Appraising Monitoring Systems

Lessons learned from verifying the DFID WASH Results Programme

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This practical note on appraising monitoring systems (or "systems appraisals") has been written to support staff involved in commissioning or managing Payment by Results (PbR) programmes. Produced by e-Pact, the Monitoring & Verification (MV) team for the DFID WASH Results Programme, the note explains how the MV team defines a systems appraisal, what it involves and why one can be useful.

What is a systems appraisal?

In the WASH Results Programme, unlike many other Payment by Results (PbR) programmes, evidence submitted to DFID about suppliers' achievements comes from data collected by suppliers themselves (see Box 1). In response, the verification approach focuses on appraising the robustness of suppliers' internal systems. This "systems-based approach" to verification has three elements: verification of supplier-generated data; cross-checking using limited data generated by the independent verifier; and a regular audit of suppliers' monitoring systems known as a "systems appraisal". By assessing the robustness of the systems through which data was generated, systems appraisals help the independent verification team to have confidence in a supplier's data.

Why have a systems appraisal?

PbR programmes need high-quality data on which to base payment decisions; robust and well-designed data collection and reporting systems are more likely to lead to reliable data. Systems appraisals help strengthen those systems. Despite considerable investment, many large-scale WASH monitoring and evaluation systems in developing countries do not provide the level of detail and reliability required for a PbR system. Across the sector, there is a lack of detailed data and it can be hard to distinguish reliable data from unreliable. Although project-based reporting systems are frequently stronger than government monitoring systems, the quality and quantity of data required under PbR to evidence achievements is often higher than has been required under other funding mechanisms.

Undertaking systems appraisals enables the MV team to:
- understand how suppliers' systems work; smoothing the verification process, for example by helping them identify what kind of data is available and how the data is generated,
- identify potential risks and weaknesses; enabling them to focus their data verification on areas where inaccuracies are most likely, and
- review whether systems and processes are working as intended.

Recommendations emerging from systems appraisals have contributed to further strengthening supplier M&E and reporting systems, and improving the quality of data they have on which to track progress and base decisions.

Box 1: Why use suppliers' own data to assess their achievements?

In many PbR programmes, verifiers collect third party data about suppliers' achievements, for example through independent surveys or randomised control trials, or use data from existing government monitoring systems.

In the WASH Results Programme, payment is made solely against data generated by the suppliers – with reliability established through checks by verifiers of both the data and data systems: an approach suppliers value, arguing that the data collection process is part of their relationship with communities. Suppliers, in this case NGOs, invest in their M&E and reporting systems in order to understand programme progress.

What does a systems appraisal involve?

Systems appraisals assess supplier systems at global, national and local levels. Where implementation is conducted in a consortium, the systems of multiple partners, including local implementing organisations and field offices, are also assessed.

Systems appraisals can use a variety of tools: a questionnaire for completion by programme leads, document reviews, and interviews with HQ and implementation staff. Visits to supplier's offices were not part of the original methodology in the WASH Results Programme but have proved invaluable in helping the MV team go beyond a theoretical understanding of systems to discern the practical implementation of monitoring and reporting systems.

Country Verifiers (MV team members based in the countries where the programme is being implemented) undertake much of the research, in collaboration with the Lead Verifier.[1] The design of the systems appraisals in the WASH Results Programme was based on a USAID data quality audit[2] tool and covers five areas, which have proved effective in this programme but could easily be amended for other PbR programmes. After assessing the evidence, each area is given a red, amber or green (RAG) rating and if problems are identified, specific recommendations are made to strengthen systems. In most cases suppliers have been happy to act on our recommendations but where there have been differences in opinion between a supplier and the MV team, DFID has been called upon to adjudicate. Systems appraisals are repeated on a regular basis, mainly reviewing areas that have previously been identified as amber or red, or assessing systems in new project locations. Over time, the MV team has seen systems improve.

> **Box 2:** What's the difference between systems appraisal and data review?
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> The **systems appraisal** looks at whether robust data collection and management systems are in place.
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> **Data reviews** check that supplier-generated data is likely to be correct by, for example, undertaking field spot checks, reviewing data sets for inconsistencies, and recalculating reported results to check they have been done accurately.

Area of WASH Results Programme Systems Appraisal	What do we assess?
1. **Result monitoring and reporting structure, functions and capabilities**	The level of staffing of M&E systems and the training staff receive, including the quality assurance and checking processes.
2. **Verification indicator definitions and reporting guidelines**	The nature of the definitions used for each indicator, the extent to which implementation staff are supported to understand them and the clarity and communication of the reporting process.
3. **Data collection and reporting tools**	Are data collected sufficiently precise? Can data be disaggregated by gender, age, wealth quintile, disability, location and implementing partner? How standardised is data collection across locations and implementing partners? In the outcomes phase, we focused especially on the design and implementation of surveys (see Box 3).
4. **Data management processes**	The strength of processes, e.g. quality control of data entry, processes for identifying and dealing with incomplete or fraudulent data and avoiding double counting, as well as systems for data storage and back-up.
5. **Alignment with national reporting systems**	Is results reporting aligned with relevant national indicators and standards? This was not related directly to ensuring reliability of data collected, but reflected a desire to ensure that any data collected was comparable with national reporting systems, and could be used by (for example) local government partners. In addition, understanding the extent of alignment helped identify the potential for confusion over indicators and standards.

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[1] For more information on the MV team structure, see "DFID Payment by Results Guidance Note: Lessons from an effective verification system", February 2020.
[2] USAID (2008): "Data quality audit tool. Guidelines for implementation".

Box 3: Systems appraisals of outcome monitoring systems: getting surveys right by focusing on management

Targets for the WASH Results Programme included WASH outcomes such as sustained handwashing practice, functioning of water points, and use of latrines some time after outputs were delivered. Approaches for monitoring outcomes are less well established than for monitoring outputs and demand a different approach to verification. Monitoring of outcome achievements relied almost exclusively on household surveys undertaken at baseline, midline and endline (two years after outputs were delivered) so systems appraisals focused on assessing survey design and implementation. The approach taken by the MV team varied, in part responding to the number and scale of the surveys planned by Suppliers: if there were many surveys it was possible to iterate – making improvements from one survey to the next; but where there were fewer, larger-scale surveys it was imperative to get surveys right the first time as mistakes could have direct payment implications and be difficult and costly to rectify. Systems appraisals of surveys cover all or some of the following areas:

1. **Survey design** – reviewing the proposed methodology, checking the draft questionnaire to make sure questions will generate data relevant to outcome indicators and suitable for reporting and verifying results. This could also include checks that questions are correctly translated into local languages and sufficient guidance, training and supervision is planned to ensure high-quality survey implementation.

2. **Sampling** – ensuring that the sampling frame, e.g. list of villages, is appropriate and the resulting sample is likely to be representative at the required level of confidence (see Box 4).

3. **Recruitment and training of survey staff** – ensuring survey staff are able to implement the survey consistently and accurately, for example that they are able to use equipment effectively, understand definitions used and correctly apply the sampling strategy. We have advised on the need to extend training, and to ensure that female enumerators are included. This is important as sensitive questions are being asked about handwashing behaviours and toilet use, and respondents tend to be female.

4. **Survey implementation** – checking that staff are managed effectively, and that agreed procedures are followed. In one case, for example, MV team spot checks have found one member of staff undertaking surveys in an area where he had previously worked on the programme implementation (jeopardising the independence of measuring results from implementation), and another found that staff were insufficiently supervised by managers.

5. **Reviews of suppliers' QA processes** – such as whether they have spot and back checks and trend analysis in relation to surveys: ensuring that these are suitably rigorous and consistently followed.

Box 4: A systems appraisal in action improving sanitation sampling

The largest programme payments for one supplier in WASH Results were for household sanitation outcomes (household access to and sustained use of sanitation) as evidenced through a household survey. A systems appraisal of the survey systems identified that only 10–20 households were sampled in each programme community, with the risk that these households could be intentionally (or accidentally) selected to favour households with higher than average sanitation outcomes, for example those in the centre of a village. Given that this was a systemic risk, which could affect every community sampled in the survey and have a potentially major impact on the reported sanitation results, a check was included in the data review process on the spatial distribution of the surveyed households in selected communities using survey GPS coordinates and satellite maps. In a few cases, this check identified problems with the way in which enumerators were conducting surveys, revealing that they were not sampling as they had been instructed. The supplier acted quickly to address the issue, appointing new enumerators and in some cases re-running surveys.

The supplier subsequently introduced greater scrutiny of enumerators and map checks to their own quality assurance processes. In a subsequent verification round map checks were failed in some of the sampled communities; tightly clustered survey points were excluding households on the periphery of communities. As a consequence, the relevant results were not fully verified, with a reduced number of beneficiaries verified (due to over-achievement there was no need to adjust payments to the supplier).

Further reflections from the MV team on systems appraisals

- **Systems appraisals should be run in an inception phase;** however, you also need them *throughout* a programme. This reflects the iteration and flexibility required for effective monitoring systems, the subsequent verification of the data they produce and the need to follow up on the implementation of recommendations from previous systems appraisals. In the WASH Results Programme, a systems appraisal accompanied each verification report but the level of detail involved varied considerably; for example, if the dataset used to generate the results had previously been verified, or there were only minor outstanding issues from a previous systems appraisal.

- **Systems appraisals can build understanding between supplier staff and the MV team, but can also be a source of tension**, particularly with consortium partners. This is especially the case if appraisals are unexpected or more rigorous than anticipated. The level of detail with which verifiers will seek to understand suppliers' monitoring systems, and the rationale for this, should be made clear at the start of the programme so Suppliers do not feel this is an unexpected level of rigour

- **Systems appraisals could be used to assess supplier efforts in relation to principles such as equity, consideration of vulnerability, downward accountability and sustainability**. One critique of PbR is that it can be difficult to place value on these principles in the results framework; including an assessment of work in these areas as part of a systems appraisal could provide an alternative accountability mechanism (which may or may not be linked directly to payment).

- **When assessing outcomes, particular focus is needed on the quality of management of the whole survey process as this is the key to good quality data.** Effective survey management (from commissioning and designing the survey through to analysing the data) can be enhanced by systems appraisals and incentivised by linking payment to survey quality, e.g. requiring suppliers to address any design concerns before surveys are undertaken or risk payment deductions.

- **Systems appraisals are a vital part of a verification system and can help drive improvements in suppliers' monitoring systems.** The MV team feels strongly that by opening up the "black box" of reported results and allowing us to understand the details of the systems and processes which generated the data, systems appraisals have helped set in motion improvements in supplier monitoring data and resulted in suppliers adopting certain aspects of the verification process internally, to ensure data quality. The learning from systems appraisals can help improve suppliers' and partners' long-term monitoring beyond the WASH Results Programme. There are already examples of suppliers adopting improved monitoring approaches and data quality checks more widely, particularly where suppliers built upon existing monitoring systems rather than designing project-specific approaches.

e-Pact is a consortium led by Oxford Policy Management and co-managed with Itad