

PRINCIPLES OF DATA COLLECTION



Before collecting any data it is useful to stop and assess the situation, to make sure that money and time is not wasted. The basic principles of data collection include keeping things as simple as possible; planning the entire process of data selection, collection, analysis and use from the start; and ensuring that any data collected is valid, reliable and credible. It is also important that ethical issues are considered.

Data collection is often the most time consuming and expensive part of any monitoring and evaluation (M&E) task. Before collecting any data it is useful to stop and take stock of the situation, to make sure money and time is not wasted.

This paper covers a set of key principles that can be used to help ensure data collection is appropriate and useful. Amongst experienced M&E practitioners many of these principles are well understood and systematically applied. But for newcomers to the world of M&E there is value in addressing these principles more formally to help avoid costly and harmful mistakes. The principles are divided into four areas:

- keeping things simple;
- planning the whole process;
- ensuring reliability, credibility and validity; and
- addressing the ethics of data collection.

Keeping things simple

In any project, programme or organisation, basic monitoring needs to be carried out. At project level there is often little difference between monitoring and project management. For example, project monitoring may involve simple processes such as conducting regular meetings, reviewing documents or records, discussing issues informally with staff, etc. In these cases there is no need to engage in complex methodologies of data collection and analysis.

Sometimes, more complex methodologies need to be adopted. For example, if carrying out an evaluation of a large programme it may be necessary to implement a formal methodology, such as a Randomised Control Trial or Qualitative Comparative Analysis, which requires specialist skills. But it is important not to undertake any data collection or analysis methodology that is more complex or expensive than is necessary.

Unfortunately, over the past two decades there has been a rise in the cult of the 'expert' within M&E. There is often a desire to over-complicate and to try to portray M&E as a field requiring a large amount of specialist knowledge. In many cases this is simply not true, and in reality most M&E activities can be designed and implemented by non-

experts. The key, therefore, is to keep things as simple as possible.

Planning the whole process

It is always important to know why information is needed before collecting it. A common mistake is to collect information before working out how it will be analysed or used. Sometimes, this means that the information cannot be properly analysed and used because it has not been collected in the right way, at the right time or in the right place.

Some basic questions to ask before collecting any information are as follows.

- What information do you intend to gather?
- Where will you get this information, and how will it be collected?
- Why is the information needed, and what questions is the information going to answer?
- Who will use the information once collected?
- How will the information be analysed?
- How will any analyses be used?

If the answers to any of these questions are unknown or uncertain then it is important to find out the answers before going any further. Huge amounts of time, money and energy are wasted every year because information is collected that is never analysed or used.

“If you collect information just because you think it might be useful at some stage in the future then there is a very good chance it will never be used.”

Sometimes decisions can be made when planning for M&E at the start of a project or programme. But it is also important to regularly review M&E systems to ensure that data is being used properly. The golden rule is 'if data is not being used then stop collecting it'. The time otherwise spent collecting the data can then be used for something more productive.

Another key principle is to collect information on a '*need to know*' basis rather than a '*like to know*' basis. This means being very clear about what information a project, programme or organisation needs to collect in order to function, rather than collecting information on all kinds of issues that might be interesting.

Unfortunately, there are no clear rules for establishing a balance between too much and too little information. As M&E practitioners become more experienced it becomes easier to strike this balance, and in many cases it is simply a matter of trial and error

Ensuring reliability, credibility and validity

As far as possible, all information collected and used in M&E should be reliable, valid and credible (see Bakewell et al. 2003).

- Data is considered **reliable** when there is confidence that similar results would be obtained if the data collection exercise was repeated within the same period, using the same methods. If data is reliable it means it is not too heavily dependent on the skills and honesty of the person collecting it.
- Data is **valid** when it measures or describes what it set out to measure or describe. Data is not valid if it is misused. For example, information collected on attendance at a training session would be valid if used to show that the training session was held and people turned up. But information on attendance would not be valid if used to claim that participants had increased their awareness or understanding of an issue. Another common mistake is to get information from just one or two stakeholders and then to use this information as if it represents the views of a much wider population.
- Data is considered **credible** when it is believable, and is consistent with a '*common sense*' view of the world. But just because data is not credible does not mean it is inaccurate. It simply means that it needs further checking. For example, if a small pilot project claimed to have data that showed it had greatly increased the living standards of farmers in a region the data may not be considered credible at first. But further data collection and analysis might confirm the findings and explain why such large changes had occurred. In that case the new data would be considered credible.

One method that is often used to improve the reliability, validity and credibility of information collected through M&E processes is triangulation. Triangulation means cross-checking information through using different methods of collection, talking to different stakeholders or using different people to collect data. Triangulation is covered in a separate paper within the M&E Universe.

The ethics of data collection

Anyone engaged in formal research is expected to be familiar with the ethics of data collection and use.

Increasingly, people carrying out external evaluations are also expected to conform to a set of ethics (some examples can be found in the reading list at the end of this paper). However, there is no recognised set of ethics for organisations, programmes or projects carrying out internal monitoring or review processes.

Some of this is because of the ongoing nature of internal M&E. For example, it is reasonable to expect a researcher or evaluator to explain clearly to different stakeholders why they are collecting data; to produce written sheets of paper explaining how data will be used; and to obtain signed papers indicating that the stakeholders are happy for the data to be used in different ways. But a typical project or programme may be acquiring information from stakeholders on a regular and ongoing basis, and would not be expected to describe the purpose of data collection every time. However, there are some fundamental ethical principles that should always be adhered to whenever carrying out any M&E activity. Some of these are described below.

- Avoidance of harm is a key principle whenever data is collected. People should not be put in a position where they might suffer because of the information they provide. For example, villagers supplying information about government services; women supplying information about domestic violence; children supplying information about bullying; or even staff providing information on leadership culture within a CSO could all be considered potentially at harm. Measures should always be taken to mitigate the possibility of harm. If this is not possible then the data should not be collected.
- The benefits and costs to different stakeholders need to be considered. For example, there may seem little harm in getting together a group of farmers to engage in a focus group discussion about farming methods. But in some cases this might mean taking them away from their fields at harvest time. Where possible, it is important to balance the costs and benefits of data collection activities to the stakeholders themselves, as well as to the organisation, programme or project.
- Participation in M&E activities should always be voluntary, and people should not be pressured into taking part. In fact any attempt to pressurise people into engaging with M&E almost always backfires, because people are usually unwilling to tell the truth in situations where they feel forced to participate.
- Confidentiality needs to be respected. Some people may be willing to express opinions provided they are not quoted, or the information is not used widely. If this is the case then this needs to be clearly recorded alongside any notes taken. The information should not then be disseminated or used without the consent of the person who supplied the information. However, it is normally acceptable to use the information to shape judgements or come to conclusions.
- Likewise, anonymity needs to be respected. Some people or organisations are willing for their opinions or stories to be used provided they are not personally

named. In these cases it is fine to record and disseminate the information, but the person or organisation supplying the information needs to remain anonymous. This might mean taking active steps to make sure that others cannot find out who the person or organisation supplying the information was.

- If an organisation, programme or project wants to use a story of change for marketing or publicity purposes, or wants to publish a photograph of a beneficiary or group of beneficiaries, then informed consent should always be sought. This means recording whether beneficiaries are happy to be quoted; whether they are happy for their real names to be used; and whether they are happy for their photographs to be used, and, if so, how.
- Cultural sensitivities should always be respected. This means considering differences in culture, local

behaviour and norms, religious beliefs and practices, sexual orientation, gender roles, disability, age, ethnicity and other social differences when planning data collection activities or communicating findings.

Finally, there are ethical issues that will affect the credibility of any data collection exercise. Any M&E practitioner – whether engaged in a simple visit to the field as part of ongoing M&E of a small project or whether engaged in a multi-million pound impact assessment – should carry out data collection in order to best establish what is happening or changing and why, and thereby ultimately improve matters. This means being as objective as possible, treating the data with respect, and always being concerned with what the information is revealing – not just what the M&E practitioner wants to hear!

Further reading and resources

Many organisations have developed their own ethics criteria for evaluations, and provide manuals freely on the internet. Two examples are:

The United Nations Evaluation Group (UNEG) 'Ethical Guidelines':

<http://www.uneval.org/document/detail/102>

Australasian Evaluation Society, Guidelines for the Ethical Conduct of Evaluations:

http://betterevaluation.org/resources/example/aes_ethical_guidelines

The INTRAC publication *Sharpening the Practice* (see Bakewell et. al. 2003 below) contains a chapter on "General Principles and Guidelines for Dealing with Data". Further papers in this section of the M&E Universe deal with triangulation, and some of the more basic data collection tools



References

- Bakewell, O; Adams, J and Pratt, B (2003), *Sharpening the Development Process; A practical guide to monitoring and evaluation*. INTRAC, UK.

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