MONITORING & EVALUATION

Monitoring and Evaluation Planning

Guidelines and Tools

by Scott G. Chaplowe
American Red Cross

American Red Cross

CRS CATHOLIC RELIEF SERVICES

USAID FROM THE AMERICAN PEOPLE

Since 1943, Catholic Relief Services (CRS) has held the privilege of serving the poor and disadvantaged overseas. Without regard to race, creed, or nationality, CRS provides emergency relief in the wake of natural and manmade disasters. Through development projects in fields such as education, peace and justice, agriculture, microfinance, health and HIV/AIDS, CRS works to uphold human dignity and promote better standards of living. CRS also works throughout the United States to expand the knowledge and action of Catholics and others interested in issues of international peace and justice. Our programs and resources respond to the U.S. Bishops' call to live in solidarity—as one human family—across borders, over oceans, and through differences in language, culture and economic condition.

The American Red Cross helps vulnerable people around the world prevent, prepare for, and respond to disasters, complex humanitarian emergencies, and life-threatening health conditions through global initiatives and community-based programs. With a focus on global health, disaster preparedness and response, restoring family links, and the dissemination of international humanitarian law, the American Red Cross provides rapid, effective, and large-scale humanitarian assistance to those in need. To achieve our goals, the American Red Cross works with our partners in the International Red Cross and Red Crescent Movement and other international relief and development agencies to build local capacities, mobilize and empower communities, and establish partnerships. Our largest program is currently the Tsunami Recovery Program, which is improving community health and preventing disease outbreaks, supporting communities as they rebuild their lives and reestablish their livelihoods, and helping affected Red Cross and Red Crescent Societies and their communities develop disaster preparedness capabilities.

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Preface

Monitoring and evaluation (M&E) are core responsibilities of American Red Cross and Catholic Relief Services (CRS) program managers and help ensure quality in our programming. *Monitoring and Evaluation Planning* is one in a series of M&E training and capacity-building modules that the American Red Cross and CRS have agreed to collaborate on under their respective Institutional Capacity Building Grants. These modules are designed to respond to field-identified needs for specific guidance and tools that did not appear to be available in existing publications. Although examples in the modules focus on Title II programming, the guidance and tools provided have value beyond the food-security realm.

Our intention in writing the *Monitoring and Evaluation Planning* module was to provide concise guidance to readers to develop a comprehensive M&E system for international humanitarian relief and development programs. Please send any comments or suggestions for this module to m&efeedback@crs.org.

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Acronyms

CRS	Catholic Relief Services
HH	Household
KAP	Knowledge, attitudes, and practices
M&E	Monitoring and evaluation
MOH	Ministry of Health
PRA	Participatory rapid (or rural) appraisal
UNAIDS	Joint United Nations Programme on HIV/AIDS
UNDP	United Nations Development Programme
USAID	United States Agency for International Development

Introduction

This *Monitoring and Evaluation Planning* module is designed for use by M&E specialists, managers of humanitarian and development programs, and decision makers responsible for program oversight and funding.

This *Monitoring and Evaluation Planning* module is intended to provide concise guidance to develop a comprehensive monitoring and evaluation (M&E) system for international humanitarian relief and development programs. It covers the key planning documents and processes needed to set up and implement an M&E system for project planning, implementation, and evaluation. It is designed for use by M&E specialists, managers of humanitarian and development programs, and decision makers responsible for program oversight and funding.

In developing this module, it became apparent that some people working in international programs use the term "M&E plan" to refer to a planning document for a project's entire M&E system, whereas others use it to refer to a specific document that defines project indicators and how they will be measured—an indicator matrix. For clarity, this module adopts the broader usage of an M&E plan as a key planning document for coherence and continuity within a project's M&E system. The specific format or content for an M&E plan should be tailored and adopted to specific project needs. This module focuses on the key components of an M&E system that inform M&E planning for projects.

This module focuses on the key components of an M&E system that inform M&E planning for projects. These components trace a logical train of thought from hypotheses on how the project will bring about change in a specific sector, to the specific objectives needed for these changes, methods for measuring the project's achievement of its stated objectives, and protocols for collecting and analyzing data and information used in the measurement. The four key components of an M&E system are:

1. A causal analysis framework
2. A logframe or logical framework
3. An indicator matrix
4. A data collection and analysis plan.

Following an overview of the M&E system, this module examines these four key M&E components. It is important to stress that the various components of an M&E system are interdependent and that M&E planning requires other elements, whether stated explicitly or implicitly. Other key considerations for M&E planning are presented in the final section of the module and highlighted in relevant boxes throughout.

Box 1. Plan Early and Involve Stakeholders

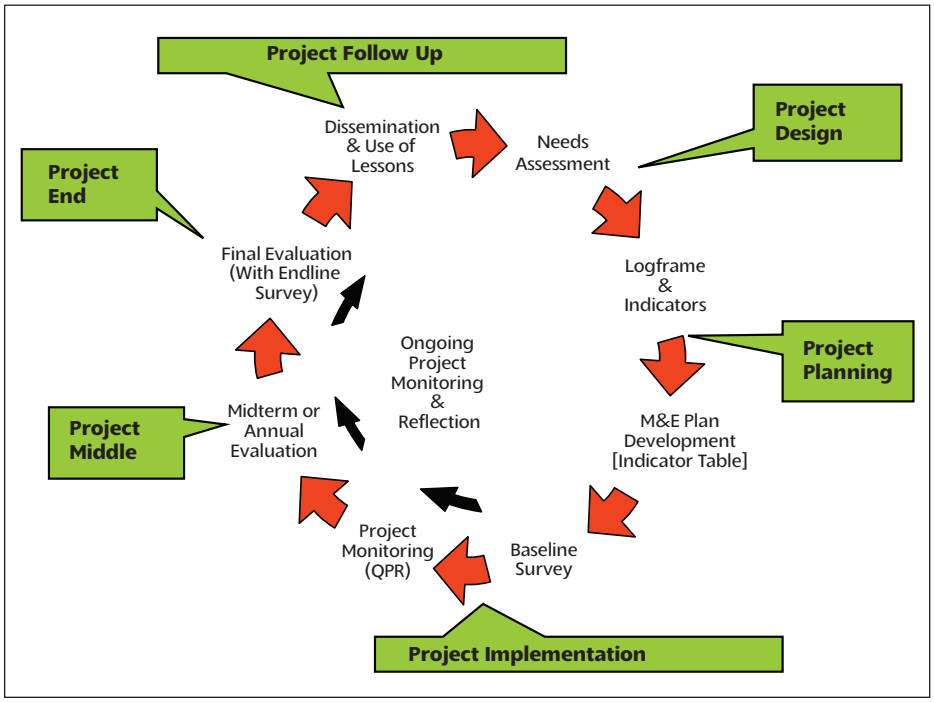
M&E planning should begin during or immediately after the project design stage. Early planning will inform the project design and allow for sufficient time to arrange for resources and personnel prior to project implementation. M&E planning should also involve those using the M&E system. Involvement of project staff and key stakeholders ensures feasibility, understanding, and ownership of the M&E system.

The M&E System–An Overview

M&E should be an integral part of project design as well as project implementation and completion.

The M&E system provides the information needed to assess and guide the project strategy, ensure effective operations, meet internal and external reporting requirements, and inform future programming. M&E should be an integral part of project design as well as project implementation and completion. Accordingly, this module will begin by describing the overall M&E system as it corresponds with these key stages in a project's lifecycle (see Figure 1).

Figure 1. M&E and the Project Cycle



An M&E system is built on the key parameters of a project:

- The overall goal or desired change or effect
- The main beneficiaries or audience that the project seeks to benefit
- The hypotheses or assumptions that link the project objectives to specific interventions or activities
- The project scope and size

- The extent of participation in and capacity for M&E
- The project duration
- The overall project budget.

Each project may have different M&E needs, depending on the operating context, implementing agency capacity, donor requirements, and other factors. In preparing an M&E plan, it is important to identify these needs and coordinate the methods, procedures, and tools used to meet them; this conserves resources and streamlines M&E planning.

There is not a single, recognized industry standard for assessing the quality of an M&E system. However, some key criteria are summarized below (IFAD 2002, pp. 4-20):

- **Utility:** The proposed M&E system will serve the practical information needs of intended users.
- **Feasibility:** The methods, sequences, timing and processing procedures proposed are realistic, prudent and cost-effective.
- **Propriety:** The M&E activities will be conducted legally, ethically and with due regard for the welfare of those affected by its results.
- **Accuracy:** The M&E outputs will reveal and convey technically adequate information.

The Four Key Components of an M&E System

There are four key components that form the foundation upon which the M&E system is built.

The four key components discussed below form the foundation upon which the M&E system is built. They play a critical role in M&E planning, answering these four corresponding questions:

1. What does the project want to change and how?
2. What are the specific objectives to achieve this change?
3. What are the indicators and how will they measure this?
4. How will the data be collected and analyzed?

Causal Analysis Framework

A causal analysis framework seeks to specify the following:

1. The major problem and condition(s) that the project seeks to change
2. Factors that cause the condition(s)
3. Ways to influence the causal factors, based on hypotheses of the relationships between the causes and likely solutions
4. Interventions to influence the causal factors
5. The expected changes or desired outcomes (see Table 1).

Causal analysis should be based on a careful study of local conditions and available data as well as consultation with potential beneficiaries, program implementers, other stakeholders, and technical experts. Such information may be available in needs assessments, feasibility studies, participatory rapid appraisals (PRAs), community mapping, and SWOT (strengths, weaknesses, opportunities, threats) analysis. CARE outlines a holistic appraisal for assessing the socioeconomic factors to identify target populations and appropriate interventions (Caldwell 2002).

The assumptions underlying causal analysis can be assessed by involving potential beneficiaries, program managers and implementers, other stakeholders, and technical experts.

Table 1. Causal Analysis Framework

Causal Analysis	Hypothesis Development	Project Design
Cause/Conditions Mothers do not know that unclean water will make infants sick (knowledge).	**IF** mothers are aware of the dangers of unclean water,	**Interventions** Educate mothers about the dangers of unclean water
Mothers believe that breastmilk alone does not satisfy infants younger than 6 months (attitude).	**AND** that breastmilk is nutritionally sufficient for infants younger than 6 months,	Educate mothers about the nutritional value of breastmilk for infants younger than 6 months
Mothers are giving breastmilk substitutes to infants younger than 6 months (practice).	**THEN** they will breastfeed their infant exclusively to avoid exposure to unclean water,	**Desired Outcomes** Increased breastfeeding of infants younger than 6 months
Problem High diarrhea rates among infants younger than 6 months	**THEREBY** contributing to reductions in diarrhea among infants younger than 6 months,	Reduced diarrhea among infants younger than 6 months
Consequence High rates of infant mortality	**THEREBY** contributing to reductions in infant mortality	**Overall Goal** Reduce infant mortality

Many projects do not develop an explicit causal analysis framework. Nevertheless, such a framework is helpful in clarifying key interventions and identifying variables needed to assess the extent of project effects. For example, the framework presented in Table 1 hypothesizes that mothers will breastfeed their infants once they learn about the dangers of unclean water. However, if mothers are not breastfeeding for other reasons, such as cultural norms or working away from home, then different interventions are needed. In effect, the M&E system tests the hypotheses to determine whether the project's interventions and outputs contributed to the desired outcomes.

The selection of problems to address and the appropriate interventions should be grounded in research findings and program experience in similar settings. Causal analysis is useful to examine cause and effect relationships and identify community needs from which to formulate a working hypothesis. Other forms of analysis include **problem analysis,** such as problem trees, to isolate conditions and consequences that help identify objectives and strategies (Stetson et al. 2004, p. 78), and **theory of change analysis**, which uses backwards mapping to identify conditions required to bring about desired long-term outcomes (Theory of Change 2008).

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Logframe Example

Logframe or Logical Framework

A logframe or logical framework shows the conceptual foundation upon which the project's M&E system is built. Basically, the logframe is a matrix that specifies what the project is intended to achieve (objectives) and how this achievement will be measured (indicators). It is essential to understand the differences between project inputs, outputs, outcomes, and impact, since the indicators to be measured under the M&E system reflect this hierarchy. Table 2 defines the key terms and components of a classic 4 x 5 logframe matrix, and Annex II provides an example of a logframe for outcome and output levels. It is important to note that various organizations in the development community use different formats and terms for the types of objectives in a logframe; Jim Rugh (2008) developed a useful guide to decipher these terms used by major development agencies.

A clear understanding of the logframe's hierarchy of objectives is essential for M&E planning. Ultimately, it will inform the key questions that will guide the evaluation of project processes and impacts:

- **Goal:** To what extent has the project contributed towards its longer term goals? Why or why not? What unanticipated positive or negative consequences did the project have? Why did they arise?
- **Outcomes:** What changes have occurred as a result of the outputs and to what extent are these likely to contribute towards the project purpose and desired impact? Has the project achieved the changes for which it can realistically be held accountable?
- **Outputs:** What direct tangible products or services has the project delivered as a result of activities?
- **Activities:** Have planned activities been completed on time and within the budget? What unplanned activities have been completed?
- **Inputs:** Are the resources being used efficiently?

Similarly, it is also important to understand the logframe's hierarchy of indicators. For instance, it is usually easier to measure lower-level indicators such as the number of workshop participants, while the difficulty in precision and measurement complexity increases when attempting to measure changes in behavior. The higher levels of the indicator hierarchy require more analysis and synthesis of different information types and sources. This affects the M&E data collection methods and analysis, which has implications for staffing, budgets, and timeframe.

Table 2. Logframe Definition Table

Project Objectives	Indicators	Means of Verification	Assumptions
Goal Simple clear statement of the impact or results to achieve by the project	**Impact Indicator** Quantitative or qualitative means to measure achievement or to reflect the changes connected to stated goal	Measurement method, data source, and data collection frequency for stated indicator	External factors necessary to sustain the long-term impact, but beyond the control of the project
Outcomes Set of beneficiary and population-level changes needed to achieve the goal (usually knowledge, attitudes and practices, or KAP)	**Outcome Indicator** Quantitative or qualitative means to measure achievement or to reflect the changes connected to stated outcomes	Measurement method, data source, and data collection frequency for stated indicator	External conditions necessary if the outcomes are to contribute to achieving the goal
Outputs Products or services needed to achieve the outcomes	**Output Indicator** Quantitative or qualitative means to measure completion of stated outputs (measures the immediate product of an activity)	Measurement method, data source, and data collection frequency for stated indicator	Factors out of the project's control that could restrict or prevent the outputs from achieving the outcomes
Activities Regular efforts needed to produce the outputs	**Process Indicator** Quantitative or qualitative means to measure completion of stated activities, i.e., attendance at the activities	Measurement method, data source, and data collection frequency for stated indicator	Factors out of the project's control that could restrict or prevent the activities from achieving the outcomes
Inputs Resources used to implement activities (financial, materials, human)	**Input Indicator** Quantitative or qualitative means to measure utilization of stated inputs (resources used for activities)	Measurement method, data source, and data collection frequency for stated indicator	Factors out of the project's control that could restrict or prevent access to the inputs

Source: Author based on an example from Caldwell (2002, p. 139).

Effective indicators are a critical logframe element. Technical expertise is helpful, and before indicators are finalized, it is important to review them with local staff to ensure that they are realistic and feasible and meet user informational needs.

Consider the following questions when designing indicators:

- **Are the indicators SMART** (*s*pecific, *m*easurable, *a*chievable, *r*elevant, and *t*ime-bound)? Indicators should be easy to interpret and explain, timely, cost-effective, and technically feasible. Each indicator should have validity (be able to measure the intended concept accurately) and reliability (yield the same data in repeated observations of a variable).
- **Are there international or industry standard indicators?** For example, indicators developed by UNAIDS, the UNDP Millennium Development Goals, and the Demographic and Health Surveys have been used and tested extensively.
- **Are there indicators required by the donor, grant or program?** This can be especially important if the project-level indicator is expected to roll up to a larger accountability framework at the program level.
- **Are there secondary indicator sources?** It may be cost-effective to adopt indicators for which data have been or will be collected by a government ministry, international agency, and so on.

Box 2. Indicator Traps

- **Indicator overload.** Indicators do not need to capture everything in a project, but only what is necessary and sufficient for monitoring and evaluation.
- **Output fixation.** Counting myriad activities or outputs is useful for project management but does not show the project's impact. For measuring project effects, it is preferable to select a few key output indicators and focus on outcome and impact indicators whenever possible.
- **Indicator imprecision.** Indicators need to be specific so that they can be readily measured. For example, it is better to ask how many children under age 5 slept under an insecticide-treated bednet the previous night than to inquire generally whether the household practices protective measures against malaria.
- **Excessive complexity.** Complex information can be time-consuming, expensive, and difficult for local staff to understand, summarize, analyze, and work with. Keep it simple, clear, and concise.

Decisions regarding indicators are linked to the overall research plan. The type of data and information to be collected will depend on the research question being addressed, the desired level of precision in measuring project effects, and the project's size and complexity. These issues need to be considered when the logframe is being developed, since they are related to the selection of interventions and project outputs, the proposed M&E budget, and staffing levels.

It is important to note that there are other types of frameworks used to show the relationships between project objectives and the indicators that will demonstrate achievement or progress toward these objectives. This module focuses on the logframe because it is widely used for development projects, but it does have its limitations (see Box 3). Another framework used by the U.S. Agency for International Development (USAID) and other donors is the **results framework**, sometimes called a **strategic framework**. Using diagrams to illustrate the steps or levels of results, the results framework emphasizes

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Indicator Matrix Example

the causal relationships that connect incremental achievement of each result to the comprehensive program impact.

Box 3. Logframe Limitations

In M&E planning, it is important to be sensitive to the critique that logic models are technocentric, with a cultural bias towards linear logic that can alienate rather than foster local understanding, participation, and ownership. It is essential to consult and involve local partners, especially managers, to enhance their understanding of logframes.

The Indicator Matrix

An indicator matrix is a critical tool for planning and managing data collection, analysis, and use. It expands the logframe to identify key information requirements for each indicator and summarizes the key M&E tasks for the project. While the names and formats of the indicator matrix may vary, (e.g., M&E plan, indicator planning matrix, or data collection plan), the overall function remains the same. Often, the project donor will have a required format (see, for example, USAID 1996; IFRC 2007, p. 6; Stetson et al. 2004, p. 140; Barton 1997, p. 53; Caldwell 2002, p. 103; IFAD 2002, Annex C; AusAID 2006, p. 6).

Annex III provides a sample format for an indicator matrix, with illustrative rows for outcome and output indicators. The following are the major components (column headings) of the indicator matrix:

1. **Indicators:** The indicators provide clear statements of the precise information needed to assess whether proposed changes have occurred. Indicators can be either quantitative (numeric) or qualitative (descriptive observations). Typically the indicators in an indicator matrix are taken directly from the logframe.
2. **Indicator Definitions:** Each indicator needs a detailed definition of its key terms, including an explanation of specific aspects that will be measured (such as who, what, and where the indicator applies). The definition should explain precisely how the indicator will be calculated, such as the numerator and denominator of a percent measure. This column should also note if the indicator is to be disaggregated by sex, age, ethnicity, or some other variable.
3. **Methods/Sources:** This column identifies sources of information and data collection methods or tools, such as use of secondary data, regular monitoring or periodic evaluation, baseline or endline surveys, PRA, and focus group discussions. This column should also indicate whether data collection tools (questionnaires, checklists) are pre-existing or will need to be developed. Note that the logframe column on "Means of Verification" may list a source or method, i.e., "household survey," the M&E plan requires much more detail, since the M&E work will be based on the specific methods noted.
4.

5. **Frequency/Schedules:** This column states how often the data for each indicator will be collected, such as monthly, quarterly, or annually. It is often useful to list the data collection timing or schedule, such as start-up and end dates for collection or deadlines for tool development. When planning for data collection timing, it is important to consider factors such as seasonal variations, school schedules, holidays, and religious observances (i.e., Ramadan).
6. **Person(s) Responsible:** This column lists the people responsible and accountable for the data collection and analysis, i.e., community volunteers, field staff, project managers, local partner/s, and external consultants. In addition to specific people's names, use the position title to ensure clarity in case of personnel changes. This column is useful in assessing and planning for capacity building for the M&E system.
7. **Data Analysis:** This column describes the process for compiling and analyzing the data to gauge whether the indicator has been met or not. For example, survey data usually require statistical analysis, while qualitative data may be reviewed by research staff or community members.
8. **Information Use:** This column identifies the intended audience and use of the information. For example, the findings could be used for monitoring project implementation, evaluating the interventions, planning future project work, or reporting to policy makers or donors. This column should also state ways that the findings will be formatted (e.g., tables, graphs, maps, histograms, and narrative reports) and disseminated (e.g., Internet Web sites, briefings, community meetings, listservs, and mass media).

The indicator matrix can be adapted to information requirements for project management. For example, separate columns can be created to identify data sources, collection methods and tools, information use and audience, or person(s) responsible for data collection and analysis. It may also be preferable to use separate matrices for M&E indicators.

It is critical that the indicator matrix be developed with the participation of those who will be using it. Completing the matrix requires detailed knowledge of the project and context provided by the local project team and partners. Their involvement contributes to data quality because it reinforces their understanding of what data they are to collect and how they will collect them.

Data Collection and Analysis Plan

The data collection and analysis plan expands on the information provided in the indicator matrix by describing in detail how data and information will be defined, collected, organized, and analyzed. Typically, this plan consists of a detailed narrative that explains how each type of data will be collected along with all the steps needed to ensure quality data and sound research practices. Key components of this plan include: the unit of analysis; the link between indicators, variables and questionnaires; the sampling

frame and methodology; timing and mode of data collection; research staff responsibilities; enumerator selection, training, and supervision; fieldwork timing and logistics; checks for data quality; data entry and storage; hypothesized relationships among the variables; and data analysis methods. Special analyses, such as disaggregating data by gender, age, location and socio-economic status, should also be described.

It is important to provide the rationale for the data collection and analysis methods. This includes the triangulation of methods (quantitative and/or qualitative) and sources to reduce bias and ensure data reliability and completeness. It should also be informed by the standards that guide good practice of project evaluation. There are many useful resources in the evaluation community that identify key principles to ensure ethical, accountable, and quality evaluations (for example, American Evaluation Association [AEA] 2004, Australian Evaluation Society [AES] 2002, and Development Assistance Committee [DAC] 2008).

The plan should also discuss the purpose of data collection and analysis in terms of specific monitoring and evaluation functions. Some key functions of monitoring include compliance, process, results, context, beneficiary, and organizational monitoring. Typically, a project will use a combination of these monitoring functions and design data collection and analysis accordingly. For project assessments, the discussion should identify not only the methods used, but the timing of the assessment event (i.e., baseline studies, annual reviews, midterm and final evaluations), and the rationale for selecting evaluators with specific skill sets and independence (i.e., internal versus external evaluators).

Major sources of data and information for project monitoring and evaluation include:

- **Secondary data.** Useful information can be obtained from other research, such as surveys and other studies previously conducted or planned at a time consistent with the project's M&E needs, in-depth assessments, and project reports. Secondary data sources include government planning departments, university or research centers, international agencies, other projects/programs working in the area, and financial institutions.
- **Sample surveys**. A survey based on a random sample taken from the beneficiaries or target audience of the project is usually the best source of data on project outcomes and effects. Although surveys are laborious and costly, they provide more objective data than qualitative methods. Many donors expect baseline and endline surveys to be done if the project is large and alternative data are unavailable.
- **Project output data.** Most projects collect data on their various activities, such as number of people served and number of items distributed.
- **Qualitative studies.** Qualitative methods that are widely used in project design and assessment are: participatory rapid appraisal,

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Data Collection Tools and Techniques

mapping, key informant interviews, focus group discussions, and observation.

- **Checklists.** A systematic review of specific project components can be useful in setting benchmark standards and establishing periodic measures of improvement.
- **External assessments.** Project implementers as well as donors often hire outside experts to review or evaluate project outputs and outcomes. Such assessments may be biased by brief exposure to the project and over-reliance on key informants. Nevertheless, this process is less costly and faster than conducting a representative sample survey, and it can provide additional insight, technical expertise, and a degree of objectivity that is more credible to stakeholders.
- **Participatory assessments.** The use of beneficiaries in project review or evaluation can be empowering, building local ownership, capacity, and project sustainability. However, such assessments can be biased by local politics or dominated by the more powerful voices in the community. Also, training and managing local beneficiaries can take time, money, and expertise, and it necessitates buy-in from stakeholders. Nevertheless, participatory assessments may be worthwhile as people are likely to accept, internalize, and act upon findings and recommendations that they identify themselves.

See Annex IV for a more extensive list of data sources. Also, Annex I lists M&E guides that describe the process of data collection and analysis.

Some practical considerations in planning for data collection include:

- **Prepare data collection guidelines.** This helps to ensure standardization, consistency, and reliability over time and among different people in the data collection process. Double-check that all the data required for indicators are being captured through at least one data source.
- **Pretest data collection tools.** Pretesting helps to detect problematic questions or techniques, verify collection time, identify potential ethical issues, and build the competence of data collectors.
- **Train data collectors.** Provide an overview of the data collection system, data collection techniques, tools, ethics, and culturally appropriate interpersonal communication skills. Give trainees practical experience collecting data.
- **Address ethical concerns.** Identify and respond to any concerns expressed by the target population. Ensure that the necessary permission or authorization has been obtained from local authorities, that local customs and attire are respected, and that confidentiality and voluntary participation are maintained.

Box 4. Reducing Data Collection Costs

Data collection can be costly. One of the best ways to reduce data collection costs is to *reduce the amount of data collected* (Bamberger et al. 2006). The following questions can help simplify data collection and reduce costs:

- **Is the information necessary and sufficient?** Collect only what is necessary for project management and evaluation. Limit information needs to the stated objectives, indicators, and assumptions in the logframe.
- **Are there reliable secondary data sources?** This can save costs for primary data collection.
- **Is the sample size adequate but not excessive?** Determine the sample size that is necessary to estimate or detect change. Consider using stratified and cluster samples.
- **Can the data collection instruments be simplified?** Eliminate extraneous questions from questionnaires and checklists. In addition to saving time and cost, this has the added benefit of reducing "survey fatigue" among respondents.

A data analysis plan should identify:

- **When data analysis will occur.** It is not an isolated event at the end of data collection, but an ongoing task from project start. Data analysis can be structured through meetings and other forums to coincide with key project implementation and reporting benchmarks.
- **To what extent analysis will be quantitative** and/or qualitative, and any specialized skills and equipment required for analysis.
- **Who will do the analysis**, i.e., external experts, project staff, beneficiaries, and/or other stakeholders.
- **If and how subsequent analysis will occur.** Such analysis may be needed to verify findings, to follow-up on research topics for project extension and additional funding, or to inform future programming.

An important consideration in planning for data collection and analysis is to identify any limitations, biases, and threats to the accuracy of the data and analysis. Data distortion can occur due to limitations or errors in design, sampling, field interviews, and data recording and analysis. It is best to monitor the research process carefully and seek expert advice, when needed.

It is also important to carefully plan for the data management of the M&E system. This includes the set of procedures, people, skills, and equipment necessary to systematically store and manage M&E data. If this step is not carefully planned, data can be lost or incorrectly recorded, which compromises not only data quality and reliability, but also subsequent data analysis and use. Poorly managed data waste time and resources.

Other Aspects of M&E Planning

Reporting is closely related to M&E work, since data are needed to support the major findings and conclusions presented in a project report.

Information Reporting and Utilization

Reporting project achievements and evaluation findings serves many important functions, namely to:

- Advance learning among project staff as well as the larger development community
- Improve the quality of the services provided
- Inform stakeholders on the project benefits and engage them in work that furthers project goals
- Inform donors, policy makers and technical specialists of effective interventions (and those that did not work as hoped)
- Develop a project model that can be replicated and scaled-up.

Reporting is closely related to M&E work, since data are needed to support the major findings and conclusions presented in a project report. Often, the focus and frequency of M&E processes are determined by reporting requirements and schedules.

Practical considerations in information reporting and utilization planning include:

- **Design the M&E communication plan around the information needs of the users.** The content and format of data reports will vary, depending on whether the reports are to be used to monitor processes, conduct strategic planning, comply with requirements, identify problems, justify a funding request, or conduct an impact evaluation.
- **Identify the frequency of data reporting needs.** For example, project managers may want to review M&E data frequently to assess project progress and make decisions, whereas donors may need data only once or twice a year to ensure accountability.
- **Tailor reporting formats to the intended audience.** Reporting may entail different levels of complexity and technical language; the report format and media should be tailored to specific audiences and different methods used to solicit feedback.
- **Identify appropriate outlets and media channels for communicating M&E data.** Consider both internal reporting, such as regular project reports to management and progress reports to donors, as well as external reporting, such as public forums, news releases, briefings, and Internet Web sites.

M&E Staffing and Capacity Building

Staffing is a special concern for M&E work because it demands special training and a combination of research and project management skills. Also, the effectiveness of M&E work often relies on assistance from staff and volunteers who are not M&E experts. Thus, capacity building is a critical aspect of implementing good M&E work.

Suggestions for ensuring adequate M&E support include the following:

- Identify the various tasks and related skills that are needed, such as ensuring adequate data collection systems in the field, research design, and data entry and analysis
- Assess the relevant skills of the project team, partner organizations, and the community beneficiaries
- Specify to what extent local stakeholders will (or will not) participate in the M&E process (see Table 3)
- Assign specific roles and responsibilities to team members and designate an overall M&E manager
- Recruit consultants, students, and others to fill in the skill gaps and special needs such as translation, statistical analysis, and cultural knowledge
- Identify the topics for which formal training is needed and hold training sessions
- Encourage staff to provide informal training through on-the-job guidance and feedback, such as commenting on a report or showing how to use computer software programs
- Give special attention to building local capacity in M&E.

Cultivating nascent M&E skills takes time and patience, but in the end the contributions of various collaborators will enrich M&E work and lead to greater acceptance of M&E's role in project implementation.

Table 3. Considering Participatory M&E

Potential Advantages	Potential Disadvantages
▪ Empowers beneficiaries to analyze and act on their own situation (as "active participants" rather than "passive recipients") ▪ Builds local capacity to manage, own, and sustain the project. People are likely to accept and internalize findings and recommendations that they provide. ▪ Builds collaboration and consensus at different levels—between beneficiaries, local staff and partners, and senior management ▪ Reinforces beneficiary accountability, preventing one perspective from dominating the M&E process ▪ Saves money and time in data collection compared with the cost of using project staff or hiring outside support ▪ Provides timely and relevant information directly from the field for management decision making to execute corrective actions	▪ Requires more time and cost to train and manage local staff and community members ▪ Requires skilled facilitators to ensure that everyone understands the process and is equally involved ▪ Can jeopardize the quality of collected data due to local politics. Data analysis and decision making can be dominated by the more powerful voices in the community (related to gender, ethnic, or religious factors). ▪ Demands the genuine commitment of local people and the support of donors, since the project may not use the traditional indicators or formats for reporting findings

Budgeting for M&E

A key function of planning for M&E is to estimate the costs, staffing, and other resources needed for M&E work. It is important for M&E specialists to weigh in on M&E budget needs at the project design stage so that funds are allocated specifically to M&E and are available to implement key M&E tasks.

The following are suggestions for building a realistic budget:

- List all M&E tasks and overall responsibilities, analyze the necessary items associated with each task, and determine their cost
- Budget for staffing, including full-time staff, external consultants, capacity building/training, and other human resource expenses
- Ensure that the budget includes all capital expenses, including facility costs, office equipment and supplies, travel and lodging, computer hardware and software, and other expenses
- Determine whether all tasks are included in the overall project budget, such as support for an information management system, field transportation and vehicle maintenance, translation, and printing and publishing of M&E documents/tools
- Review the donor's requirements to determine whether there are any extra items that need to be budgeted, or conversely, items such as an external evaluation that will be funded directly by the donor

- Allow for unexpected contingencies such as inflation, currency devaluation, equipment theft, or the need for additional data collection/analysis to verify findings.

A narrative justifying each line item can help guard against arbitrary budget cuts. It may be necessary to clarify or justify expenses, such as wage rates not normally paid to comparable positions, fees for consultants and external experts, or the various steps in a survey that add up in cost (development and testing the questionnaire, translation and back-translation, enumerator training, enumerators' and field supervisors' daily rates, travel/lodging costs for administering the survey, data analysis and write-up, and so on).

Program managers often ask what proportion of a project's budget should be allocated to M&E. There is no set formula; various donors and organizations recommend that between 3 to10 percent of a project's budget should be allocated to M&E (Frankel and Gage 2007, p. 11). A general rule of thumb is that the M&E budget should not be so small as to compromise the accuracy and credibility of results, but neither should it divert project resources to the extent that programming is impaired.

Annex I

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Annex II

Logframe Example

Project Objectives	Indicators	Means of Verification	Assumptions
Goal Improve the health in target communities in Matara District, Sri Lanka, by reducing the incidence of polio	**Impact Indicator G1** percent of children younger than 5 who died from polio (child mortality rate)	1. Household survey 2. Medical clinic records	Security/political situation in Sri Lanka remains stable for country and allows for project implementation
Outcome 1 Increased immunization of children less than one-year old in target communities	**Outcome Indicator 1.a** percent of children under 1 year who are fully immunized for polio (immunization coverage)	1. Household survey 2. Vaccine records	Community acceptance of polio vaccine
Output 1.1 Polio Immunization Awareness workshop (and people participation)	**Output Indicator 1.1a.** number of caretakers participating in Polio Immunization Awareness workshops	1. Workshop attendance roster 2. Focus group	Community capacity to participate in project is not compromised by other development initiatives within the community, natural disaster, and so on.
Activity A.1 Translation of polio immunization booklets	**Process Indicator A.1a** number of polio immunization booklets translated	Inventory of translated booklets	
Input I.1 Polio immunization booklets, trainers, facilities, and so on	**Input Indicator I.1a** number of polio immunization booklets printed	Warehouse inventory for booklets and printing receipts	

Annex III

Indicator Matrix Examples[2]

Indicators	Indicator Definition	Methods/Sources	Person/s Responsible	Frequency/ Schedules	Data Analysis	Information Use
Example Outcome 1a. Percent of children younger than one-year old who are fully immunized for polio (immunization coverage)	1. Children refer to age between 3 days and 1 year 2. Fully immunized for polio refers to getting polio immunization vaccine according to MOH standards (1st dose at any time after birth, 2nd dose at 1-2 months later, 3rd dose at 6-12 months after second vaccination) 3. Numerator: number of fully immunized children in the community Denominator: Total number of children in the community per defined age category	1. Endline randomized household survey 2. Community focus group discussions 3. Community key informant interviews	External Evaluation Team	1. Endline survey depends on the project timeline 2. School Focus Group Discussions (FGDs): teachers, students, and administration at the end of the project 3. Beginning of data collection according to the project timeline 4. Endline survey questionnaire pending depends on the project timeline	1. Project management team during project reflection meeting 2. Post-project meeting with implementing partners (Sri Lanka Red Cross Society) facilitated by project manager	1. Project implementation and decision making with community 2. Monitoring process of project with management of Sri Lankan Red Cross Society 3. Tsunami Recovery Program management 4. Impact evaluation to justify intervention to Ministry of Health and donors

2 *Note:* The indicators in Annex III are illustrative and are not necessarily from the same project or objective.

Indicators	Indicator Definition	Methods/Sources	Person/s Responsible	Frequency/ Schedules	Data Analysis	Information Use
Example Output II.a. Number of caretakers participating in Polio Immunization Awareness workshops	1. Caretakers refers to community beneficiaries identified by Local Government Agent (Grama Niladari) and who are participating in project activities 2. Polio Immunization Awareness Workshop refers to a one-day training, which is designed to convey knowledge on polio immunization according to Ministry of Health recognized standard curriculum 3. Numerator: number of beneficiaries who participate and complete one-day workshop	Polio Immunization Workshop Attendance Roster	Education Field Officer (EFO): Priyantha Perera	Attendance roster data collected at the workshop and reported quarterly	1. Quarterly project reporting and project reflection meeting 2. Project management team during quarterly reflection meeting	1. Project implementation with community beneficiaries 2. Monitoring process of community outreach training for project with management with Sri Lankan Red Cross Society 3. Tsunami Recovery Program management 4. Impact evaluation to justify intervention to Ministry of Health and donors
Example Outcome 2a. Percent of target schools that successfully conduct a minimum of one disaster drill per quarter	1. "Schools" refers to K-12 in Matara District 2. Criteria of "success": drill unannounced through early warning system; response time under 20 minutes, school members report to designated area per the School Crisis Response Plan 3. Numerator: number of schools with successful scenario per quarter. Denominator: total number of targeted schools	1. Pre-arranged site visits during disaster drill 2. Complete disaster drill checklist and entered into quarterly project report (QPR) 3. School focus group discussions (teachers, students, administration)	School Field Officer (SFO): Shantha Mande	1. Checklist data collected quarterly 2. FGDs: teachers, students, and administration every six months 3. Begin data collection on 4/15/06 4. Scenario checklist completed by 3/8/06	1. Post-drill meeting with School Disaster Committee, facilitated by SFO 2. Project management team during quarterly reflection meeting	1. Project implementation with School Disaster Committees 2. Monitoring process of school outreach training for project with management with Sri Lankan Red Cross Society 3. Tsunami Recovery Program management 4. Impact evaluation to justify intervention to Ministry of Education, Ministry of Disaster Relief, donors

Annex IV

Data Collection Tools and Techniques[3]

Case study: A detailed descriptive narrative of individuals, communities, organizations, events, program, or time periods. They are particularly useful in evaluating complex situations and exploring qualitative impact.

Checklist: A list of items used for validating or inspecting that procedures/steps have been followed, or the presence of examined behaviors.

Closed-ended (structured) interview: A technique for interviewing that uses carefully organized questions that only allow a limited range of answers, such as "yes/no," or expressed by a rating/number on a scale. Replies can easily be numerically coded for statistical analysis.

Community interviews/meeting: A form of public meeting open to all community members. Interaction is between the participants and the interviewer, who presides over the meeting and asks questions following a prepared interview guide.

Direct observation: A record of what observers see and hear at a specified site, using a detailed observation form. Observation may be of physical surroundings, activities, or processes. Observation is a good technique for collecting data on behavior patterns and physical conditions.

Focus group discussion: Focused discussion with a small group (usually 8 to 12 people) of participants to record attitudes, perceptions, and beliefs pertinent to the issues being examined. A moderator introduces the topic and uses a prepared interview guide to lead the discussion and elicit discussion, opinions, and reactions.

Key informant interview: An interview with a person having special information about a particular topic. These interviews are generally conducted in an open-ended or semi-structured fashion.

Laboratory testing: Precise measurement of specific objective phenomenon, for example, infant weight or water quality test.

Mini-survey: Data collected from interviews with 25 to 50 individuals, usually selected using non-probability sampling techniques. Structured questionnaires with a limited number of closed-ended questions are used to generate quantitative data that can be collected and analyzed quickly.

Most significant change (MSC): A participatory monitoring technique based on stories about important or significant changes, rather than indicators. They give a rich picture of the impact of development work and provide the basis for dialogue over key objectives and the value of development programs.

Open-ended (semi-structured) interview: A technique for questioning that allows the interviewer to probe and follow up topics of interest in depth (rather than just "yes/no" questions).

3 *Note:* This list is not exhaustive, as tools and techniques are emerging and evolving in the M&E field.

Participant observation: A technique first used by anthropologists; it requires the researcher to spend considerable time with the group being studied (days) and to interact with them as a participant in their community. This method gathers insights that might otherwise be overlooked, but is time-consuming.

Participatory rapid (or rural) appraisal (PRA): This uses community engagement techniques to understand community views on a particular issue. It is usually done quickly and intensively – over a 2 to 3-week period. Methods include interviews, focus groups, and community mapping.

Questionnaire: A data collection instrument containing a set of questions organized in a systematic way, as well as a set of instructions to the enumerator/interviewer about how to ask the questions (typically used in a survey).

Rapid appraisal (or assessment): A quick cost-effective technique to gather data systematically for decision-making, using qualitative and quantitative methods, such as site visits, observations, and sample surveys. This technique shares many of the characteristics of participatory appraisal (such as triangulation and multi-disciplinary teams) and recognizes that indigenous knowledge is a critical consideration for decision-making.

Self-administered survey: Written surveys completed by the respondent, either in a group setting or in a separate location. Respondents must be literate (for example, it can be used to survey teacher opinions).

Statistical data review: A review of population censuses, research studies, and other sources of statistical data.

Survey: Systematic collection of information from a defined population, usually by means of interviews or questionnaires administered to a sample of units in the population (e.g., person, beneficiaries, and adults).

Visual techniques: Participants develop maps, diagrams, calendars, timelines, and other visual displays to examine the study topics. Participants can be prompted to construct visual responses to questions posed by the interviewers, for example, by constructing a map of their local area. This technique is especially effective where verbal methods can be problematic due to low literate or mixed language target populations, or in situations where the desired information is not easily expressed in either words or numbers.

Written document review: A review of documents (secondary data) such as project records and reports, administrative databases, training materials, correspondence, legislation, and policy documents.