Developing a Monitoring and Evaluation Plan for Food Security and Agriculture Programmes

Planning for monitoring and evaluation activities during the programme's lifetime

Text-only version

In this lesson

LEARNING OBJECTIVES

At the end of this lesson, you will be able to:

- identify options for data collection to address different information needs;

- describe the issues to consider when you plan for data analysis and reporting;

- identify the elements to plan with regard to human resources; and

- be aware of data management issues.

INTRODUCTION

Thanks to the work done previously, you have selected a small set of indicators that you will use to track the programme's results. Now, it's time to plan how you will feed the system, who will be in charge and how you will react to the information obtained.

> **Without planning, there is no implementation.**

This lesson will provide guidance on:

- ✓ Planning data collection
- ✓ Planning analysis and reporting
- ✓ Planning for resources
- ✓ Planning data management

PLANNING DATA COLLECTION

You already know how to define and detail your indicators. Now, you have to decide **how to collect them**. This is usually an **iterative process**, where you try to compromise between your actual **information needs**, your technical **ability to collect data** and the **resources** you can dedicate to data collection, i.e. what budget, what human resources and what level of priority. There are three main types of data that you can use:

- Data that you will specifically collect **at given times**, such as that for **baseline** and end line studies, reviews or evaluations.
- Data that **other organizations** collect and that you can use for your M&E purposes.
- Data that you collect yourself **in the course** of the programme's implementation.

Why it is important to ask questions before formulating indicators

Sometimes you might choose an indicator for your M&E system, but then realize that **you will not be able to calculate it**. For example, the indicator might require the use of statistical skills that you may not have. In that case, you can try to find another indicator that will answer the question you are asking and which fits your possibilities.

From the moment the indicators have been finalized, you will need to launch **a baseline study**, which will be the first measurement of the indicators. Some organizations also schedule an end line study, in which the same indicators as in the baseline study are calculated and changes are analysed.

The baseline study will provide a measure against which **progress** can be **assessed every year** and at **the end** of the programme. It can also help you better understand the needs of your target. Baseline and end line studies can also focus on important **assumptions and risks** that you will not be able to track on an annual basis, but which can help you understand the results observed.

Baseline studies are especially useful to provide a basis for the monitoring of **outcomes**. This monitoring often done via a survey, especially when the expected results come as improved knowledge, changing attitudes or new practices. For instance, if you monitor how high enhancing rural livelihoods is as a priority for government officials or agriculture stakeholders, you could ask interviewees in your baseline survey to rank it among a dozen other priorities. Then, at mid-term review, you could do it again to see whether it climbed in the ranking or not.

TIP: What can I do if I'm not able to do a full-fledged baseline study?

In some cases, you may not be able to do a full-fledged baseline study. In that case, try to collect an answer to your M&E questions via a **few workshops or interviews**. Also try using existing data such as the evaluation or end line study of a previous or similar programme.

Also, if you could not do a baseline study because you did not manage to collect the needed data, the indicators may be too complicated or not realistic. Baseline studies are a good **test of reality**. And, there is still time to develop new indicators in answer to your M&E questions.

Most of the indicators of your M&E system will likely need to be calculated **every year**, and sometimes twice a year, to be included in the annual report. You will need to retrieve information drawn from the operation and management of programme activities. This must be planned **before the activities start**.

Sharifa's programme includes an array of training projects, which are operated by training centres across the country. There is a lot of useful information that those **operators can easily retrieve** in their day-to-day activity.

💬 *"I need to know the number of attendees, their details, but also their profile (i.e. age, gender, residence, job, etc.), whether they are satisfied or not, whether they would recommend the training to others or whether they think they have learned something new that they will use."- Sharifa*

All this information can easily be asked of project beneficiaries using an application form first, and an evaluation questionnaire at the end of the training session.

How to collect data from operators

To be able to collect this data for the duration of the programme:

- Make your **information needs and indicators known to all** the future project or activity **operators**.
- Provide them with **examples of questionnaires or application forms** that include the needed information. This process will help to keep phrasing similar across projects so that collected data can be compared.
- Require that they collect and store that data in **digital format**, and that they back it up regularly.
- Provide them with a **reporting model** for the data you will gather (e.g. a spreadsheet). This model will also help with aggregating data from different projects. What is even better is the use of **online forms** provided by Google Forms or Survey Monkey (the same that you would use to implement a survey). Ask operators to fill in the requested data directly, so that you can analyse it once they are done.

Tips to collect data effectively

Make sure that your operators **collect the personal details** of the beneficiaries. By doing so, you will be able to **contact them** at a later stage for a survey. You will also **avoid double counting**. For example, it will help you make the distinction between the number of persons trained and the total number of trainings.

To encourage operators to supply the required information, it is customary to **guarantee feedback** in the form of useful information. For example, each operator could receive an annual report which would allow them to compare their individual results with the average for all other operators. Remember that this kind of data is easy to retrieve if you have requested it **from the**

start and if a common framework has been provided to collect it. It cannot be reconstructed later, as the expense will be too great.

At outcome level, you will also often need to collect specific data by yourself. There are two main types of evidence that you are likely to rely on: "**traces**" and "**testimonies**".

TRACE	TESTIMONY
A fact that proves the existence of something.	A statement or an opinion about the existence of something.
For example: New public commitments by government; new policies designed, endorsed and implemented; mention of strategic objectives of your organization in the law.	*For example:* Notation by expert panel of the current legislative framework compared to organizational objectives.

Example: Sharifa has collected the following evidence in the framework of her priority on improving rural livelihoods.

TRACES	TESTIMONIES
Production of studies on rural livelihoods by national government.	Survey of government officers who were trained, about the knowledge and competencies they acquired and how they used it.
Existence of coordination mechanisms with agriculture stakeholders in terms of attendance at the meetings.	Survey of agriculture stakeholders about the evolution of the coordination process with governments.

How to collect traces and testimonies?

Traces and testimonies are different kinds of evidence. One is not better than the other, and they strive to be complementary. Traces are often retrieved by **documentary analysis** (e.g. legislation analysis), but in many cases it is lengthy and tedious work. An alternative solution is to ask insiders about these traces; for example, by organizing a workshop to review the legislation activity over the past 12 months (i.e. testimony).

Testimonies can be collected via **interviews**, **workshops** and **surveys**. Surveying your targets is an excellent way to retrieve information, especially about changes in terms of knowledge, attitudes and practices (KAP).Surveys:

- are good at monitoring outcomes, which is what we want to do in programme M&E;
- provide quantitative measurements which are easy to use;

- are quite easy and cheap to implement, especially when you can survey the population online.

Should you plan for a sample survey?

Size of the population	Example	What you should do
< 200	Top government officials who have been invited to seminars. You want to know if they are more aware of the rural livelihood issues.	This population is usually too small to make a statistical random sample of it. Make an exhaustive survey and try to collect as many answers as possible.
200 < N < 5 000	Rural officers that have had training about ecological risks. You want to know if they learned something, and if they use what they have learned.	You should aim for a beneficiary survey. At the planning stage, you can use a simple formula to estimate your sample size if you know the size of the population targeted: $n=385/(1+(385/N))$, where N is the size of the population. This is for a confidence level of 95 percent and a margin of error of 5 percent. Multiply by two if your sample is non-probabilistic.
> 5 000	Farmers that have received subsidies to use new agricultural techniques. You want to know if they have used the techniques, and if they have improved their productivity.	You could try a quasi-experimental design, in which you would compare the changes in an observed variable in your targeted population with the changes that occurred in a control group.[1] To calculate the size of the population surveyed, you need to factor the prevalence of the expected change into the population targeted. Use an online calculator or rely on an experienced professional to do so. At planning stage, you can simply schedule 400 persons to interview; 800, if the sample is **non-probabilistic**[2].

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[1] **Intervention group and control group -** In an experimental or quasi-experimental design, impact is measured by comparing two matching groups (i.e. groups that share the same features). The intervention group undergoes the intervention while the control group does not.

[2] **Probabilistic and non-probabilistic surveys -**A survey is probabilistic if it is based on a random sample. It is non-probabilistic when individuals are chosen for specific aspects, e.g. farmers from

In all cases, you must calculate the size of the needed sample at implementation time. Rely on a professional or use simple online calculators such as Sampsize (available at **sampsize.sourceforge.net** http://sampsize.sourceforge.net/).

This course only provides a short overview of primary data collection tools. To have a broader view of the many data collection techniques that you can use, you can take the United Nations Food and Agriculture Organization (FAO) course "Assessing impact of development programmes on food security". You can also take a look at the International Fund for Agricultural Development's (IFAD's) *Guide to project M&E*; especially, annex D.

How often should you organize a survey?

It may be difficult to organize a survey every year: it is demanding for you, but also for the interviewees, especially if they are likely to be **the same individuals every year**. In this case, be sure to schedule a survey at least:

- in the first year (**baseline study**);
- mid-way (**mid-term review**);
- in the final year of the programme (**final assessment**).

Tips for preparing and reading a survey

Keep your surveys **short**. They should...

- focus on providing the **needed data** to calculate your **indicators**;
- be **straightforward**, with simple, clear-cut questions;
- allow for some **feedback** from the Interviewees, by including a few open-ended questions; and
- **not take long** to answer.

To **read survey results**, you must know its margin of error and confidence. For instance, if a survey shows that 50 percent of farmers used the skills acquired in training with a confidence interval of 95 percent and a margin of error at 5 percent, that means that we are 95 percent sure that 45 to 55 percent of farmers used the skills acquired.

Relying on data collected by other organizations

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some villages or areas only, trainees who agreed to be called for a survey, etc. In this latter case, to reduce bias, the size of the sample is doubled.

Other organizations are probably collecting data in the country, either for a statistical purpose (e.g. national agriculture institutes); M&E purposes (e.g. other international programmes); OR other reasons (NGO's public watch on governments, for instance).

Using information from other organizations

Make sure that your information needs are known by these other stakeholders and find arrangements for using their data sets (for instance, by ensuring reciprocity). Though the data they collect may not be exactly the one you were looking for, optimizing the use of such secondary data will allow you to focus your primary data gathering efforts on other information needs.

Conduct data collection in an ethical manner

M&E collects data about **people**. You should, therefore, make sure that you conduct M&E in a way that is **respectful** to respondents, and your analyses **should not endanger or embarrass** them. The International Federation of Red Cross and Red Crescent Societies (IFRC) offers clear criteria about the treatment of people in M&E processes:

"M&E involves collecting, analysing and communicating information about people - therefore, it is especially important that M&E is conducted in an ethical and legal manner, with particular regard for the welfare of those involved in and affected by it...

M&E should respect the customs, culture and dignity of human subjects...This includes differences due to religion, gender, disability, age, sexual orientation and ethnicity. Cultural sensitivity is especially important when collecting data on sensitive topics, from vulnerable and marginalized groups, and following psychosocial trauma (e.g. natural disaster or conflict).

M&E practices should uphold the principle of "do no harm". Data collectors and those disseminating M&E reports should be respectful that certain information can endanger or embarrass respondents."

IFRC also emphasizes the need for a feedback system:

"...an M&E system should ensure that stakeholders can provide comment and voice any complaints about [your own] work. This also includes a process for reviewing and responding concerns/grievances."

See the IFRC Project/programme monitoring and evaluation (M&E) guide.

PLANNING DATA ANALYSIS AND REPORTING

The reporting mechanisms of your programme have probably been set already. Each programme may have its own specificities, but the reporting mechanisms usually include:

ANNUAL REPORT

It present the outputs of the monitoring system - usually along the results matrix - and try to explain the observed variations.

Every year, the programme manager (or the M&E specialist) **should**:

- calculate the indicators and compare the level attained to the expected **target**;
- perform **additional analysis**, when the indicators are **below target**, such as disaggregating the data coming from the project level.

For instance, if the number of participants in the training sessions is well below expectations, is there any type of participant who did not come? Did all training sessions suffer from low attendance, or only some of them?

- Present the indicators in a **meeting with the M&E committee** (also called a "critical reflection event").

During the meeting **each indicator** is discussed.

➲ **If the indicator's value is below the target -** The participants try to explain it. They have access to the additional analyses performed by the programme manager. The committee should be able to hear from people who understand why the programme is not performing as expected (e.g. the operator of the activity at stake). Based on this information, they come up with an explanation that will be recorded in the report. They can also add any new assumptions or risks that have been overlooked in the design phase, to the results matrix.

➲ **If the indicator's value is close to or above target -** Explanations should also be sought, though in a lighter manner. The members of the committee should try to identify future risks that could affect the good results attained.

Finally, the members of the committee may make **recommendations** as to the decisions that should be taken to improve the situation. This exercise should start at least **three months before the reporting deadline**.

Following the committee's recommendations you will have to make some decisions. You can use a **scoring process** to help you make the correct decisions. The scoring process, if done **collectively**, is a good way to provoke discussion about the definition of the problem, **how serious** it is and **how to correct** it. For example, you can use "**traffic light**" reporting

i   *Using a traffic light method*

Using "traffic light" reporting is a good idea as long as you give a precise definition of red, yellow and green. This can be done, for example, in the CPF Toolkit:

> **Green** would mean that no decision is needed, or that only minor tweaks are required.
>
> **Yellow** would indicate that corrective measures are needed to get the programme back on track.
>
> **Red** would indicate that corrective measures are needed, but that they may not be sufficient to sort out the problems.

Why is it better to discuss it collectively?

Of course, this process could be done by the programme manager alone.

However, that may be inefficient, as one individual might not find it easy to come up with adequate explanations. A committee provides an occasion for staff and those outside the team to share what works and what does not.

The decisions you may have to make are usually of **three different types**:

① **Operational measures** to be taken when the problem comes from the way the activity is implemented.

② **Strategic measures** needed when the strategy and objectives appear to be inadequate.

③ **Knowledge measures** made when a situation is unexpected, or when no decision can be taken to correct the problem.

Examples of problem calls for operational, strategic or knowledge measure

Participants in the training sessions tell us that they do not use the knowledge acquired. Apparently, they are unable to advocate for inclusion of the concepts into their hierarchy and, therefore, do not have an occasion to apply what they have learned.	*Operational* As an operational measure, next year the M&E team will invite top-level government officers to awareness-rising events, and include advocacy arguments in the training curriculum.
Our strategy was to train national level government officers to better control the implementation of national laws on rural livelihoods. But we realized that this control is actually done at local level.	*Knowledge* A possible solution would be to launch investigations in the field to understand the reasons and to try to come up with more efficient corrective measures.
Only men come to our sessions, despite our efforts to include women.	*Strategic* A possible measure would be to start organizing training sessions at local levels all across the country, updating the course content accordingly.

Don't forget to follow-up

Keep in mind that each decision should include its own **follow-up**. At the **next M&E committee meeting**, you should indicate what corrective measures have been taken, and how they have performed.

Are you collecting **more information** than is needed to comply with reporting requirements? If this extra information is useful for decision-making, then consider having **two reports**:

➡ **One for your own team** which gives a **wealth of details** to explain the current state of achievement of the programme. It can be a good way to share the lessons learned from the programme with the staff. You will be able to extract from this report the content needed for the required report(s).

➡ **One (or several) for the outside** which should be **shorter** and especially concentrate on the answer to information needs; explanations about the situation observed and how it may evolve in the foreseeable future; and decisions that are taken.

Figures should always be accompanied by an interpretation

If your annual report is published, make sure that the figures it contains are always accompanied by an interpretation.

Otherwise, **the indicator's values could be misunderstood** and used in ways that could be potentially harmful for the programme (for instance, to suggest that the programme is not effective, even if it is). You can also prepare a **report for the general public**, which would contain only a handful of indicators and their interpretation.

Communicating M&E results in an effective way is very important. Implementing an M&E system takes some time. Therefore, you should make sure that its results (and how you made your decisions based on the results) are **widely shared**.

Internally, we have previously mentioned the "internal report". An **annual M&E workshop** with the staff is a good way to share information and an opportunity to celebrate when the results are good. **Externally**, you should share the lessons you have learned with other international and national organizations, at national or cross-regional levels. You can also participate in online communities of practice such as FAO's global forum on Food Security and Nutrition.

INTERMEDIATE AND FINAL EVALUATION

Mid term evaluation focuses on the first outcomes as well as on the relevance, and internal and external coherence of the programme.

Final evaluation looks at the impacts of the programme, and tries to answer the question: Did the programme make a difference, and how?

Mid-term and final evaluations are an opportunity to collect specific data about the **outcomes** and, sometimes, the **impacts** of your programme. The evaluation process tends to be a longer process than the annual review: you need to ask **specific questions** (e.g. based on the questions that arose in the M&E committee in the previous years). You also need to plan for data collection, analysis and reporting. The entire process may take **up to a year**.

Furthermore, evaluations are usually conducted by **independent teams** that are either internal or external to your organization. This process helps avoid conflicts of interest.

PLANNING FOR RESOURCES

You should plan for the needed human resources as early as possible in the programme. It's important to understand what are the **existing M&E capacities** in your programme team and among partners. Ask the following three questions:

1. Is there M&E expertise among the **programme team**? This should include individuals with qualitative and quantitative social research backgrounds and experience.
2. Is there M&E support from your **organization** or any other that you can rely on? Can it be made available for that specific programme?
3. Do **partners** have any experience in M&E?

If the answer to these questions is rather negative, you will need to **rely on an external M&E specialist** who can help you improve your M&E plan. They will be able to train your team or to hire an M&E officer for your programme, if resources are available. Otherwise, you can rely on your organization's or your partners' expertise to build your M&E system and develop capacity.

Who will do what in the M&E system?

It is important to clearly define **roles and responsibilities**. The first step is to designate who will be in charge of the M&E system overall. It is usually the M&E officer or the programme manager, who will also be the resource person for her or his colleagues.

Main tasks to be performed

    ◆   **Collecting the data**

To provide information on output level indicators is part of the job of the project/activity officers, but it should be done under the supervision of the M&E officer. And who will do it at the outcome level? Either an M&E officer, or someone else you will need to designate.

    ◆   **Calculating the indicators**

Calculating the indicators is done by the M&E officer, or someone you will need to designate.

    ◆   **Interpreting the indicators' values**

Programme officers are supposed to interpret the indicator values or, better yet, it can be done by an M&E committee composed of staff members and partners.

    ◆   **Reporting on the indicators**

M&E officers and programme officers report on the indicators, especially when it comes to explaining why decisions have been made.

If you are working on a large programme

In the case of **large programmes** you actually need an M&E officer to take charge of M&E as otherwise, there is a strong risk that the M&E system will not be implemented. The programme manager will not have the time to perform M&E tasks correctly, as M&E is a job in itself, which should be done by someone who has the relevant skills.

What are your M&E training and support requirements?

By comparing the current M&E capacity of your team and the M&E tasks that need to be performed, you will be able to identify what **gaps** you may need to fill with training and learning activities, for example:

Activity	What for?	How to do it?
Self-paced learning	Give common background knowledge to all. Allow for different learning rhythms among staff members.	Make a set of learning resources available to your team. Encourage your team to read and use it. Make it mandatory for new team members.
Staff training	Create an M&E culture. Allow your team members to seek a tutor's expertise	Organize a collective training session in the first year on M&E.

	in order to share experience.	Organize an additional training session every year on specific aspects, such as "reporting M&E" or "undertaking a mid-term review."
Coaching	Help team members in charge of the most difficult tasks. Contribute to the overall quality of the M&E system.	Identify tasks that are crucial to the quality of the M&E system, such as implementing a survey or reporting. Ask an internal or external specialist (e.g. an international M&E consultant) to come for a short period of time to coach the staff members in charge of this task.
Sharing best practices	Create an M&E culture; develop your own M&E practice.	Hold a best practice seminar every year (for instance coupled with collective staff training). Ask staff members in charge of M&E to explain the difficulties they have faced, how they dealt with them and how they would do things now.

Training, learning by doing and sharing are good ways to build a culture of M&E in your programme, which, in turn, can contribute to better commitment to the programme's achievement.

Example

In Sharifa's team, every programme officer is responsible for collecting and aggregating some of the data that goes into the M&E system. What could she recommend to her colleagues who want to know more?

Self-training. Collective staff training and Sharing best practices are recommended. Self-training is the minimum option here, and seminars with training and sharing times would really reinforce M&E ownership in the team. Learning by doing would be more relevant to Sharifa's needs than to her colleagues.

Within the first year of your programme, make sure that you know **what are the costs** to plan for. These usually include:

➢ **Staff -**Full-time staff, but also the time dedicated to M&E by other staff members.

➢ **Reporting -** Publishing documents, disseminating them, holding feedback events etc.

➢ **Expertise -** External consultants, external specialists to train and coach your team.

➢ **Data collection and analysis -** Design and implementation of primary and secondary data collection, if not done by staff; travel; enumerators' honorarium and per diem; pieces of software and hardware you may need to collect data etc.

DATA MANAGEMENT

Last but not least, make sure that you plan for data management. Remember, that you will start collecting data that should be available at least **for the duration of the programme**, and even longer, if you consider the information needs of an **ex-post evaluation**[3], for instance. The IFRC guide on M&E proposes **seven key considerations** that you can make your own:

↘ **Data organization**

A programme needs to organize its information into logical, easily understood categories to increase its access and use.

↘ **Data format**

The format in which data are recorded, stored and eventually reported is an important aspect of overall data management. Standardized formats and templates improve the organization and storage of data.

↘ **Data availability**

Data should be available for its intended users and secure from unauthorized use.

↘**Information technology (IT)**

The use of computer technology to systematize the recording, storage and use of data is especially useful for programmes for which data need to be collected and analysed from multiple smaller projects.

↘ **Responsibility and accountability of data management**

It is important to identify the individuals or team responsible for developing and/or maintaining the data management system, assisting team members in its use and enforcing any policies and regulations. Also, for confidential data, it is important to identify who authorizes the release/access of this data.

↘ **Data quality control**

It is important to identify procedures for checking and cleaning data, and how to treat missing data. In data management, unreliable data can result from poor typing of data, duplication of data entries, inconsistent data, and accidental deletion and loss of data. These problems are common with quantitative data collection for statistical analysis.

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[3] **Ex-post evaluation -** An ex-post evaluation is an evaluation that starts after a project or programme is completed, and usually focuses on the sustainability of its impacts.

↘ **Data security and legalities**

Programmes need to identify any security considerations for confidential data, as well as any legal requirements with governments, donors and other partners. Data should be protected from non-authorized users. This can range from a lock on a filing cabinet to computer virus and firewall software programs. Data storage and retrieval should also conform to any privacy clauses and regulations for auditing purposes.

SUMMARY

Defining the right indicators is not enough. It is equally important to **plan** how you will feed the system, who will be in charge and how you will react to the information obtained.

First, you should decide how you will **collect data**: for baseline and end line studies, reviews or evaluations; for annual reporting; and/or through other organizations.

Is it also crucial to plan for **data analysis and reporting**, in order to be able to provide timely recommendations and adopt appropriate measures to improve the programme's performance.

You will have to assess the existing M&E capacities in your programme team and among partners. By comparing the current capacity of your team and the tasks that need to be performed, you will be able to identify what **gaps** you may need to fill **with training and learning activities**.

Within the first year of your programme, make sure that you know and plan for the **costs**. Last but not least, make sure that you plan for **data management.**