

Costing toolkit for WASH in schools

A user's guide



The University of North Carolina
at Chapel Hill

The Water Institute

Swiss Water & Sanitation Consortium



Costing overview

Key terms

COSTING

- Determine how much money is required to deliver WASH services
- Identify activities and inputs and calculate their associated costs
- More technical process

How much money is needed to achieve and sustain WASH services?

BUDGETING

- Determine how much money will be allocated over what timeframe
- Identify funders/funding sources
- Create a plan for how to pay
- More political process

Who will pay how much, for what, and when?

Why do budgeting and costing?

Understand the true costs of service provision

- Certain expenses are often overlooked (maintenance, training)

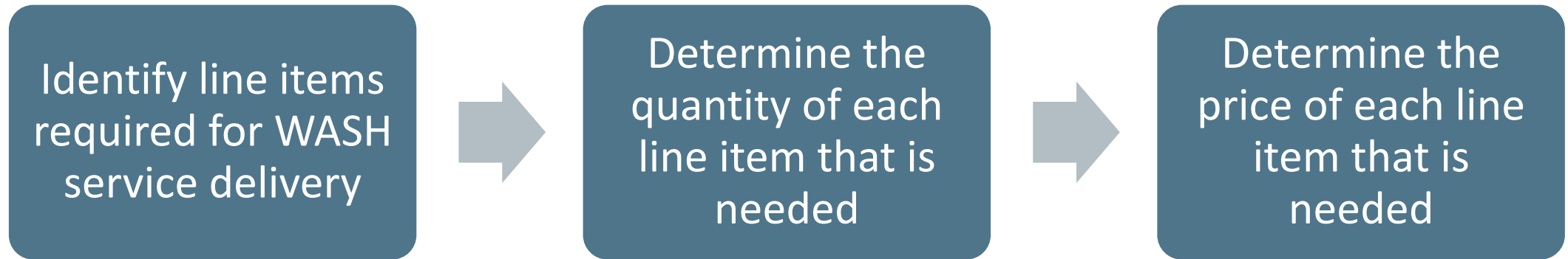
Plan programs

- Evaluate and compare different intervention types (cost-effectiveness)
- Ensure sufficient funding to reach targets/do activities

Inform sustainable investments

- Reach agreements among stakeholders to fund necessary inputs
- Avoid investments with unaffordable operations and maintenance

Basic costing process

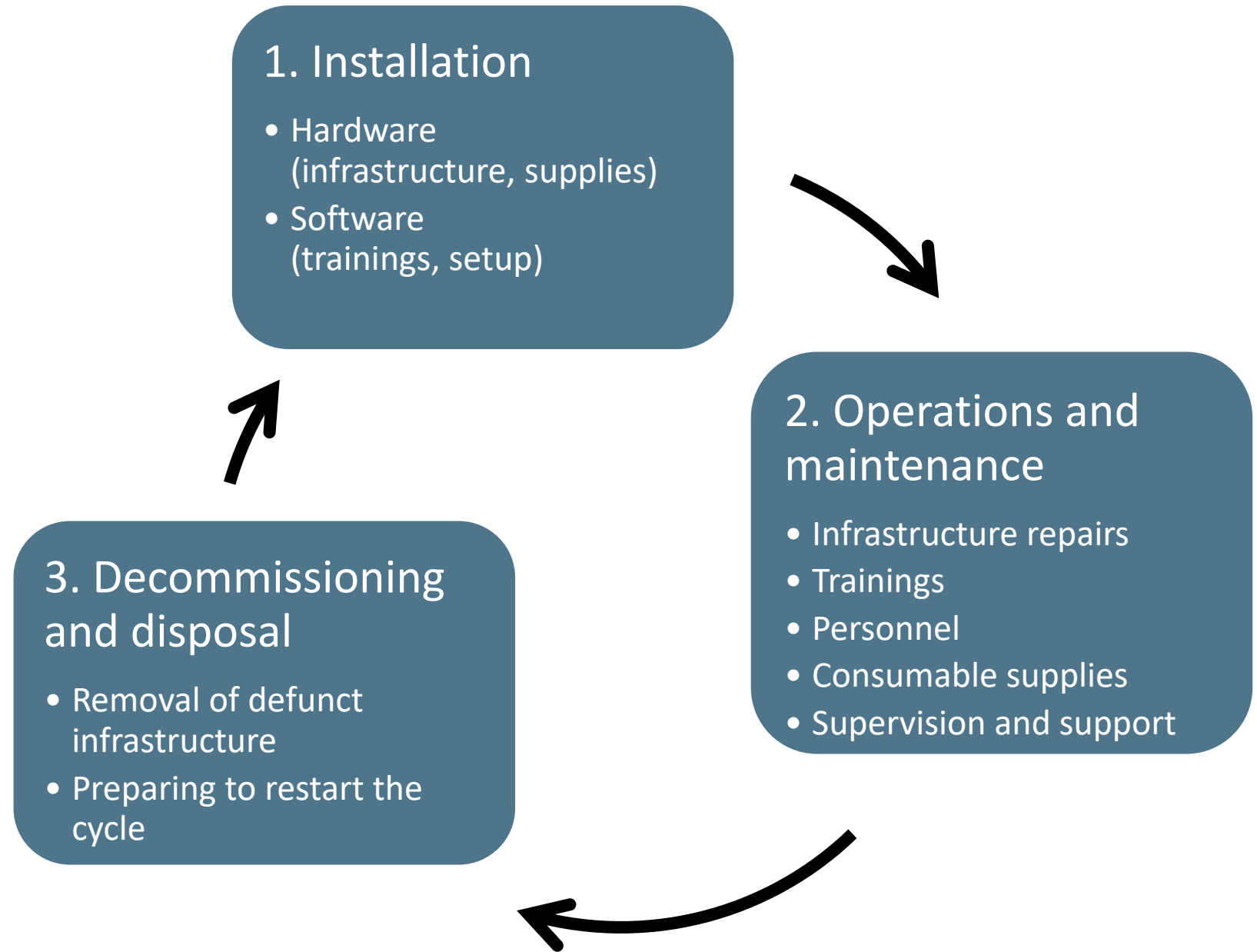


Total cost = (quantity * unit price)

Repeat and sum for all line items

Data inputs for costing & budgeting

Lifecycle costing considers line items across the entire lifespan of WASH services



Preparing for costing

1

Determine the goal or purpose of costing. Why do you want to collect cost data?

Common purposes include:

- Calculate the costs of WASH services to budget for operation
- Support advocacy efforts and/or policy implementation

2

Identify relevant stakeholders who will receive costs data

Common stakeholders include:

- School administrators, management committees
- Local, regional, and/or national government

Preparing for costing

3

Review any national or local standards for WASH in schools

- What is the required or target WASH service level?
- What are the current policies or standards for operations and maintenance?

4

Establish and orient a project team

Include team members (as relevant) for

- Cost data collection
- Policy formulation
- Communication and advocacy

Preparing for costing

5

Orient and sensitize school administrators and government officials

- Communicate project goals and activities
- Secure approvals and buy-in
- Establish committees/working groups as needed

6

Select target schools and train the field team



Tdh Nepal conducting a workshop with local government for healthcare facility costing

Selecting target schools for costing

5-10 schools or approximately 10% of schools in the target area (whichever is larger) is typically sufficient for most costing purposes

If the number and type of schools in the target area is diverse, select additional schools to achieve a representative sample. Consider the following demographics:

- Public vs. private vs. religious-affiliated
- Primary vs. secondary
- Size (number of pupils)
- Location (urban vs. rural)

Data collection tools

Throughout the costing process, you will use an Excel spreadsheet to record information.

The spreadsheet has pre-filled items required for basic WASH service delivery and performs basic cost calculations automatically.

The spreadsheet can be customized to the project and local context as needed.

Costing spreadsheet schools EN v1.1

File Home Sharing Insert Draw Page Layout Formulas Data Review View Automate Help

Spelling Thesaurus Workbook Statistics Proofing Check Performance Performance Check Accessibility Accessibility Translate Language Show Changes Changes New Comment Delete Comments Notes Notes

E32

A	B	C	D
1	SCHOOL INFORMATION		
2	Enter information about the school and local currency in yellow cells. Do not modify anything else in this sheet.		
3			
4			
5	School information		
6	School name -		
7	Location (town/province)		
8	Year -		
9	Currency -		
10			
11	Currency conversions		
12	Converted to -		
13	Conversion rate -	1	
14			
15	SUMMARY COST CALCULATIONS ARE DISPLAYED BELOW THIS LINE. DO NOT EDIT.		
16			
17	COSTS IN LOCAL CURRENCY		
18			
19	CAPITAL COSTS	Upfront costs (current)	Upfront costs (upgrading)
20		0	0
21			
22	OPERATIONS AND MAINTENANCE	Current annual costs	Upgrading annual costs
23	Infrastructure O&M	0	0
24	Consumables	0	0
25	Training	0	0
26	Personnel	0	0
27	Support	0	0
28	Total operations and maintenance	0	0
29			
30	Annual costs by WASH category	Current annual cost	Upgrading annual cost
31	Water	0	0
32	Sanitation	0	0
33	Hygiene	0	0
34	Waste management	0	0
35	Cleaning	0	0
36	School garden and other Blue Schools	0	0
37	Other	0	0

Summary UNICEF Guidelines Capital Infrastructure O&M Main

Data collection process

1

Identify stakeholders responsible for WASH service delivery

These are individuals you will consult to determine costs. Relevant individuals may include:

- School WASH committees/school management committees
- Head teachers, school administrators
- Engineers or WASH officials at the district/regional (especially for infrastructure costs)
- Community members (if engaged in WASH service delivery)

Note that school WASH provision is sometimes managed by multiple stakeholders (e.g., national government installs WASH infrastructure. Local government operates and maintains). Recruit stakeholders from all relevant levels for data collection.

Data collection process

2

Review the costing spreadsheet with identified stakeholders

- Discuss the level of WASH services currently provided at the school
- Identify any needs for upgrades
- Review the suggested line items in the costing spreadsheet. Assess whether they are sufficient to meet the WASH needs of the school.
- Revise line items in the spreadsheet to the local context as necessary

Once the line items are finalized, you will move to the next step and collect information about the quantity required and price of each item.

Data collection process

3

Collect quantity and price information. Hold focus groups or interviews with stakeholders to collect information

- Describe the purpose of costing
- Show the participant the costing spreadsheet and review the line items
- Ask the participant to estimate the quantities and prices for each item
- Record information in the costing spreadsheet

You will likely need to consult multiple participants to gather all information. The spreadsheet is a tool to help you record information from every consultation. Save working drafts and revise as necessary.

Data collection process

4

Review preliminary cost information with relevant stakeholders

- Once a preliminary draft of the spreadsheet is complete, discuss it with school administrators, local government, and other relevant officials
- Receive any concerns and feedback about data quality



Tdh Nepal collecting costs data through a focus group at a healthcare facility.

Data collection process

5

Respond to feedback, address data quality

- Create a plan to respond to any feedback or data quality concerns
- This will likely include double-checking or correcting data through additional field visits
- Continue to use the costing spreadsheet to record and correct information
- Be sure to archive old versions of the spreadsheet so they may be used for reference

6

Finalize the data. Create a plan with stakeholders for any final data review and certification. Options include:

- Review by school administrators, WASH officials, and others
- Certification (e.g., signed letters, declarations of data accuracy)
- Workshops to present final data

Data collection process

7

Proceed to policy and/or programmatic objectives

- Once data have been prepared and endorsed by relevant stakeholders, they may be incorporated into program planning, policy development, or other activities

Toolkit user guide

OVERVIEW

Costing spreadsheet

Excel-based

Designed to comprehensively calculate the costs of achieving basic WASH service

Customizable to local needs and contexts

Costing spreadsheet schools EN v1.1

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SCHOOL INFORMATION

Enter information about the school and local currency in yellow cells. Do not modify anything else in this sheet.

School information

School name -

Location (town/province) -

Year -

Currency -

Currency conversions

Converted to -

Conversion rate - 1

SUMMARY COST CALCULATIONS ARE DISPLAYED BELOW THIS LINE. DO NOT EDIT.

COSTS IN LOCAL CURRENCY

CAPITAL COSTS	Upfront costs (current)	Upfront costs (upgrading)	Ar
	0	0	

OPERATIONS AND MAINTENANCE	Current annual costs	Upgrading annual costs
Infrastructure O&M	0	0
Consumables	0	0
Training	0	0
Personnel	0	0
Support	0	0
Total operations and maintenance	0	0

Annual costs by WASH category	Current annual cost	Upgrading annual cost
Water	0	0
Sanitation	0	0
Hygiene	0	0
Waste management	0	0
Cleaning	0	0
School garden and other Blue Schools	0	0
Other	0	0

Summary UNICEF Guidelines Capital Infrastructure O&M Main

Costing categories

Costs are divided into six categories

Cost category	Definition	Example included expenses
Capital	Infrastructure or equipment purchases required to establish or rehabilitate WASH services	Sanitation facilities/toilets Water source and pipe network
Infrastructure O&M	Expenses required to operate or repair and maintain functionality of capital infrastructure and equipment	Breakdown repairs (e.g., clogged pipes) Cleaning of toilets Water testing and treatment
Consumables	Products and supplies that are consumed during normal operation	Handwashing soap Cleaning detergents Cleaning tools (mops, brooms)
Training	Trainings or behavior change activities related to providing WASH services	Annual WASH committee meetings or trainings Pupil hygiene education
Personnel	Labor costs associated with normal operation of a service, including staff benefits	WASH focal person Support staff
Support	Expenses to strengthen WASH provision but that do not have direct service outputs	Communication Capacity building

Costing categories

Each category is recorded on a separate tab of the spreadsheet.

The summary tab (shown at left) displays the total costs for all categories.

Spreadsheet tabs by cost category



Costing spreadsheet schools EN v1.1

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SCHOOL INFORMATION

Enter information about the school and local currency in yellow cells. Do not modify anything else in this sheet.

School information

School name -

Location (town/province)

Year -

Currency -

Currency conversions

Converted to -

Conversion rate - 1

SUMMARY COST CALCULATIONS ARE DISPLAYED BELOW THIS LINE. DO NOT EDIT.

COSTS IN LOCAL CURRENCY

CAPITAL COSTS

	Upfront costs (current)	Upfront costs (upgrading)	Annualized cost
	0	0	

OPERATIONS AND MAINTENANCE

	Current annual costs	Upgrading annual costs
Infrastructure O&M	0	0
Consumables	0	0
Training	0	0
Personnel	0	0
Support	0	0

Summary UNICEF Guidelines Capital Infrastructure O&M Maintenance



Overview

Data entry tabs look like this.
Click each tab to navigate to it.

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Proofing Performance Accessibility Language Changes Comments Notes Pr

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 Water source

	A	B	C	D	E	F	G	H	I	J	K	L
1												
2												
3	APITAL		Current costs					Upgrading costs				
4	Item	Estimated lifespan (years)	Unit cost	Quantity required	Total upfront cost	Equivalent annual cost	Remarks	Unit cost	Quantity required	Total upfront cost	Equivalent annual cost	Remarks
5	Water											
6	Water source	25			-	-				-	-	
7	Water network	25			-	-				-	-	
8	Water tower or reservoir	20			-	-				-	-	
9	Water filtration/treatment systems	10			-	-				-	-	
10	Rainwater harvesting	25			-	-				-	-	
11					-	-				-	-	
12					-	-				-	-	
13					-	-				-	-	
14	Sanitation											
15	Toilets	25			-	-				-	-	
16	Fecal sludge containment (pits, septic tanks)	20			-	-				-	-	
17	Drainage	20			-	-				-	-	
18	Menstrual hygiene (disposal bins)	10			-	-				-	-	
19	Disability accessibility support (handrails)	25			-	-				-	-	
20					-	-				-	-	
21					-	-				-	-	
22					-	-				-	-	
23	Hygiene											
24	Hand washing stations	15			-	-				-	-	
25					-	-				-	-	
26					-	-				-	-	
27					-	-				-	-	

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Capital

Infrastructure O&M

Maintenance

Consumables

Training

Personnel

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Display Settings

Overview

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Overview

WASH service category

Individual line items



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	A	B	C	D
3	CAPITAL			
	Item	Estimated lifespan (years)	Unit cost	Quantity required
4				Total
5	Water			
6	Water source	25		
7	Pipe network	25		
8	Water tower or reservoir	20		
9	Water filtration/treatment systems	10		
10	Rainwater harvesting	25		
11				
12				
13				

Overview

Pre-filled line items can be modified as needed to match the local context

New line items can also be added in blank rows as needed



Proofing Performance Accessibility Language Changes Comments					
G17	✕	✓	fx		
	A	B	C	D	
3	CAPITAL				
	Item	Estimated lifespan (years)	Unit cost	Quantity required	Total
4					
5	Water				
6	Water source	25			
7	Pipe network	25			
8	Water tower or reservoir	20			
9	Water filtration/treatment systems	10			
10	Rainwater harvesting	25			
11					
12					
13					

Overview

Yellow cells are for data entry.

Water source											
APITAL				Current costs					Upgrading costs		
Item	Estimated lifespan (years)	Unit cost	Quantity required	Total upfront cost	Equivalent annual cost	Remarks	Unit cost	Quantity required	Total upfront cost	Equivalent annual cost	Remarks
Water											
Water source	25			-	-				-	-	
Water network	25			-	-				-	-	
Water tower or reservoir	20			-	-				-	-	
Water filtration/treatment systems	10			-	-				-	-	
Rainwater harvesting	25			-	-				-	-	
				-	-				-	-	
				-	-				-	-	
Sanitation											
Latrine pits	25			-	-				-	-	
fecal sludge containment (pits, septic tanks)	20			-	-				-	-	
Drainage	20			-	-				-	-	
Menstrual hygiene (disposal bins)	10			-	-				-	-	
Disability accessibility support (handrails)	25			-	-				-	-	
				-	-				-	-	
				-	-				-	-	
Hygiene											
Hand and washing stations	15			-	-				-	-	
				-	-				-	-	
				-	-				-	-	
				-	-				-	-	

Overview

Blue cells are formulas. These cells calculate summary costs and should not be edited.

Water source											
				Current costs				Upgrading costs			
Item	Estimated lifespan (years)	Unit cost	Quantity required	Total upfront cost	Equivalent annual cost	Remarks	Unit cost	Quantity required	Total upfront cost	Equivalent annual cost	Remarks
Water											
Water source	25			-	-				-	-	
Water network	25			-	-				-	-	
Water tower or reservoir	20			-	-				-	-	
Water filtration/treatment systems	10			-	-				-	-	
Rainwater harvesting	25			-	-				-	-	
				-	-				-	-	
				-	-				-	-	
Sanitation											
Toilets	25			-	-				-	-	
Local sludge containment (pits, septic tanks)	20			-	-				-	-	
Drainage	20			-	-				-	-	
Menstrual hygiene (disposal bins)	10			-	-				-	-	
Disability accessibility support (handrails)	25			-	-				-	-	
				-	-				-	-	
				-	-				-	-	
Hygiene											
Hand and washing stations	15			-	-				-	-	
				-	-				-	-	
				-	-				-	-	
				-	-				-	-	

Overview

You may enter current costs and upgrading costs separately

Water source											
Current costs						Upgrading costs					
Item	Estimated lifespan (years)	Unit cost	Quantity required	Total upfront cost	Equivalent annual cost	Remarks	Unit cost	Quantity required	Total upfront cost	Equivalent annual cost	Remarks
Water											
Water source	25			-	-				-	-	
Pipe network	25			-	-				-	-	
Water tower or reservoir	20			-	-				-	-	
Water filtration/treatment systems	10			-	-				-	-	
Rainwater harvesting	25			-	-				-	-	
				-	-				-	-	
				-	-				-	-	
				-	-				-	-	
Sanitation											
Toilets	25			-	-				-	-	
Faecal sludge containment (pits, septic tanks)	20			-	-				-	-	
Drainage	20			-	-				-	-	
Menstrual hygiene (disposal bins)	10			-	-				-	-	
Disability accessibility support (handrails)	25			-	-				-	-	
				-	-				-	-	
				-	-				-	-	
				-	-				-	-	
Hygiene											
Hand and washing stations	15			-	-				-	-	
				-	-				-	-	
				-	-				-	-	
				-	-				-	-	

Overview

Current costs: Costs associated with WASH item costs NOW. These costs will display in black text.

Upgrading costs: Costs to UPGRADE the WASH item to the desired service level. These costs will display in red text.

		Performance		Accessibility		Language		Changes		Comments		Notes		Pr	
✕ ✓ <i>fx</i> ▾		Water source													
		B	C	D	E	F	G	H	I	J	K		L		
		Current costs					Upgrading costs								
		Estimated lifespan (years)	Unit cost	Quantity required	Total upfront cost	Equivalent annual cost	Remarks	Unit cost	Quantity required	Total upfront cost	Equivalent annual cost	Remarks			
		25			-	-				-	-				
		25			-	-				-	-				
		20			-	-				-	-				
		10			-	-				-	-				
		25			-	-				-	-				
					-	-				-	-				

Toolkit user guide

BASIC USAGE

Summary tab

CONTENTS OVERVIEW

Summary tab

The summary tab calculates total costs across the entire spreadsheet. **Summary costs populate automatically** as the user enters information into other tabs.

Users can update the school demographic information in the **yellow cells**.

Other cells should not be edited. These contain formulas that calculate totals based on other parts of the spreadsheet.

Costing spreadsheet schools EN v1.1

File Home Sharing Insert Draw Page Layout Formulas Data Review View Automate Help

Spelling Thesaurus Workbook Statistics Proofing Check Performance Performance Check Accessibility Accessibility Translate Language Show Changes Changes New Comment Delete Comments Notes Notes

E32

A	B	C	D
1	SCHOOL INFORMATION		
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4			
5	School information		
6	School name -		
7	Location (town/province)		
8	Year -		
9	Currency -		
10			
11	Currency conversions		
12	Converted to -		
13	Conversion rate -	1	
14			
15	SUMMARY COST CALCULATIONS ARE DISPLAYED BELOW THIS LINE. DO NOT EDIT.		
16			
17	COSTS IN LOCAL CURRENCY		
18			
19	CAPITAL COSTS	Upfront costs (current)	Upfront costs (upgrading)
20		0	0
21			
22	OPERATIONS AND MAINTENANCE	Current annual costs	Upgrading annual costs
23	Infrastructure O&M	0	0
24	Consumables	0	0
25	Training	0	0
26	Personnel	0	0
27	Support	0	0
28	Total operations and maintenance	0	0
29			
30	Annual costs by WASH category	Current annual cost	Upgrading annual cost
31	Water	0	0
32	Sanitation	0	0
33	Hygiene	0	0
34	Waste management	0	0
35	Cleaning	0	0
36	School garden and other Blue Schools	0	0
37	Other	0	0

Summary UNICEF Guidelines Capital Infrastructure O&M Main

Summary tab – capital costs

Capital costs are presented as:

- **Upfront:** Total, one-time investment costs
- **Annualized:** Total costs divided over the expected infrastructure lifespan, plus accounting for factors like interest and inflation

13	Conversion rate -	1			
14	SUMMARY COST CALCULATIONS ARE DISPLAYED BELOW THIS LINE. DO NOT EDIT.				
15					
16					
17	COSTS IN LOCAL CURRENCY				
18					
19	CAPITAL COSTS	Upfront costs (current)	Upfront costs (upgrading)	Annualized costs (current)	Annualized costs (upgrading)
20		0	0	0	0
21					
22	OPERATIONS AND MAINTENANCE	Current annual costs	Upgrading annual costs		
23	Infrastructure O&M	0	0		
24	Consumables	0	0		
25	Training	0	0		
26	Personnel	0	0		
27	Support	0	0		
28	Total operations and maintenance	0	0		
29					

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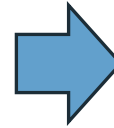
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Display Settings

Summary tab – O&M costs

Operations and maintenance costs are presented as annual costs.

- O&M costs include everything else that is not capital investments
- Costs are separated into current costs and upgrading costs



4			
5	SUMMARY COST CALCULATIONS ARE DISPLAYED BELOW THIS LINE. DO NOT EDIT.		
6			
7	COSTS IN LOCAL CURRENCY		
8			
9	CAPITAL COSTS	Upfront costs (current)	Upfront costs (upgrading)
10		0	0
11			
12	OPERATIONS AND MAINTENANCE	Current annual costs	Upgrading annual costs
13	Infrastructure O&M	0	0
14	Consumables	0	0
15	Training	0	0
16	Personnel	0	0
17	Support	0	0
18	Total operations and maintenance	0	0
19			
20	Annual costs by WASH category	Current annual cost	Upgrading annual cost
21	Water	0	0
22	Sanitation	0	0
23	Hygiene	0	0
24	Waste management	0	0
25	Cleaning	0	0
26	School garden and other Blue Schools ac	0	0
27	Other	0	0
28			
29			
30	COSTS IN CONVERTED CURRENCY	0	
31			
32	CAPITAL COSTS	Upfront costs (current)	Upfront costs (upgrading)
33			

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Summary

UNICEF Guidelines

Capital

Infrastructure O&M

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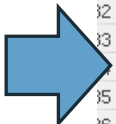
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Summary tab – breakdown by WASH service

The summary tab presents costs broken down by each WASH service.

- WASH service costs are **annual** and include **all capital and O&M costs**
- Costs are separated into current costs and upgrading costs



SUMMARY COST CALCULATIONS ARE DISPLAYED BELOW THIS LINE. DO NOT EDIT.		
COSTS IN LOCAL CURRENCY		
CAPITAL COSTS	Upfront costs (current)	Upfront costs (upgrading)
	0	0
OPERATIONS AND MAINTENANCE	Current annual costs	Upgrading annual costs
Infrastructure O&M	0	0
Consumables	0	0
Training	0	0
Personnel	0	0
Support	0	0
Total operations and maintenance	0	0
Annual costs by WASH category	Current annual cost	Upgrading annual cost
Water	0	0
Sanitation	0	0
Hygiene	0	0
Waste management	0	0
Cleaning	0	0
School garden and other Blue Schools ac	0	0
Other	0	0
COSTS IN CONVERTED CURRENCY		
	0	
CAPITAL COSTS	Upfront costs (current)	Upfront costs (upgrading)

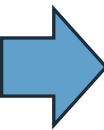
< > Summary UNICEF Guidelines Capital Infrastructure O&M Maintenance ... +

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Summary tab – currency conversions

The summary tab has a section to convert costs to other currencies. This section appears at the bottom of the page.

- Users must input the conversion rate for the desired currency



4			
5	SUMMARY COST CALCULATIONS ARE DISPLAYED BELOW THIS LINE. DO NOT EDIT.		
6			
7	COSTS IN LOCAL CURRENCY		
8			
9	CAPITAL COSTS	Upfront costs (current)	Upfront costs (upgrading)
10		0	0
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23	Hygiene	0	0
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25	Cleaning	0	0
26	School garden and other Blue Schools ac	0	0
27	Other	0	0
28			
29			
30	COSTS IN CONVERTED CURRENCY	0	
31			
32	CAPITAL COSTS	Upfront costs (current)	Upfront costs (upgrading)
33	<	>	Summary
34	UNICEF Guidelines	Capital	Infrastructure O&M
35	Maintenance	...	+
36	Ready	Accessibility	Investigate

Summary tab

ENTERING INFORMATION

Summary tab

Insert school
information and
country's currency in
YELLOW cells

For currency, note the
currency that you using to
report the cost data (e.g.,
rupees, riels, francs, dollars)

HEALTH FACILITY INFORMATION		
<i>Enter information about the school and local currency in yellow cells. Do not modify anything else in this sheet.</i>		
School information		
School name -		
Location (town/province)		
Year -		
Currency -		
Currency conversions		
Converted to -	USD	
Conversion rate -	1	

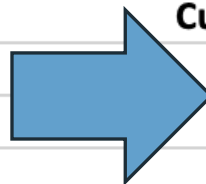


All costs must be entered in the same currency, or the spreadsheet will not total correctly. If you have costs data in different currencies, convert all data to the same currency before entering.

Summary tab

Insert the desired
currency conversion type
and rate

Converted currency



HEALTH FACILITY INFORMATION		
<i>Enter information about the school and local currency in yellow cells. Do not modify anything else in this sheet.</i>		
School information		
School name -		
Location (town/province)		
Year -		
Currency -		
Currency conversions		
Converted to -	USD	
Conversion rate -	1	

The default conversion
rate is set to 1 (i.e., no
conversion).

Currency conversion rates can be found online at
<https://www.oanda.com/currency-converter/>

UNICEF guidelines tab

CONTENTS OVERVIEW

UNICEF guidelines tab

The UNICEF guidelines tab calculates information about the quantity of WASH needed at the school, based on the number of pupils.

Totals are based on UNICEF guidelines.

Users can update the school demographic information in the **yellow cells**. The remaining information is populated automatically.

Proofing | Performance | Accessibility | Language | Changes

E10

<

UNICEF guidelines tab

The UNICEF guidelines tab does not influence cost calculations throughout the rest of the sheet.

It is only for reference, to help users determine the quantity of WASH services required (e.g., to estimate upgrading needs).

Proofing | Performance | Accessibility | Language | Changes

E10

UNICEF guidelines tab

ENTERING INFORMATION

UNICEF Guidelines

Insert school information
into the YELLOW cells

Recommended WASH
service quantities appear in
blue cells below.

Proofing				Performance				Accessibility				Language				Changes							
E10				✕				✓				fx											
A				B				C				D											
1																							
2				School information																			
3																							
4				Number of students and staff								1											
5				Number of female students/staff								1											
6				Number of male students/staff								1											
7				Type of school				Boarding															
8																							
9				Recommended quantities for WASH infrastructure per UN																			
10																							
11				Daily water needs (litres)								20											
12				Number of toilets for females								1											
13				Number of toilets for males								1											
14				Number of urinals for males								1											
15				Daily flushing toilet water (litres)								60											
16				Daily anal washing/cleaning water (litres)								6											
17																							
18																							
19																							
20																							
21																							
22				UNICEF WASH IN SCHOOLS GUIDELINES BELOW THIS LINE. DO NOT EDIT.																			
23																							
24																							
<				>				Summary				UNICEF Guidelines				Capital				Infrastructure O&M			

Capital tab

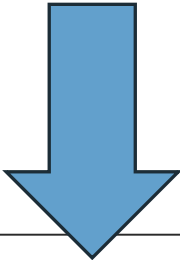
CONTENTS OVERVIEW

Capital tab

The capital tab calculates costs of capital investments (e.g., infrastructure, major equipment).

Suggested items required to deliver basic WASH service are pre-filled in the column A.

The items are divided into sections for water, sanitation, hygiene, etc....



2						
3	CAPITAL				Current costs	
	Item	Estimated lifespan (years)	Unit cost	Quantity required	Total upfront cost	Equivalent annual cost
4						
5	Water					
6	Water source	25			-	-
7	Pipe network	25			-	-
8	Water tower or reservoir	20			-	-
9	Water filtration/treatment systems	10			-	-
10	Rainwater harvesting	25			-	-
11					-	-
12					-	-
13					-	-
14	Sanitation					
15	Toilets	25			-	-
16	Fecal sludge containment (pits, septic tanks)	20			-	-
17	Drainage	20			-	-
18	Menstrual hygiene (disposal bins)	10			-	-
19	Disability accessibility support (handrails)	25			-	-
20					-	-
21					-	-
22					-	-
23	Hygiene					
24	Hand washing stations	15			-	-
25					-	-
26					-	-
27					-	-
28	Waste management					
	Solid waste disposal (e.g., incinerator)	25			-	-
< >		Summary	UNICEF Guidelines	Capital	Infrastructure C	

Capital tab

The user must input three pieces of information for each item

- **Estimated lifespan:** how long will the infrastructure last before it must be replaced?
- **Unit cost:** what is the cost of purchasing one item?
- **Quantity required:** how many items are needed in the school?

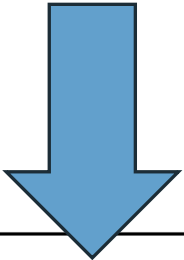
Current costs						
Item	Estimated lifespan (years)	Unit cost	Quantity required	Total upfront cost	Equivalent annual cost	
Water						
Water source	25			-	-	
Pipe network	25			-	-	
Water tower or reservoir	20			-	-	
Water filtration/treatment systems	10			-	-	
Rainwater harvesting	25			-	-	
				-	-	
				-	-	
				-	-	
Sanitation						
Toilets	25			-	-	
Fecal sludge containment (pits, septic tanks)	20			-	-	
Drainage	20			-	-	
Menstrual hygiene (disposal bins)	10			-	-	
Disability accessibility support (handrails)	25			-	-	
				-	-	
				-	-	
				-	-	
Hygiene						
Hand washing stations	15			-	-	
				-	-	
				-	-	
				-	-	
Waste management						
Solid waste disposal (e.g. incinerated)	25					



Capital tab

Based on user inputs, the spreadsheet automatically calculates:

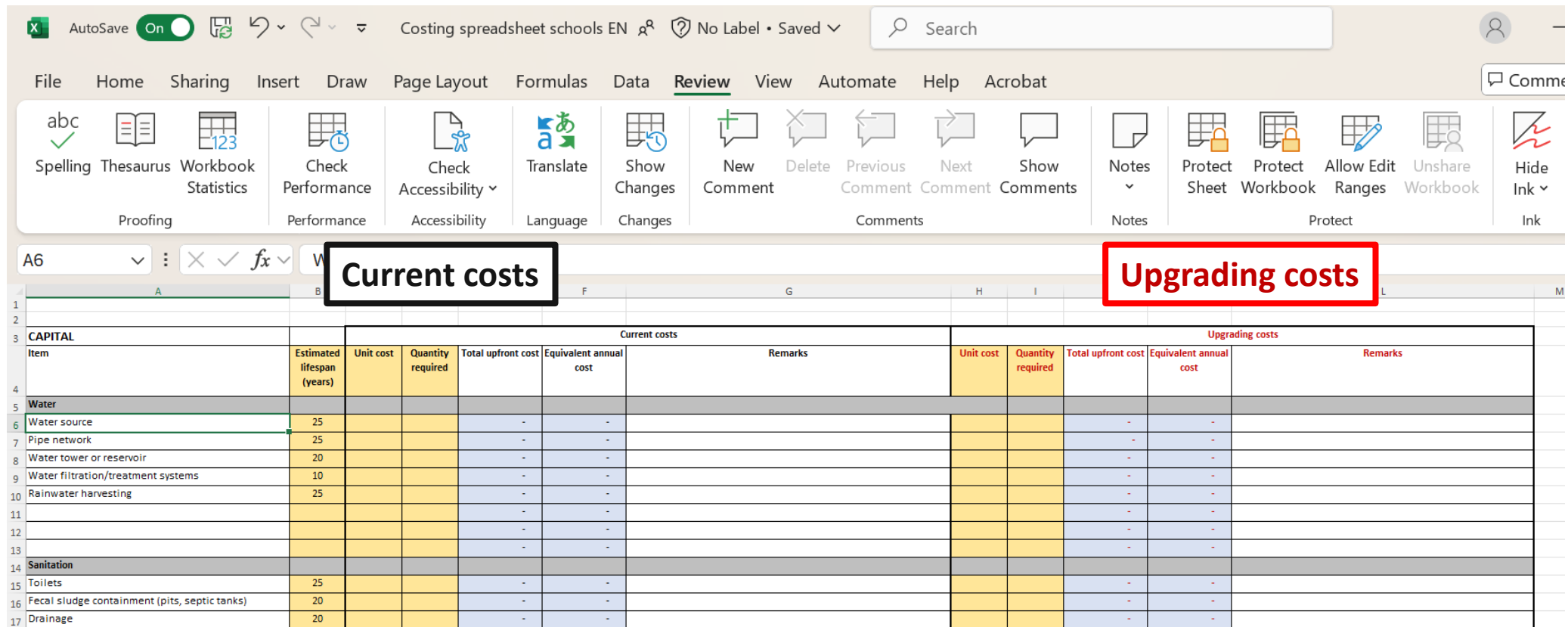
- **Total upfront cost:** Total, one-time investment costs for the item
- **Equivalent annual cost:** Total costs divided over the expected infrastructure lifespan, plus accounting for factors like interest and inflation



2						
3	CAPITAL				Current costs	
	Item	Estimated lifespan (years)	Unit cost	Quantity required	Total upfront cost	Equivalent annual cost
4						
5	Water					
6	Water source	25			-	-
7	Pipe network	25			-	-
8	Water tower or reservoir	20			-	-
9	Water filtration/treatment systems	10			-	-
10	Rainwater harvesting	25			-	-
11					-	-
12					-	-
13					-	-
14	Sanitation					
15	Toilets	25			-	-
16	Fecal sludge containment (pits, septic tanks)	20			-	-
17	Drainage	20			-	-
18	Menstrual hygiene (disposal bins)	10			-	-
19	Disability accessibility support (handrails)	25			-	-
20					-	-
21					-	-
22					-	-
23	Hygiene					
24	Hand washing stations	15			-	-
25					-	-
26					-	-
27					-	-
28	Waste management					
	Solid waste disposal (e.g. incineration)	25			-	-
< > Summary UNICEF Guidelines Capital Infrastructure C						

Capital tab

Remember that the spreadsheet has a section for current costs and a section for upgrading costs (for items that are needed but not currently available).



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Spelling Thesaurus Workbook Statistics Check Performance Check Accessibility Translate Show Changes New Comment Delete Previous Comment Next Comment Show Comments Notes Protect Sheet Protect Workbook Allow Edit Ranges Unshare Workbook Hide Ink

A6

Current costs							Upgrading costs				
Item	Estimated lifespan (years)	Unit cost	Quantity required	Total upfront cost	Equivalent annual cost	Remarks	Unit cost	Quantity required	Total upfront cost	Equivalent annual cost	Remarks
CAPITAL											
Water											
Water source	25			-	-				-	-	
Pipe network	25			-	-				-	-	
Water tower or reservoir	20			-	-				-	-	
Water filtration/treatment systems	10			-	-				-	-	
Rainwater harvesting	25			-	-				-	-	
Sanitation											
Toilets	25			-	-				-	-	
Fecal sludge containment (pits, septic tanks)	20			-	-				-	-	
Drainage	20			-	-				-	-	

Capital tab

ENTERING INFORMATION

Capital tab

Review lifespan information for each item in YELLOW cells. Edit or insert if necessary.

Estimated lifespan (years):

How long is the item predicted to last?

Some lifespan data is pre-filled but can be edited. If you add or change items, you will need to add new lifespan information.

Proofing Performance Accessibility					
A6		✕	✓	<i>fx</i>	Water source
	A	B	C	D	
1					
2					
3	CAPITAL				
4	Item	Estimated lifespan (years)	Unit cost	Quantity required	Total
5	Water				
6	Water source	25			
7	Pipe network	25			
8	Water tower or reservoir	20			
9	Water filtration/treatment systems	10			
10	Rainwater harvesting	25			
11					
12					
13					
14	Sanitation				
15	Toilets	25			
16	Fecal sludge containment (pits, septic tanks)	20			
17	Drainage	20			

Capital tab

Insert unit cost information
for each item in YELLOW
cells

Unit cost:

How much does one item
cost?

No unit cost information is
pre-filled. You must update
this for every item.

Proofing Performance Accessibility					
A6 X ✓ fx Water source					
	A	B	C	D	
1					
2					
3	CAPITAL				
	Item	Estimated lifespan (years)	Unit cost	Quantity required	Total
4					
5	Water				
6	Water source				
7	Pipe network				
8	Water tower or reservoir	20			
9	Water filtration/treatment systems	10			
10	Rainwater harvesting	25			
11					
12					
13					
14	Sanitation				
15	Toilets	25			
16	Fecal sludge containment (pits, septic tanks)	20			
17	Drainage	20			

Capital tab

Insert quantity information
for each item in YELLOW
cells

Quantity required:

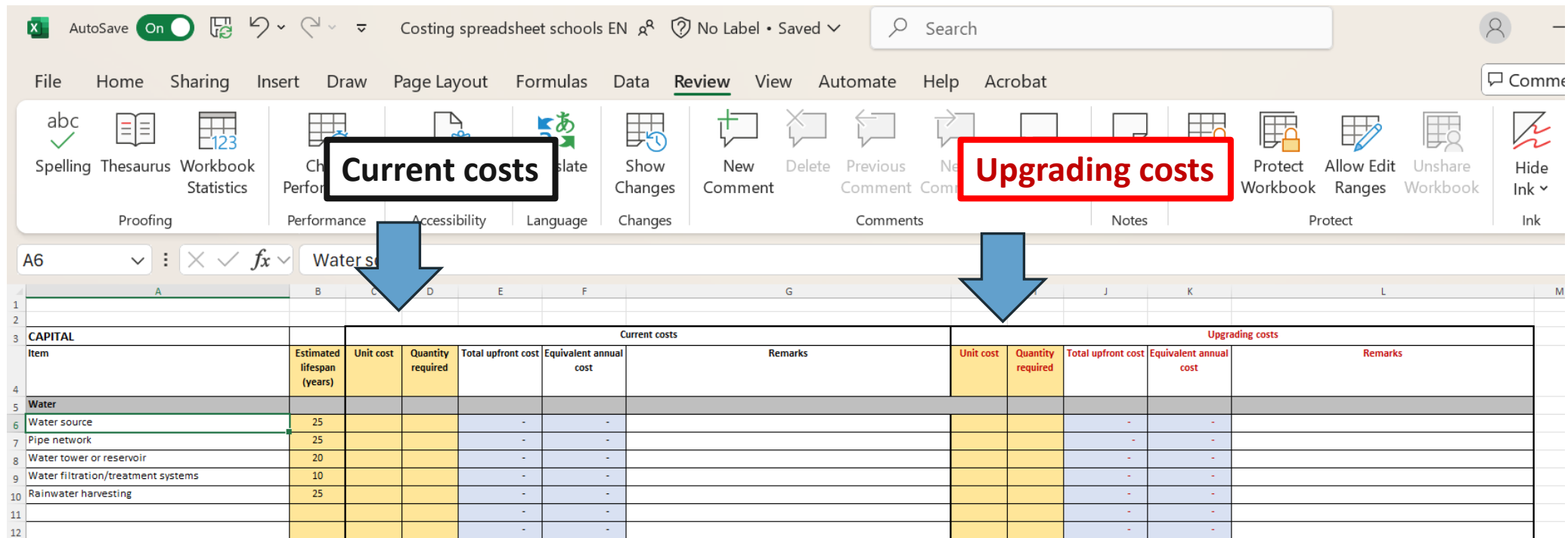
How many of these WASH
items does the school need?

No quantity information is
pre-filled. You must update
this for every item.

Proofing Performance Accessibility					
A6		✕	✓	<i>fx</i>	Water source
	A	B	C	D	
1					
2					
3	CAPITAL				
	Item	Estimated lifespan (years)	Unit cost	Quantity required	Total
4					
5	Water				
6	Water source				
7	Pipe network	25			
8	Water tower or reservoir	20			
9	Water filtration/treatment systems	10			
10	Rainwater harvesting	25			
11					
12					
13					
14	Sanitation				
15	Toilets	25			
16	Fecal sludge containment (pits, septic tanks)	20			
17	Drainage	20			

Capital tab

Unit cost and quantity information can be entered under the “Current cost” columns and the “Upgrading cost” columns. The current costs reflects what the school has already purchased. The upgrading cost reflects what is need to reach basic service.



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Spelling Thesaurus Workbook Statistics Proofing Performance Accessibility Language Changes Comments Notes Protect Allow Edit Unshare Hide Ink

Current costs

Upgrading costs

CAPITAL		Current costs					Upgrading costs				
Item	Estimated lifespan (years)	Unit cost	Quantity required	Total upfront cost	Equivalent annual cost	Remarks	Unit cost	Quantity required	Total upfront cost	Equivalent annual cost	Remarks
Water											
Water source	25			-	-				-	-	
Pipe network	25			-	-				-	-	
Water tower or reservoir	20			-	-				-	-	
Water filtration/treatment systems	10			-	-				-	-	
Rainwater harvesting	25			-	-				-	-	
				-	-				-	-	
				-	-				-	-	

Infrastructure O&M tab Maintenance tab

CONTENTS OVERVIEW

O&M tab

The capital tab calculates costs of infrastructure O&M.

The items are divided into sections for water, sanitation, hygiene, etc....

Some basic operations items are pre-filled. Maintenance costs are calculated on a separate tab.

		Spelling	thesaurus	WORKBOOK	Check	Check	Translate	SHOW	
				Statistics	Performance	Accessibility		Changes	Co
					Performance	Accessibility	Language	Changes	
		F12							
2									
3									
4									
5									
6									
7									
8									
9									
10									
11									
12									
13									
14									
15									

O&M tab

Maintenance

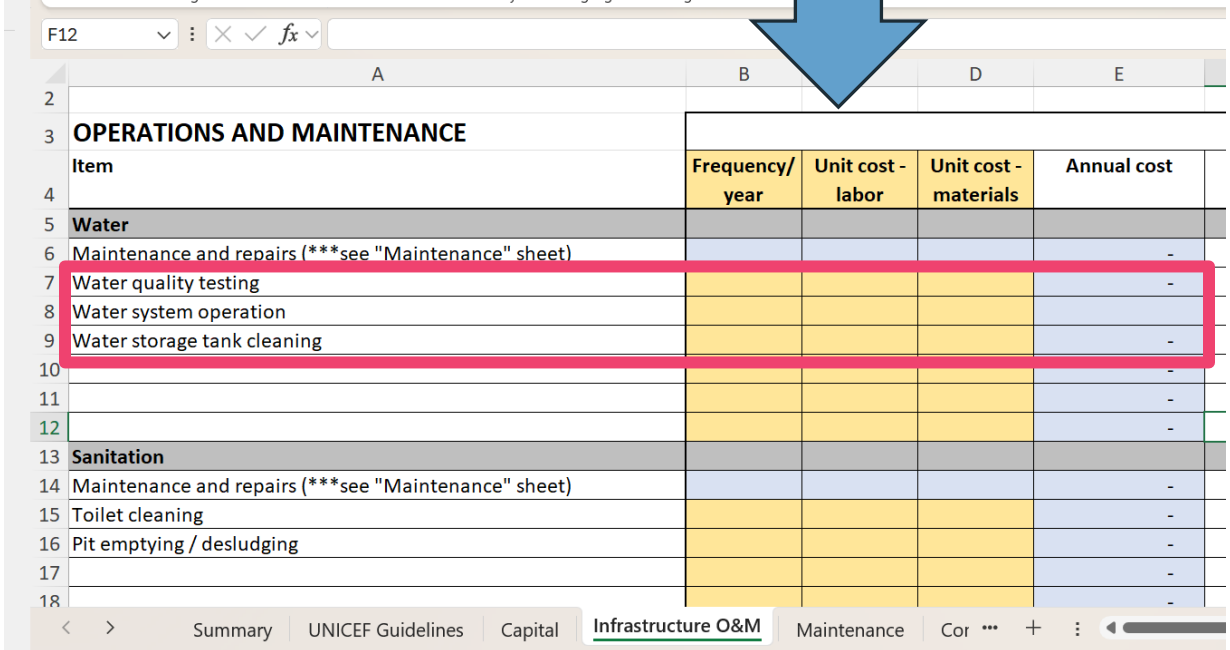
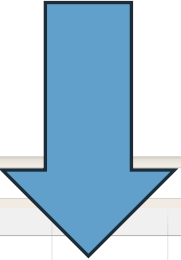
Operations

F12					
	A	B	C	D	E
2					
3	OPERATIONS AND MAINTENANCE				
4	Item	Frequency/ year	Unit cost - labor	Unit cost - materials	Annual cost
5	Water				
6	Maintenance and repairs (**see "Maintenance" sheet)				-
7	Water quality testing				-
8	Water system operation				-
9	Water storage tank cleaning				-
10					-
11					-
12					-

O&M tab (operations)

For operations costs, the user must input three pieces of information for each item

- **Frequency/year:** how many times per year the operations activity is done?
- **Unit cost - labor:** what is the labor cost of the activity? This can be estimated by the time required for the activity and the hourly wage of the personnel performing it
- **Unit cost – materials:** what is the cost of materials/supplies for the activity?

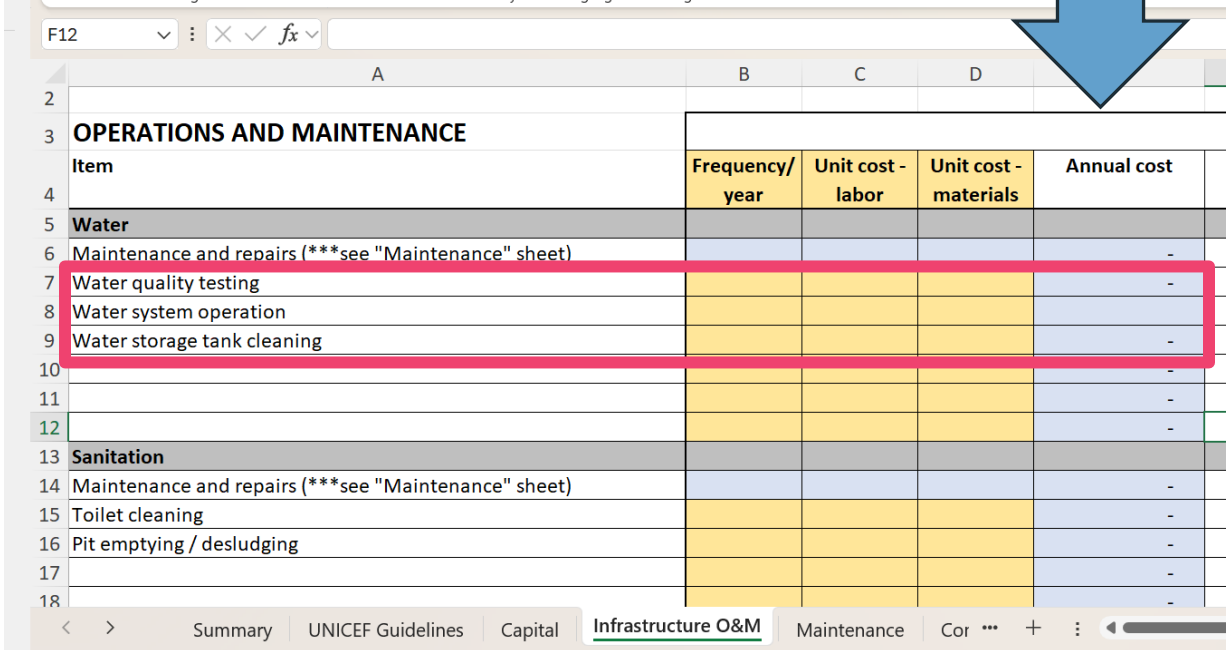
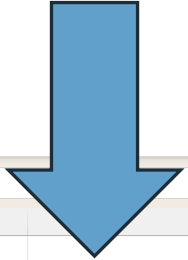


Item	Frequency/ year	Unit cost - labor	Unit cost - materials	Annual cost
Water				
Maintenance and repairs (**see "Maintenance" sheet)				-
Water quality testing				-
Water system operation				-
Water storage tank cleaning				-
				-
				-
Sanitation				
Maintenance and repairs (**see "Maintenance" sheet)				-
Toilet cleaning				-
Pit emptying / desludging				-
				-
				-

O&M tab (operations)

Based on user inputs, the spreadsheet automatically calculates:

- **Annual cost:** The total annual cost for the operations activity



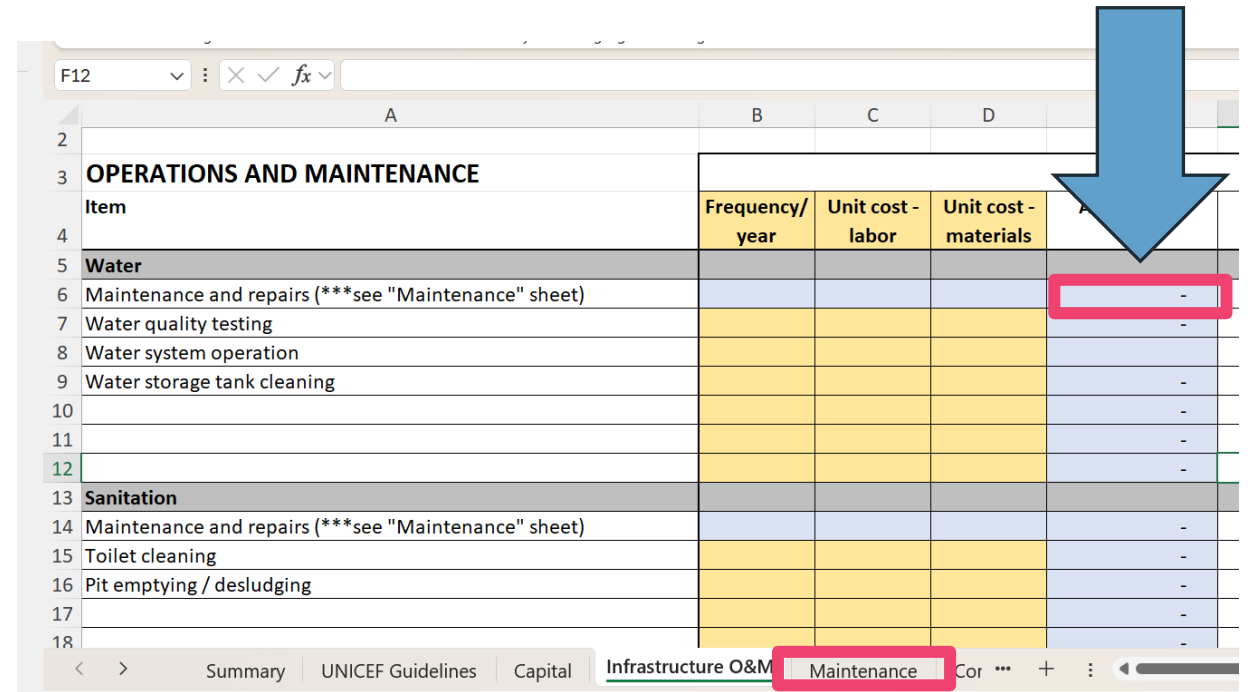
Item	Frequency/ year	Unit cost - labor	Unit cost - materials	Annual cost
Water				
Maintenance and repairs (**see "Maintenance" sheet)				-
Water quality testing				-
Water system operation				-
Water storage tank cleaning				-
				-
				-
				-
Sanitation				
Maintenance and repairs (**see "Maintenance" sheet)				-
Toilet cleaning				-
Pit emptying / desludging				-
				-
				-

O&M tab (maintenance)

Maintenance costs are populated from the Maintenance tab.

The row for maintenance costs will remain blank until you enter information into the Maintenance tab.

Data populates here.



	A	B	C	D
2				
3	OPERATIONS AND MAINTENANCE			
4	Item	Frequency/ year	Unit cost - labor	Unit cost - materials
5	Water			
6	Maintenance and repairs (**see "Maintenance" sheet)			-
7	Water quality testing			-
8	Water system operation			-
9	Water storage tank cleaning			-
10				-
11				-
12				-
13	Sanitation			
14	Maintenance and repairs (**see "Maintenance" sheet)			-
15	Toilet cleaning			-
16	Pit emptying / desludging			-
17				-
18				-

Summary UNICEF Guidelines Capital Infrastructure O&M Maintenance Cor ... +

Data entered on this tab.

Maintenance tab

The maintenance tab is pre-filled with items. These items match the infrastructure listed on the capital tab.

If you add infrastructure to the capital costs, be sure to also add it to the maintenance tab, so that O&M can be fully costed.

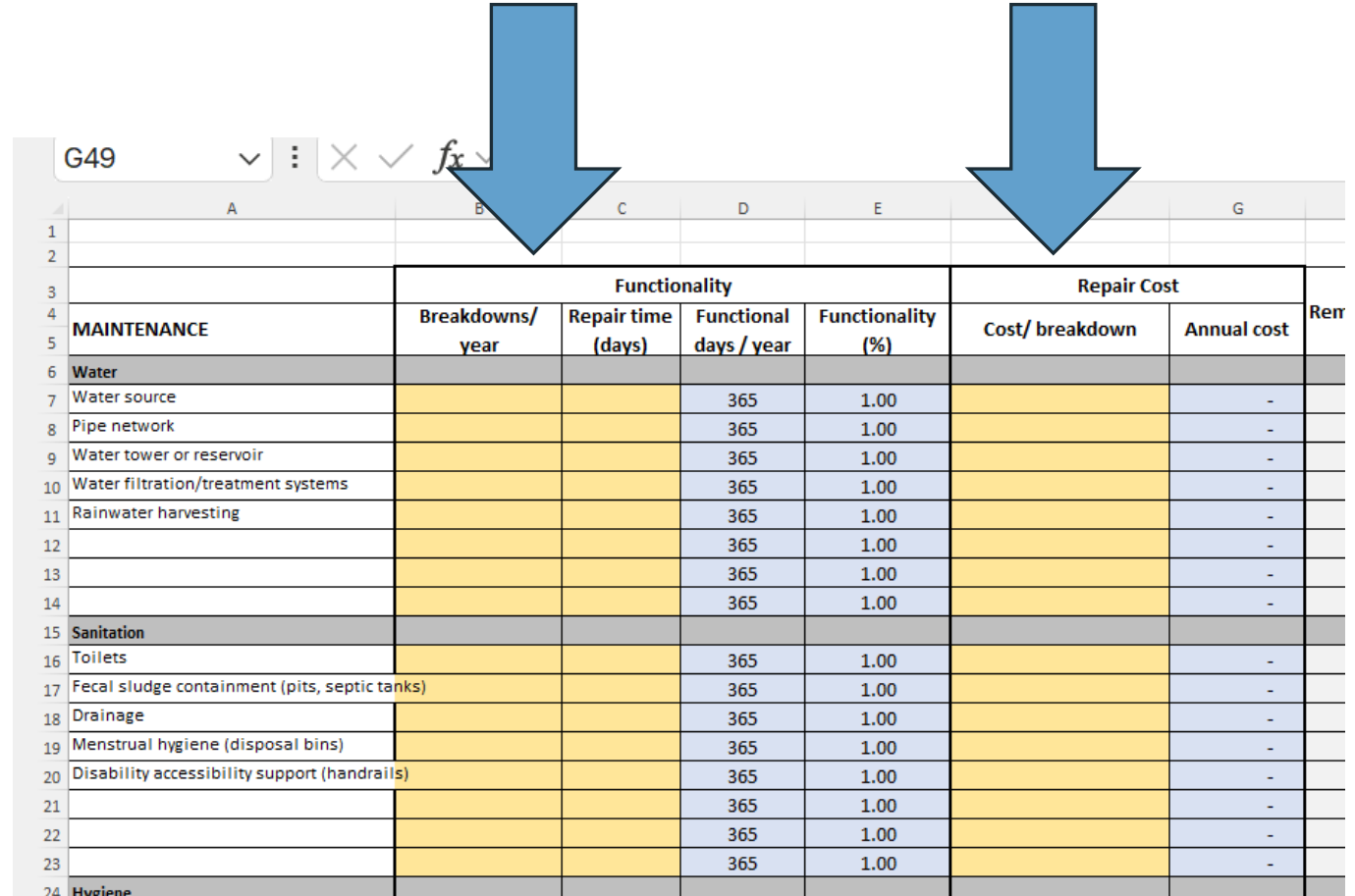


G49							
	B	C	D	E	F	G	
1							
2							
3		Functionality				Repair Cost	
4	MAINTENANCE	Breakdowns/	Repair time	Functional	Functionality	Cost/ breakdown	Annual cost
5		year	(days)	days / year	(%)		
6	Water						
7	Water source			365	1.00		-
8	Pipe network			365	1.00		-
9	Water tower or reservoir			365	1.00		-
10	Water filtration/treatment systems			365	1.00		-
11	Rainwater harvesting			365	1.00		-
12				365	1.00		-
13				365	1.00		-
14				365	1.00		-
15	Sanitation						
16	Toilets			365	1.00		-
17	Fecal sludge containment (pits, septic tanks)			365	1.00		-
18	Drainage			365	1.00		-
19	Menstrual hygiene (disposal bins)			365	1.00		-
20	Disability accessibility support (handrails)			365	1.00		-
21				365	1.00		-
22				365	1.00		-
23				365	1.00		-
24	Hveiene						

Maintenance tab

The user must input three pieces of information for each item

- **Breakdowns/year:** approximately how many times per year does the infrastructure break down?
- **Repair time:** what is the average number of days to repair the infrastructure (including wait time)?
- **Cost/breakdown:** what is the average cost per repair?

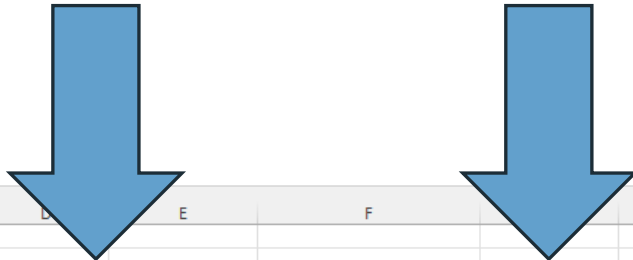


	Functionality				Repair Cost		
	Breakdowns/ year	Repair time (days)	Functional days / year	Functionality (%)	Cost/ breakdown	Annual cost	Rem
MAINTENANCE							
Water							
Water source			365	1.00		-	
Pipe network			365	1.00		-	
Water tower or reservoir			365	1.00		-	
Water filtration/treatment systems			365	1.00		-	
Rainwater harvesting			365	1.00		-	
			365	1.00		-	
			365	1.00		-	
			365	1.00		-	
Sanitation							
Toilets			365	1.00		-	
Fecal sludge containment (pits, septic tanks)			365	1.00		-	
Drainage			365	1.00		-	
Menstrual hygiene (disposal bins)			365	1.00		-	
Disability accessibility support (handrails)			365	1.00		-	
			365	1.00		-	
			365	1.00		-	
			365	1.00		-	
Hygiene							

Maintenance tab

Based on user inputs, the spreadsheet automatically calculates:

- **Functionality:** Number of days (%) of the year that the infrastructure is functional
- **Annual cost:** Total annual costs for repairs



G49							
	A	B	C	D	E	F	
		Functionality			Repair Cost		
	MAINTENANCE	Breakdowns/ year	Repair time (days)	Functional days / year	Functionality (%)	Cost/ breakdown	Annual cost
6	Water						
7	Water source			365	1.00		-
8	Pipe network			365	1.00		-
9	Water tower or reservoir			365	1.00		-
10	Water filtration/treatment systems			365	1.00		-
11	Rainwater harvesting			365	1.00		-
12				365	1.00		-
13				365	1.00		-
14				365	1.00		-
15	Sanitation						
16	Toilets			365	1.00		-
17	Fecal sludge containment (pits, septic tanks)			365	1.00		-
18	Drainage			365	1.00		-
19	Menstrual hygiene (disposal bins)			365	1.00		-
20	Disability accessibility support (handrails)			365	1.00		-
21				365	1.00		-
22				365	1.00		-
23				365	1.00		-
24	Hveiene						

Infrastructure O&M tab

Maintenance tab

ENTERING INFORMATION

Infrastructure O&M tab

Insert frequency
information for each item in
YELLOW cells

Frequency/year:

How many times per year
the operations activity is
done?

OPERATIONS AND MAINTENANCE				
Item	Frequency/ year	Unit cost - labor	Unit cost - materials	Annual cost
Water				
Maintenance and repairs (***see "Maintenance" sheet)				-
Water quality testing				-
Water system operation				-
Water storage tank cleaning				-
				-
				-
				-
Sanitation				
Maintenance and repairs (***see "Maintenance" sheet)				-
Toilet cleaning				-
Pit emptying / desludging				-
				-
				-
				-
Hygiene				
Maintenance and repairs (***see "Maintenance" sheet)				-
				-

Infrastructure O&M tab

Insert unit costs of labor
information for each item in
YELLOW cells

Unit cost - labor:

What is the labor cost of the
activity?

This can be estimated by the
time required for the activity
and the hourly wage of the
personnel performing it

OR

Cost of hiring a contractor

OPERATIONS AND MAINTENANCE				
Item	Frequency/ year	Unit cost - labor	Unit cost - materials	Annual cost
Water				
Maintenance and repairs (***see "Maintenance" sheet)				-
Water quality testing				-
Water system operation				-
Water storage tank cleaning				-
				-
				-
				-
Sanitation				
Maintenance and repairs (***see "Maintenance" sheet)				-
Toilet cleaning				-
Pit emptying / desludging				-
				-
				-
				-
Hygiene				
Maintenance and repairs (***see "Maintenance" sheet)				-
				-

Infrastructure O&M tab

Insert unit cost of materials
information for each item in
YELLOW cells

Unit cost - labor:

What is the cost of
materials/supplies for the
activity?

OPERATIONS AND MAINTENANCE				
Item	Frequency/ year	Unit cost - labor	Unit cost - materials	Annual cost
Water				
Maintenance and repairs (***see "Maintenance" sheet)				-
Water quality testing				-
Water system operation				-
Water storage tank cleaning				-
				-
				-
				-
Sanitation				
Maintenance and repairs (***see "Maintenance" sheet)				-
Toilet cleaning				-
Pit emptying / desludging				-
				-
				-
				-
Hygiene				
Maintenance and repairs (***see "Maintenance" sheet)				-
				-

Maintenance tab

Insert breakdown/year
information for each item in
YELLOW cells

Breakdowns/year:

Approximately how many
times per year does the
infrastructure break down?

Cost/ breakdown						
	A	B	C	D	E	F
2						
3		Functionality				Repair Cost
4		Breakdowns	Repair time	Functional	Functionality	Cost/
5	MAINTENANCE	/ year	(days)	days / year	(%)	breakdown
6	Water					
7	Water source			365	1.00	
8	Pipe network			365	1.00	
9	Water tower or reservoir			365	1.00	
10	Water filtration/treatment systems			365	1.00	
11	Rainwater harvesting			365	1.00	
12				365	1.00	
13				365	1.00	
14				365	1.00	
15	Sanitation					
16	Toilets			365	1.00	
17	Fecal sludge containment (pits, septic tanks)			365	1.00	
18	Drainage			365	1.00	
19	Menstrual hygiene (disposal bins)			365	1.00	
20	Disability accessibility support (handrails)			365	1.00	
21				365	1.00	
22				365	1.00	

Maintenance tab

Insert repair time
information for each item in
YELLOW cells

Repair time (days):

What is the average number
of days to repair the
infrastructure (including wait
time)?

Cost/ breakdown						
	A	B	C	D	E	F
2						
3		Functionality			Repair Cost	
4		Breakdowns	Repair time	Functional	Functionality	Cost/
5	MAINTENANCE	/ year	(days)	days / year	(%)	breakdown
6	Water					
7	Water source			365	1.00	
8	Pipe network			365	1.00	
9	Water tower or reservoir			365	1.00	
10	Water filtration/treatment systems			365	1.00	
11	Rainwater harvesting			365	1.00	
12				365	1.00	
13				365	1.00	
14				365	1.00	
15	Sanitation					
16	Toilets			365	1.00	
17	Fecal sludge containment (pits, septic tanks)			365	1.00	
18	Drainage			365	1.00	
19	Menstrual hygiene (disposal bins)			365	1.00	
20	Disability accessibility support (handrails)			365	1.00	
21				365	1.00	
22				365	1.00	

Maintenance tab

Insert cost/breakdown
information for each item in
YELLOW cells

Cost/breakdown:

What is the average cost per
repair?

Include labor (wages) parts,
materials, etc. and/or
Contractor fees

Cost/ breakdown						
	A	B	C	D	E	F
2						
3		Functionality				Repair Cost
4		Breakdowns	Repair time	Functional	Functionality	Cost/
5	MAINTENANCE	/ year	(days)	days / year	(%)	breakdown
6	Water					Annual c
7	Water source			365		
8	Pipe network			365	1.00	
9	Water tower or reservoir			365	1.00	
10	Water filtration/treatment systems			365	1.00	
11	Rainwater harvesting			365	1.00	
12				365	1.00	
13				365	1.00	
14				365	1.00	
15	Sanitation					
16	Toilets			365	1.00	
17	Fecal sludge containment (pits, septic tanks)			365	1.00	
18	Drainage			365	1.00	
19	Menstrual hygiene (disposal bins)			365	1.00	
20	Disability accessibility support (handrails)			365	1.00	
21				365	1.00	
22				365	1.00	

Reminder!

MAINTENANCE	Functionality				Repair Cost	
	Breakdowns / year	Repair time (days)	Functional days / year	Functionality (%)	Cost/ breakdown	Annual cost
Water source	5	2	355	0.97	400	2,000
Pipe network			365	1.00		-
Water tower or reservoir			365	1.00		-
Water filtration/treatment systems			365	1.00		-

OPERATIONS AND MAINTENANCE				
Item	Frequency/ year	Unit cost - labor	Unit cost - materials	Annual cost
Water				
Maintenance and repairs (**see "Maintenance" sheet)				2,000
Water quality testing				
Water system operation				
Water storage tank cleaning				-
				-
				-
				-
Sanitation				
Maintenance and repairs (**see "Maintenance" sheet)				-
Toilet cleaning				-
Pit emptying / desludging				-
				-
				-
Hygiene				
Maintenance and repairs (**see "Maintenance" sheet)				-
				-

Capital	Infrastructure O&M	Maintenance	Cor	...	+	:
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Information entered on the Maintenance tab will automatically populate onto the Infrastructure O&M tab

Consumables tab

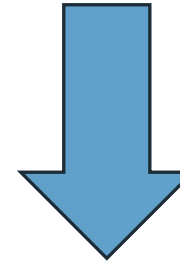
CONTENTS OVERVIEW

Consumables tab

The consumables tab calculates costs of consumable products used for WASH service delivery on an annual basis.

Suggested items required to deliver basic WASH service are pre-filled in the column A.

The items are divided into sections for water, sanitation, hygiene, etc....

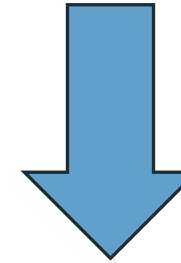


2					
3	CONSUMABLES	Current cost			
4	Item	Unit cost	Quantity/ year	Annual cost	
5	Water				
6	Water treatment products			-	
7	Purchased drinking water			-	
8				-	
9				-	
10				-	
11	Sanitation				
12	Anal cleansing materials (e.g., toilet paper)			-	
13	Menstrual hygiene supplies (sanitary pads)			-	
14				-	
15				-	
16				-	
17	Hygiene				
18	Hand soap			-	
19	Hand towels / drying supplies				
20	Alcohol-based hand rub			-	
21	Oral hygiene supplies (toothbrush, tooth paste)				
22				-	

Consumables tab

The user must input two pieces of information for each item

- **Unit cost:** what is the cost of purchasing one item?
- **Quantity required:** how many items are needed in the school every year?

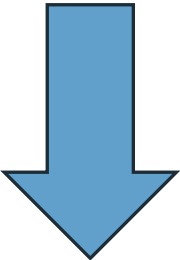


2				
3	CONSUMABLES	Current cost		
4	Item	Unit cost	Quantity/ year	Annual cost
5	Water			
6	Water treatment products			-
7	Purchased drinking water			-
8				-
9				-
10				-
11	Sanitation			
12	Anal cleansing materials (e.g., toilet paper)			-
13	Menstrual hygiene supplies (sanitary pads)			-
14				-
15				-
16				-
17	Hygiene			
18	Hand soap			-
19	Hand towels / drying supplies			-
20	Alcohol-based hand rub			-
21	Oral hygiene supplies (toothbrush, tooth paste)			-
22				-

Consumables tab

Based on user inputs, the spreadsheet automatically calculates:

- **Annual cost:** Total annual cost of the consumable item, based on the unit cost and quantities purchased



2					
3	CONSUMABLES	Current cost			
4	Item	Unit cost	Quantity/ year	Annual cost	
5	Water				
6	Water treatment products			-	
7	Purchased drinking water			-	
8				-	
9				-	
10				-	
11	Sanitation				
12	Anal cleansing materials (e.g., toilet paper)			-	
13	Menstrual hygiene supplies (sanitary pads)			-	
14				-	
15				-	
16				-	
17	Hygiene				
18	Hand soap			-	
19	Hand towels / drying supplies				
20	Alcohol-based hand rub			-	
21	Oral hygiene supplies (toothbrush, tooth paste)				
22				-	

Consumables tab

ENTERING INFORMATION

Consumables tab

Insert unit cost information
for each item in YELLOW
cells

Unit cost:

What is the price for one
item?

Note: some items may be
purchased in bulk (e.g., a
case of gloves containing
multiple boxes). Enter the
cost for the unit as
purchased (e.g., the cost of
the case)

Format Painter				
Clipboard		Font		Alignment
D19				
	A	B	C	D
1				
2				
3	CONSUMABLES	Current cost		
4	Item	Unit cost	Quantity/ year	Annual cost
5	Water			
6	Water treatment products			-
7	Purchased drinking water			-
8				-
9				-
10				-
11	Sanitation			
12	Anal cleansing materials (e.g., toilet paper)			-
13	Menstrual hygiene supplies (sanitary pads)			-
14				-
15				-
16				-
17	Hygiene			
18	Hand soap			-
19	Hand towels / drying supplies			
20	Alcohol-based hand rub			-
21	Oral hygiene supplies (toothbrush, tooth paste)			
22				-
23				-
24				-
25	Waste management			

Consumables tab

Insert quantity/year
information for each item in
YELLOW cells

Quantity/year:

How many units are
purchased per year?

Note: Some items may be
purchased in bulk. Enter the
number of bulk units
purchased.

Format Painter				
Clipboard		Font		Alignment
D19				
	A	B	C	D
1				
2				
3	CONSUMABLES	Current cost		
4	Item	Unit cost	Quantity/ year	Annual cost
5	Water			
6	Water treatment products			-
7	Purchased drinking water			-
8				-
9				-
10				-
11	Sanitation			
12	Anal cleansing materials (e.g., toilet paper)			-
13	Menstrual hygiene supplies (sanitary pads)			-
14				-
15				-
16				-
17	Hygiene			
18	Hand soap			-
19	Hand towels / drying supplies			-
20	Alcohol-based hand rub			-
21	Oral hygiene supplies (toothbrush, tooth paste)			-
22				-
23				-
24				-
25	Waste management			

Training tab

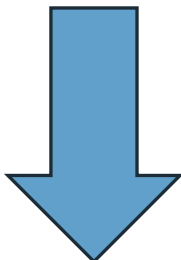
CONTENTS OVERVIEW

Training tab

The training tab calculates costs of WASH-related trainings held on an annual basis.

Suggested trainings required to deliver basic WASH service are pre-filled in the column A.

The items are divided into sections for water, sanitation, hygiene, etc... Some trainings may cover multiple WASH services. These may be recorded under the most relevant WASH service or under “Other.”

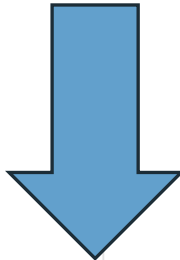


2				
3	TRAINING		Current cost	
4	Item	Frequency/ year	Cost/ training	Annual cost
5	Water			
6	Drinking water, water treatment education			-
7	Watershed management education			-
8				-
9				-
10				-
11	Sanitation			
12	Sanitation education			-
13				-
14				-
15				-
16	Hygiene			
17	Handwashing education			-
18	Menstrual hygiene education			-
19	Puberty / growth and change education			-
20				-
21				-
22				-
23	Waste management			
24	Solid waste management education			-
25	Composting / waste reuse education			-
26				-
27				-
28				-
29	Cleaning			
< > ... UNICEF Guidelines Capital Infrastructure O&M ... + :				

Training tab

The user must input two pieces of information for each item

- **Frequency/year:** how many times per year is the training held?
- **Cost/training:** what is the total cost of the training for every occurrence?

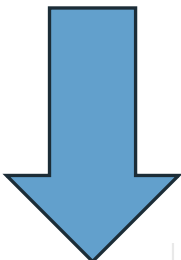


2				
3	TRAINING		Current cost	
4	Item	Frequency/ year	Cost/ training	Annual cost
5	Water			
6	Drinking water, water treatment education			-
7	Watershed management education			-
8				-
9				-
10				-
11	Sanitation			
12	Sanitation education			-
13				-
14				-
15				-
16	Hygiene			
17	Handwashing education			-
18	Menstrual hygiene education			-
19	Puberty / growth and change education			-
20				-
21				-
22				-
23	Waste management			
24	Solid waste management education			-
25	Composting / waste reuse education			-
26				-
27				-
28				-
29	Cleaning			
< > ... UNICEF Guidelines Capital Infrastructure O&M ... + :				

Training tab

Based on user inputs, the spreadsheet automatically calculates:

- **Annual cost:** Total annual cost of the trainings, based on the frequencies and per training costs



2				
3	TRAINING	Current cost		
4	Item	Frequency/ year	Cost/ training	Annual cost
5	Water			
6	Drinking water, water treatment education			-
7	Watershed management education			-
8				-
9				-
10				-
11	Sanitation			
12	Sanitation education			-
13				-
14				-
15				-
16	Hygiene			
17	Handwashing education			-
18	Menstrual hygiene education			-
19	Puberty / growth and change education			-
20				-
21				-
22				-
23	Waste management			
24	Solid waste management education			-
25	Composting / waste reuse education			-
26				-
27				-
28				-
29	Cleaning			

< > ... UNICEF Guidelines Capital Infrastructure O&M ... + :

Training tab

ENTERING INFORMATION

Training tab

Insert frequency/year information for each item in YELLOW cells

Frequency/year:

How many times per year does the training occur?

Note: If the training is held less often than once per year, you may enter a fraction. For example, a training that is held once every two years can be entered with the frequency 0.5.

	A	B	C	D	
1					
2					
3	TRAINING	Current cost			
4	Item	Frequency/ year	Cost/ training	Annual cost	
5	Water				
6	Drinking water, water treatment			-	
7	Watershed management education			-	
8				-	
9				-	
10				-	
11	Sanitation				
12	Sanitation education			-	
13				-	
14				-	
15				-	
16	Hygiene				
17	Handwashing education			-	
18	Menstrual hygiene education				

Training tab

Insert cost per training information for each item in YELLOW cells

Cost/training:

How much does it cost to run a training, including materials, personnel, venue, etc.?

	A	B	C	D	
1					
2					
3	TRAINING	Current cost			
4	Item	Frequency/ year	Cost/ training	Annual cost	
5	Water				
6	Drinking water, water treatment education			-	
7	Watershed management education			-	
8				-	
9				-	
10				-	
11	Sanitation				
12	Sanitation education			-	
13				-	
14				-	
15				-	
16	Hygiene				
17	Handwashing education			-	
18	Menstrual hygiene education				

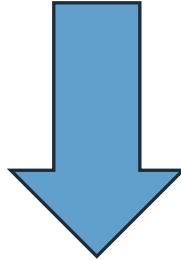
Personnel tab

CONTENTS OVERVIEW

Personnel tab

The personnel tab calculates costs of WASH-related labor at the school on an annual basis.

Many labor costs are already accounted elsewhere in the spreadsheet (e.g., under O&M). However, schools may have additional staff that contribute to WASH services. Any additional staff or labor costs that are not accounted for elsewhere may be listed here. Some suggested items are already pre-filled.



2					
3	PERSONNEL	Current cost			
4	Item	Quantity	Effort % dedicated to WASH	Annual salary	Annual cost
5	Water				
6					-
7					-
8					-
9	Sanitation				
10	Plumber				-
11					-
12					-
13	Hygiene				
14					-
15					-
16					-
17	Waste management				
18					-
19					-
20					-
21	Cleaning				
22	Cleaner				-
23	Groundskeeper				-
24					-

< > ...

Maintenance

Consumables

Training

Personnel

Support cost

+

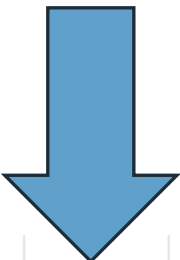
⋮

Ready Accessibility: Investigate

Personnel tab

The user must input three pieces of information for each item

- **Quantity:** how many staff members with this job title does the school employ?
- **Effort % dedicated to WASH:** What percent of the staff member's duties are related to WASH?
- **Annual salary:** what is the annual salary of the staff member, including benefits?



2					
3	PERSONNEL	Current cost			
	Item		Effort % dedicated to WASH	Annual salary	Annual cost
4		Quantity			
5	Water				
6					-
7					-
8					-
9	Sanitation				
10	Plumber				-
11					-
12					-
13	Hygiene				
14					-
15					-
16					-
17	Waste management				
18					-
19					-
20					-
21	Cleaning				
22	Cleaner				-
23	Groundskeeper				-
24					-

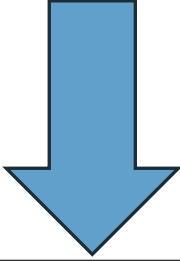
Ready Accessibility: Investigate

Maintenance Consumables Training **Personnel** Support cost

Personnel tab

Based on user inputs, the spreadsheet automatically calculates:

- **Annual cost:** Total annual cost of the personnel, based on the number of staff members, the proportion of their duties related to WASH, and their salaries



2					
3	PERSONNEL	Current cost			
4	Item	Quantity	Effort % dedicated to WASH	Annual salary	Annual cost
5	Water				
6					-
7					-
8					-
9	Sanitation				
10	Plumber				-
11					-
12					-
13	Hygiene				
14					-
15					-
16					-
17	Waste management				
18					-
19					-
20					-
21	Cleaning				
22	Cleaner				-
23	Groundskeeper				-
24					-

Navigation: < > ... Maintenance Consumables Training **Personnel** Support cost +

Status: Ready Accessibility: Investigate

Personnel tab

ENTERING INFORMATION

Personnel tab

Insert quantity
information for each
item in YELLOW cells

Quantity:

How many staff members with
this job title does the school
employ?

2					
3	PERSONNEL	Current cost			
	Item				
4		Quantity	Effort % dedicated to WASH	Annual salary	Annual cost
5	Water				
6					-
7					-
8					-
9	Sanitation				
10	Plumber				-
11					-
12					-
13	Hygiene				
14					-
15					-
16					-
17	Waste management				
18					-
19					-
20					-
21	Cleaning				
22	Cleaner				-
23	Groundskeeper				-
24					-

< > ...

Maintenance

Consumables

Training

Personnel

Support cost

+

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Readv Accessibility: Investigate

Personnel tab

Insert effort %
information for each
item in YELLOW cells

Effort % dedicated to WASH:

What percent of the staff
members duties are related
to WASH?

This information should be
entered as a fraction
between 0 and 1.0 (e.g.,
0.10 represents 10% effort).

2					
3	PERSONNEL	Current cost			
	Item	Quantity	Effort % dedicated to WASH	Annual salary	Annual cost
4					
5	Water				
6					-
7					-
8					-
9	Sanitation				
10	Plumber				-
11					-
12					-
13	Hygiene				
14					-
15					-
16					-
17	Waste management				
18					-
19					-
20					-
21	Cleaning				
22	Cleaner				-
23	Groundskeeper				-
24					-

Readv Accessibility: Investigate

Personnel tab

Insert salary
information for each
item in YELLOW cells

Annual salary:

What is the annual salary of
the staff member?

Include the cost of any staff
benefits.

2					
3	PERSONNEL	Current cost			
	Item		Effort % dedicated to WASH	Annual salary	Annual cost
4		Quantity			
5	Water				-
6					-
7					-
8					-
9	Sanitation				
10	Plumber				-
11					-
12					-
13	Hygiene				
14					-
15					-
16					-
17	Waste management				
18					-
19					-
20					-
21	Cleaning				
22	Cleaner				-
23	Groundskeeper				-
24					-

< > ...

Maintenance

Consumables

Training

Personnel

Support cost

+

:

◀ ▶

Readv  Accessibility: Investigate 

Support cost tab

CONTENTS OVERVIEW

Support cost tab

The support cost tab is an additional space to document any costs that have not been well captured in other tabs.

SUPPORT			
Item	Unit cost	Quantity/ year	Annual cost
Cleaning			
School garden and other Blue Schools activities			
Other			
Capacity building			
Policy making			
Planning			
Regulation			
Knowledge management			
Communication			
		Total	0

< > ...

Maintenance

Consumables

Training

Personnel

Support cost

+

Support cost tab

Most items here will be cross-cutting support for all WASH activities. These are listed under the category for “Other”. This tab may be left blank if there are no relevant support costs.

SUPPORT			
Item	Unit cost	Quantity/ year	Annual cost
Cleaning			
School garden and other Blue Schools activities			
Other			
Capacity building			
Policy making			
Planning			
Regulation			
Knowledge management			
Communication			
		Total	0

< > ...

Maintenance

Consumables

Training

Personnel

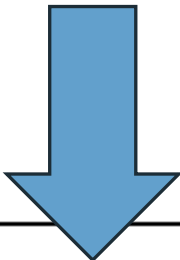
Support cost

+

Support cost tab

The user must input two pieces of information for each item

- **Unit cost:** what is the cost of the support item?
- **Quantity/year:** how many times per year is the cost incurred?



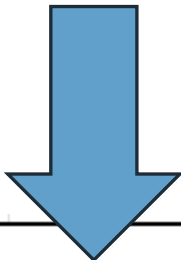
SUPPORT			
Item	Unit cost	Quantity/ year	Annual cost
Cleaning			
School garden and other Blue Schools activities			
Other			
Capacity building			
Policy making			
Planning			
Regulation			
Knowledge management			
Communication			
		Total	0

<
>
...
Maintenance
Consumables
Training
Personnel
Support cost
+

Support cost tab

Based on user inputs, the spreadsheet automatically calculates:

- **Annual cost:** Total annual cost of support



SUPPORT			
Item	Unit cost	Quantity/ year	Annual cost
Cleaning			
School garden and other Blue Schools activities			
Other			
Capacity building			
Policy making			
Planning			
Regulation			
Knowledge management			
Communication			
		Total	0

< > ...

Maintenance

Consumables

Training

Personnel

Support cost

+

Support costs tab

ENTERING INFORMATION

Support tab

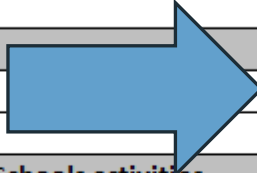
Insert unit cost and quantity/year information for each item in YELLOW cells

Unit cost:

What is the cost of the support item?

Quantity/year:

How many times per year is the cost incurred?



3	SUPPORT			
4	Item	Unit cost	Quantity/ year	Annual cost
16				
17	Cleaning			
18				
19				
20	School garden and other Blue Schools activities			
21				
22				
23	Other			
24	Capacity building			
25	Policy making			
26	Planning			
27	Regulation			
28	Knowledge management			
29	Communication			
30				

Navigation bar: < > ... Maintenance Consumables Training Personnel Support cost +

Many support costs may be overhead items, where a unit cost and quantity is not applicable. In these cases, you may simply enter the unit cost as the total estimated annual amount and the quantity as 1.

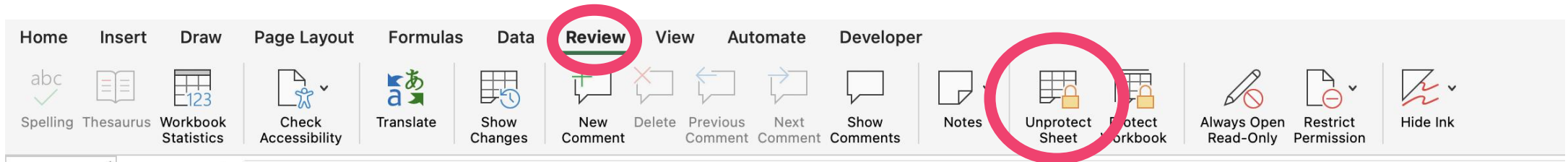
Toolkit user guide

ADVANCED FUNCTIONS

Protected vs. Unprotected mode

PROTECTED MODE	UNPROTECTED MODE
The default spreadsheet is “protected.” This means that formula cells are locked and cannot be edited. Protected mode helps ensure that the user does not accidentally override the formulas, causing errors. Basic usage can be performed in protected mode.	Protected mode can be turned off. Unprotecting the sheet allows unrestricted access to edit any cells. This allows for more customization but should be done carefully. Avoid changing formula cells and check for errors. Advanced functions require the user to “unprotect” the spreadsheet.

How to unprotect a sheet



1

Go to “Review” button at the top of Excel screen

2

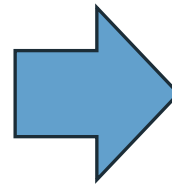
Click “Unprotect Sheet”

Adding items

Each section contains pre-filled items and three blank rows.

You may edit the pre-filled items and enter new items into blank rows.

If you need to add more than three new items, you can add additional blank rows for more items.



CAPITAL					
Item	Estimated lifespan (years)	Unit cost	Quantity required	Total upfront cost	Equivalent annual cost
Water					
Water source	25			-	
Pipe network	25			-	
Water tower or reservoir	20			-	
Water filtration/treatment systems	10			-	
Rainwater harvesting	25			-	
				-	
				-	
				-	
Sanitation					
Toilets	25			-	
Fecal sludge containment (pits, septic tanks)	20			-	
Drainage	20			-	
Menstrual hygiene (disposal bins)	10			-	

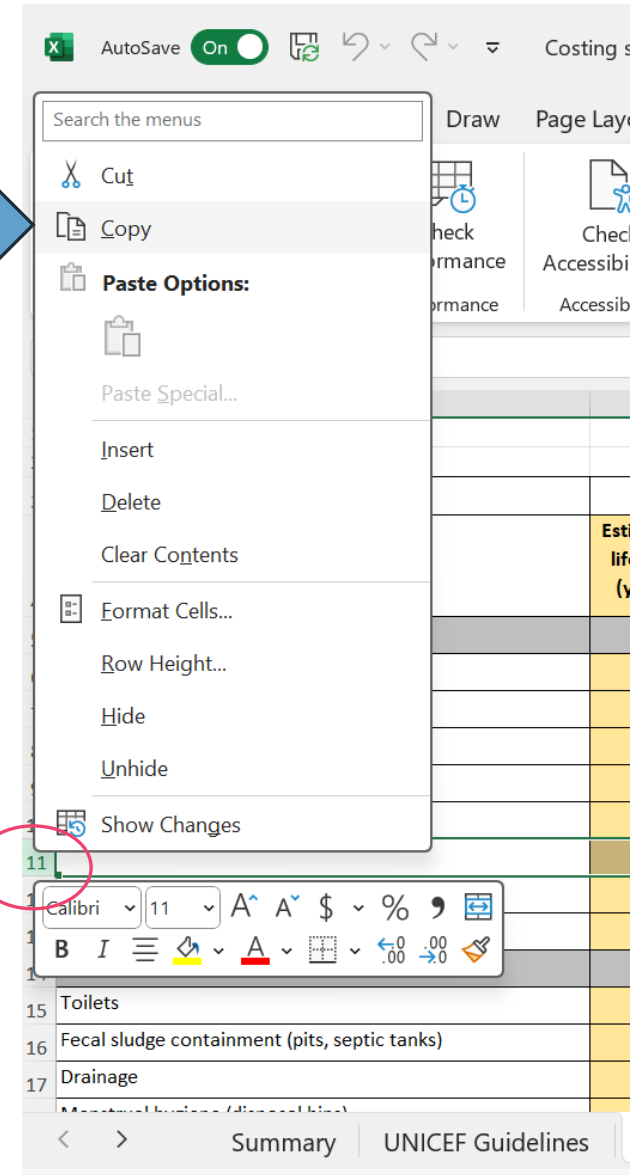
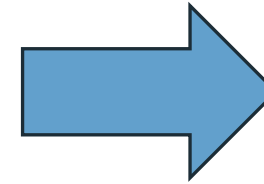
How to add new items

1

Right-click the cell number for a blank row in the section where you want to add an item.

Click “Copy”

“cell number”



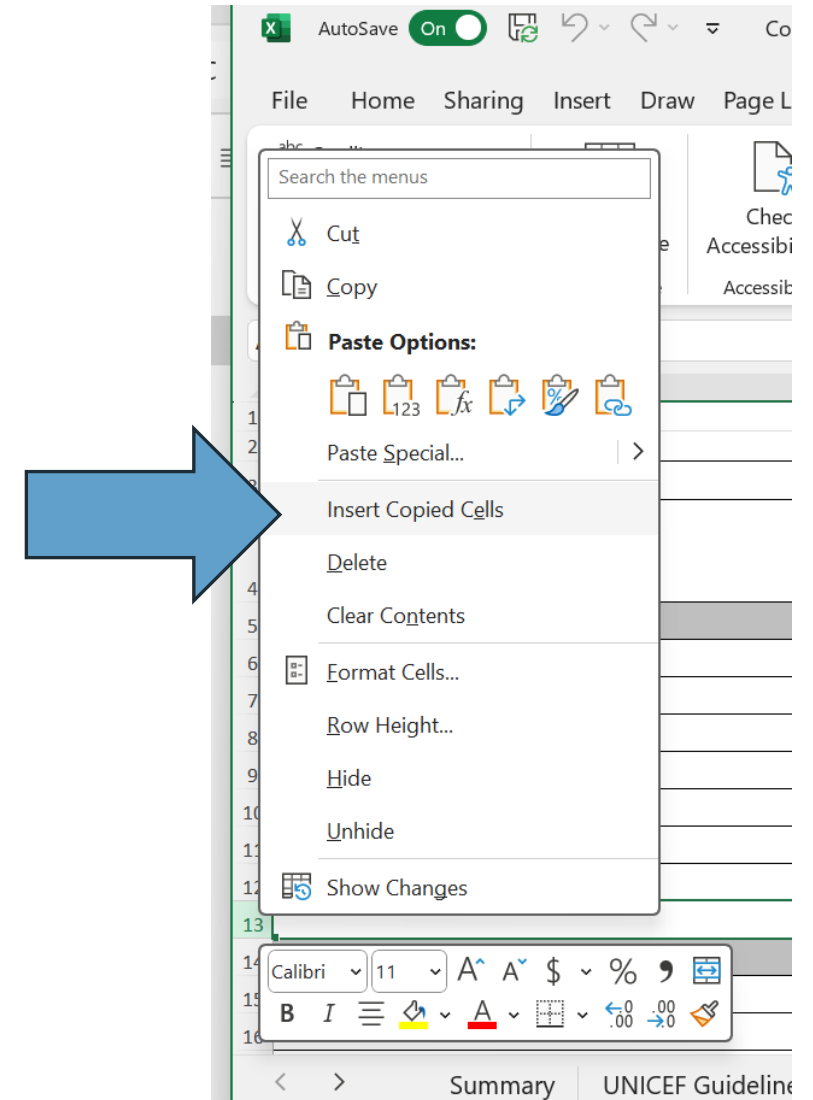
How to add new items

2

Right-click again on the cell number for the blank row in the section where you want to add an item.

Click “Insert Copied Cells”

A new blank row will be added above.



How to add new items



You must use this process to copy an existing blank row

If you do not, then the new row may not be incorporated into the formulas to calculate total costs

Bypassing detailed maintenance calculations

Detailed maintenance cost are recorded on the Maintenance tab. However, this can be bypassed if you do not need or want this level of detail.

	A	B	C	D	E
1					
2					
3	OPERATIONS AND MAINTENANCE				
4	Item	Frequency/ year	Unit cost - labor	Unit cost - materials	Annual cost
5	Water				
6	Maintenance and repairs (**see "Maintenance" sheet)				-
7	Water quality testing				-
8	Water system operation				-
9	Water storage tank cleaning				-
10					-
11					-
12					-
13	Sanitation				
14	Maintenance and repairs (**see "Maintenance" sheet)				-
15	Toilet cleaning				-
16	Pit emptying / desludging				-
17					-
18					-
19					-
20	Hygiene				
21	Maintenance and repairs (**see "Maintenance" sheet)				-

Bypassing detailed maintenance calculations

To bypass the Maintenance tab, first unprotect the sheet.

Enter an estimated maintenance total for each WASH category directly into Column E.

This will override the existing formula in the cell.

Proofing | Performance

E6 : X ✓ fx =Maint

A

1

2

3 **OPERATIONS AND MAINTENANCE**

Item	Frequency/ year	Unit cost - labor	Unit cost - materials	Annual cost
Water				
Maintenance and repairs (**see "Maintenance" sheet)				-
Water quality testing				
Water system operation				
Water storage tank cleaning				-
				-
				-
				-
Sanitation				
Maintenance and repairs (**see "Maintenance" sheet)				-
Toilet cleaning				-
Pit emptying / desludging				-
				-
				-
				-
Hygiene				
Maintenance and repairs (**see "Maintenance" sheet)				-

< > ... Capital Infrastructure O&M Maintenance Consumables Traini

Enter estimated maintenance costs here to override the formula

Frequently asked questions

1. The spreadsheet contains items that I do not want to include. Can I delete them?

- You may remove or revise the item name from Column A of any tab. However, do not delete cell or row, or modify any of the blue formula cells, as this will create errors in the calculations for total costs.

2. Different participants have provided different estimates of unit costs for a particular item. What should I do?

- Prices may vary naturally across schools. If you are costing in multiple schools, each school will have its own spreadsheet. You may use different unit costs in different spreadsheets. If the unit price varies within a single school, you may use the average value. The spreadsheets can also be used to calculate a range: first enter the lowest unit price and record the total costs; then enter the highest unit price and record the total costs. This gives you the range of probable cost estimates.

3. The school WASH program is multi-year. How many years of consumables data do I need to collect?

- The spreadsheet is designed to collect and calculate annual costs. Therefore, data for consumables (and other O&M line items) are entered for only one year. Usually, the most recent year is sufficient. However, if there are demographic trends that may impact expenses (e.g., significant growth in the number of pupils), you may want to look at trends over several years and adjust your estimates to account for any trends.

4. I have records of capital costs from many years ago. The price of these items has change since. What should I do?

- Cost data should ideally reflect current market prices. Data from older records can be adjusted for inflation using an online calculator (e.g., see <https://www.global-rates.com/en/calculations/inflation-calculator/> for a generic option; there may be more accurate options from the ministry of finance or central bank in your country). You can also triangulate costs by verifying current market rates with other schools, government officials, private sector contractors, or others to understand what those capital items would cost today.

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- The Water Institute at the University of North Carolina at Chapel Hill
- The Swiss Water and Sanitation Consortium



The University of North Carolina
at Chapel Hill

The Water Institute

Swiss Water & Sanitation Consortium



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