

# A Decade of Biosand Filters in Vietnam

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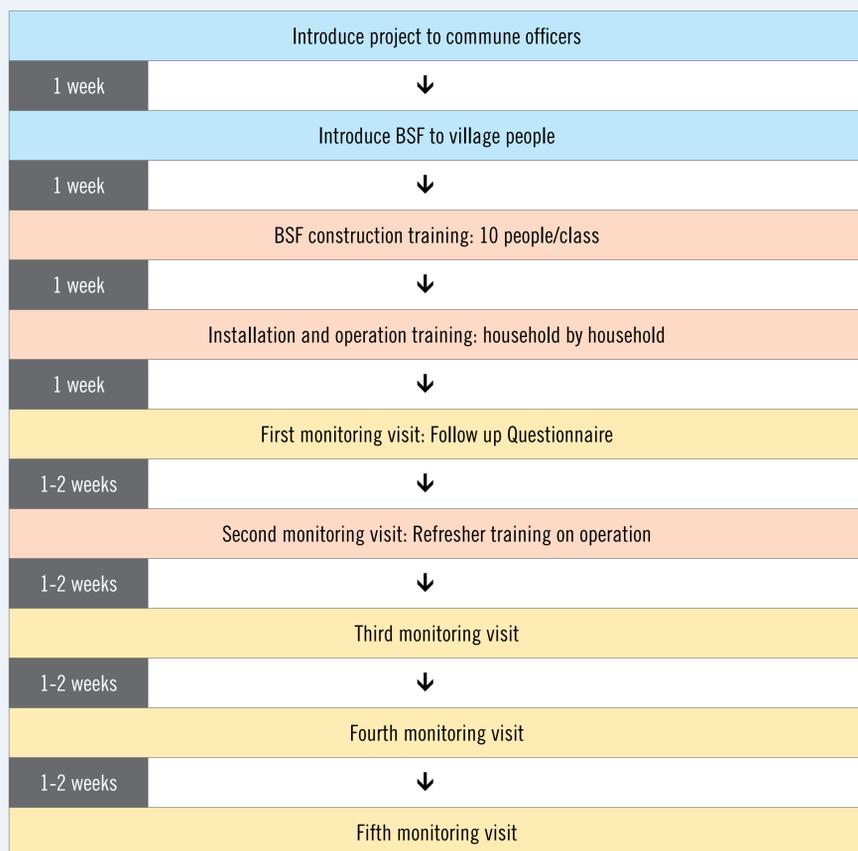


## Background

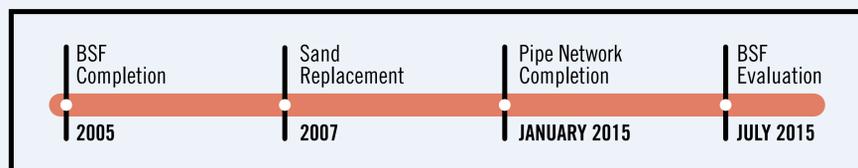
Samaritan's Purse Vietnam has been working in country since 1999 implementing various WASH, Livelihood, Education, Construction and Health and Nutrition programs for a total of 11,494 beneficiaries. In 2005, SPV carried out a BioSand filter (BSF) project in Hanam Province under technical and financial support from Samaritan's Purse Canada. In 2005, 90% of the population in the project area were living without access to a safe water source. There were three water sources including untreated pond water, shallow (30m depth) ground water and rain water. These water sources were high in E.coli. and turbidity. A total of 5,800 BSFs were installed in households and kindergartens in six communes including 1,400 in Thanhhuong Commune; 1,400 in Thanhphong Commune; 700 in Liemthuan Commune; 600 in Tienphong Commune, 1,000 in Tienhai Commune and 700 in Liemphong Commune. These six agriculture communes belong to the Red River Delta.

In July 2015, the SPV WASH team evaluated BSF usage in Tienphong, Liemthuan and Thanhphong communes, Duytien District, Hanam Province using a follow up questionnaire and observation. These three communes were selected randomly to be evaluated due to limited financial resources. The SPV evaluators conducted household visits to interview BSF owners and observe usage. The BSF usage rates in Tienphong, Thanhphong and Liemthuan are 62%, 40% and 4% respectively.

### 2005 BSF Installation Process



Regular monitoring and technical support visits were conducted every 1 or 2 weeks. The SPV trainers visited every household to provide instruction on building filters.



Project communes	Tienphong	Thanhphong	Liemthuan	Thanhhuong	Tienhai	Liemphong
Number of filters installed	600	1,400	700	1,400	1,000	700
Number of filters evaluated	21	22	23	0	0	0
"In use" rate (%)	62	40	4	NA	NA	NA
Definition of "in use" filter	Standing water level is around 5cm No insects inside filter No leak in filter					

Evaluation Summary

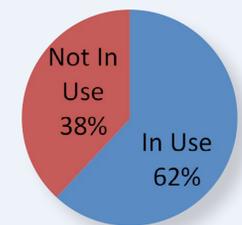
## Impact

Ten years after completion, 62% of BSFs are still used for drinking and cooking in Tienphong Commune although a government funded pipe network has been installed. Water that comes out of the BSF is stored in plastic bottles and then kept in the refrigerator for drinking. A total of 96% of BSF users use BSF water for drinking and cooking, only 4% is for washing.

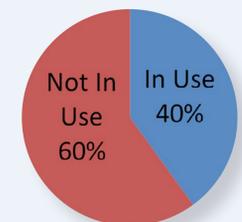
The man in Figure 1 has a Pho restaurant serving around one hundred diners daily. He said: "Tap water has a chloride-odor. But BSF water is so pure for my noodle dishes. Our diners prefer food cooked using BSF water."



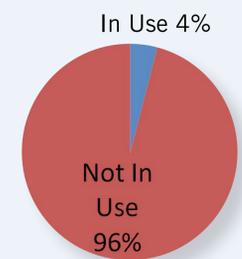
BSF in use at Pho restaurant.



BSF Usage in Tienphong commune



BSF Usage in Thanhphong commune



BSF Usage in Liemthuan commune

## Challenges

A pipe network has been installed since January 2015. Tap water only costs approximately 30 cents per cubic meter. In general, the reason for stopping BSF usage is this cheap tap water.

Many users did not know how to restart using their filter after leaving the filter for an extended period of time. When interviewing owners, the evaluation team realized they could not recall the steps to restart using the filter.



A Biosand filter

## Conclusions

While the BSF usage rate in Tienphong is 62%, in Thanhphong and Liemthuan communes, the BSF usage rate is only 40% and 4% respectively. The three communes have similar economic and social status. Training and technical support in Tienphong was much better than the other two communes because of a higher number of staff and interns. The differences in how SPV implemented the project in Tienphong Commune were as follows:

Construction training for small groups of less than 10 participants, while those in Thanhphong and Liemthuan received training in groups of 20.

Separate installation and operation training for each household, while those in Thanhphong and Liemthuan received training in groups of 5.

Regular monitoring visit with timely technical support for every household.

Installation of a piped network should be viewed as a positive step, therefore a decrease in BSF use was expected. However, as shown above, with increased follow up and support in smaller groups, the usage rate over time can be elevated.



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