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WATER, SANITATION AND HYGIENE: CHALLENGES OF THE MILLENNIUM

Sanitary investigations as a sanitation monitoring tool

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MONITORING AND EVALUATION (M & E) activities are widely recognised as being important components of water supply and sanitation projects, contributing to achievement of maximum health benefits on a project both in the short and long-term. Monitoring and evaluation can help to identify improvements in individual projects, and help to improve the planning, implementation and M & E of future projects.

Health improvements resulting from water supply and sanitation projects are often difficult to quantify, and are unlikely to be achieved quickly (Almedom et al., 1997). The number of latrines or toilets completed is not necessarily an indication of improved hygiene. A latrine that is used and maintained well can be a very effective barrier to the transmission of faecal-oral diseases, whereas a latrine that is not used correctly or well-maintained can become a focus for the transmission of diseases. M & E activities for sanitation projects therefore frequently focus on both the number of facilities provided and proxy indicators to show improvements in hygiene practices.

Identification of objective verifiable indicators to monitor the impact of sanitation projects is therefore difficult. This paper describes the concept of using simple sanitary inspection forms for systematic evaluation of the quality of sanitation facilities. Use of standard forms permits direct comparison of sanitation facilities from different projects, assessment of the impact of new facilities, and monitoring of changes to sanitation facilities and user behaviour over a period of time.

Sanitary inspections

In the field of water supply, sanitary inspections are used to complement bacterial analyses to assess water quality. Bacterial analyses provide facts about the quality of the water samples analysed, but the samples may not be representative, and the results of analyses do not suggest explanations for the water quality as measured. Sanitary inspections, however, identify risks of contamination, offer possible explanations for water quality analyses, identify possible faecal-oral routes for the transmission of diseases, and treat all risks as being of equal importance. Assessment and analysis of the relative importance of individual risks is very difficult without detailed analysis, because many risks are inter-dependent. The relative importance of risks may also vary between different areas, so that it is not valid to allocate differential scores to risks.

Sanitary inspection report forms have been prepared for a range of different low-cost water supply options, and examples have been published in (for example) Lloyd and Helmer (1991) and WHO (1997). Waterlines Technical Brief 50 (Smith and Shaw, 1996) provides a simple introduction to Sanitary Inspection. Sanitary inspection forms are quick and easy to use, providing a useful record of possible causes of water contamination.

Assessment of sanitary facilities using sanitary inspection forms

It is also possible to use sanitary inspections in the sanitation sector. Many development projects contain both water supply and sanitation components, and the authors have developed sanitary inspection forms for both water supply and sanitation components for a rural development project near Hebron in the West Bank.

It is not practical to use a standard sanitary inspection form for use with different latrines. Six draft sanitary inspection forms for use on sanitation projects have been prepared to date, to reflect local needs. These list questions that identify possible risks to transmission of faecal-oral and other excreta-related diseases. Preparation of a drawing for each form is also planned, following field-testing of the forms, to illustrate the risks identified. The forms currently available are:

- Household latrines (single pit VIP);
- School toilets (VIP);
- Household latrines (pour-flush);
- School toilets (pour-flush);
- Septic tanks; and
- Communities without latrines or toilets.

For simplicity all risks are considered as being of equal importance, and questions have been phrased in such a way that the answer is 'Yes' if a risk is present. This requirement can lead to some questions being rather clumsy in structure, and it is therefore important that people who use the forms receive adequate training in their use, to avoid possible misunderstandings about how questions should be answered. Some questions relating to the facilities and user behaviour have been grouped together on the forms, and no questions about pollution risks for water sources have been included, because separate sanitary inspection forms can be used to identify these risks. Most questions can be answered by visual inspection of the facilities, and no special equipment is required for conducting the sanitary inspections. The number of questions on the different forms varies from 9 to 18, depending on the type of sanitation, so an attempt has been made to classify the level

of risk for each form, based on the number of risks identified. This allows the risk ratings, ranging from 'low' to 'very high', from different sanitary inspection forms to be compared directly.

Some of the sanitary inspection forms are currently being field tested in two Palestinian villages, where new sanitation facilities are being prepared. Different forms are being used for the baseline survey (pre-project) and post-project, because different risks apply to pre and post-project conditions. The forms are being used to evaluate the impact on levels of health risk as a result of the project. The forms can also be used to identify specific risks resulting from poor construction or poor operation and maintenance, so that deficiencies can be remedied.

Future plans

Additional sanitary inspection forms for other sanitation options (e.g. for simple pit latrines) will be prepared and refined as required. Copies of the draft sanitary inspection forms are available from the authors for evaluation purposes. Some changes to questions may be needed to suit local conditions.

Dissemination materials will be prepared documenting the authors' experiences of using the sanitary investigation forms, incorporating information received from others who use the forms as a monitoring and evaluation tool for sanitation projects. Field experiences will assist the authors in developing and refining the forms further.

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