

## WASHCost reveals the high cost of low quality services

IRC Symposium 'Pumps, Pipes and Promises'.

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**It costs a lot of money to provide low quality water and sanitation services – and more expensive technology alone will not solve the problem, Catarina Fonseca, Director of the WASHCost project, has told an audience of economists, WASH specialists and researchers.**

Research in four countries has found that switching from boreholes with handpumps to small piped services can triple the costs but often leaves people with service levels somewhere between sub-standard and basic.

The WASHCost project is working with partners in Burkina Faso, Ghana, Mozambique and in the Indian State of Andhra Pradesh to collect and analyse cost data for water and sanitation services in rural and peri-urban areas. The overall aim is to build better cost data into country systems to increase the quality of services, especially targeting issues of poverty, equity and cost-effectiveness.

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WASHCost is completing the third year of the five year project which is run by IRC in the Netherlands and funded by the Bill and Melinda Gates Foundation. An intensive year of data collection is being analysed but preliminary results were revealed for the first time at the IRC Symposium in

The Hague on 16-18 November. Seven papers were presented by WASHCost research teams alongside the keynote address by the project director.

### **Data welcomed**

The data and methodology presented at the symposium was strongly welcomed. Guy Hutton, senior economist with the World Bank Water and Sanitation Program (WSP), said: "I think this is really exciting to have such detailed cost data and also in a new framework of conceptualisation." He said that ways had to be found to move from costing services as they exist (as done by WASHCost) and being able to estimate what would be needed for 'ideal' services – i.e. those that sustained a high service level.

Mark Tiele Westra, editor of Akvopedia, said: "This must be some of the most interesting data on WASH costs that I have ever seen. I am pretty sure that this also represents need-to-know information for everyone working in the water sector." He challenged WASHCost to develop a communication strategy "to ensure that everybody hears about this".

### **Costing different service levels**

Catarina Fonseca described how the project set out to define service levels so they could differentiate between costs. After studying country norms WASHCost has proposed service ladders for water and for sanitation with five levels: no service, sub-standard, basic, intermediate and high levels.

The criteria for distinguishing between levels of water services are quantity, quality, accessibility, reliability and Joint Monitoring Programme status (improved / not improved). For sanitation the criteria are accessibility, use, reliability and environmental protection. These criteria mean that it is no longer enough simply to count the number of water points or toilets. The technology itself is no longer the critical factor – providing safe and reliable services that are well used is all important.

The WASHCost approach divides costs into capital investment (CapEx), operation and minor maintenance (OpEx), major repairs and replacements (capital maintenance - CapManEx), direct support expenditure (ExpDS) and in direct support expenditure (ExpIDS). CapManEx and direct support to communities are usually left out of

the mix when services are planned meaning that expensive infrastructure is discarded when it breaks down and new investment has to be found.

### **The forgotten costs**

WASHCost has identified the forgotten costs as a critical gap in funding the sustainability of services. Catarina Fonseca told the symposium: "There seems to be a perception of a different type of accountability for different types of costs. So, for instance donors in the north say, 'We just provide CapEx (capital expenditure) for new investments – new sanitation infrastructure or new handpumps. We don't do operation and maintenance – that's the responsibility of the government and communities.' The communities say 'Why should we pay for the pump if it breaks after just three years?' The Government says 'you should be asking the NGO that put it in, not us'. This kind of pushing around of who is responsible for which kind of costs in the rural water sector shows borderline irresponsibility."

Many villages show a history of repeated capital investment, with short life spans. Indeed one preliminary suggestion from WASHCost (still under analysis) is that increasing expenditure on capital maintenance and direct support can decrease the overall costs. For example, in Ghana it would be more cost effective to replace every US\$ 500 handpump every five to ten years, than to wait for them to fail and put at risk a US\$ 10,000 borehole.

Catarina Fonseca said: "This is a huge amount of money going every year into CapEx over and over and over again. We have all these histories of investments over several villages and communities and the money that we could save is quite impressive. This is a very important message."

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## How can you climb the service ladder?

WASHCost expected to find that installing more expensive technology (piped services for example) would move people up the service ladder. But they found this often did not happen. Catarina Fonseca said: “The costs ranges are huge for providing the same low levels of service - for water, between sub-standard and basic. What you are finding is if you want to go from basic to the next stage higher up, you need a much higher investment effort, not in the capital expenditure component – but in all the other components.”

Patrick Moriarty, IRC governance specialist and part of the Ghana research team, said: “We can tell you that it costs three times as much to provide a service that should be higher, but in practice it costs three times as much to provide a very similar level of service. You don’t see any difference really in service levels for all that extra money.”

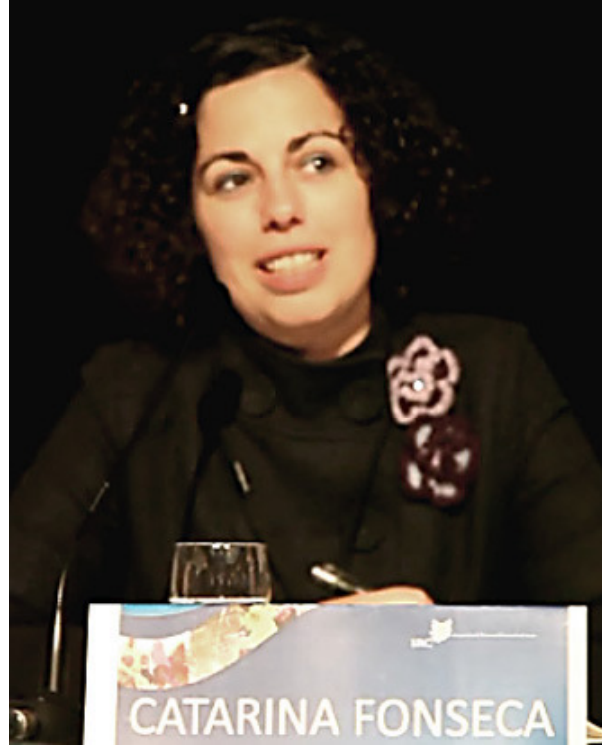
## Key messages

The key messages for relationship between costs and service levels are:

- more expensive technology (mini-medium piped systems) often provides the same (low) level of service as cheaper technology (boreholes with handpumps)
- it often costs a lot of money to provide a low level of service
- to take services above ‘limited’ or ‘basic’ levels means paying attention to accessibility, reliability, quality, etc.
- more could be done with what we have now
- changes needed for the MDGs and beyond require more than pumping extra money into capital expenditure

## Low cost water ...

Costs vary between countries and regions – but annualised costs per capita show surprisingly low costs for water and surprisingly high costs for sanitation, when household expenditure is taken into account. For boreholes and handpumps annualised



WASHCost Project Director, Catarina Fonseca, delivering a presentation at the IRC symposium 'Pumps, Pipes and Promises'

costs are US\$ 2 per capita in Mozambique and US\$ 4 in Ghana, rising to US\$ 12-22 for small town systems. In Andhra Pradesh where new guidelines for water have resulted in major new investments, the annualised costs are as high as US\$ 132 per capita.

- In Ghana, the annual water costs per capita rise threefold when moving from point sources to piped systems
- In Mozambique upgrading water point services to piped systems will cost up to 10 times more per person per year when all costs are taken into account

## ... and high cost sanitation and expenditure on soap

Most sanitation costs in rural and peri-urban areas are borne by households and when these are taken into account, the per capita costs are actually higher than those for water. State expenditure on capital maintenance, operation and maintenance and direct and indirect support costs for sanitation is minimal in all four research countries.

- In Andhra Pradesh, households spend from US\$ 150 to US\$ 227 on their toilets in addition to the Government subsidy – which is supposed to cover 90% of the costs.

- WASHCost researched ten villages in Andhra Pradesh that had won the NGP award for becoming 'open defecation free' and found open defecation again being practised in nine of them. This "slippage" relates to the failure of sustainability of large hygiene interventions.
- In Mozambique, all sanitation construction costs are borne by households. Going from traditional pit latrine to a higher level of service implies at least 50% more capital costs per person per year.
- Pit latrines are widely used in Burkina Faso and in Mozambique and last a long time without much maintenance. However, they are not considered as safe in government norms.
- In Ghana, communities spend US\$ 26 per capita per year on soap, more than the per capita cost of a small town water system. In Mozambique, households are spending up to 5% of their cash-income on soap. This average of US\$ 12 per capita per year is more than the per capita expenditure on hygiene promotion interventions.

### **Country specific data – context specific methodology**

Catarina Fonseca said that defining service levels had allowed meaningful for in-country discussions on the reality of services delivered against country norms and guidelines. Cost data being produced by WASHCost can be used for planning. However, costs and services are context specific. The methodology developed by WASHCost for collecting this data is online and will be used to develop training packages. It can be contextualised – and partners in countries and other international organisations are beginning to pilot and test the methodology.

One of the medium term goals is to have a public cost database developed by organisations in the sector, including WSP and WHO as well as IRC/WASHCost.

WASHCost papers presented at the symposium can be found on the IRC website on the symposium pages at <http://www.irc.nl/page/55569>. Look under theme 1 Costs and services, and click read for each chosen paper. Papers can be downloaded as pdf files.

More information about WASHCost can be found at [www.washcost.info](http://www.washcost.info)

The research report with the methodology is at: <http://www.washcost.info/redir/content/download/1053/6624/file/Research%20report%20November%202010%20WASHCost.pdf>

Information about how costs are divided can be found in WASHCost Briefing Note 1 – Lifecycle costs approach:

[http://www.washcost.info/redir/content/download/763/4808/file/20100409\\_WASHCost\\_BriefingNoteN1%20LowRes.pdf](http://www.washcost.info/redir/content/download/763/4808/file/20100409_WASHCost_BriefingNoteN1%20LowRes.pdf)

This article is an extract from our December WASHCost Update featuring news, the latest research and insights from the WASHCost project.

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