

DEALING WITH UNCERTAINTY



Some changes resulting from CSOs' work can be accurately measured. But M&E findings are often uncertain, particularly when CSOs work in complex or difficult environments. A higher degree of certainty is required when CSOs use M&E findings as the basis for decision-making. The certainty of M&E findings can be increased in many different ways. However, there are usually associated costs.

Monitoring and evaluation (M&E) is often conducted to find out what a development intervention has done, and what (if anything) has changed as a result. This information can then be used to help make decisions. It is therefore important that the information is as accurate as possible.

Sometimes, this is relatively straightforward. Within social development, many things can be measured with a high level of accuracy. Examples include the number of wells dug, school enrolment, website visits, or immediate improvements in health following medical treatment. But at other times it is not so easy, and M&E findings may be subject to a degree of uncertainty. This is especially true when CSOs work in complex or difficult environments, where evidence may be contradictory, inconsistent or hard to find.

Areas of uncertainty

It is useful to break down uncertainty into different areas. Each area has its own unique challenges.

Inputs and activities: A CSO can usually be fairly certain about its inputs and activities. Most of the time these are entirely within the control of a CSO, and can be measured with complete accuracy. For example, CSOs normally know the amount of money they spend on a project. And it is relatively easy to collect information on activities such as meeting with local communities to plan a project, or drawing up designs for a new school or clinic.

Outputs: Many outputs (deliverables) can also be measured accurately, such as the number of schools built, people trained or children immunised. However, this may only tell part of the story. For example, a CSO may be certain that it has provided training to a number of people, but it may be more difficult to establish whether the training was done well. A post-evaluation training form might reveal that participants rated the training highly. However, this could be because participants were being polite, or that only satisfied participants bothered to fill in the forms.

Change (outcomes and impact): Some changes can also be measured with a high degree of accuracy, for example, changes in the weight of children during a nutrition programme, or crop yields following agricultural training. But at outcome and impact levels many, if not most, M&E

findings are subject to at least some level of uncertainty. For instance, work in sectors such as governance, conflict resolution, or mobilisation of communities is often difficult to measure, and it may be hard to find simple indicators that provide concrete proof of change.

Significance of change: Sometimes, a CSO can be relatively certain that a change has occurred, but unsure about its significance. For example, a CSO might be reasonably certain that it has successfully persuaded different parts of a community to come together to jointly discuss common issues. But it may be unsure if the change is sustainable, or whether it is likely to have a significant impact on the community in the future.

Inference of change across wider populations: Sometimes, CSOs can measure change accurately across a small number of people or communities. But they may be uncertain how far these cases are representative of change across wider populations. Equally, CSOs may have clear evidence that a development initiative has led to change in a specific time, location and context. But this does not automatically mean that the same initiative will work in other times and places.

Contribution to change: In some areas of work, such as policy influencing, change may be relatively straightforward to measure. For example, it is usually easy to establish if a new law has been passed or successfully opposed, or whether an issue has been debated in parliament. But a CSO may be uncertain about exactly how far it influenced that change. Equally, in a large women's empowerment programme it may be quite easy to track changes in the number of women working for local government, but much harder to assess the contribution of the programme.

Lessons learned: Just because something is recorded as a lesson learned does not necessarily make it certain or true. Often, CSO staff record lessons when they suspect something is true, but are not completely sure. Even learning from large, in-depth research studies may be subject to at least some degree of uncertainty.

Implications and recommendations: Even if a CSO is sure about what has changed, its role in bringing about the change, and what has been learned as a result, it may still be unsure what to do about it. There may be many potential courses of action, all subject to some degree of uncertainty.

Overall, the uncertainty of M&E findings tends to increase with complexity. In straightforward service delivery projects, it is often possible to assess change with a high level of certainty. But as the complexity of a development intervention increases, so does the uncertainty of M&E findings. A CSO then needs to know what to do about it – whether it can accept a level of uncertainty, or whether it needs to take steps to reduce it.

The importance of certainty

Much depends on how M&E information is used. If M&E is primarily carried out for accountability to donors, for fundraising, to assist communications, or to enhance participation of different stakeholders, there is not much harm in presenting or using information that comes attached to a level of uncertainty.

For example, many CSO develop stories of change based on self-reported testimonials of beneficiaries. Sometimes, these are used with little or no validation, or only rudimentary validation. This may not be an issue if M&E is only being used to illustrate the type of changes achieved through a CSO's work.

However, a higher degree of certainty is required when CSOs use M&E findings as the basis for decision-making. Even here there may be different levels. For example, minor alterations to a project or programme may be based on M&E findings with a high level of uncertainty. It may be quicker and easier to pilot the alterations instead of taking time to improve the certainty of findings. On the other hand, a much higher level of certainty may be needed if findings are used to decide whether to abandon or extend a project. This is because the consequences and implications are much greater.

In general, a higher level of certainty may be required:

- when there is significant pressure on a project or programme to demonstrate that it is effective and/or represents good value for money, particularly if there is a concern that funding or support may be reduced or withdrawn;
- where rigorous evidence of change is required in order to make decisions about whether or not to enter a new phase of a project or programme;
- where decisions need to be made about whether and/or how to adapt, scale-up, mainstream or replicate pilot or innovation projects or programmes;
- when a CSO supports many similar projects and programmes, and wishes to invest significant resources in finding out whether and/or why these are effective;
- when a CSO wishes to make any other kind of major change to a project or programme; and
- where a CSO is seriously questioning its own vision, mission or values, and is considering a change of direction.

Basically, as the consequences of any decisions based on M&E increases, so too does the certainty required.

Ways to increase certainty

CSOs can increase the certainty of M&E findings in many different ways. Some of these are described below, although these suggestions are illustrative only.

- **Improving sample sizes or methodologies:** In quantitative analysis, there are fixed rules for calculating the certainty of findings. Generally, larger sample sizes tend to increase the precision of findings. If a CSO has generated M&E findings based on a low sample size it could consider interviewing or surveying more people. In qualitative analysis the rules are not so precise. But it is often possible to increase the certainty of findings by talking to more people, or by improving the sampling methodology. This may involve talking to a broader range of stakeholders, or being more strategic in how people are selected for interview.
- **Triangulating information:** It is often possible to increase the certainty of findings by triangulating information. This may involve talking to different groups of people (e.g. men and women), using different people to carry out interviews or surveys, using different methods of data collection, and so on.
- **Improving methodologies for data collection and analysis:** Many CSOs engage in qualitative methods of data collection such as the Most Significant Change (MSC) technique, Outcome Mapping, or (increasingly) outcome harvesting. Often, CSOs cut corners, following some aspects of the methodology but not others. For example, many CSOs engaging in MSC or outcome harvesting do not pay enough attention to processes designed to verify and validate changes. Greater certainty can sometimes be achieved by following these methodologies more carefully.
- **Enhancing analysis through sense-making:** Greater certainty can be reached by investing in sense-making. This means getting people together to pool experiences, knowledge and understanding. In this way, tentative conclusions reached by one person or team can be cross-checked with wider teams.
- **Enhancing the capacity of M&E staff:** Capacity development can help improve M&E performance amongst core M&E staff, or staff with M&E responsibilities. This can help improve the quality of data collection and analysis, and thereby the certainty of M&E findings.
- **Enhancing the supporting environment:** Actions can sometimes be taken to enhance the supporting environment for M&E, helping to create an organisational culture that is conducive to effective M&E. These actions can include raising awareness of how M&E is used, ensuring that M&E is seen as a non-threatening exercise, enhancing feedback processes, or providing leadership to ensure that M&E work is valued, and findings are acted on where necessary.

Although the processes described above can all be used to reduce uncertainty to some degree, there is usually a limit. A CSO is then left with one of three choices:

- it can decide that it is unwilling to accept the M&E findings as a valid input into decision-making; or
- it can accept the level of uncertainty, and factor this into decision-making; or
- it can invest dedicated and targeted resources to minimise the uncertainty of findings.

The third option is quite common in complex programmes, where routine M&E findings rarely provide all the information needed to make management decisions, and are more likely to highlight the need to investigate an issue further. Additional M&E work can then be carried out to confirm or reject earlier findings, and produce detailed recommendations. This additional work might involve adopting or designing new M&E tools or methodologies, carrying out a major review or an evaluation, or even implementing a formal research study.

Indeed, in complex situations the role of an M&E system is often to identify emerging patterns of change or learning, which then become the focus for further M&E or research work, designed to reduce uncertainty. Ultimately, this should happen when: a) there is a clear plan for how to use the M&E findings; and b) when an organisation judges that the costs of carrying out the work to reduce uncertainty are matched or outweighed by the potential benefits.

An important dilemma in reducing uncertainty is how long a CSO should wait before assessing or confirming a change resulting from its work. This is because it is difficult to assess significant or sustainable change in some social development projects and programmes until long after work has been completed. CSOs often need to make decisions based on the best information they have, rather than waiting longer to be more certain, and thereby running the risk that any M&E findings are too late to be useful.

Accepting uncertainty

As stated above, CSOs should seek to ensure that the certainty of M&E findings is as high as possible, especially when using that information to make decisions. However, this sometimes means weighing up the benefits of greater certainty against the costs – largely, the greater time and expense of carrying out more effective M&E work.

This means that a CSO wishing to act on M&E findings often has to do two things. First, it needs to ensure that those findings are as precise as possible, given the available level of resources. Second, it needs to recognise any remaining uncertainties, and communicate these clearly to decision-makers, so that they can take them into account when making decisions.

Case study: Uncertainty in climate change

A few years ago, an organisation working on an £80 million, five-year programme on climate change produced an annual report for its principal donor stating that it “believes it has contributed to changes in climate policies and programmes in 28 countries.” The headline was followed by a series of in-depth case studies, detailing what had changed in each country, and precisely how the programme believed it had contributed to those changes.

The donor responded by asking what the programme meant by saying that it “believed” it had contributed to change, and basically asked “have you or haven’t you influenced these policies?” At the same time, a UN panel had just brought out a report saying “scientists are now 95% sure human activity is behind the increase in global warming since the 1950s.” The head of M&E for the programme wanted to respond by writing to the donor to question its policy on climate change, and to ask it to state with 100% confidence whether climate change was being influenced by humans or not. Luckily for the programme, wiser heads prevailed!

But the point is important when looking at how different actors view uncertainty. For climate scientists, 95% certainty provided a very high level of certainty – something on which to base decisions involving billions of pounds globally. Whilst it might be ideal to be 100% certain, it was considered better to act immediately than to wait until uncertainty had been completely eliminated. And it was better to be honest about the available evidence than to run the risk of over-claiming the certainty of findings. For evaluators, however, any statement of uncertainty is often seen as a weakness, and something to be ruthlessly eradicated. This partly explains why few CSOs are really willing to publicly acknowledge or discuss uncertainties in their M&E work.

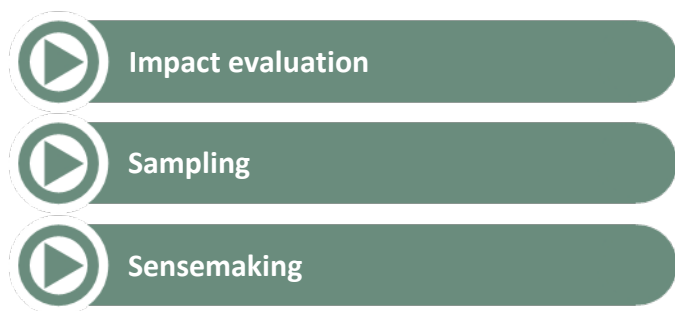
This means ensuring that uncertainties and/or qualifications are included when reporting changes, lessons learned, or recommendations. For example, it might mean offering alternative explanations for why change has occurred, or being explicit about the limitations of any evidence gathered. However, CSOs, and the development community as a whole, are not always very good at this. This is partly because uncertainty in evaluation has traditionally been seen as a weakness (see case study above). Indeed, some physical scientists argue that:

“... estimating the uncertainty on a result is often as important as the result itself. It is only when we are aware of our ignorance that we can judge best how to use knowledge. In engineering or medical science, a deep understanding of uncertainty can be a matter of life or death. In politics, over-confidence is often the norm; uncertainty is seen as weakness when really it is a vital part of decision-making.” (Cox and Forshaw 2016)

What Cox and Forshaw say about politics could equally be said about M&E. Sometimes, when deciding whether or how to act on M&E findings, the task of a CSO is not to spend more and more money reducing uncertainty, but rather to recognise the limits of certainty, and to take this into account during decision-making.

Further reading and resources

The M&E Universe paper on *Impact Evaluation* discusses some methodologies used to increase the certainty of M&E findings. Other papers dealing with some of the subjects covered in this paper can be accessed by clicking on the links below.



Author(s):
Nigel Simister

INTRAC is a specialist capacity building institution for organisations involved in international relief and development. Since 1992, INTRAC has contributed significantly to the body of knowledge on monitoring and evaluation. Our approach to M&E is practical and founded on core principles. We encourage appropriate M&E, based on understanding what works in different contexts, and we work with people to develop their own M&E approaches and tools, based on their needs.

M&E Training & Consultancy

INTRAC's team of M&E specialists offer consultancy and training in all aspects of M&E, from core skills development through to the design of complex M&E systems.

Email: info@intrac.org

Tel: +44 (0)1865 201851



M&E Universe

For more papers in the M&E Universe series click the home button