

Appendix 4 – The Cost of a Biosand Filter

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1. Calculating the cost of construction and installation

Calculating the Cost of a Biosand Filter					
CONSTRUCTION & INSTALLATION	Quantity	Unit	Price	Per Unit	Cost
For 1 Filter:	(e.g. 3)	(e.g. litre)	(e.g. per litre)	(e.g. litre)	(=quantity X price)
MATERIALS					
Concrete Container					
Cement		bag		bag	
Sand		L		L	
Small gravel		L		L	
Large gravel		L		L	
Tubing (3')		m		m	
Tape for securing tubing etc.		m		m	
Edible oil, margarine or lard		mL		mL	
Finishing the container					
Soap		mL		mL	
Paint		can		can	
Diffuser					
Sheet metal		square m		square m	
Lid					
Wood or sheet metal		m		m	
Inside the filter					
Sand		L		L	
Separation gravel		L		L	
Drainage gravel		L		L	
Sacks or bags		bag		bag	
Total Materials (Hardcosts)					=
LABOUR					
Labour - making filter		hr		hr	
Labour - finishing filter		hr		hr	
Labour - making diffuser		hr		hr	
Labour - making lid		hr		hr	
Labour - sieving		hr		hr	
Labour - washing		hr		hr	
Labour - other (e.g. crushing rock by hand)		hr		hr	
Labour - installation		hr		hr	
Total Construction Labour Cost					=
TOTAL CONSTRUCTION COST					=

e.g. = for example

2. Calculating the cost of transportation

Calculating the Cost of a Biosand Filter					
TRANSPORTATION					
	Quantity	Unit	Price	Per Unit	Cost
For 1 Filter:	(e.g. 3)	(e.g. litres)	(e.g. per litre)	(e.g. litre)	(=quantity X price)
TRANSPORT					
Vehicle rental or ownership		days		day	
Fuel		tank		tank	
Other costs (tolls, taxes, maintenance)					
Total Transportation Hard Costs					=
LABOUR					
Staff time - loading filters		hr		hr	
Staff time - transportation/driving		hr		hr	
Total Transportation Labour Cost					=
TOTAL TRANSPORTATION COST					=

3. Calculating the cost of user education

Calculating the Cost of a Biosand Filter					
USER EDUCATION					
	Quantity	Unit	Price	Per Unit	Cost
For 1 Filter:	(e.g. 3)	(e.g. litres)	(e.g. per litre)	(e.g. litre)	(=quantity X price)
EDUCATION DURING INSTALLATION					
Hard Costs					
Vehicle rental or ownership		days		day	
Fuel		tank		tank	
Education materials for the user (pamphlet, sticker, poster)					
Other costs (tolls, taxes, maintenance)					
Total Education Hard Costs					=
Labour					
Staff time - educating users		hr		hr	
Total Education Labour Cost					=
TOTAL EDUCATION COST					=

e.g. = for example

4. Calculating the cost of follow-up

Calculating the Cost of a Biosand Filter					
FOLLOW-UP	Quantity	Unit	Price	Per Unit	Cost
For 1 Filter:	(e.g. 3)	(e.g. litres)	(e.g. per litre)	(e.g. litre)	(=quantity X price)
VISIT 1 - Hard Costs					
Vehicle rental or ownership		days		day	
Fuel		tank		tank	
Other costs (tolls, taxes, maintenance)					
Education materials - printing					
Total Visit 1 Hard Costs					=
Labour					
Staff time - transportation/driving		hr		hr	
Staff time - follow-up visit		hr		hr	
Total Visit 1 Labour Cost					=
Total Visit 1 Cost					=
VISIT 2 - Hard Costs					
Vehicle rental or ownership		days		day	
Fuel		tank		tank	
Other costs (tolls, taxes, maintenance)					
Education materials - printing					
Total Visit 2 Hard Costs					=
Labour					
Staff time - transportation/driving		hr		hr	
Staff time - follow-up visit		hr		hr	
Total Visit 2 Labour Cost					=
Total Visit 2 Cost					=
VISIT 3 - Hard Costs					
Vehicle rental or ownership		days		day	
Fuel		tank		tank	
Other costs (tolls, taxes, maintenance)					
Education materials - printing					
Total Visit 3 Hard Costs					=
Labour					
Staff time - transportation/driving		hr		hr	
Staff time - follow-up visit		hr		hr	
Total Visit 3 Labour Cost					=
Total Visit 3 Cost					=
TOTAL FOLLOW-UP COST (3 Visits)					=

e.g. = for example

5. Calculating the total cost of a biosand filter

Calculating the Cost of a Biosand Filter	
TOTAL COST of a BIOSAND FILTER	
	Cost
For 1 Filter:	
CONSTRUCTION & INSTALLATION	
Hard Costs	=
Labour	=
Sub-Total	=
TRANSPORTATION	
Hard Costs	=
Labour	=
Sub-Total	=
EDUCATION	
Hard Costs	=
Labour	=
Sub-Total	=
FOLLOW-UP (3 Visits)	
Hard Costs	=
Labour	=
Sub-Total	=
Total Cost	=