WASHCost Infosheet 5
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Hygiene promotion
How effective is it? How much does it cost?

Hygiene promotion is a public health care intervention aimed at behaviour change that can lead to improved health, and help people to move out of poverty. It is the missing link in WASH—the benefits of clean water and safe sanitation are reduced if good hygiene is not practised.

An estimated 2.2 million deaths occur each year in the developing world because people lack access to safe drinking water, adequate sanitation, and awareness of good hygiene practices.

The benefits of hygiene promotion are generally not prioritised and the costs of hygiene promotion are poorly understood and therefore not adequately budgeted for. WASHCost examined hygiene promotion and associated costs in Ghana, Mozambique and Burkina Faso, looking at interventions that targeted latrine use and faecal containment, handwashing with soap and the protection of drinking water.

In these relatively short-term interventions, there were limited changes in behaviour but greater change where hygiene promotion was made part of a wider WASH programme. Some emerging pointers may guide planning and budgeting.

This Infosheet presents findings from testing this methodology designed to help determine the costs and efficacy of WASH-related hygiene promotion interventions.

This information is vital to persuade WASH planners and policy makers of the importance of appropriate investment in hygiene promotion. They need to know what works, and why; how much money will be required to achieve expected outcomes; how they will know whether behaviour change is taking place; and to what extent money invested in hygiene promotion impacts on long-term behavioural changes.

1 WASHCost was a five-year action research programme led by IRC International Water and Sanitation Centre, running from 2008-2012 with partner organisations in Burkina Faso, Ghana, Andhra Pradesh (India) and Mozambique. The WASHCost team collected and analysed cost and service level information for water, sanitation and hygiene in rural and peri-urban areas, applying a life-cycle costs approach. A life-cycle costs approach examines the complex relationships between expenditure, service delivery, poverty, effectiveness and sustainability (see www.washcost.info).

What is hygiene promotion?

Hygiene promotion looks to change behaviour at household and community level and covers issues such as safe management of excreta; handwashing with soap (or suitable alternatives) at critical times; and safe management of water.

Hygiene promotion is ideally a **public or environmental health function** and hygiene interventions therefore should be services provided by district level local authorities, public health or environmental health departments, or (in urban contexts) by utilities. Hygiene promotion must be planned, managed and implemented in an integrated manner.

Effective hygiene promotion interventions are best when led and coordinated by government agencies, with implementation and monitoring support from the private sector, NGOs and communities.

Hygiene promotion activities that must be costed for appropriate budgeting include:

1. District activities such as planning, budgeting and continuous monitoring.
2. Implementation of the intervention, including awareness creation, training of trainers and monitoring.
3. Household time spent in hygiene promotion related activities and in undertaking safe hygiene practices, including collection and safe storage of water (economic costs); and the purchase of soap and other cleaning materials and water storage vessels (financial costs).

The value of an evidence base on the costs and outcomes of hygiene promotion

WASHCost interventions were conducted in three countries to develop a deeper understanding of the degree to which particular hygiene interventions may influence key changes in hygiene behaviour, and to assess the full range of costs. The aim was to:

1. Contribute to more effective policy making and hygiene programming, improve the sector's ability to budget from local to national levels and maximise long-term benefits arising from any water and sanitation project or service.
2. Advocate for improved long-term investment in hygiene promotion.
3. Strengthen sector knowledge of effective and cost-effective interventions and help to assess quality assurance of hygiene promotion interventions.

Limitations in setting cost benchmarks for hygiene promotion

In the IRC WASHCost programme, cost benchmarks[2] for water and sanitation were developed to aid policy makers and implementers in delivering a sustainable level of service. The costs covered both **capital** and **recurrent** expenditure.

Cost benchmarks for hygiene promotion are, at this point, difficult to assess and disaggregate. Hygiene promotion is generally undertaken as a one-off exercise within the implementation of a sanitation and/ or water project; making it extremely difficult to isolate its links to behaviour change or its costs. It is rarely offered as a public health or environmental health service provided at district level.

2 View cost benchmarks for water and sanitation here: http://www.washcost.info/page/2386. More information on budgeting for the sustainable delivery of water is accessible here: http://www.washcost.info/page/2439, and for water here: http://www.washcost.info/page/2584.

The methodology

WASHCost developed a three-step methodology to cost and assess hygiene interventions:

1. A 'hygiene behaviour-change ladder' to identify behaviour change before and after hygiene promotion interventions.
2. Collection of cost data before, during and after the interventions: including the financial and economic[3] costs incurred by households, and the financial costs incurred by districts and the agencies that implemented the hygiene intervention.
3. Comparison of costs with behaviour outcomes.

The methodology was adapted according to country circumstances. Cost data collection was limited by what was available: in Mozambique this was implementation and allied costs; in Ghana, it was possible to collect district, implementation and household costs; in Burkina Faso, implementation and household costs were collected. Assumptions and proxies were made where data collected by other organisations did not exactly match the methodology. These limitations impacted on the comparison of effectiveness levels against costs, and the ability to benchmark costs.

This Infosheet reflects on the preliminary findings of the team's first attempt at deriving some cost benchmarks. In coming years the methodology will be amended and more cost data will be made available to provide more robust benchmarks for hygiene promotion interventions.

3 Economic cost designates time spent on hygiene promotion-related activities by household members, which creates a loss in productivity for the household. Time spent on hygiene activities cannot be spent on other activities such as income-generating activities or child care.

The 'hygiene behaviour effectiveness ladder'

The action research focused on the costs and efficacy of WASH-related hygiene promotion interventions aimed at achieving behavioural changes in three key practices[4]: faecal containment and use of latrines; handwashing with soap (or substitute) after defecation and before handling food; and drinking water source and management from collection to consumption.

Focusing on these three key practices, a 'hygiene behaviour effectiveness ladder' was developed for measuring outcomes of a hygiene intervention, classified as: Not effective; Limited; Basic; and Improved.

Table 1 **'Hygiene behaviour effectiveness ladder'[5]**

Effectiveness level	Faecal containment and latrine use	Handwashing with soap/ substitute	Drinking water source and management
Improved	All household members use a latrine all the time The latrine used separates users from faecal waste	Accessible designated handwashing facility Sufficient water is available for handwashing Water for handwashing is poured/not re-contaminated by handwashing Soap or substitute available and used All household members wash their hands with soap/ substitute at critical times	Protected water sources are always used Collection vessel (if necessary) is regularly cleaned with soap or substitute Water storage vessel (if necessary) is covered Water is drawn in a safe manner
Basic	All or some household members use a latrine some or most of the time When there is no access to a latrine, faeces are generally buried The latrine separates users from faecal waste		Protected water sources are always used Collection vessel (if necessary) is regularly cleaned with soap or substitute Water storage vessel (if necessary) is uncovered and/or Water is not drawn in a safe manner
Limited	The latrine does not provide adequate faecal separation and/or All/some family members generally do not bury faeces when not using a latrine and/or All family members practice burying faeces	Most household members wash their hands after defecation but not at other critical times and/or Water for handwashing is not poured and the same water is used each time and/or No soap or substitute is available and/or is not used for hand washing	Protected drinking water sources are not always used and/or Collection vessel is not cleaned (not collected safely)
Not effective	Open defecation	Household members have no specific place to wash their hands and usually do not wash their hands after defecation	Unsafe sources are mostly/always used to collect drinking water

4 All three key hygiene practices are considered by Hernandez and Tobias (2010) as forming the focus areas of most hygiene promotion interventions, and as having the greatest positive impact on individual health. For more information, see: <http://www.hip.watsan.net/page/4148>.

5 The source of the table is WASHCost Working Paper 7, p. 11: http://www.washcost.info/page/2341.

Key findings

The 'hygiene behaviour effectiveness ladder' was used to assess the effectiveness of interventions in three countries.

Key findings in Ghana

In Ghana comparisons were made before and immediately after a six-month Community-led Total Sanitation (CLTS) intervention, which was part of an integrated WASH project that also included the construction of water facilities. The total integrated WASH project intervention cost US$ 106,839 covering costs related to household participation and expenditure on soap, latrine construction, and implementer/ hygiene facilitator, government and water supply facility requirements. The before and after comparison found the following:

- 1% increase in basic faecal containment and latrine use.
- 4% increase in basic handwashing with soap.
- 18% increase in basic drinking water management (partly attributed to the provision of handpump borehole facilities).
- Households spent US$ 10 per person on soap over the intervention period; a 40% increase compared to spending on soap before the intervention.

Overall, the findings show that the short-term effect of the hygiene intervention did not result in a significant increase in basic faecal containment or latrine use. Also, hygiene promotion, when integrated with the provision of appropriate water and sanitation technologies leads to significant improvement in behavioural change.

Key findings in Mozambique

Comparisons before and after a CLTS and a Participatory Hygiene and Sanitation Transformation (PHAST) intervention in the context of an integrated WASH improvement programme in Mozambique found that, for an investment in a hygiene intervention of US$ 5 per person per year, there was a:

- 5% increase in basic faecal containment and latrine use.
- 28% increase in basic handwashing.
- 57% increase in basic drinking water management.

This means that, for a cost which is within range of previous hygiene promotion interventions reported, impact on two of the three hygiene key behaviours is significant.

A separate study in 2010[6] found that household investments in handwashing facilities was US$ 0.97 per person, with an additional US$ 12.62 per person per year spent on the purchase of soap.

Post-activity support[7] for local stakeholders and users was calculated to cost the equivalent of US$ 0.11 per person per year. District support costs accounted for an average of 12% of the total implementation costs.

6 View A costs analysis of hygiene promotion interventions in Mozambique by Maarten van de Reep, at: http://www.irc.nl/page/55895

7 Defined in WASHCost as Expenditure on Direct Support (ExpDS).

Key findings in Burkina Faso
Comparisons before and mid-way through sanitation programme in Burkina Faso (which included a mix of PHAST and CLTS approaches) in two different villages showed that:

In village 1 (822 households), for which US$ 1.1 was spent per household during the intervention, there was a:

- 1% increase in basic, and 3% increase in improved faecal containment and latrine use.
- 2% to 4% (depending on gender and age) increase in basic and 0% to 1% increase in improved handwashing.
- 2% increase in basic, and 1% increase in improved domestic water management.

In village 2 (271 households), for which US$ 3.87 was spent per household during the intervention, results were less encouraging:

- 1% increase in basic and 1% increase in improved faecal containment and latrine use.
- 1% to 3% (depending on gender and age) decrease in basic and 0% to 2% decrease in improved handwashing.
- 1% decrease in basic and 1% increase in improved domestic water management.

This means that, in the case of Burkina Faso, effectiveness is clearly more significant for the indicator linked to latrine use, which was the main infrastructure component of the sanitation programme. (There was no activity linked to water or handwashing infrastructure.) However, in village 2, even for the latrine indicator, changes towards improved effectiveness were not highly significant. One can deduct that:

- Hygiene promotion interventions without hardware investments can work, but only with significant time (long run) and financial investment. Current investments are not sufficient to sustain safe water and sanitation hygiene practices in the absence of infrastructure improvement.
- Improved water and sanitation services are necessary but not sufficient for safe hygiene practices. The two are inextricably linked, and suggests that hardware improvement should follow WASH promotion and demand creation.

Take away global messages

Testing hygiene costs against outcomes methodology

- ☐ The methodology used to distil these findings enables a before and after comparison of the change that occurs across three core hygiene behaviours, allowing for an assessment of the relative costs and outcomes of different hygiene promotion interventions.
- ☐ These are preliminary findings from testing the methodology, and more cost data will be made available in the coming years to provide a cost benchmark for effective hygiene interventions. Nonetheless, it can be said that a hygiene intervention costing less than US$ 5 per person provides somewhat limited impact on the three key hygiene behaviour changes.
- ☐ Comparison across each of the three key behaviours provides a nuanced insight that can help implementers and districts adapt promotion strategies and interventions to address gaps.
- ☐ Using this methodology to periodically monitor and evaluate the sustainability of hygiene behaviours over time will enable implementers and districts to design follow-up support more effectively, targeting gaps in safe hygiene practices.

Design and budgeting for hygiene promotion interventions

- ☐ Hygiene promotion costs go beyond the cost of planning and implementing interventions. For behaviours to be sustained over time, promotion efforts need to be repeated and targeted based on gaps identified through periodic monitoring. Recurrent and support costs, incurred by districts to monitor behaviours over time and implement more focused promotion activities, are key to effective hygiene promotion interventions.
- ☐ Practising safe hygiene also implies household financial and economic costs. In Mozambique, households were spending up to one third of their income on soap products[8], and in Ghana there was a 40% increase in household expenditure on soap. This sends a clear message about the willingness of households to invest in hygiene-related products, and the need for socially responsible social marketing approaches.
- ☐ Hygiene promotion is more effective when implemented alongside technically appropriate water and sanitation infrastructure improvement; an integrated WASH approach is recommended.

Linking hygiene behaviour change outcomes with health impacts

- ☐ Further development of the WASHCost methodology to link behavioural outcomes with health impacts (e.g., diarrhoea incidence) could assist sectors to shift from monitoring cost-effectiveness of hygiene promotion interventions to monitoring the health impact of hygiene services.
- ☐ Harmonisation of WASH health indicators and systems would reduce monitoring costs and resource requirements, and contribute to better integrated and coordinated safe hygiene practices promotion across sectors.
- ☐ Improved integration of water and sanitation-related hygiene promotion interventions within a framework of broader public and environmental health services will strengthen the overall impact of WASH services.

8 View A costs analysis of hygiene promotion interventions in Mozambique by Maarten van de Reep, at: http://www.irc.nl/page/55895

WASHCost Briefing Notes and Working Papers for further reading

- Assessing hygiene cost-effectiveness
  http://www.washcost.info/page/1629 (English)
  http://www.washcost.info/page/1933 (French)
- Assessing hygiene cost-effectiveness: a methodology
  http://www.washcost.info/page/2341
- Hygiene cost effectiveness in Ghana: case study of Sunyani West District
  http://www.washcost.info/page/2900
- Costs and effectiveness of hygiene promotion within an integrated WASH capacity building project in Mozambique
  http://www.washcost.info/page/2899
- Assessment of hygiene interventions: cost-effectiveness study applied to Burkina Faso
  http://www.washcost.info/page/2847 (English)
  http://www.washcost.info/page/2755 (French)

Other materials for further reading

- Access and behavioural outcome indicators for water, sanitation and hygiene
  http://www.hip.watsan.net/page/4148
- A cost analysis of hygiene promotion interventions in Mozambique
  http://www.irc.nl/page/55895 (conference paper)
  http://www.irc.nl/page/57864 (power point presentation)

Visit IRC's WASH library at http://www.washdoc.info.nl to access global and country-specific publications and research material on a life-cycle costs approach.

WASHCost

This Infosheet provides a definition for hygiene promotion and looks at constraints in maximising its effectiveness. It presents a methodology used in Ghana, Mozambique and Burkina Faso where different forms of hygiene promotion were undertaken as part of a water and/ or sanitation project; and it draws tentative conclusions from emerging data on the costing of hygiene promotion.

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