms of presence of toilet in Bhutan is 91% and in the case of water supply, 84.5% of households had access to water supply in 2009, and 80.1% of the households had functional piped water schemes. However despite these good figures, the incidence of illness due to water and sanitation-related diseases is still high and the figure for under-five child mortality is one of the highest in South Asia (85/1000 live birth). This is thought to be due to continued poor hygiene practice and in particular the poor state of latrines and associated facilities. Although the construction coverage of latrines is relatively high, the conditions are thought to be very poor and the amount of use low.

The Rural Sanitation and Hygiene Programme (RSAHP) co-ordinated by Public Health Engineering Division (PHED) under the Ministry of Health with technical assistance from SNV Netherlands Development Organisation had been assisting the primary client in rural areas by developing new approaches to improving the overall sanitation and hygiene practices in the rural communities in Bhutan. The initial programme area starting in 2008 was in the four pilot Geogs of Nanong (Pemagatshel), Hiley (Sarpang), Laya (Gasa) and Jarey (Lhuentse). The programme was later upscaled to the whole Dzongkhag of Lhuentse covering 7 more Geogs (Kurtoe, Khoma, Gangzur, Metsho, Menbi, Minjay and Tsenkhar) in June 2010.

There were two primary objectives under the RSAHP. Firstly, to explore, adapt and pilot best international practices to develop a model that can be rolled out country-wide. The model to be explored and piloted included an approach termed Community-Led Total Sanitation (CLTS), of which the outcome is measured in a complete end to open defecation and unsanitary conditions for entire communities rather than in terms of individual household latrine construction coverage. Secondly to study, explore and pilot sustainable, affordable and appropriate sanitation technologies in the programme areas. This handbook is a result of this second primary objective of the programme.

1.1 Why this handbook?

There have been several attempts in the past to document the technical details of the different types of toilets found in rural Bhutan. However, these efforts were all focused in one type of toilet or the other. This handbook has attempted to gather together in one place all the information needed for deciding which is the most suitable toilet technology for the various rural household settings found in Bhutan. All the information provided in this handbook is based on the field experiences in the RSAHP programme area. The handbook also tries to provide the technical details along with graphic illustrations of the different types of toilet. However, this manual is not to be taken as “one size fits all” since the information gathered herein may not be suitable for some situation and might need to be adapted accordingly.

1.2 Who is the handbook for?

This handbook is intended to be used by Dzongkhag and Geog engineers, health staff, local carpenters, masons and builders, and other rural extension workers involved with promoting hygienic household sanitation in rural Bhutan.

2. How to use this handbook ?

This handbook contains details about 11 different types of toilets which can be opted for depending on the different situation in rural Bhutan. It starts off with ventilated single pit toilet, which is considered as one step higher in the sanitation ladder when compared to the basic simple pit toilet. Basic simple pit toilet is the type of toilet which is very common in rural Bhutan and not necessarily hygienic in most cases. Every toilet type is described in terms of applicability, construction details, location and proper usage. Graphic illustrations are also provided followed by technical engineering details. Attempt has also been made in terms of providing approximate material and cost estimates but these are subject to deviation depending on the distance from market, geographical topography, soil type, transportation etc. A minimum estimated cost is also provided for each toilet type. This cost however, excludes the cost of locally available materials and labour. An overview of the different toilet options is provided in the next page.

