Crossfire: 'Measures of sanitation coverage for the MDGs are unreliable, only raising a false sense of achievement'

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In our debate between two experts, Crossfire invites Kristof Bostoen and Barbara Evans to debate the following: 'Measures of sanitation coverage for the MDGs are unreliable, only raising a false sense of achievement'.

In making the system robust and universal we may have had to make too many compromises

Dear Kristof,

I am really glad to be given the opportunity to discuss this important issue with you and pleased that we are keeping the profile of sanitation in the public eye and high on the development agenda.

First of all I would like to acknowledge that the Millennium Development Goals (MDGs) do provide easily understood targets that we can all work towards achieving, but I am concerned that for water and sanitation they can be misunderstood and misused. Since 2000 progress towards the water and sanitation target has been monitored by the WHO/UNICEF Joint Monitoring Programme (JMP). As you know, I am a strong supporter of the JMP; having an international system by which progress can be assessed is invaluable. The problem is that in making the system robust and universal we may have had to make too many compromises. This has resulted in two separate problems: 1) inaccurate reporting (usually over-reporting); and 2) over attention to the hardware aspects of sanitation.

On the first point, let me use a couple of illustrations: The *JMP Report 2006* states that in Pakistan improved sanitation coverage in urban areas currently stands at 92 per cent. This seems very high to me and I am sure anyone with any knowledge of conditions in the urban areas of Pakistan would agree with me. Meanwhile, rural areas of Sri Lanka are reported as having 89 per cent coverage; this seems extremely unlikely, especially following the dreadful *tsunami* event of December 2004. The officials in these governments may be very pleased with how the report looks; the millions of slum-dwellers in Karachi

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and on the east coast of Sri Lanka would surely not be so pleased.

On a more positive note, the coverage figures quoted for many countries including Bangladesh, India, Kenya and Tanzania have been revised downwards since the first JMP Report 2000, suggesting a growing maturity around monitoring progress in sanitation. Indeed, very few of the world's poorest countries show improved sanitation coverage greater than 50 per cent, a much more realistic figure, but I am still concerned that the figures don't truly reflect the situation in the smaller urban centres where sanitation (and water supply) services are generally much worse than in the big cities.

The figures probably don't truly reflect the situation in the smaller urban centres

Moving to my second point, the MDGs are very clear in what they want to achieve, but not clear about the means through which they will be achieved. Most nations have no accurate statistics on who has 'adequate' provision for sanitation and how sanitation usage and hygiene behaviours are changing. Data for the JMP is obtained mostly from censuses and household surveys and only ascertains who has access to 'improved sanitation'. An urban dweller that answers 'yes' to the question 'Do you have access to a latrine?' will be classed as having access to improved sanitation; but what is the quality of the latrine? Is it easily accessed by the whole family? What does it cost? What is the provision for handwashing? In short, is it adequate? (Similarly householders may say they have access to a sewer simply because there is one near to their house.) These are important questions that are completely missed by the surveys. If the MDGs focus purely on measurable outcomes, then there will be a tendency for developments to be skewed to meet the targets. Governments and development agencies will continue to roll out top-down, targeted interventions with little regard for the process or for the beneficiaries. Such projects may well indicate a rapid progress towards coverage targets but they will not lead to a reduction in poverty. In other words they will result in a completely false sense of achievement.

Governments will continue to roll out top-down interventions with little regard for the beneficiaries

Yours,
Barbara Evans

Dear Barbara,

I share your concern for accurate data collection and analysis. It is an issue which I, as many practitioners, have been struggling with over the years and the examples you mentioned in your first point are a good demonstration of some of the problems. Just to clarify your points, the 2006 Joint Monitoring Programme for Water Supply and Sanitation (JMP) estimate on improved sanitation for urban Pakistan is based on seven surveys (WHO/UNICEF, 2006a) from 1991 to 2003, all with consistent results. The discrepancy you sense between JMP figures and your own assessment is probably due to the definition used for urban areas and the proxies used

to define access, which is your second point. Sri Lanka is a good example of a less reliable estimate which is based on only two survey results (WHO/UNICEF, 2006b) obtained in 1987 and 2000 so no data collected after the 2004 *tsunami* was used in the estimate. In the 2006 JMP report many countries like Sri Lanka have few data points to estimate access to sanitation, but this mainly concerns less populated countries, which reduces the impact of these figures on the global estimates.

The data used for global monitoring is collected by other sectors and is limited

But instead of looking at your examples in detail to judge the state of international sector monitoring, it might be good to briefly sketch the history of sector monitoring at an international level to rebut some of your arguments and point out where I believe the problems are with the current state of affairs in sector monitoring.

From the early 1980s until the Global Water Supply and Sanitation Assessment in 2000 (GA2000) first WHO and later WHO and UNICEF, united in the JMP, relied on data provided by national authorities. During that period there were concerns regarding accuracy and comparability of the provided data as different authorities used different definitions and methods to obtain access figures. With the availability of national data from sources such as Demographic Health Survey and Multiple Indicator Cluster Survey, it became possible to determine access figures from information provided by individuals rather than from national authorities. This allowed for more comparable data to be collected in a more accurate way. This approach also has serious drawbacks.

The aims of the JMP might be misunderstood

The data used for global monitoring is collected by other sectors and the water and sanitation sector is limited to the information such surveys are willing to collect on our behalf. The data these surveys provided at the time of the Millennium Declaration has limited the indicators which could be used to measure progress towards the water and sanitation MDGs. Unfortunately, the same indicator used to determine the base line will have to be used for evaluating the MDGs to allow for a meaningful comparison.

You are right in your second point that the proxy indicators used by the JMP are not adequately expressing all critical aspects of access to water or sanitation, but you also point out that the aims of the JMP might be misunderstood. The London School of Hygiene and Tropical Medicine in collaboration with Oxford University (Devi, 2004) estimated how access figures would change for Eastern Africa if more detailed indicators for access were used. While the gap in access between urban and rural areas increased when using more detailed indicators, these discrepancies become less important once the data was aggregated to obtain national and regional

access figures. This difference in access figures shows that detailed indicators are more critical for local sector monitoring than they are for global sector monitoring.

What the JMP does is measure global trends in water and sanitation and as such has been instrumental in increasing attention and investments into the sector. This has contributed to the establishment of the 2nd Water Decade (2005–2015) and the International Year of Sanitation (2008). It is unlikely the JMP will be able to provide the detailed information required for policy and planning on a national and sub-national level. Such detailed information has to be collected locally and once this is done in a systematic and reliable way I hope it can become once again the basis of global sector monitoring.

What the JMP does is measure global trends in water and sanitation, bringing attention to the sector

Yours,
Kristof Bostoen

Dear Kristof

Your explanation of the challenges faced by the JMP is well taken. Given its institutional complexity the ability of the JMP system to adapt and change and even to create the pressure needed to improve data collection cannot be overstated.

However the question we must ask is whether the existing structure of targets and the associated monitoring system is doing enough to put pressure on those who make the key investment decisions in sanitation.

We need more resources to support the generation of information at the local level

The first and obvious observation is that sanitation is not where it should be in the list of international targets: near the top of the development agenda. In terms of public interest it lags behind education, health and HIV/AIDs. There seem to be two reasons for this: 1) lack of adequate sanitation is an experience that is hard for the privileged to engage with; and 2) even when our sector gets the attention it needs we tend to present a complex picture of what is needed (we get hung up on technologies and 'approaches' instead of focusing on outcomes). A colleague of mine from Zimbabwe recently commented on the frustration of meeting a succession of donors and non-governmental organizations (NGOs) each with a 'new' idea. What is lacking is a willingness to come together within a coherent overarching framework by which resources can be allocated and investment decisions made.

The second point we have already touched on: that the international targets by their necessary simplicity have tended to damage the work done to address sustainability.

Your reply hints at one very specific thing which must happen to reverse this situation. We need more money and more resources to support the generation of information at the local level. We need to find ways to encourage local governments to use information generated within the community to improve the qual-

ity of investments. The work of grass roots organizations such as Shack Dwellers International needs to gain in prominence and be drawn on more frequently by water and sanitation professionals.

Part of this task involves grasping the fact that sanitation is in essence a very political issue – it concerns the poorest and the most disadvantaged – involving trade-offs between investments in access for the poorest and more costly investments in incremental improvements for those who already have services. It also means we have to invest in building up capacity at a local level and among our own sector professionals.

But we can also ask, as 2015 approaches, what other steps can we take to improve the impact of targets set at international level on local decision making? I think we need two things: firstly a system that really asks hard questions about the effectiveness of investments (linking investments to outcomes), and secondly targets for the future which go further in promoting sustainability and access. This might for example involve linked targets (how many schools have sanitation facilities, how many maternal health programmes deal with basic hygiene, etc.).

We need an international system with the credibility of JMP that hits harder at poor investment planning

Targets may be crude tools, but thanks to the MDGs, sanitation coverage has become part of the political agenda

My vision is for an international system with the credibility and respect of JMP that hits harder at poor investment planning. We have time before 2015 to think what such a system might look like but I can think of four characteristics it will need:

- continued academic rigour and credibility;
- independence from all the agencies who have a stake in the investments themselves;
- close links to grass roots organizations (both in the community and local government) who want to push national governments and donors harder; and
- enough resources to continue to improve the quality of the data collected.

I hope we can gradually build on the past towards such a robust system.

Yours,
Barbara

Dear Barbara,

Your last letter explains how to bring the sanitation agenda forward. I agree, targets are crude tools with which to achieve progress, but thanks to the MDGs, sanitation coverage has become part of the political agenda. Sanitation was added as an MDG during the 2002 Earth Summit for Sustainable Development in Johannesburg. The difficulties in acknowledging sanitation as an MDG target leave it an open question whether sanitation will remain part of the political agenda after 2015. Like you, I believe we will have to keep on pushing to give the sector more prominence, but it will take more than just political lobbying. In this follow-up I wanted

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to concentrate on how data collection in our sector could be instrumental in achieving progress within the sanitation sector by drawing a parallel with the health sector. Developing data collection addresses the four characteristics you highlight in your letter.

Development of a simple survey method to allow statistically untrained people to collect reliable data on vaccination coverage was one of the key factors that made the WHO/UNICEF Expanded Programme of Immunization (EPI) so successful. It allowed one to estimate coverage of past campaigns and estimate further needs without requiring healthcare specialists or survey statisticians. The EPI-sampling method (Henderson et al., 1973) as it is often referred to, was so successful that it was adapted to measure nutritional status (Sullivan, 1994). Unfortunately the basis of the EPI method proves unsuitable for the water and sanitation sector (Bostoen, 2007). As some other fields face similar methodological problems, there is a growing interest in developing suitable data collection methods (Bostoen and Chalabi, 2006; Bostoen et al., 2007a,b).

We should accept that there are different possible definitions of 'acceptable' suitable for different situations and purposes

Defining vaccination or nutritional status as well as identifying suitable indicators to measure such status is relatively simple compared with defining access to an adequate water source and adequate sanitation. While it is easy to define what is *not* adequate it is much more difficult to define what *is* adequate access. Maybe we should stop our decades-long search for the holy grail of the universal indicator. We can understand that, while many Africans feel adequately served by a tap-stand 15 minutes away from their house, most South Americans would expect nothing less than a household connection. We should accept that there are different possible definitions suitable for different situations and purposes. This approach can, with some proper planning, feed effortlessly into activities such as the JMP once the collection process is clearly documented and the data proves reliable (UN-HABITAT, 2006).

Currently the largest systematic effort at data collection for the water and sanitation sector is done by surveys for other sectors. While there is an effort to standardize indicators among these national surveys, they will never supply the detailed information required for national and sub-national policy making as well as project identification, implementation and evaluation.

As with other sectors the sanitation sector has limited resources. It is typically managed by engineers who are often trained to solve problems through a technical approach and seldom taught how to define problems and solutions in a participatory way. Our colleagues in the health sector have been taught for decades how to use evidenced-based approaches which

give them the tools to measure, analyse, target and evaluate interventions as well as influence policy. The work by the JMP shows that we are getting better at using data at a global level, but there is still very little support for the practitioner in the field. A simple start could be the development of a Web resource which supports the many practitioners currently collecting data to improve the quality of such data. It could be a training resource for those unfamiliar with data collection and analysis and become a depository to make existing survey data available to the world.

There is still very little support for the practitioner in the field to gather data

Archimedes is quoted as saying about levers: 'Give me but one firm spot on which to stand, and I will move the earth'. To lift sanitation coverage up, simple data collection methods can be the lever; what we need is an international structure willing to be the fulcrum. I can't wait to put all those ideas that have been developed around monitoring into action, and I'm sure, Barbara, you feel the same.

Kind regards,
Kristof

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