

CARE - Uganda

**Guidelines to Monitoring
and Evaluation**

How are we doing?

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Endorsement

Our goal is for CARE staff around the world do better project design, establish more effective monitoring systems and conduct or coordinate better quality evaluations. In order to achieve that goal we seek means of assisting those staff responsible for aspects of design, monitoring and evaluation (D+M&E) to continue to learn more about those subjects. This includes providing useful materials to facilitate that learning and provide guidance in practice.

The ideal persons to develop relevant materials on D+M&E are those who are closest to the field where CARE projects operate. Their experiences and perspectives are relevant to their colleagues in other countries and projects. The challenge is to find persons who have sufficient expertise to share and sufficient time and energy to articulate their experience in a way which is helpful to others.

It is thus a delight to find and share a document as well done as the M&E Guidelines developed by CARE-Uganda.

In their efforts to improve their monitoring and evaluation capacity, the staff of CARE-Uganda formed a M&E Task Force. Members include representatives of CARE-Uganda projects and sectors, under the leadership of Assistant Country Director Geoffrey Chege and Country Director Nick Ritchie. With the assistance of consultant Tom Barton, this Task Force identified the strengths and weaknesses of the M&E capacities of each project, organised a M&E workshop for key staff from all projects, and, building on the lessons learned from that workshop, have now prepared these guidelines.

Though the intended audience of these guidelines was initially CARE staff in Uganda, it is evident to me that this document deserves to be held up as an excellent guideline for all of CARE -- indeed, for staff of any development agency. There are many manuals on this subject available from various sources, but this is the most practical and clearly written I have seen. And it is addressed to the specific conditions and needs of CARE projects.

The philosophy, concepts, and terminology in these M&E guidelines are consistent with that of other current CARE documents, including the PMTF API framework, the Project Design Workshop Trainers' Guidelines, and the materials being developed as a part of the MER initiative.

Thus I endorse this document to serve as M&E guidelines for all of us in CARE. I strongly recommend it to anybody who has anything to do with monitoring and evaluating development projects.

Jim Rugh
Coordinator of Program Design, Monitoring and Evaluation
CARE-USA / Atlanta

Preface

CARE International is the largest private non-sectarian aid organisation in the world, bringing help to those most in need. Its purpose is to help the developing world's poor in their efforts to achieve long-term social and economic well-being and to offer relief in times of crisis when there is acute suffering and life is threatened. The current programming sectors of CARE are: Agriculture and Natural Resources (ANR), Small Economic Activity Development (SEAD), Primary Health Care (PHC), Girls' Education and Literacy, and Population. In these areas, CARE supports processes that create competence and become self-sustaining over time. In addition, CARE advocates for public policies and programmes that support these ends.

Since the signing of CARE International in Uganda's agreement with the Government of Uganda in 1979, CARE has been assisting Uganda to build on its own considerable resources to address human needs via projects in agricultural production, environmental protection and conservation, reproductive health, water and sanitation, and small economic activity development. As CARE works primarily at the community level, the scope of its work is more regional than national. CARE activities are concentrated in Arua, Nebbi and Moyo districts of the West Nile region; Bushenyi, Ntungamo, Kasese, Rukungiri, Kabale, and Kisoro districts in the Southwest region, and Mbale, Kapchorwa, Pallisa and Kumi districts in the Eastern region.

CARE Uganda is dedicated to the goal of improving the capacity of Ugandans to manage their natural, cash, and human resources in a sustainable manner. This goal is to be reached through programmes of proven quality, which allow for pioneering approaches, women's empowerment, cost-effectiveness, integrated project strategies, manageable expansion, and legitimate participation. In support of this goal, CARE Uganda aims at improved collaboration between its partners, more effective monitoring and evaluation, and enhanced human resource development in CARE.

To maximise its efficiency and effectiveness, CARE periodically reviews its activities in consultation with its government counterparts and collaborators, and introduces modification to its programme and geographic focus as necessary.

From: CARE International in Uganda – Project Briefs, 1996

Foreword

Every CARE Country Office faces the challenge of assessing progress in its projects and understanding the ways it is making a difference, beneficial or otherwise, in people's lives and the institutions serving them. Attaining this, we can use lessons learned to continuously improve the design and implementation of our programme.

There is no shortage of literature on the subject of monitoring and evaluation; indeed, it is vast. Unfortunately, much of it is very technical and obscure. Sorting out what is useful and necessary to a complex programme of varying sectors, or even an individual project, can be a daunting task. Most CARE programme staff have technical backgrounds, but their academic education rarely includes monitoring and evaluation, or the M&E training is seldom oriented to the needs of an NGO project. The common result is that monitoring and evaluation too often remains 'mysterious', consuming substantial time and resources with little to show for considerable effort.

Having examined the M&E issues facing CARE Uganda, we agreed that our prime objectives were de-mystifying monitoring and evaluation and putting practical guidelines in the hands of those who need them. We decided to do this exploring and learning together - empowering ourselves - and producing guidelines which can be understood and used by just about anyone working on a project. To help us achieve this objective we made some key decisions during the early planning:

- to omit project design issues in this initiative. While a project design has a significant effect on the type of M&E system required, we decided M&E issues were a sufficient challenge without simultaneously tackling those issues.
- to focus our initial effort principally on the effects (intermediate goal level) and to more substantively address impacts (and final goals) in a second phase. (Exploring impacts, and how to assess them in practical ways is our next task.)
- to create an M&E task force as a "brain trust" within CARE to work collectively on this and subsequent phases. (Gathering talent from across the organisation substantially benefited the quality of our learning and will continue to do so.)
- to seek assistance from a person based in Uganda who possesses the wide range of skills required and who could work with us over time. (We found what we were looking for in the person of Tom Barton, who wrote these guidelines.)

Thanks in very large measure to the effort of our consultant/author, I believe these guidelines have met the objectives we set. My hope now is that CARE Uganda and our partners will find the guidelines practical in developing and using monitoring and evaluation systems; and that these systems will provide everyone involved in our work with better quality and more timely information.

The document will be provided to CARE's Design, Monitoring and Evaluation unit for wider distribution together with a companion document - a workshop report. If you obtain and use either document please let CARE Uganda know what you think of it.

Nick Ritchie

Country Director, CARE Uganda

Acknowledgements

The inspiration for these guidelines came from Nick Ritchie, Country Director, CARE Uganda, and Geoffrey Chege, Assistant Country Director. Their initial ideas and sustained enthusiasm for the project have contributed enormously to its design and evolution. Along the way, the author was very privileged to collaborate closely with Geoffrey, truly a master facilitator, and the CARE M&E Task Force in a participatory M&E workshop, which helped considerably in the development of the guidelines. Mary Babirye, Programme Officer, CARE Uganda, has given considerable support to the project, including expanding the horizons of its layout. Mary, together with Polly Dolan, University of Michigan Population and Environment Fellow, produced a wonderful report on the workshop that has been a rich mine of examples for these guidelines. Sincere appreciation goes to the entire CARE M&E Task Force for their conscientious reading and constructive criticism of multiple drafts: Caroline Abeja, Geoffrey Chege, Polly Dolan, Sandra Erickson, Philip Franks, Fred Mukholi, David Mwesigwa and Nick Ritchie. Appreciation also goes to Gimono Wamai and Rose Asera for supportive reading and layout suggestions. Finally, a big thank you to Jim Rugh, CARE International, and all the other CARE staff who participated in the Kabale '96 M&E workshop for their many ideas and good feedback on the place of Monitoring and Evaluation in CARE projects.

*Tom Barton
1 January, 1997*

Introduction

Background to the guidelines:

For some time, CARE Uganda has been working to improve its monitoring and evaluation systems. Each project has made some individual progress, and a general workshop was held on M&E in 1994. That workshop led to a set of guidelines that did not meet our needs and were hardly used by program staff. A review of current project M&E systems and discussions with staff revealed that we did not have a common understanding of what CARE wanted from a monitoring and evaluation system nor how to create and use one. The skills of staff, both national and international, varied tremendously, as did the systems in use. Difficulties in common evaluation exercises, e.g., development of an M&E plan, a baseline survey for a new project or an external evaluation of a project coming to closure, pointed to the need for a common set of expectations and requirements. Thus, we began a systematic process of strengthening our skills to design and use M&E systems.

CARE International has also been working over many years to develop the capacity of Country Offices. Sectoral technical assistance teams have produced a variety of documents that are now in use. Following the creation of a CARE International Design, Monitoring and Evaluation Unit (DME), workshops were held in West and East Africa, and in Asia, aimed at increasing linkages among countries and programmes, developing a world-wide DME cadre and building capacity. A parallel development at CARE International is the Household Livelihood Security concept, aimed at unifying CARE's work across sectors and spanning the relief to development continuum; this effort has now progressed to the stage of testing methods to assess household impacts.

The CARE Uganda initiative started with a number of planning sessions by the senior management team, selection of a consultant and his subsequent visits to each project to become familiar with the activities, M&E systems and staff expertise in our projects. An M&E task force, comprised of experienced staff from each project, was formed and meetings held with the consultant to map out tasks and approaches. Following these meetings, a workshop was planned and carried out for about 25 senior staff. (The report of this workshop – the Kabale '96 M&E Workshop – provides a session by session record of the proceedings.) Subsequently, the guidelines were drafted a number of times, each draft reviewed by the task force members and comments integrated into the ensuing draft of the document.

Objectives of the guidelines:

- Improve monitoring and evaluation in CARE projects
- Provide a useful technical resource for planning project monitoring and evaluation systems
- Strengthen skills in information systems for project staff

Anticipated audience:

This set of guidelines is designed primarily for CARE project staff, supervisors and managers. Everyone in these categories uses information about their projects, and most are also contributing in some capacity to information gathering and analysis.

Other parties involved with or interested in CARE projects may also find the guidelines useful, e.g., counterpart agencies, collaborating partner organisations, and consultants working with CARE.

How to use the guidelines:

Building on the organisation of CARE development projects, the chapters in these guidelines are arranged in a series that moves from planning to implementation, analysis and application. Readers with relatively little experience in planning, research or information management may find it most useful to read the chapters one after another as they are arranged. More experienced readers are also encouraged to skim all the chapters to understand the linkages to any specific topics they are pursuing in more depth.

The body of the guidelines starts with the importance of information to CARE projects (Chapter 1), identifies users of information about CARE projects and their needs (Chapter 2), and discusses some of the common strengths and weaknesses of information gathering, analysis and use in development projects, including CARE's projects (Chapter 3). Project planning elements and the key concepts of monitoring and evaluation are reviewed in Chapter 4.

Chapter 5 prepares the way for creating specific monitoring and evaluation plans for existing projects. The following section focuses on the crucial issue of assessing project progress and achievement, i.e., indicators (Chapter 6). Sources of indicator information and ways to select smaller samples that represent the larger target population of a project are discussed in Chapter 7. The next chapter reviews methods to gather such information (Chapter 8).

The important steps of analysing and making sense of the information that has been collected are dealt with in Chapter 9, followed by presentation of findings

and ensuring action in Chapter 10. The final chapter in the body of the text is concerned with ways to institutionalise information management (monitoring and evaluation) plans within CARE projects (Chapter 11).

The annex section of the guidelines also includes some very useful reference material. First, there is a glossary of key terms and concepts (Annex 1), then a set of relevant abbreviations commonly used by CARE (Annex 2), followed by a set of suggestions for some key M&E documents (Annex 3). Annex 4 is comprised of short presentations about a variety of techniques for data collection and analysis. Annex 5 is a useful table comparing the preferred terms used for similar planning concepts by a wide range of donors and support agencies. The final annex lists the references used in preparing the guidelines, and serves as a guide for readers wishing to pursue topics in even greater detail.

CHAPTER 1

Why is information (gathering, analysis, use) important to projects?

Projects, and the people involved with them, need to have accurate and timely information to assess the value of what they are doing. The following list shows some of the key reasons why people need information about projects:

Information Needs

- **Achievement** – what has been achieved? How do we know that the project caused the results?
- **Assessing progress** – are the objectives being met? Is the project doing what the plans said it would do?
- **Monitoring** – is the project well-managed?
- **Identifying strengths and weaknesses** – where does the project need improvement and how can it be done? Are the original objectives still appropriate?
- **Checking effectiveness** – what difference has the project made? Can the impact be improved?
- **Cost-effectiveness** – were the costs reasonable?
- **Sharing experiences** – can we help to prevent similar mistakes or to encourage positive approaches?

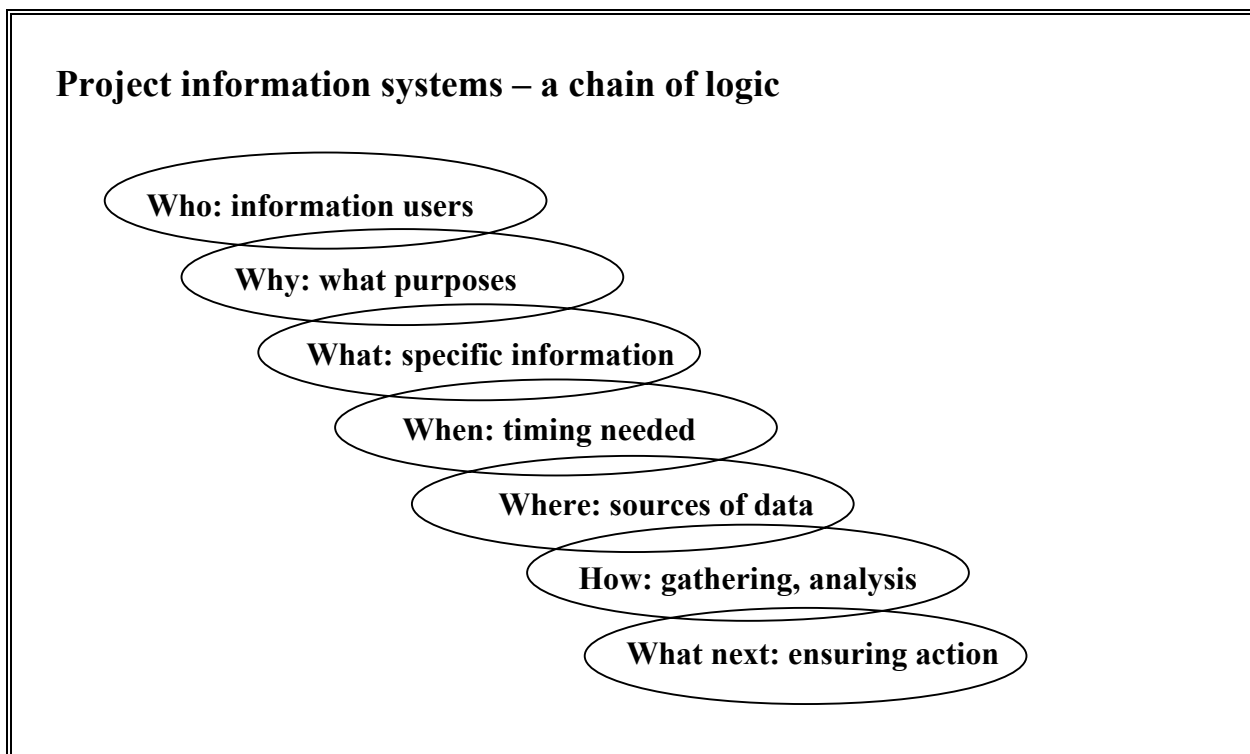
Adapted from: Feuerstein, 1986

The collection of information in projects, in combination with its analysis and use, is collectively referred to as the ‘Monitoring and Evaluation’ (M&E) component of a project.

When considering the M&E system, it is important to reflect on the purpose of Monitoring and Evaluation as:

The collection and management of data to be analysed and used for the regular and periodic assessment of a project's relevance, performance, efficiency, and impact in the context of its stated objectives.

The M&E system is a form of 'information system', which is a broad term for information selection, gathering, analysis, and use. It can be described as a logical chain of linked ideas starting (and continuing) with information users.



Information users include persons who are influenced by projects as well as those who influence the project, e.g., target communities, project staff, donors. The major uses of the information include informing decisions in the project and sharing information with other persons or organisations. Specific information is needed in order to ensure that the project is relevant, efficient and effective within its stated objectives.

If accurate information is planned, but it is not feasible to collect it or it can't be collected in time, then the project may get off track, i.e., it can become ineffective or irrelevant to local priorities. If the information is gathered to answer such needs, but it is not analysed, then it cannot be used by the project. Finally, if the

information is collected and analysed but not available to the persons who need it, critical decisions about the project may not be made or may be poorly taken.

The bottom line:

Projects need logical information systems that maintain and strengthen the project, as well as meeting the needs of many other kinds of information users, including the target population.

CHAPTER 2

Who needs information about CARE projects (within or outside the project)?

Information users

One of the most important first steps in developing an information system is to identify who are the users of project-related information. Once users are identified, it is then possible and necessary to determine what kind of information they need and for what purposes, what questions or concerns about the information users have and what constitutes quality information.

Many people and organisations are interested in each and every CARE project. All of these people can be called '*information users*'. Some persons will be interested in the achievements and lessons learned in a project, e.g., other NGOs working with similar target populations in another district. Other persons may want information so that they can participate in various decisions related to the project. The latter group are often referred to as '*stakeholders*', or potential 'owners' of the project. Project stakeholders include all persons or groups who have the capacity to make or influence decisions that have an impact on project design or implementation.

Ultimately, all of the stakeholders may be involved in the implementation phase of a project; therefore, they should be consulted and informed regularly about project planning and developments. Involving potential users (especially project management, staff, and target population) in the design of M&E will not only help them clarify their information requirements, but also ensure their support for the M&E system and utilisation of its findings.

Key categories of people and organisations who may be interested in obtaining information about CARE projects include:

Community

(sometimes called ‘clients’ or ‘beneficiaries’ or ‘target population’): may be individual community members, families, community

groups, or whole villages. Specific categories of importance to CARE include community leaders, target groups in the community, and the community at large.

Local Organisations

includes Community-based Organisations (CBOs), and Non-Governmental Organisations (NGOs). CBOs are potential local collaborators: e.g., mutual assistance societies,

cultivating groups, and local associations. NGOs, whether local or international, have shared and potentially overlapping interests; they are also potential collaborators with supplemental resources.

Government

the collaborating and co-ordinating local counterparts, policy-makers and planners; includes district officials, officials in line

Ministries, and politicians like Members of Parliament.

Project staff

the CARE-Uganda project managers and field staff who implement projects.

Country office

the CARE-Uganda programme level staff such as the country director (CD) and assistant CDs,

sector advisors and project managers.

CARE International

the Atlanta headquarters level staff, such as the Regional Monitoring Unit (RMU), sector co-ordination group (PAD), fund raisers (External Relations), finance and advocacy.

Donors

Funders, external support agencies.

Additional categories of persons or organisations which may need to be considered in some projects include:

- **Other CARE International members:** potential funders of some projects, and professional colleagues with shared interests
- **Academicians, researchers, consultants:** shared professional interests, potential for further analysis and alternative applications of project information
- **Media, journalists:** dissemination of significant results; showing transparency and public accountability

What kinds of information are needed?

Content concerns

Among the many different people are interested and actively involved in project M&E are the project target population, staff responsible for routine collection and management of data (e.g., on finances and outputs), internal and external evaluation teams responsible for periodic assessments (e.g., of project performance and progress). The differences between these groups will be in their:

- perceptions of the purpose of M&E
- reasons for collecting data
- interests in the information generated as a result of M&E.

Another group of people who influence the M&E system are the various specialists involved within the project, e.g., economists, ecologists, agronomists, sociologists, health workers, etc. Many of their information needs (and what information they think the project needs) will be largely determined by their professional training (e.g., economists who tend to search for information relating to income). As a result, although their experience and training can bring useful perspectives to the M&E system, these groups may also introduce an element of professional ‘bias’. Caution is needed to ensure that the views of these professionals do not over-influence the design of the M&E system.

Quality concerns

Information users have many concerns about the quality of information they are seeking. Some key criteria are shown in the following box:

Quality of Information

- **Accuracy**, validity: does the information show the true situation?
- **Relevance**: is the information relevant to user interests?
- **Timeliness**: is the information available in time to make necessary decisions?
- **Credibility**: is the information believable?
- **Attribution**: are results due to the project or to something else? (see Chapter 4)
- **Significance**: is the information important? (see Chapter 4)
- **Representativeness**: does the information represent only the target group, or also the wider population? (see Chapter 7)

Addressing Issues of Quality

The first four quality concerns above were prioritised in a recent CARE workshop, which went on to suggest strategies for ensuring that data is of good quality (from CARE Uganda, Report on M&E workshop, 1996). Below are the strategies identified for each of these four concerns:

Accuracy

How can we ensure information is accurate and reliable?

- Plan in advance; be specific with regard to information needed and processes for acquiring it
- Simplify information needs and systems for its collection and analysis; be selective with regard to information collected, samples, methods, etc.
- Develop guidelines and standardise how to collect and analyse information
- Triangulate information sources and methods of collection where possible (i.e. use more than one method/source for the same data item)

- Encourage commitment to collecting accurate information
- If appropriate, acquire and use modern equipment, e.g., computers (but remember ‘GIGO’: garbage in, garbage out)

Relevance

How can we ensure information is relevant to user’s needs?

- ‘Relevance’ differs for different information users.
- Gain the perspective of project target populations by engaging their participation in information collection and analysis
- Avoid being donor-driven, while meeting donor requirements
- Be selective and prioritise information needs; know in advance who needs what information, and how it will be used.
- Ensure the project can analyse information; and present results in an accessible form for the various users/audiences (i.e., don’t use a written report with illiterate community members or a 200 page report with a busy Ministry official)

Timeliness

How can we ensure information is available in time?

- Use simple tools for collection and analysis
- Plan in advance: consult information providers; seek commitment from partners/counterparts/communities
- Create a schedule with deadlines; delegate and share responsibilities related to information collection, analysis and presentation; sensitise participants about the need for timeliness

Credibility

How can we promote the credibility of information?

- Design information gathering methods carefully; be consistent (by using repeatable methods which can show trends); be objective when gathering, analysing and interpreting information
- Be transparent about processes used; explain methods used to obtain data and draw conclusions (including assumptions, statistical links between sources; methods of collection, analysis and results)
- Address and discuss attribution issues (whether results can be claimed by the project)
- Maintain your personal and organisational reputation

Why is the information needed? For what purposes? What decisions or actions will be affected?

Purposes of information

The two main uses for information produced by or about projects are:

a) informing people who have to make decisions (whether inside or outside of the project); and b) description for persons who want to learn from the project (including achievements, constraints and failures).

Some common examples of these two purposes include the following:

- to monitor *physical and financial progress* so that decisions can be made (or revised) about spending and resource distribution that will keep the project functioning and within its budget.
- to monitor *distribution of project benefits*; e.g., some people may benefit more than others. This information is useful to groups wanting to monitor project equity and accountability.
- to examine the *responses of the target population* to the services and inputs being provided by the project; such information can help ensure acceptability and usefulness of project activities.
- to study *specific implementation problems* facing a project so that the cause(s) can be identified and practical solutions recommended.
- to determine what is the *impact on the target population*, especially on quality of life and living standards (income, health, empowerment, relationship to environment, etc.) as a direct result of the project, i.e., to assess the attributable impact of the project. Where project benefits are identifiable, impact information can be useful for advocacy.
- *compliance and accountability*, e.g., meeting donor requirements.

Purposes, Needs and Concerns of Six Key Information Users

The charts on the following two pages summarise information purposes, needs and concerns for the six of the most significant users of information related to CARE-Uganda's projects, as identified by the Kabale '96 workshop participants:

- *Community*
- *Local organisations - CBOs, NGOs*
- *Government*
- *Project staff*
- *CARE Country Office - Uganda HQ*
- *CARE International*

Purpose, Information Needed and Concerns About Information by Key Information Users

USERS	PURPOSE	KIND OF INFORMATION	CONCERN
Community			
Leaders: LCs; Opinion, Cultural, and Religious	<ul style="list-style-type: none"> To clear suspicion; for deciding whether to support activities For planning and mobilisation of members To integrate project activities into parish/village activities To understand project within cultural/social/ religious norms 	<ul style="list-style-type: none"> Aims/objectives, Targets, Activities Resources, support from project, Duration Effect on community 	<ul style="list-style-type: none"> Simplicity, Consistency, Accuracy, Timeliness
Target group: e.g., women, farmers, veterans, etc.	<ul style="list-style-type: none"> To know benefits of project To know what contributions have been made To gain feedback from the project To know support expected from participants 	<ul style="list-style-type: none"> Aims/objectives, Targets, Activities Resources, support from project, Duration Effect on community 	<ul style="list-style-type: none"> Simplicity, Consistency, Accuracy, Timeliness
General community	<ul style="list-style-type: none"> Why not me? To clear suspicion To know expected benefits and expected contributions For feedback 	<ul style="list-style-type: none"> Aims/objectives, Targets, Activities Resources, support from project, Duration Effect on community 	<ul style="list-style-type: none"> Simplicity, Consistency, Accuracy, Timeliness
Local Organisations			
CBOs	<ul style="list-style-type: none"> For shared planning and mobilisation of members To integrate project activities into group's activities 	<ul style="list-style-type: none"> 	<ul style="list-style-type: none">
NGOs	<ul style="list-style-type: none"> For shared planning and collaborative efforts To learn from project activities and experiences 	<ul style="list-style-type: none"> 	<ul style="list-style-type: none">
Government			
Counterparts: District and field staff	<ul style="list-style-type: none"> Planning, Co-ordination Allocation of time, personnel, resources What to expect from project; what expected by project 	<ul style="list-style-type: none"> Annual plans Status reports, Evaluation reports PIR 	<ul style="list-style-type: none"> Timeliness, Relevance
Central: Line ministry	<ul style="list-style-type: none"> Project approval Budget approval, Accountability Co-ordination, Planning 	<ul style="list-style-type: none"> Coverage, Financial and Qualitative information Status reports, Evaluation reports Project documents, and MoU 	<ul style="list-style-type: none"> Completeness, Accuracy, Accountability, Validity, Timeliness, Credibility

USERS	PURPOSE	KIND OF INFORMATION	CONCERN
Project Staff			
Field officers	<ul style="list-style-type: none"> To monitor budgets and expenditures, tracking expenditures Other inputs, e.g., materials, personnel Staff performance appraisal To identify constraints, obstacles, gaps, etc., for planning 	<ul style="list-style-type: none"> Financial statements Quantitative Quantity and quality of outputs (IOP) Qualitative - beneficiary needs and perceptions 	<ul style="list-style-type: none"> Accuracy, Objectivity, Feasibility, Timeliness, Validity, Relevance, Representativeness
FEWs	<ul style="list-style-type: none"> To compare activities achieved against targets To assess effectiveness of methods and strategies To report on communities 	<ul style="list-style-type: none"> Quantity and quality against time/plans Beneficiary response, e.g., utilisation adoption 	<ul style="list-style-type: none"> Quality, Effectiveness, Cost, Time, Validity, Relevance
CARE Country Office - Uganda HQ			
Country Director	<ul style="list-style-type: none"> Preparation of annual project information 	<ul style="list-style-type: none"> Annual Portfolio/Project Information, AIP 1.1 API 	<ul style="list-style-type: none"> Follow agreed formats Significance, Attribution
Programme (ACD, PMs, Advisors)	<ul style="list-style-type: none"> Compile PIRs, Prepare AIPs, Staff appraisals/action plans Overall management of sectors, Monitoring budget Advocacy/fundraising, Identifying areas of project support 	<ul style="list-style-type: none"> Annual Implementation Plans (AIPs 1.1, 1.2, 1.3) PIRs, API Annual project performance reports 	<ul style="list-style-type: none"> Relevance Good quality English
Prog. support (Finance, Personnel)	<ul style="list-style-type: none"> Compilation of budgets Preparation of OFR (Overseas Financial Report) Human resource planning 	<ul style="list-style-type: none"> Monthly Overseas financial Reports (OFR) AIP 1.1 Project progress reports 	<ul style="list-style-type: none"> Relevance, Accuracy
CARE International - Atlanta HQ			
RMU	<ul style="list-style-type: none"> To measure project performance against plans 	<ul style="list-style-type: none"> Actuals against plans API 	<ul style="list-style-type: none"> Significance, Representativeness, Sustainability
Sector (PAD)	<ul style="list-style-type: none"> To identify areas that need support To compare project globally; To draw lessons learned To assess performance against standards 	<ul style="list-style-type: none"> Weaknesses and constraints Outputs/progress, API Evaluators' findings 	<ul style="list-style-type: none"> Relevance, Credibility, Significance, Accuracy, Attribution, Sustainability
External Relations	<ul style="list-style-type: none"> To convince donors of need to intervene To convince USA government to support projects 	<ul style="list-style-type: none"> Human interest stories, Major achievements Relevance of needs to USA interests: API, PIR 	<ul style="list-style-type: none"> Credibility, Attribution, Significance
Finance	<ul style="list-style-type: none"> For accountability To assess adherence to policy 	<ul style="list-style-type: none"> Budgets and projections Expenditure reports, Contracts 	<ul style="list-style-type: none"> Accuracy, Timeliness

CHAPTER 3

What are some of the common strengths and weaknesses of information gathering, analysis, and use in development projects? And why?

Poor project design

Sometimes projects are too hastily developed in response to available funds, omitting a thorough analysis of the community needs and situation. The donors themselves are sometimes relatively unsophisticated about M&E, either lacking interest in proper planning for information management in a project or regarding M&E only as a tool for accountability and not a part of on-going project design.

Human resource development needs

The available staff may be unqualified for tasks related to information management, in part because there is relatively little local opportunity for practical training/learning in this field. Coupled with this issue is staff apprehension about the ‘difficulty’ of monitoring and evaluation, which is not helped by the lack of common agreement about standards and methods among professionals. These factors sometimes (too often, in fact) lead to reliance on consultants to design systems and outsiders to evaluate projects.

Quantitative bias

A frequent complaint by project staff and other information users is the quantitative bias of project information systems. One contributing factor to this weakness is an organisational trend toward almost exclusive use of log frames (see Chapter 4). The nature of information requested in the typical log frame is numerical. Thus, over-dependence on log frames can result in over-reliance on quantitative information that leaves out explanations, human voices and the actual nature of what is going on.

Low priority for information systems

Persons expected to carry out data collection are frequently expected to take this role on as an ‘additional’ task, to be worked in and around the more ‘important’ service-oriented tasks of the project interventions.

Involvement limited to collection

Many staff do not understand why they have to collect the information, i.e., they have no sense of how the information contributes to or can even be used in their own work. This problem is most common when staff members do not participate in either the planning for information gathering or the analysis of the data collected.

Poor feedback to the data collection (and respondent) levels

Failure of field staff to get feedback about information that has been collected contributes to low morale and a perception that such an activity is not as important as other duties, e.g., intervention tasks that are more regularly supervised and/or assessed for job performance. Failure to give feedback to the community level respondents also convinces them that the data collection exercise was a waste of time, and breeds reluctance or even resentment toward any repetitions in the future.

What about CARE? How are we doing with M&E?

Sources of information about strengths and weaknesses in CARE projects came from two main sources: contributions by the M&E Task Force (19/6/96), and the participants at the Kabale '96 M&E Workshop (9-13/9/96). The results of these participatory discussions are presented in following table that shows strengths, weaknesses, opportunities and constraints to M&E within CARE.

Among the main strengths of M&E within CARE is data collection, due to committed staff, standard formats, and regular schedules for collecting and reporting information. As an organisation, CARE ensures that resources for M&E are built into project proposals. Information dissemination is also encouraged as a tool for promoting institutional development and community empowerment.

CARE - Status of present M&E within CARE International in Uganda

Strengths	Weaknesses	Opportunities	Threats, limitations, or external constraints
<ul style="list-style-type: none"> • Regularity: information is collected regularly through well-established reporting systems • Standardised formats within projects: uniform formats and reporting forms in each project help facilitate data collection • Resources: resources for M&E are available • Information dissemination: information is usually disseminated to the community and other stakeholders • Commitment: collective awareness in staff of M&E needs and importance of gathering good quality data • Useful: information collected is usually put to good use • Capacity: most projects have log frames; some projects with M&E frameworks; some projects with an M&E officer 	<ul style="list-style-type: none"> • Weak information planning and management at project level due to inadequate technical skills, including poor sampling, gathering too much data, and inability to do data analysis • One-way information flow ('bottom→up') and lack of feedback • No standard information system across projects to guide projects; lack of consistency between projects • Quantitative bias: Over-emphasis on quantitative information • Donor-driven systems limit relevancy: e.g., assessment of institutional and capacity-building effects (or impacts) not done • Partners not involved: Relationship of projects and partner or stakeholder (e.g., data requests, shared planning for M&E) is inadequate • Weak link from log frames to M&E plans; methods for data collection not always specified; lack of attention to assumption issues in log frame 	<ul style="list-style-type: none"> • Projects with similar/shared objectives and/or activities • Community participation in M&E could be strengthened • Community M&E for: a) CARE, b) community's own projects could be improved • Selection of appropriate indicators could be improved • Supportive link exists with CARE USA and the DME unit • Sentinel surveillance is a possible tool for rapid, participatory community assessment • More translation of project objectives and related outcomes into job descriptions (via IOPs) could improve perception of value for information management • Household livelihood security impact concept not yet clarified or operationalised (CARE-Uganda has a chance to help develop) 	<ul style="list-style-type: none"> • Mandatory link with government system can lead to difficulty with: poor fit of data into existing system, or dependency on government workers and government information system • Attribution of effects and impacts can be difficult in a fluid socio-economic setting, especially when multiple other groups are working in overlapping areas • M&E can be time- and resource-consuming, requiring careful planning to balance M&E needs against intervention needs • Multiple stakeholders request (or require) a wide range of M&E information

Adapted from CARE M&E Task Force meeting 19/6/96, and the CARE Kabale '96 M&E Workshop

The priority concern and reasons for weaknesses of CARE-Uganda's information systems, as identified by participants during the Kabale '96 workshop are presented below.

- **Inadequate skills for data analysis and weak data management at project level:** Projects often lack data analysis skills so collected information sometimes ends up unanalysed and unused. Lacking training, staff shy away from monitoring as something 'mystical' rather than an everyday activity. With inadequate skills in data management, there are clear concerns about the quality, content, dissemination and utilisation of information collected. There is need for tools which staff are capable of learning and utilising.
- **Lack of feedback:** The flow of CARE's information systems is one-way – 'bottom→up'. Feedback is rarely given from "further up the system" on submitted reports. When feedback is given, it is usually in response to a specific critical issue, and is dependent on an individual rather than a system. Project staff from the 'lower' levels feel the information system would be more effective if they systematically received feedback on quality of reporting, lessons learnt, and project performance.
- **No standard system:** Currently, there is no standard information system to guide projects on M&E within CARE Uganda. As a result, different projects have inconsistent reporting systems, non-similar data management systems, and widely varying approaches to dissemination. Because "we do not really know what we need," M&E consultants are not used in the most effective way. In addition, information is often collected and reports made in response to isolated needs, rather than as an integrated part of daily project activities.
- **Emphasis on quantitative system:** Many donors have principally requested numerical (quantitative) information about projects as it is easier to compare and summarise than qualitative information. However, an over-emphasis on quantitative data within projects means that little information is being gathered about the qualitative effects and impacts of CARE projects on people's lives.
- **Donor driven:** Many staff tend to see M&E as something that is necessary to please donors, rather than as important for the project and for their own work. Donor schedules and demands can mean that M&E work, such as conducting and interpreting a baseline, may be rushed and not undertaken carefully. Without a baseline, subsequent demonstration of project effects and target population change is generally very difficult and unconvincing.

CHAPTER 4

What key concepts are fundamental to understanding and planning for information management?

Project definition

A ‘project’ is usually defined as a one-time activity with a well-defined set of desired results. Ideally, a project will have the elements shown in the following box:

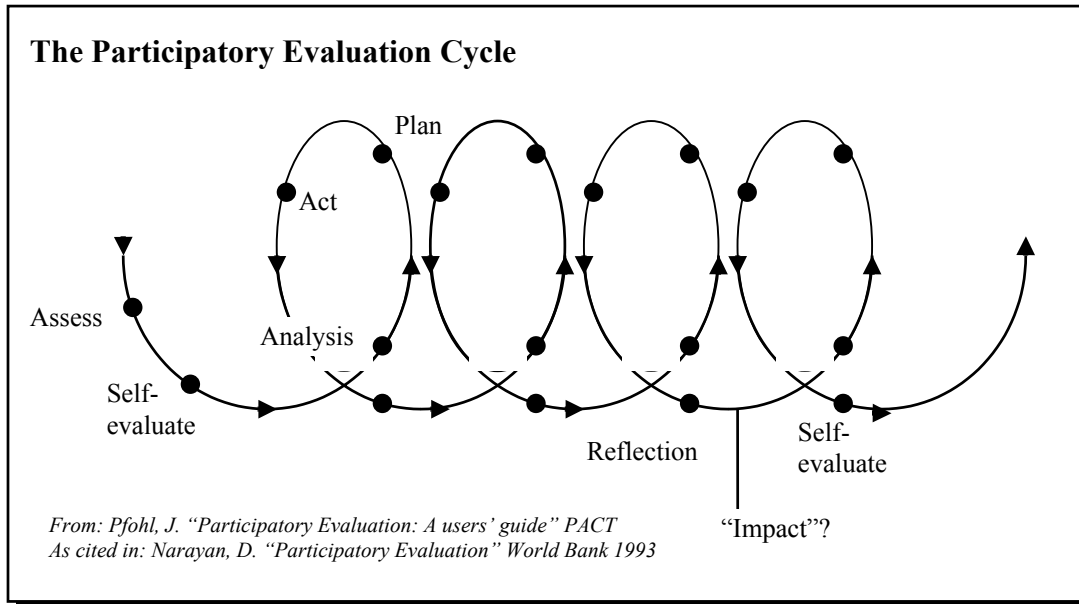
Elements of a project

- a beginning, a middle, and an end (project lifetime)
- a clear set of objectives and goals linked to anticipated (desired) effects and impacts in a target population (sometimes called ‘beneficiaries’)
- various activities with related inputs and outputs

The various stages in the life of a project may be sliced into many tiny pieces, each with a specific label. Frustratingly, every agency seems to use a different set of terms (for examples, see Annex 5).

A project goes through various stages: from the first idea to greater and greater clarification of setting, problems, objectives, choices and action. When funded, it is then implemented, revised during implementation, and eventually evaluated. These progressive stages in the lifespan of a project are sometimes referred to as a ‘project cycle’. Used in this way, the concept mostly refers to the overall ‘life

cycle' of the project from beginning to end. In fact, however, some elements of projects are cyclical – they get repeated regularly (see box below).



Each CARE project reviews its progress against plans every six months ('semesterly') and prepares a Project Implementation Report (PIR). Each project is also responsible for reviewing annual performance at the end of each year and identifying lessons learnt. This annual process is integrated with a review of the multi-year (life of project) plans contained in the project document in order to prepare an Annual Implementation Plan (AIP 1.2) for the following year.

Project stages and information needs

For the purposes of these guidelines, we will refer principally to the following stages in a project:

Before Project

What are the problems? What are the resources? What are the unmet needs?

This is when the problems that need a project are identified, contributing factors clarified, needs assessed, and then the project is designed.

Project Start-up

What is the current situation?

During this phase, after funding is secured, but shortly before project services and activities begin, the project carries out a ‘baseline’ study.

Implementation

Is the project proceeding according to plan?

This is an on-going stage, during which the project interventions (services and activities) are being carried out, together with various forms of regular assessment to ensure that the project is on track.

Mid-term

Are the project strategies working?

This stage occurs at approximately the mid-point in the project funding cycle. It is the time for re-assessing project strategies, management systems, linkages with partners, and looking for preliminary evidence of project effects.

End of Project

What effect(s) did the project have?

This is the point where project interventions (and funds) are terminated, and an assessment is made of project achievements during the period of support.

After Project

What impact did the project have on the lives of the people it was designed to affect?

Ideally, after the withdrawal of project support, the benefits of projects are sustained and can be demonstrated among the target community.

As noted in these descriptions of stages in a project lifespan, information of one kind or another is gathered at every stage.

Project Logical Framework (‘log frame’)

The log frame of a project is a tool for planning and managing development processes. Not just a static multi-year outline for a project, log frames are actually dynamic; in other words, they can change as the project develops. Using periodic monitoring information, a project can adjust the annual plan, and even modify the lower levels of the log frame, to reflect what can realistically be achieved in the coming year.

The process of creating a log frame begins from the premise that if we know what the problem or situation is that we want to change, then we can envision a resolution or a better future (i.e., the objectives or goals of a project). Next, the Logical Framework Approach (LFA) reasons that if we know our objectives, then we can identify a set of project outputs that will achieve the objectives. Continuing in this line of thinking, we can then identify the project activities and inputs that are essential for generating the necessary outputs in order to reach the objectives.

The format of a completed log frame is usually a four column grid that shows the linkages between project intentions (‘goals’, ‘objectives’), assessments of achievements (‘indicators’), ways of checking progress (‘means of verification’) and expected events or situations outside project control that can influence the project (‘assumptions’). Other agencies or various donors may request (or demand) a variety of terms for very similar elements in the log frame (see Annex 5). For consistency, in these guidelines, we will use the preferred terminology of CARE International. As typically seen in CARE Log Frames, the assembled elements look like the following table:

Typical CARE Log Frame Structure

Hierarchy of objectives	Objectively verifiable indicators (OVIs)	Means of verification (MoVs)	Assumptions
Final Goal (FG)			
Intermediate Goal (IG)			
Outputs			
Activities			

Presented in rank order, the important levels in a hierarchy of project objective/goals are:

Final Goal

What the project intends to contribute in the long term as a result of achieving the intermediate goal(s). E.g., improve the rural standard of living. This is the ultimate level, and only reached when the community is able to sustain the positive benefits without continued project inputs.

Intermediate Goal

What response the project intends to achieve among the target population groups. E.g., increase the production and sale of high quality bananas by small farmers.

Outputs

What the project intends to achieve in the short term as a result of the project activities. E.g., 100 farmers trained to carry out improved banana farming.

Activities

What the project staff and target population are going to do. E.g., provide technical support to existing farmer groups. This is the 'lowest' level in the sense that it occurs first, and is completely dependent on project inputs.

Inputs

What resources are necessary for performing the project activities. E.g., stationery supplies for workshops and training sessions. These are not usually shown in the log frame itself, though they are a key element in producing project outputs. Inputs occur only during the period of project support.

In order to determine where results from project interventions fall on the hierarchy, the matrix on page 31 can be useful. The first column shows the levels of the 'Hierarchy of objectives' as they appear in the log frame. The second column shows CARE's preferred terms for the 'Kinds of results' that are expected at each level; a description of each concept is presented under the 'What' column. The next two columns of the matrix, 'Caused by whom' and 'Claimed by whom' also help define what kinds of project interventions and results fall at each level. The second last column 'Time-frame', shows when a project can expect to be able to measure the progress and results at each level. A final column gives examples of the different levels of objectives, as drawn from existing CARE projects.

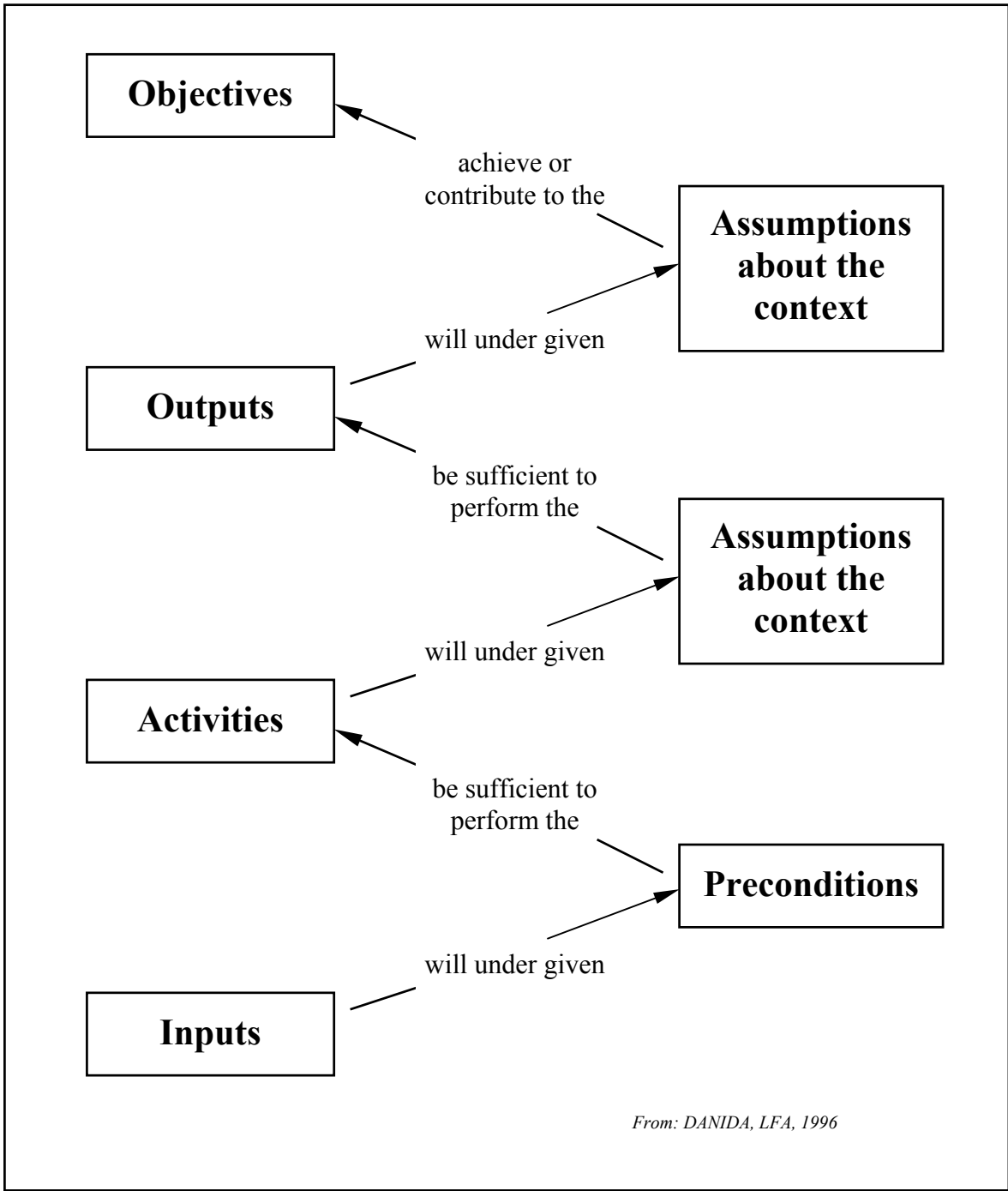
Inputs (funds, technical assistance, commodities, in-kind) are used to support **Activities** (project processes done with the input resources). Both contribute to the **Outputs** (the products of the project). All of these three elements are within the control and responsibility of the project and, therefore, the project is accountable for the extent and quality of their achievement.

The final two levels depend on responses within the target community; these are **Effects** (target population response to the project outputs, such as change in behaviour), and **Impacts** (sustainable changes in conditions at the household level). Although the project is not strictly accountable for the latter two levels since they depend on the target population and other external stakeholders, the project is responsible for the strategies that are supposed to produce the desired effects and impacts.

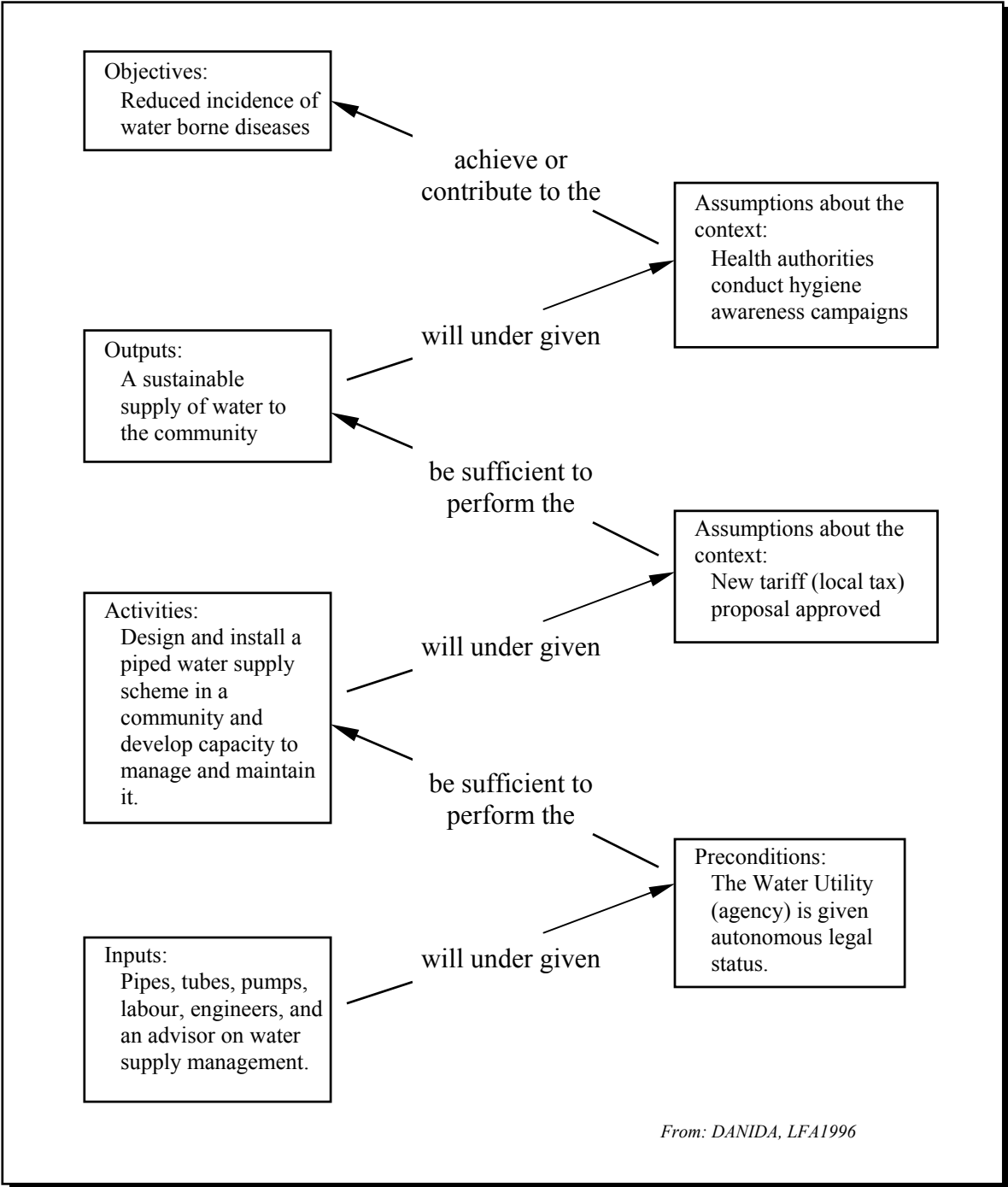
Hierarchy of Objectives

Hierarchy of Objectives	Results	What: description	Caused by Whom	Claimed by Whom	Time-Frame	Examples of objective by level
Final Goal	Impact	sustainable changes in human conditions or well-being of target population at household level	target groups experience it; may come from target group or local institutions	attribution is difficult with other influences substantial and inevitable	sometimes measurable within life of project (e.g., through case studies) but most often ex-post	Child mortality in Nyarusiza sub-county of Kisoro district reduced by 20%
Intermediate Goal	Effect	reactions and actions of target populations as a consequence of exposure to project interventions	target groups experience it; comes from response of target group to project interventions	should be largely attributable to the project, with other influences relatively minor	within life of project	Community involvement in, and demand for reproductive health services increased
Output	Output	products produced by the project	project staff produce it (and are accountable)	100% attributable to the project	within life of project	75 community based FP distributors trained
Activity	Process	interventions or activities done by the project	project staff do it (and are accountable)	100% attributable to the project	within life of project	8 training courses conducted for district medical staff in FP methods
Input	Input	resources used by the project	project staff use them (and are accountable)	100% attributable to the project	within life of project	FP supplies available at health units without stock-outs all year

The following graphic shows another way of understanding the LFA levels (read the figure progressively from the bottom up to the top).



For example, imagine a project seeking to reduce the amount of childhood diarrhoea by getting the community to use 'safe' water. If this project drills and equips boreholes that are then not being used, then the project logic needs to be re-assessed and strategies changed in order to achieve the desired effects.



From: DANIDA, LFA1996

The M&E System

The Monitoring and Evaluation system is another planning and management tool of projects; it is actually the information system used to assess project progress, performance and impact. Monitoring refers to the regular collection (plus analysis and use) of information within the project about its progress. Evaluation refers to periodic reviews of information from within, as well as about, projects and their performance. The M&E system is very important in its ability to assist project staff, target population, and other stakeholders to develop the project throughout its lifespan. As with the log frame, the structure of the M&E system is also characterised by several levels. Each level relates closely to the hierarchy of objectives in the log frame. The following table shows how each level of objectives links with specific monitoring and evaluation assessments (see also the chart on page 40).

Overview of structure of M&E information system

Hierarchy of objectives	Types of information	Monitoring activities	Evaluation activities
Final Goal	Impacts (fundamental changes for target population)	Impacts (relatively little at this level)	Ex-post assessment Final evaluation (mostly done by evaluation)
Intermediate Goal	Effects (target population response)	Effects (more important at evaluation)	Annual review Mid-term evaluation Final evaluation (more by evaluation)
Output (intervention)	Outputs (project products)	Semesterly: Physical	Annual, mid-term and final (with monitoring data)
Activities	Process indicators	Semesterly: Physical	Annual, mid-term and final (with monitoring data)
Inputs	Input indicators	Semesterly: Financial and physical	Annual, mid-term and final (with monitoring data)

MONITORING

Monitoring is the collection and management of data which relate to the predefined target values for the indicators (OVIs) in the log frame. Monitoring information is collected on a continuous basis throughout the implementation phase of the project.

There are four main types of monitoring activities:

Institutional monitoring

This category refers to internal monitoring of financial, physical and organisational issues affecting the project. Financial monitoring tracks project inputs and costs by activity within predefined categories of expenditure.

Physical monitoring tracks the distribution and delivery of project activities and outputs/interventions. Organisational monitoring tracks sustainability, institutional development and capacity building in the project and direct partners.

Context monitoring

The process of tracking the context in which a project is operating, as it affects critical assumptions and risks to the project. This includes monitoring institutional and policy issues that may affect the capacity of the project to act or the capability of the target population to respond to the project. These concerns are handled to some extent during monitoring, but principally during evaluations.

Results monitoring

The process of tracking project effects (target population responses to project outputs/interventions) and project impacts (the contribution that the project makes to fundamental and sustainable change for the target population). Concerns about effects are handled to some extent during monitoring, but mostly by evaluation. Assessment of impacts is rarely dealt with by monitoring, and is principally in the domain of evaluation.

Objectives monitoring

The process of tracking project objectives and strategies for continuing relevance to the target population and its changing needs.

These monitoring activities vary in terms of where the data is collected from (i.e., the source), the frequency of collection, and the methods used for gathering and analysing the data.

Project Monitoring Activities

Hierarchy of objectives in the Log Frame	Monitoring activity	WHO is responsible	WHAT is monitored	WHY is it monitored	HOW is it monitored	WHERE is it monitored (source of information)	WHEN is it monitored	What format for reporting (in CARE)
Final Goal (FG)	Impact, Context and Assumptions, Objectives	Project staff, target population, other stakeholders	Impact indicators (fundamental changes for target population, e.g., improved standard of living); Policy and institutional changes	To assess sustainable contribution of IG to FG (successes); To assess risks, constraints, and negative outcomes	Special assessments by project staff and target population, e.g., case study	Primary: rural households Secondary: regional statistics, other institutions	Annual assessments and after project terminated	Evaluation reports
Intermediate Goal (IG)	Effects, Context and Assumptions, Objectives	Project staff, target population, other stakeholders	Effects indicators (response of target population to project outputs, e.g., behaviour change); Policy and institutional changes	To assess contribution of outputs to IG (successes); To assess risks, constraints and negative outcomes	Regular assessments by project staff and target population	Primary: rural households Secondary: regional statistics, other institutions	Annual assessments	PIR, API, Evaluations
Outputs	Institutional, including organisational and physical issues	Project staff, project managers	Output indicators (project products, e.g., farmers trained in a specific farming skill)	To assess progress being made by project in delivery of outputs, to assess institutional development issues	Using data collected by field staff and target group from monthly reports	Primary, e.g., training units in project	Monthly and according to level of output	API, PIR
Activities	Physical	Project staff, project managers	Distribution and delivery (actual compared to planned)	Scheduling and allocation of resources	Monthly reports by field staff	In the project office	Monthly and according to level of activity	EARs, API, PIR
Inputs	Financial, Physical	Project staff, financial controller, project accountant	Resources for project activities (e.g., people, materials, funds)	Scheduling and budgetary control	Expenditure reports, by category of expenditure	In the project office and country HQ	Monthly	EARs, API, PIR

Institutional Monitoring

Project inputs (i.e., resources required to implement project activities) are assessed by monitoring financial information. Monitoring input data helps keep the project management informed of the degree of financial efficiency with which the project is operating. Inputs include physical and human resources (the means) and financial resources (the costs). These data are managed according to specific expenditure categories (sometimes called “cost centres”), and are reported in regular financial reports (e.g., EARs).

Physical monitoring is carried out to assess progress in the delivery of project outputs and activities (interventions) to the target population group(s). This kind of monitoring keeps the project management informed about scheduling, distribution (equity), and effectiveness of the project in delivering the outputs and activities. Indicators for outputs and activities typically quantify the amount delivered by the project, to whom, and within what period of time. The sources of information for physical monitoring include various project records (e.g., monthly reports by project field workers) and second-hand information from the routine records of other institutions collaborating with the project. Results of physical monitoring are reported in the regular semesterly Project Implementation Reports (PIRs).

Many information users are coming to recognise that even when implementation is proceeding ‘according to plan’, many projects do not produce their intended amount of benefits, or the benefits are not sustained during and after the project. Aspects that need to be monitored to track these issues could include the following examples: human capacity – staff recruitment, training and turnover; organisational linkages – intra-organisational co-operation, inter-organisational co-ordination, relations with other public and private institutions, including those in the target communities; internal organisation of the project – including function of the monitoring and evaluation systems.

Data for financial and physical monitoring are collected on a regular and frequent basis throughout the implementation phase of the project, according to the level of project activities and outputs. The team members who are responsible for financial and physical monitoring are internal project staff members, such as the project manager, the accountant or an administrative assistant.

Context monitoring

The assumptions and risks identified in a project log frame are contextual or environmental factors that, although beyond the direct control of the project, have the potential to significantly affect the implementation of activities and the achievement of objectives. It is important that these factors are assessed on a regular basis so that changes in strategy or interventions can be made before pending problems become critical. In general, the indicators for the assumptions will relate to the project environment: physical, socio-economic, institutional and government policy.

Results monitoring

Project effects are monitored by assessing the perceptions (opinions and reactions) and responses (behaviour change) of the project target population to the project outputs. Such monitoring helps the project to understand the level of acceptance (or adoption) of project outputs or interventions among the target population. Indicators that assess effects focus on changes in attitudes and behaviours, e.g., changes in farming practices and acceptance of family planning methods.

Relatively little impact monitoring generally occurs during the lifetime of a project, due to the duration of time necessary for impacts to become manifest and measurable. Some impact monitoring may be carried on as case studies of selected sub-groups who are most likely to be affected by the project, e.g., farmers who have been actively participating in project-related trainings and assistance since the early days of a project. Monitoring project impacts helps to understand whether the strategies of the project are really working in the direction of the final goal. Indicators at this level tend to focus on development, e.g., change in household income or consumption patterns, self-reliance, and capacity to cope with seasonal fluctuations.

Data about project effects and impacts are collected during periodic monitoring assessments and can be either qualitatively descriptive or numerical (quantitative). While the principal source of information is direct interviews and observations of target population members, this form of monitoring can also include data from routine records of other collaborating institutions.

Objectives monitoring

The purpose of objectives monitoring includes checking on whether project objectives are being achieved or are likely to be achieved within the existing circumstances. Objectives monitoring also means looking into the presence of any unanticipated effects/impacts or unwanted side effects (negative consequences of the project). This kind of assessment is mostly done in the course of mid-term and final (or terminal) project evaluations, but can also be a part of the annual review process.

EVALUATION

Evaluation is the periodic assessment, analysis and use of data about a project. The main evaluation points in the project cycle are:

Baseline study

The assessment of a selected set of indicators about target population conditions after project start-up but before the beginning of project interventions.

Annual review

The internal assessment of the performance and progress of a project's development over successive one year periods. Usually includes an assessment of effects (target population responses to project outputs/interventions) and project strategies.

Mid-term evaluation

Usually an external (and thus 'objective') assessment of a project which focuses on its performance, organisational capacity, and mid-course corrections to improve achievement in the remaining project period.

Final evaluation

An external or internal assessment of the effects and impacts generated by the project, as well as a cost-effectiveness or cost-benefit assessment. Usually done just before or just after the project ends.

Ex-post evaluation

An external and in-depth study of the impact of a project on the target population. The preferred interval between project termination and an ex-post evaluation is 5-10 years. Rarely done due to lack of donor willingness to fund.

Baseline studies rely on the collection of new data. All of the evaluation activities after the baseline rely on various combinations of monitoring data, data from other organisations, and new data to be collected from the field.

Project Evaluation Activities

Phase of project lifespan	Evaluation activity	WHO is responsible	WHAT is evaluated	WHY is it evaluated	HOW is it evaluated	WHERE is it evaluated (source of information)	WHEN is it evaluated	Reporting Format (CARE)
Start-up	Baseline study	Project staff, target population	Indicators (OVIs) at FG & IG level	Benchmark for later assessment of effects and impacts	Pre-intervention descriptive survey, often quantitative	Primary: target population	Prior to starting implementation of interventions	Baseline report
Implementation	Annual review	Project management team	Financial, Physical, Effects	To assess progress and strategies To keep project on track To adjust Log Frame	Using existing monitoring information Annual survey	Monitoring data, Annual and semester reports, reports of diagnostic studies	Annually	API
Implementation	Mid-term Evaluation	Mid-term Evaluation team	Organisational structure & design Physical, financial progress Assess effects Analysis of risks and assumptions	Assessment of project performance Identify possible improvements in project strategies and interventions	Comparative analysis of targets and actual achievements; may include qualitative interviews	Annual reports, log frames, survey reports Target population, staff, collaborating institutions	Half-way through the implementation phase	Mid-term Evaluation Report
End of project	Final evaluation	Project management or external evaluation team	As above, plus impacts, cost-benefit and sustainability of benefits	Extract lessons learnt to improve design of on-going and future projects	new survey repeating OVIs from baseline Cost-benefit Targets vs. actuals	Document review, Household survey, Interviews with staff, other institutions	At the end of the project implementation phase	Final Evaluation Report
After project	Ex-post evaluation	External evaluation team	Detailed study of impacts: economic, social, environmental, institutional	To assess the sustainability of benefits for target population, government	Before and after analysis, investigation of unintended impacts	Review documents on general context Repeat survey, other interviews	Usually 5-10 years after termination of the project	Ex-post Evaluation Report

Baseline study

The principal focus of the baseline is on collecting and analysing pre-intervention data relating to the indicators (OVIs) for the Intermediate and Final Goals (IG, FG). Baselines are done to establish benchmarks for the chosen indicators, i.e., to provide data on their initial status so that subsequent monitoring and evaluation can assess the effects and impacts of the project for the target population. The baseline also helps to assess the measurability of the selected indicators and can be used to fine tune them for future follow-up. To do this, baselines are carried out after the project is designed and funded, but before starting project interventions.

If a baseline study can be planned, designed, implemented and analysed in a participatory fashion, the commitment of partners (including the target population) to the project interventions can be enhanced. For example, in a recent health project baseline that used social mapping (a PRA tool, see Annex 4), a community in southern Malawi found that the western two-thirds of one village did not use latrines, vs. the eastern one-third where most households had latrines. Within three months after the baseline, more than half of the homes that previously did not have latrines had now spontaneously built latrines – as a direct consequence of public opinion arising from the baseline.

Very specific and clear objectives need to be established for baseline studies since they will be of enduring importance in the project. See box below about potential limitations of baseline studies.

Potential limitations of baseline studies

- Collecting *excessive and non-specific information* that is too overwhelming to ever be analysed and used
- Extracting information and *not actively involving target population* members in planning and implementing the assessment; this happens most commonly if the approach is a complex quantitative survey.
- Collecting *data related to a single point in time*, i.e., the season and year when the assessment was done; this means that subsequent comparison studies need to be scheduled at a similar time.
- **Errors in sampling:** the respondents can spoil the value of the analysis, e.g., sampling only farmers who are particularly likely to be changed by project interventions such as farmers with land, or educated farmers who can easily answer a questionnaire.

Annual review

The annual review is an internal evaluation done by the project management team. It is a form of on-going evaluation because it occurs every year during the implementation phase of the project. The data used in the annual review includes most of the kinds of monitoring information: financial, physical, effects, and assumptions.

The objective of this evaluation is to assess project progress and performance and to keep the project on track towards its objective. A further objective is to review the strategies and log frame of the project and, if necessary, modify the log frame. Such modifications are generally limited to the level of activities and some outputs. This connection between Planning, Monitoring and Evaluation is called the PME cycle, and it is an annual process.

In the CARE context, this means that the annual review is usually carried out in January or early February prior to development of the Annual Implementation Plan (AIP) for the coming year. Each CARE project is responsible for an annual review that leads to preparing their AIPs (1.1 - budget; 1.2 - operational plan; and 1.3 - procurement requests) for every fiscal year. The Country Office expects that these reviews and the associated planning will be conducted as a participatory team effort within each project, reflecting on progress and lessons learnt, using internal monitoring data and whatever data is available about target population responses to the project. On this latter point, currently, there is no routine, CARE-mandated process for collecting new data about the target population in the annual reviews.

During the initial stages of the project implementation (i.e., the first two years) the emphasis of PME will be mostly on using the data collected to measure means and costs relating to project inputs, activities and delivery of their associated outputs. Assumptions and preconditions for project interventions, including institutional development may also be tracked. The evaluation of information relating to project effects and impacts is usually premature at this stage. As the project develops the full PME cycle is established.

Analysis of the annual review assessment data is done by comparing monitoring data about actual achievements with targets stated in the log frame. This type of comparative analysis facilitates reporting of deviations from targets in actual spending and outputs. A weakness of relying only on information from financial and physical monitoring (i.e., meeting physical targets within an accepted degree

of financial efficiency) does not say anything about the effects of these outputs/interventions among the target population.

Diagnostic study

Occasionally, a more detailed investigation of a particular constraint or opportunity for intervention is required to assist the project. In this case, a diagnostic study may be done by the project staff as a one-time activity in order to provide additional information. Although not a regular (recurrent) part of the monitoring and evaluation system, the diagnostic study provides a quick and significant contribution of information to the project's planning and management.

Mid-term Evaluation

The Mid-term Evaluation (MTE) is an external evaluation activity which takes place approximately halfway through the project implementation phase. The data analysed and used during the MTE originates from the routine financial, physical, effects and assumption monitoring activities. This information has been reported within the project in a number of project documents, including annual reports, log frames, and diagnostic studies.

The MTE team aims to identify possible improvements in the nature of project outputs/interventions. These recommendations are based on the understanding by the evaluation team of the process by which the project has reached its present stage (see box below).

**Mid-Term Evaluation:
Criteria for assessing project performance**

- the *organisational structure, institutional development, and capacity building* of the project
- the project *design*, including project *strategies linkages* and lines of *collaboration* with other institutions
- *procurements*
- *physical and financial* progress
- *target population response* to project outputs/interventions
- an analysis of *risks and assumptions*.

Final evaluation

As the project comes to the end of its cycle, a final evaluation is completed by the project management team (internal), or more commonly, by an evaluation team that includes external persons. The objective of a final evaluation is to draw upon the experiences of the project in order to improve the design of future and on-going projects.

The data for analysis during this form of evaluation is the same as that in the Mid-term Evaluation, but it may also include a cost-effectiveness (and sometimes a cost-benefit) assessment. Sources of data for a final evaluation include project documents, and discussions with all the different groups of people involved in or with the project from its conception. This includes project target population, project staff, regional and national government policy makers, and donors.

Two principal analytical methods used in final evaluations are a) comparing *before and after* (re-gathering selected indicators originally documented in the baseline study, and comparing values at start-up and end-of-project); b) comparing *with and without* (assessing selected indicators among groups of people who have and have not been exposed to the project interventions). Comparative analysis of ‘actuals’ and targets is less satisfactory when it comes to assessing effects monitoring data, especially with the more qualitative OVIs about target population opinions. The results of the evaluation are reported in the Final Project Evaluation Report (Project Completion Report).

Ex-post evaluation

This evaluation activity is done approximately 5-10 years after the termination of the project and is done by an external evaluation team. In reality, they are seldom done because it is very difficult to find a funder willing to support such a study. The objective of an ex-post evaluation is to assess the sustainability of the benefits of the project, both to the rural households/communities and to the government and collaborating institutions in the project area.

Sources of data for analysis in the ex-post evaluation include interviews, observations, project documents (especially the baseline and final evaluation); and reports of any on-going monitoring of the target population (e.g., by government counterparts or community agencies).

The ex-post analysis usually includes a detailed study of the project in terms of: a) economic impact; b) social impact; c) environmental impact; and d) institutional impact.

Linkages Between Monitoring And Evaluation

Kind of information	MONITORING ACTIVITIES – INFORMATION COLLECTION	When is it collected (Phase of project cycle)	Frequency of collection (PY = Project Year)	How reported	EVALUATION ACTIVITIES – INFORMATION USE	When? (Phase of project cycle)	Frequency?	How reported
Target population impacts	Target population impact monitoring	During implementation	Not often done; but can start after PY2	PIR	Baseline survey Final evaluation Ex-post evaluation (these should include repeats of baseline survey)	5 yrs after project End of project	once (if done) once	ex-post (seldom done) FER
Effects (target population responses)	Effects monitoring	During implementation	Annually from PY 2	PIR, API	Annual Review Mid-term and Final eval.	Implement. End of project	Annually from PY2	API MTER FER
Assumption and risks	Assumption (and risk) monitoring	During implementation	Annually, from PY 1	PIR	Annual Review Mid-term eval.	Implement.	Annually from PY 1	MTER FER
Outputs	Physical monitoring	During implementation	Monthly from PY1	PIR, API	Annual Review Mid-term and Final eval.	Implement. End of project	Annually from PY 1	API MTER FER
Processes (activities)	Physical and financial monitor	During implementation	Monthly from PY1	PIR, EAR	Annual Review Mid-term and Final eval.	Implement. End of project	Annually from PY 1	API MTER FER
Inputs	Financial monitoring	During implementation	Monthly from PY1	EAR	Annual Review Mid-term and Final eval.	Implement. End of project	Annually from PY 1	API MTER FER

Design issues in information systems

As mentioned earlier (see Chapter 2), experience has shown that users of information about projects commonly have a number of concerns about the quality of the information they are seeking. General issues about accuracy, relevance, timeliness and credibility were reviewed in Chapter 2. Four additional issues that require specific information management plans are discussed in this section. These four issues are:

Attribution

How can we/they be satisfied that results (effects, impacts) claimed for the project are actually due to project interventions and not to other outside factors?

Effectiveness

How can we/they find out whether project resources are being used wisely, i.e., obtaining maximum benefits for minimum costs?

Significance

How do we/they know that the problems being addressed are important, and that any effects or impacts reported are valuable (fundamental)?

Sustainability

How can we/they know whether any positive impacts (or effects) can continue to happen without direct project support (financial or otherwise)?

Let us take these critical issues in sequence.

Attribution

Capacity to assess and show project influence requires planning and specific information gathering designs from the very beginning of a project. A number of design strategies are available that can help to demonstrate attribution. Among the main types are the following:

- **the ‘with/without’ scenario.** This approach relies on a comparison between two distinct groups of people, one of which has received project interventions and another community which has not been exposed to the project. The weakness of this approach is difficulty in being sure that the two communities are truly equal or similar. If they are not exactly alike (which is usually the case), then it is hard to be sure that any observed effects or impacts in the ‘with’ community are actually due to project interventions. Nonetheless, this is a strategy commonly used for end of project evaluations because it is relatively inexpensive.

- **the ‘control group’ scenario.** If the with/without arrangement is planned and two groups are monitored from the very beginning of the project, the ‘without’ group is referred to as a ‘control group’. The strength of this strategy is that attribution of changes to project influence is more clearly demonstrable than it is in the other designs. Changes occurring in the ‘with’ community during the life of the project are ‘controlled’ by being able to identify and then subtract changes seen in both communities. Any remaining changes in the ‘with’ group can then be assumed to be due to project influence. In reality, although control groups are closer to a scientific ideal, they are expensive and logistically difficult to carry out. They may be most suitable in pilot projects or when mandated by a donor interested to clearly determine attribution.
- **the ‘before and after’ scenario.** This is a comparison between two distinct time periods. A specific set of information (selected indicators) is collected from a representative group of intended beneficiaries (target population) *before* the project has been implemented (i.e., a baseline study is essential for this approach) and then compared a similar collection of information at the end of the project *after* implementation (e.g., at the final evaluation). The before and after design is weak in addressing attribution; it also cannot answer whether the project target population could have done better without the project.

Effectiveness

The core issue in assessing effectiveness is value for money. Within CARE, this is generally done only at the output level, i.e., assessing cost-effectiveness for project products/results that are within the control of the project. This approach is thus able to be done within the lifetime of the project.

A deeper level of assessing effectiveness is a cost-benefit analysis, i.e., comparing resource inputs to effects and impacts for the target population. A major weakness in such analyses is a tendency to focus only on numbers to the exclusion of many qualitative aspects, e.g., local target population perceptions about the significance of the indicators being used.

Significance

One of the principal design strategies to address this concern is participatory planning and management, including participatory evaluation. The weakness of a participatory approach can be the logistical efforts needed to gain and sustain active participation. Other considerations of significance include scale (how

many people are reached) and replicability (whether or not this model could be repeated in other projects in other communities).

Sustainability

The core concept of sustainability is the continuation of project activities after the end of project support. It may also refer to self-financing (financial sustainability) and/or continued flow of support to target populations through the resources and initiative of local institutions (operational sustainability). If a specific institution is being enhanced to continue project benefits, then criteria for assessing institutional sustainability may include issues of organisational maturity, efficiency, effective implementation, consolidation, and financial viability. Another dimension of sustainability relates to environmental impact. Are the practices promoted by the project in harmony with ecological considerations, or do they deplete natural resources?

It is important to be clear about what element(s) of sustainability are being assessed, and what are the indicators of these aspects. For example, in an ANR project, the assessable aspects of sustainability can include:

- maintenance of a certain project activity (reflecting sustained demand for a service, as well as financial sustainability and the sustained provision of that service; i.e., effects on the farmers and the system)
- adoption by farmers of a specific technology (sustained use, effects at the level of the individual farmer)
- an extension system that allows farmers to continue to identify new technologies (sustained feasibility, capacity, and effects of institutional development)
- productivity of the farming system (sustained effects)
- environmental impact
- impact on household livelihood security.

Many projects focus on the first two levels in the above list. Other ANR experts, however, feel that these issues are actually of lesser significance than the lower levels in the long run.

An ultimate design strategy for assessing beneficiary sustainability is to do an ‘ex-post’ evaluation on the target population several years after the project has ended. Impacts that continue to be demonstrated after such long intervals show that changes in the community were fundamental and ‘sustained’. Two major weaknesses in this strategy are the duration of time before getting information about sustainability and the rarity of any donor being willing to fund an ex-post evaluation.

CHAPTER 5

What needs to be included in detailed project planning in order to have the desired information at the right time in usable form?

Responsibility for M&E

Projects have a responsibility to identify a process that ensures the design of the M&E system is both appropriate and sustainable for its providers and users. When we are assessing the resources required to operate an M&E system, we need to assess the means and costs of collecting, managing and analysing the data against the value of the ‘end product’, i.e., the usefulness of the information produced. The requirement is for an M&E system which is sustainable, i.e., able to be operated and managed by collaborating institutions, their staff and the project target population. Achieving sustainability has implications as far back as the project preparation phase when the OVIs are first identified and described.

This process involves the active participation by all the people who have an interest in the information contained within the system. The providers of data collected, and those responsible for its ‘input’ into the system via the project monitoring activities, are invariably among the users of the information ‘output’ from the system. There is an obvious causal relationship between the quality of data ‘in’ and the information ‘out’. If the M&E system is deemed as useful among the target population during the implementation phase, the chances are good that it will also be sustainable. A well-designed participatory M&E system should represent one of the benefits of the project.

Participation involves not only giving people opportunities to become involved with planning and M&E, but it also means empowering those people to influence the final outcomes or decisions based on the information generated. The following box is a short checklist that can be used for assessing the participatory aspects of a project M&E design.

Checklist for assessing participation in M&E design

- Has it been designed with participation of all stakeholders?*
- Does it involve the target population?*
- Can it be fitted into the activities of collaborating agencies?*
- Do the staff (and community) responsible for M&E have the necessary skills?*
- Is it going to be sustainable for the duration of the project?*
- Can it be sustained by other groups after the project is ended?*

Pre-project planning for M&E

Ideally, thinking about the M&E system for a project should start at the stage of appraisal and project design, not when the project has already been approved and implementation has begun. There are four important reasons for this, as shown in the box below:

Reasons for early planning of project M&E

- Concern about M&E encourages clearer thinking and a more refined statement of the project objectives, assumptions, indicators and activities.
- Adequate provision can be made at the outset for meeting the cost of M&E
- M&E can be built from the start into the various project components
- Information users (including target population members) can participate in designing an appropriate M&E system that is acceptable and useful for their needs, not just for project and donor use.

When consideration for M&E is not included from the earliest point in project planning the M&E systems may be constrained by the design of the preliminary assessments. The possible limitations include lack of specificity in the project log frame (e.g., vague project objectives and outputs, or unclear indicators and means of verification), and designs for information management that simply

extract data without actively involving the target population in planning and implementation of the system.

Planning for M&E in an existing project

The optimal time for creation of a full M&E plan for a project is after funding, but before the initial baseline and start-up of interventions. All too often, however, the reality is that projects are faced with creating their M&E plan when they realise that, although implementation is occurring, information is not flowing.

Project documents (and their ‘log frames’) are an important tool for project management, but they do not usually contain sufficient detail when it comes to information systems. Log frames do list some essential items for planning information management: desired information (as ‘objectively verifiable indicators’) and sources of information (as ‘means of verification’). These two categories, however, do not include any answers for the following key questions:

Key information system requirements not included in standard Log Frames

- How will the information be gathered? Who will collect it? When will it be obtained?
- How will the gathered information be analysed? Who will analyse it? When will the analysis be done?
- Who will receive the results? In what format will they be distributed? And what decisions in (or about) the project are dependent on getting the analysed information?

Recognising that the log frame does not provide enough detail by itself for creating the M&E plan, it is necessary to develop a strategy for generating the missing elements. A useful way to do this is to prepare and complete an Monitoring and Evaluation Planning Matrix that expands the Log Frame matrix to include the key elements of an M&E plan (see chart on next page).

Monitoring and Evaluation Planning Matrix (expanding beyond the Log Frame)

Objectives	OVI	Means of verification (MOV)			Type of activity: monitor, evaluation	Frequency	Application (expected uses)	Circulation (expected information users)
		Sources of information	Method for data collection	Method for analysis of data				
Hierarchy of Objectives	Indicators							

Operational definitions for the table:

- **Objectives** - hierarchy of objectives in the log frame (e.g., Final Goal, Intermediate Goal, Output, Activity)
- **Indicators** - details about exact information desired; clarify meanings of vague terms; link to impact, effect, output levels
- **Methodology** - what specific *sources of information* (which records located where, what persons to interview); which *data gathering methods*, what tools, who to collect the data, and when; which *means of data analysis*, who to do, and when
- **Type of M&E activity** - regular monitoring, or periodic evaluation (or one-off diagnostic study)
- **Frequency** - how often will information about each specific indicator be gathered
- **Application** - what anticipated uses for the information, what decisions will be influenced by the results
- **Circulation** - information users; dissemination, who should get the information and analyses, and in what form

Below are two examples from completed M&E matrices of CARE projects done at the Kabale '96 M&E workshop. The extracts here show only one indicator at the IG level for each project.

Community Reproductive Health Project

IG: Increased Number of Women Seeking Maternal Health Services at a Health Facility

Indicators	Sources	Methods	Who	Data Analysis	Who/Why	M or E	Frequency	Application	Circulation	How
% of all deliveries in project area attended by trained health worker	<u>Original Sources</u> <ul style="list-style-type: none"> • HMIS (DMO) • CRHW records • CREHP clinic • CRHW data 	Review records, census projections	Project M&E person	Quantitative tallies and trends	Project M&E person	Mon.	Monthly; Quarterly; Semi-annually; Annually	Assess trends: are we on track? If not, why? Make adjustments; Comparative assessment	Direct partners; CARE HQ CARE USA Donor - USAID	Reports, PIRs, API
	<u>New Sources</u> <ul style="list-style-type: none"> • Community women having birth in past year • LC3 health committees • Women bringing babies for EPI • TBAs 	Survey Group meetings Key informants Focus groups	Project team, Partners Counterpart NGOs Community workers	Quantitative correlation Triangulate Qualitative patterns, ask and answer why?	Project team and partners for interpreting meaning	Eval	Baseline; Mid-term; Final	Set foundation for measuring change Assess strategy effectiveness Assess project effects	Partners; CARE; Donors; Interested groups	Group meeting: presentation with support graphs, tables, maps, discussion Informal meetings, radio programmes

Bushenyi-Ntungamo Agricultural Innovations Project

IG: 700 Participating rural HHs in Bushenyi and Ntungamo achieve significant increase in agricultural production through environmentally sound practices by 1999

Indicator	Sources of information	Methods of data gathering	Who	Data analysis	Who	Type of M&E	Frequency	Application	Circulation	How
Percent (%) of participating poor rural HHs practising one or more project promoted environmentally sound agricultural practices	'Contact' farmers	Interviews of a sample of contact farmers	Field officers, FEWs	Qualitative; advantages, disadvantages constraints	Field officer, M&E person	Mon Eval	Monthly	Track achievements	Project staff District officials CARE Community	Narrative reports
	Participating HHs (farmers)	Update records of participating HHs	FEWs	Quantitative: tallies, proportions	Field officer, M&E person	Mon	Monthly	Reassess strategy		Tables
	Participating HHs (farmers)	Observation of a sample of farmers with checklist	Field officers, FEWs	Qualitative and quantitative achievements	Field officer, M&E person FEWs	Eval	Twice a year	Modify interventions if necessary		Histograms
	Community, all farmers	Update of social map with farmers, community	Field officers, FEWs	Quantitative: tallies, distribution Qualitative: explanations	Field officer, M&E person, FEWs, farmers	Eval	Twice a year			Maps
										Photographs and sketches
										Examples of pages from farmer's records (scanned or photocopied)

CHAPTER 6

Indicators - what do we (or the users) specifically want to know about projects?

Indicators

Indicators are qualitative or quantitative criteria used to check whether proposed changes have occurred. In the context of the log frame, indicators (column 2) are defined as specific (explicit) and objectively verifiable criteria which can be used to assess whether the objectives (column 1) have been met. In other words, indicators are designed to provide a standard against which to measure, or assess, or show, the success or progress of a project against stated targets.

While indicators can be used to assess progress toward project targets, the indicators are not the same as targets. Targets specify desired results within a specified time span (e.g., 700 farmers trained in compost mulching techniques within 3 years, or 50 community health workers trained in each of 4 districts within the first year of a project); but there can be targets that apply to inputs, outputs, effects or impacts. As used in the CARE log frame format, indicators are assessments of progress towards achieving desired changes in the target population, i.e., reaching intermediate or long-term objectives. Indicators are not generally presented as numerical targets in themselves. Some donors, however, do vary in their degree of separating or merging indicators and targets (see Annex 5).

The five main types of indicators used in project monitoring and evaluation correspond to the main levels in the project hierarchy of objectives. By objective level, the corresponding indicators are shown in the following table:

Types of indicators by objective level

Hierarchy of objectives	Indicator type	Description of indicator type	Examples
Final goal	Impact	assess actual change in the conditions of the basic problem identified; shows changes that are fundamental and sustainable without continuing project support	<ul style="list-style-type: none"> household livelihood security levels, as shown by measures of health, nutrition, education, community participation and economic security
Intermediate goal	<i>Effect</i>	describe target population responses to project outputs, e.g., behaviour change, reactions and perceptions; systemic changes in institutions	<ul style="list-style-type: none"> % of households in target area using improved fuel-conserving stoves number of health units with a cost-sharing system
Outputs	<i>Output</i>	describe project products, i.e., the direct outcome of project activities and inputs for which the project is responsible	<ul style="list-style-type: none"> number of health workers trained in FP services number of farmers trained in proper handling of pesticides
Activities	<i>Process</i>	describe project activities (or processes)	<ul style="list-style-type: none"> number of trainings held
Inputs	<i>Input</i>	describe what resources go into the project	<ul style="list-style-type: none"> number of TBA kits provided number of staff supported by project

Indicators and information users

Data about inputs and activities are essential for the day to day job of the project manager. The project can follow these levels through ‘process indicators’. For example, the project manager needs to know the number and kinds of training courses in a specified time period in order to budget for the required activities, prepare training materials, etc.

Once the project activities are started, the project will be able to measure output indicators (e.g., the number of providers trained). Output indicators will tell the project manager how close the project is to achieving the expected targets. At the same time, output indicators permit managers and programme offices to track trends for achievements, and to spot difficulties indicating the existence of

problems needing attention. Output indicators should come from the routine information gathering (i.e., monitoring) activities required of all projects.

In contrast, effects indicators showing the interaction of project products and community responses will require other means for data collection than routine monitoring of daily activities. They need more probing methods, such as evaluation surveys and qualitative or participatory approaches. Effects data is useful for project managers, country directors, regional managers and the international headquarters.

Finally, indicators are needed that will permit analysis of the project's impact on the household and household members, as well as at the institutional level. This dimension will usually not be clear enough for reliable assessment until several years after an intervention is implemented (e.g., 5-10 years after project start-up). This information is critical to government, to donors, and to CARE's Board for setting direction and long-range strategic plans.

Issues affecting selection of indicators

Although not their exclusive information need, donors always ask for some numbers (i.e., 'quantitative' information). Project logical frameworks written to meet donor requirements tend to support this number-crunching orientation. Fundamental and sustainable changes in people's lives are a 'final goal' that is rarely measured. Providing information on numbers of people reached, number of trainings, etc. is easier than assessing deeper changes in people's lives. For these reasons, both donors and NGOs have been more comfortable with measures of project effectiveness than project impact. It is only recently that donors have begun to ask about effects and impacts that are best illustrated in words or pictures (i.e., 'qualitative' information).

Input and output indicators are easier to assess than effect or impact indicators, but the 'lower' level indicators only provide an indirect measure of the success of a project. To use them, one has to assume that the achievement of certain activities will automatically result in positive changes (e.g., desired effects and impacts), but the lower level indicators cannot demonstrate the reality of such change. On the other hand, however, it can take many years for impacts to become measurable when looking at the target population as a whole. For this reason, it is sometimes appropriate to make qualitative preliminary assessments of the direction and nature of impacts by doing cases studies of selected households within the lifetime of the project.

Measuring cost-effective use of inputs and overall project effectiveness will always be important. Donors want to know how their money has been spent and ensure that activities are in line with those outlined in the project agreement. However, there is an increasing recognition that measuring impact is also important, although difficult. It is difficult because it is necessarily subjective, and because one has to wait so long to identify changes that qualify as impacts (fundamental, sustainable, and attributable to the project). Quantitative information alone cannot adequately assess impact level changes in people's lives. Moreover, changes that development workers expect may not be the changes that the members of the target population desire. It is important to recognise differing perceptions of reality.

Ultimately, the selection and nature of indicators for a project should be guided by the nature of the objectives and the intended effects and impacts of the project. The first step, therefore, is a clear and unambiguous statement of the hierarchy of objectives: short-term, intermediate, and final goals. These may pertain to short-term achievements, such as construction of wells (outputs), or changes in behaviours among the target population (intermediate goal), such as starting a small enterprise. Or they may be long-term impacts such as the eradication of rural poverty or better health of the target population (final goal).

There is little conceptual problem with outputs and effects, which are generally straightforward and directly measurable, but concepts such as poverty and health are not easily assessed. For instance, with health, it is first necessary to specify the exact aims of the given project: better health status of the target group as a whole or specifically for women and children; prevention of specific diseases or improved health care services; or all of these. Depending on the specifications, appropriate indicators can be selected.

Criteria for selection of 'good' indicators

While the choice of indicators is a matter of common sense, or of experience and knowledge of statistical data sources, certain basic criteria can be applied. At the Kabale '96 workshop, the participants prioritised the following criteria to assist in selecting good indicators:

Priority criteria for indicators

Relevant

The indicators should be directly linked to the project objectives, and to the appropriate levels in the hierarchy.

Technically feasible

The indicators should be capable of being assessed (or ‘measured’ if they are quantitative).

Reliable

The indicators should be verifiable and (relatively) objective; i.e., conclusions based on them should be the same if they are assessed by different people at different times and under different circumstances.

Usable

People in the project should be able to understand and use the information provided by the indicators to make decisions or improve their work and the performance of the project.

Participatory

The steps for working with the indicator should be capable of being carried out with the target community and other stakeholders in a participatory manner: i.e., data collection, analysis and use.

Other criteria which can also be helpful in selecting indicators include the following:

- **comprehensible** - the indicators should be worded simply and clearly so that people involved in the project will be able to understand them.
- **valid** – the indicators should actually measure what they are supposed to measure, e.g., measuring effects due to project interventions rather than outside influences.
- **sensitive** – they should be capable of demonstrating changes in the situation being observed, e.g., measuring the GNP of Uganda doesn’t tell us much about the individual households in one district.
- **cost-effective** – the results should be worth the time and money it costs to collect, analyse and apply them.
- **timely** – it should be possible to collect and analyse the data reasonably quickly, i.e., in time to be useful for any decisions that have to be made.
- **ethical** – the collection and use of the indicators should be acceptable to the communities (target populations) providing the information.

Few indicators fulfil all these criteria. But they may still indicate direction and general magnitude, thereby assisting in comparisons over time or among different areas or groups of people at a point in time.

Choice of appropriate indicators is an art that requires experience and skill. It requires thorough understanding of the information needs of project management and information users at different levels. Choosing indicators also requires knowledge of how best to obtain (and analyse) the data for the indicators, and of the limits imposed by both costs and techniques.

Thus, infant mortality rate (or maternal mortality rate) may be a suitable indicator to monitor health in countries with comprehensive systems for registering vital statistics, i.e., births and deaths. It may be quite unsuitable for project monitoring where the target population is relatively small and/or where the data must be obtained by a household survey.

Similarly, agricultural production may be relatively easy to measure in a country like Malawi that has Ministry of Agriculture staff to collect crop data and the country relies on one staple food (maize). In contrast, it can be very difficult in Uganda to ensure enough staff in order to monitor so many crops and varied times of harvesting; the only option may be the unreliable one of expecting farmers to keep their own records.

How indicators can be improved

Project staff responsible for developing an M&E plan may need to improve the indicators presently in the log frame, or to reassign them to different levels in the hierarchy of objectives. The box on the next page gives some examples of how to fix inappropriate indicators.

Finding and fixing inappropriate indicators - some examples

Does the indicator get to the heart of the issue reflected in the Intermediate goal (IG)? Is the indicator valid? Does it measure (or assess) what it is supposed to?

IG: By December, 2005, a functioning and sustainable benefit-sharing programme between the Bwindi National Park and surrounding communities, and between the state farms and surrounding communities will exist.

Indicator: 20% of sampled households will participate in income-generating activities. [*Problems: indicator not clearly linked to goal, expressed as target*]

Better indicator: % of communities within X km border zone around Bwindi Park with self-funded natural resource programmes in place for at least XX (time).

Is the IG level ('effect') indicator statement actually at an activity or output level of the project?

IG: 60% of families in project area will have adopted appropriate farming techniques.

Indicator: % of families that have received training in better agricultural methods. [*Problems: output level, non-specific statement*]

Better indicator: % of target families that have adopted mulching banana stems for weevil control. (i.e., a specific agricultural method)

IG: Improved access to clean water for target population through repair of old pumps, installation of new pumps and hygiene education.

Indicator: Re-assessment of existing water systems completed. [*Problems: activity level*]

Better indicator: % of identified old pumps repaired by local water committees after project-supported training.

Is it relevant to the project environment?

IG: To increase the proportion of youth in Kabale (Arua, Mbale, Kampala) who will be able to practice STD/HIV prevention and control by 1999.

Indicator: Percentage of participants who are able to name a virus as the cause of AIDS.

[*Problems: knowledge does not equal skill; this knowledge may not be essential*]

Better indicators:

- ◆ % of randomly sampled youth (15-20 years old) who are able to recognise a condom (and condom packet) and describe its use.
- ◆ % of randomly sampled youth who are able to dress a condom properly on a wooden condom demonstrator.

The chart on the next page shows how the Kabale '96 M&E workshop participants modified some existing indicators from two CARE projects their reasons for doing so, based on the criteria for good indicators previously defined.

Applying Indicator Skills to BAIP and CREHP

CREHP IG: Increased number of women seeking maternal health services at health facility.		
Original indicators:	Modified Indicators	Changes made and reasons
Women delivering under trained care from 24%-45% of all pregnant women in the project area	% of all deliveries in the project area attended by trained health worker	<ul style="list-style-type: none"> • Target taken out • Simplified/clarified language
# of women attending ante-natal services at least once in a given pregnancy	% change in women attending ANC at least once in a given pregnancy	<ul style="list-style-type: none"> • Indicator measured in % instead of # because % may be easier to measure
# of women referred early to and seeking for services from health units in order to prevent obstetric complications	<p># women referred early to prevent obstetric complications</p> <p># of women referred who actually seek services</p>	<ul style="list-style-type: none"> • Simplified language • “referred early” and “seeking services” were separated; the first is at the output level and within control of the project, while the second is at the effect level and is less within the control of the project
BAIP IG: 7000 Participating rural HHs in Bushenyi and Ntungamo Districts realise significant increase in agricultural production through environmentally sound practices by 1999		
At least 60% of the participating poor rural farm HHs will practice environmentally sound agriculture by 1999	% of participating poor rural HHs practising one or more project promoted environmentally sound agricultural practices	<ul style="list-style-type: none"> • Target (60% and year 1999) removed • Indicator made more specific: (“one or more environmentally sound practices”)
At least 25% of the participating HHs have increased their marketable produce by at least 20% by 1999	% of participating poor rural households with production increased by at least 20% for any of the following: (milk, bananas, etc.)	<ul style="list-style-type: none"> • Target removed • Indicator made more specific to help measurability (i.e. produce is defined by item, and only significant items are selected – instead of all crops including minor ones) • “marketable” deleted because IG aims at overall production, not just marketable crops
At least one functional marketing group is formed in each sub-county reached by the project.	# of active marketing groups formed by participating HHs	<ul style="list-style-type: none"> • Target of “one group” removed • Indicator made more specific: identifying who forms groups • The vague word “functional” replaced with “active” to increase measurability

Technical considerations

Numbers vs. Percentages:

The goals (which include targets) and the corresponding indicators should be consistent in terms of using numbers or percentages (%). For example, in a reproductive health project in a rural area of Uganda, the total numbers of pregnant women may be very difficult to assess; therefore, framing targets and indicators in terms of the proportion (%) of those attending antenatal clinics may be more manageable.

However, it can also be important to consider the value of using both numbers and percentages. Continuing with the above example of a reproductive health project, it is important to remember that due to the natural growth of the population, there are increasing numbers of girls becoming reproductive age adults each year. Since the total population of reproductive age women in the project area is rising every year, if the proportion (%) of women served remains the same, in fact, the project is likely to be reaching increasing numbers of women. Therefore, it can be important to document both numbers and percentages in order to describe project achievements (or target population needs).

Aggregation of Data:

An important factor affecting the cost of data collection and the method of analysing any indicator is the level of the data collected. Indicators may be aggregated (pooled or combined) at the national level, derived from national sources and only applicable at this level. An example is the gross national product (GNP) derived from national accounts. A second category of aggregate indicators comes from the local level (community, village, district). Examples are the availability of medical facilities or schools in each village/district and their condition. A third category of indicators is based on households or individuals, usually obtained through a census or survey. The extent of literacy and the height and weight of children are examples.

By and large, aggregate indicators are easier to collect than household indicators, but because they cannot readily be disaggregated (e.g., separated by gender, age, or specific community), distribution data cannot be obtained from them and their utility is very limited. Hence, we cannot use GNP to arrive at the gross product for a district, or for the poor. On the other hand, household data can be disaggregated, but they are generally costly to collect.

As far as possible, the indicators selected should be separable by gender, income group, etc., in line with project objectives. Disadvantaged groups such as the rural poor and women cannot receive equitable benefits from development projects unless they are specified as target populations with strategies indicated whereby their disadvantaged status can be overcome and their conditions monitored. Aggregate indicators cannot achieve this; indicators based on the household or the individual are required to provide data separately for men and women or for socio-economic categories such as the poor or landless.

Direct vs. Proxy Indicators:

Indicators may be direct, such as reported personal statements by reproductive age women about use of family planning methods including condoms, or indirect (proxy), such as the number of condoms sold or distributed in a community. Indirect indicators are useful where direct measurement is not feasible or cost effective. A good example of applying proxy indicators is estimating income based on nature and size of assets, type of house construction, or expenditure patterns – because few people are willing or able to accurately report their income from all sources.

Precision requirements:

Both indicators and related information requirements should be periodically reviewed to take into account changing needs or ways to improve data quality. For each indicator, we must consider the degree of precision needed in the measurement and whether we can achieve it. For example, it might do little good to measure performance if our measures are so gross that we cannot tell whether the standards have been met. In this connection, indicators already in use, or indicators used in other projects, should be reviewed before new ones are considered.

Nature of information required:

In addition to considerations about indicators by the various categories above (hierarchy of objective, qualitative or quantitative, direct or proxy), it can also be useful to consider the intended content of the indicators. The following chart shows nine types of indicators classified by expected content.

Common Types of Indicators

Indicator types	What they show	Examples
Indicators of availability	These show whether something exists and if it is available.	Whether there is one trained local worker for every ten houses.
Indicators of relevance	These show how relevant or appropriate something is.	Whether new stoves burn less fuel than the old ones.
Indicators of accessibility	These show whether what exists is actually within reach of those who need it.	A health post in one village may be out of reach of other villages due to mountains, rivers, lack of transport or poverty.
Indicators of utilisation	These show to what extent something that has been made available is being used for that purpose.	how many non-literate villagers attend literacy classes regularly.
Indicators of coverage	These show what proportion of those who need something are receiving it.	of the number of people estimated to have tuberculosis in a given area, what % are actually receiving regular treatment.
Indicators of quality	These show the quality or standard of something.	whether water is free from harmful, disease-causing substances or organisms.
Indicators of effort	These show how much and what is being invested to achieve the objectives.	how long it takes how many men to plant what number of palm trees in a week.
Indicators of efficiency	These show whether resources and activities are being put to the best possible use to achieve the objectives.	the number, frequency and quality of supervisory visits after introducing bicycles to replace heavy vehicles.
Indicators of impact	These show if what you are doing is really making any difference.	after a campaign against measles, does the incidence of measles reduce over the next several years

[Feuerstein, 1986]

The bottom line:

Would the information be *'nice to know'*, or do we *'need to know'*? The temptation to collect data merely for the sake of interest (or 'it might be useful someday') should be resisted. If there is a serious doubt as to whether an item should be collected or not, the general rule is to leave it out.

CHAPTER 7

Means of Verification: where can we find the information we need (sources)? And how can we be sure that the information is representative (sampling)?

This chapter (and the next two chapters after it) deal with the third column in the project logical framework, the ‘Means of Verification’ (MoV). The MoV column is a very important column for monitoring and evaluation, but may not have been recognised as such until the real M&E planning begins.

The Means of Verification is often interpreted by log frame planners to only mean ‘sources’ of information. In actual fact, it refers to a much broader set of issues related to assessing the project indicators (OVIs) which need to be expanded in the M&E planning process. The key elements are:

Sources of information

Where the information comes from (e.g., people, institutions, documents, etc.). As it is generally not feasible to talk with everyone involved with a project (all target households, all stakeholders, etc.), strategies are

usually necessary for getting information from a ‘representative’ sample of the complete set of potential information sources. (See later section in this chapter)

Methods of data collection

How the information about the indicators is actually obtained (e.g., documents review, interviews, participatory mapping exercises with the community, focus group discussions, farmers' self-maintained records, etc.). (see Chapter 8)

Methods of data analysis

How the collected information is consolidated, described, and interpreted in order to make it useful. (see Chapter 9)

Methods of dissemination

How the information is prepared for application/use and circulation to information users. (see Chapter 10)

Major sources of information

Sources of information may be classified as either primary or secondary. Primary sources refer to people or places where one can obtain new information (not previously existing). Secondary sources refer to information which has already been gathered (possibly for reasons other than the purposes of the present assessment).

Pre-existing information (secondary data)

The term 'secondary data' refers to information which is already existing, i.e., it has been previously gathered by some other person or organisation. Secondary data includes many kinds of written and visual materials, e.g., reports of previous surveys, maps, organisational archives, aerial photographs.

Quantitative (numerical) data may be obtainable from the records of government agencies and other institutions. District or national statistical offices may have extensive data on file which can be obtained for diagnostic studies and impact evaluations. Qualitative (descriptive) information may be available from universities or other research institutions. Secondary sources also include the project reports and documents that have been produced for other purposes, e.g., reports of training workshops, or monthly reports of field staff.

Obtaining data from secondary sources is obviously cheaper and easier to access than going out to the field to gather fresh information. Therefore, gathering and

using secondary data should generally be considered as a first option when it is available. That said, however, all secondary data must be used with caution because it has certain inherent disadvantages (see box below).

Potential limitations of secondary data include:

- ***Inadequacy:*** If the necessary data is not in the existing reports, it is usually not possible to go back to the same sources to get the missing information.
- ***Potential for poor quality:*** Secondary data is collected by others, and sometimes the means and circumstances of data collection are not recorded. Thus, the project using the secondary data may not be sure how it was collected and has no control over its quality.
- ***Variation in concepts:*** There can be differences in definitions of indicators (e.g., some studies may use 10-19 years as the ages of adolescence, others use 13-24; some studies may have one definition for a ‘commercial’ farmer or a ‘cash crop’).
- ***May be out-dated:*** The information may exist, but it may be old.
- ***Inaccessibility:*** Some government agencies, organisations, or individuals may not allow access to their data.

New information (primary data)

Primary data is obtained by going to the field to collect new information, i.e., it requires that a specific study be planned and carried out. Typically, primary data is needed for monitoring, as well as baseline, final and ex-post evaluations. Data gathering can be done by various methods, e.g., rapid observation by a team of trained observers (who can include staff, target population, and other stakeholders); sample household surveys by enumerators and field staff; or in-depth case studies by skilled teams. (see Chapter 8)

One of the big advantages of arranging for primary data is that the project has control over what data is gathered, as well as when and how the information is collected. In this way, it is easier to maintain control over quality of information, and to do follow-up for any critical findings or missing information.

There are also disadvantages, especially the skills requirement and costs. Skills needed for successfully planning and implementing primary data collection are substantially greater than those needed for working with secondary data. Costs of primary data collection can be high, particularly if the persons doing it are relatively inexperienced (causing waste of resources, collecting too much data) or the study design is very complex.

A central principle to keep in mind, therefore, is that the projects should aim to keep collection of primary data to a minimum. Caution is needed in selecting indicators which can be readily assessed (i.e., easily gathered and analysed). Information requirements and costs of collection should be kept to a minimum by focusing only on the most significant issues and using straightforward designs.

Examples of primary sources include:

- the target population (e.g., personal experience of issues affecting their lives; observations and opinions about the project strategy)
- project personnel (e.g., observations about the target population they are serving; personal experiences of the project organisation)
- other interested parties, such as agencies working with the same or similar populations

Bias and sources of data (issues affecting selection of information sources)

There are several potential errors in selecting the sources of information for indicators in the information system. Two critical risks not to overlook in project M&E designs include seasonality and sampling.

‘*Seasonal bias*’ refers to the effects of collecting information at a specific season. Indicators that are influenced by seasonality or weather are more likely to be affected, e.g., incomes related to specific cash crops. Seasonality can also influence respondents’ willingness to participate, e.g., it is unwise to expect adult household members to be home in the morning (and available for interviews) during planting season in Uganda.

‘*Sampling bias*’ refers to errors of judgement in selecting the persons or places from which to gather information, e.g., arranging to sample only communities along a tarmac road – and thereby not reflecting the issues of the project participants or target populations who do not live in those areas. As a general

strategy, it is wise to obtain information from multiple kinds of sources so that their individual perspectives are balanced and a truer picture emerges. (See also following section on sampling)

Specificity of sources

When preparing the information matrix (and preferably, even when preparing the original project log frame), it is desirable that the types of sources mentioned be as specific as possible. It is all too easy to write ‘project reports’ in the MoV column of the log frame, or the ‘sources’ column of the M&E planning matrix. This can result in projecting information from (or about) an indicator that may later prove impractical.

The bottom line:

Data collection for M&E should be limited in scope and sharply focused. The main reasons for this include constraints on time, skills and budgets.

Examples of sources and selection issues - CARE projects

Community Reproductive Health Project

Indicator	Sources	Advantages/Disadvantages
% of women with recent deliveries who attend/obtain post-natal services	<p><i>Secondary sources:</i> HMIS records (DMO) CREHP clinic records CRHW records TBA records</p> <p><i>Primary sources:</i> Community women having a birth in past one year Women bringing babies for EPI Midwives TBAs</p>	<p><i>Secondary sources:</i> (+) Records exist with information about post-natal visits (-) Reliability, accuracy and accessibility of records is questionable (-) Clinic records may inflate client numbers to ensure provision of resources</p> <p><i>Primary sources:</i> (+) First hand (primary) information is important to the project (-) There are divisions in the community (the community is not homogenous) (-) Sources can be determining factors on what results the information will show</p>

(+) = Advantage; (-) = Disadvantage

HMIS Health Management Information systems

CRHW Community Reproductive Health Worker

TBA Traditional Birth Attendants

EPI Expanded Programme on Immunisation

Bushenyi-Ntungamo Agricultural Project

Indicator	Sources	Advantages/Disadvantages
# of active marketing groups formed by participating HHs	<p><i>Secondary sources:</i> FEW and FO records District agricultural extension office records Marketing group records</p> <p><i>Primary sources:</i> Project staff Marketing group members District marketing department officer Heads of participating HHs and spouses</p>	<p><i>Secondary sources:</i> (+) Records exist and cheap to access (-) Inadequate group records (-) Information may not be reliable and relevant (-) Variable quality of project records (-) District offices may not have current information</p> <p><i>Primary sources:</i> (+) Collecting information from groups is easier and cheaper than going to individual households (+) Responsible district officers exist and are stable (-) Unstable membership of groups formed (-) Relying on farmers' recall from memory</p>

Sampling - how can we know what is happening with a large population by gathering data from a smaller group?

In the design of an M&E system, the objective is to collect indicator data from various sources, including the target population for monitoring project progress. Sampling is a strategy for selecting a smaller sub-group of the target population (intended beneficiaries) that will accurately represent the patterns of the target population at large.

The main purposes of sampling are to:

- *economise on the resources* required to collect and manage the desired data
- *improve quality of the data.*

Key questions in thinking about sampling:

Why?

Why is information being collected from these sources? What is the purpose of the study (survey)? For example, is it being done to gather information for planning, monitoring, advocacy, identification of vulnerable populations, etc.

About whom?

For what population sub-groups are results needed? For example, is it specifically women farmers growing bananas on at least ¼ hectare of land or is it generally any farmers growing at least some bananas for commercial sale?

From whom?

Who is in the 'sampling frame', i.e., what group of persons (or households or farms, etc.) will be eligible to be drawn for the sample? And what larger group is the sampling frame supposed to represent? For example, some ANR projects have only used trained farmers as their sampling frame, and then erroneously tried to draw conclusions about effects and impacts among the larger target population of all farmers resident in the area.

With what precision?

What accuracy of results is needed? If comparisons are going to be made (e.g., by sub-group or theme), how large a difference is considered important and expected? Is it necessary to know that 10 out of 100 people behave in a certain way, or is it essential to know if 10 out of 10,000 people behave in that way?

Example of sampling frame in CARE project:**Development Through Conservation Project**

When monitoring for adoption rates of project promoted activities in the DTC project, the project used three methods of sampling and acquired three different results:

- 1) The project first sampled people it worked with directly.
- 2) Then, the project asked people if they knew of anyone who had copied them. Based on this information, the project calculated an average diffusion rate factor.
- 3) Following that, a random sample of people in the target area was asked if they had taken on any new agricultural activities in the last five years, which activity, and where they had gotten the idea.

Comparing the results of the three approaches was revealing:

- 1) extension staff reported giving beans to 572 households;
- 2) when the diffusion rate was factored in, the number of adopting farmers rose to 744;
- 3) but when the random sample was analysed, an estimated 5,700 farmers had adopted the improved bean varieties.

This example shows the importance of defining the target population, and then ensuring the sample represents that group.

Probability sampling for quantitative studies

Sometimes, projects need to quantitatively assess changes (effects, impacts) that are widely distributed in the project area. In such circumstances, the M&E sample design should, if possible, use a ‘probability sample’ (see box below). This means that each and every unit of assessment (e.g., each household) in the target area has an equal and positive chance of being selected. Probability sampling relies on randomisation among all of the eligible candidates, e.g., by

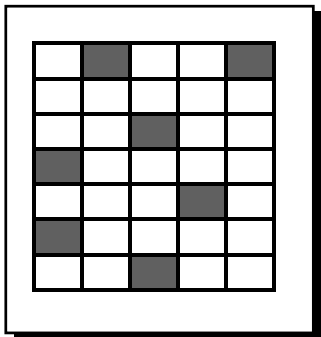
numbering households and drawing numbers from a hat or a random number chart.

Advantages of a probability sample for a quantitative analysis

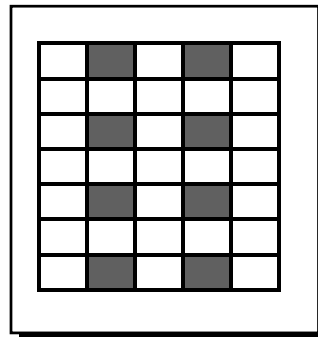
- it allows you to measure the sampling error (the likelihood that your results are just due to the effects of sampling)
- it allows you to test the statistical significance of the observed trends (the likelihood that results are due purely to chance)
- it reduces the risk of a biased selection of sampling units.

The graphic below and the following table illustrate major types of probability sampling methods:

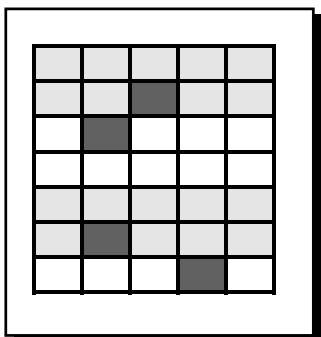
Major probability sampling methods



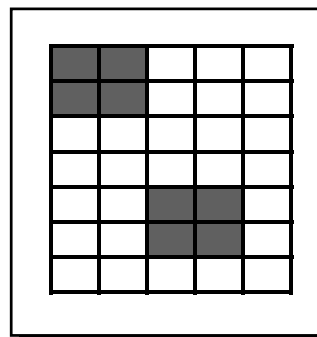
a) Simple Random Sample



b) Systematic Random Sample



c) Stratified Random Sample



d) Cluster Sample

Adapted from: East Africa DME Workshop, '96

Comparing methods for probability sampling

METHOD	ADVANTAGES	DISADVANTAGES
Simple random samples (e.g., household numbers drawn from a hat)	<ul style="list-style-type: none"> • Avoids bias • Relatively simple to implement 	<ul style="list-style-type: none"> • Requires sampling frame for full population • Samples may be very dispersed • May be unrepresentative for key sub-groups • Ignores differences among sub-populations
Systematic random samples (e.g., every third household in a community)	<ul style="list-style-type: none"> • Easier to select • More likely to represent sub-groups (depending on size of the sample) 	<ul style="list-style-type: none"> • Also requires sampling frame for full population • Samples may also be widespread
Stratified random samples (e.g., a random sample among female-headed households, or among households growing at least 30 banana plants)	<ul style="list-style-type: none"> • Makes sure key sub-groups are represented in the sample • Can fix sample size for each sub-group to get representative sample 	<ul style="list-style-type: none"> • Need to know enough about complete target population to divide into sub-groups relative to interests of study • Need to use special analytical techniques when results are combined for different sub-groups, especially when the groups are different sizes
Cluster samples (e.g., random selection of 30 out of 100 villages in the target area, and then random selection of 7 households per village)	<ul style="list-style-type: none"> • Savings in travel costs and time • Only need detailed sampling frame for selected clusters 	<ul style="list-style-type: none"> • May miss out on important sub-groups • Communities selected may not be representative

Purposive sampling

Sometimes it is desirable to purposively (intentionally) choose the respondents in a study for a specific reason, e.g., adolescents attending a family planning clinic. The project is choosing who it is that should be interviewed or surveyed, a choice that should be made very carefully and thoughtfully. In other words, if this strategy is used, it will be very important to clearly define the selection procedures. Purposive sampling can be used with quantitative or qualitative studies.

Such selective sampling is quite different from the sampling based on statistical probabilities used in quantitative studies. Probability sampling depends on randomness for being able to confidently generalise results from a small sample to a larger population. The power of purposive sampling lies in selecting information-rich cases for in-depth analysis related to the central issues being studied.

The skill in designing the sampling strategy is in assessing the degree of variation within the project area, and how the distribution of the sampled households can capture (or portray) this variation. Examples include different agro-ecological zones, proximity to forest areas, etc.

Example of purposive sampling in CARE project:

Uganda Family Health Project

When the project completed its baseline, the three target districts had been broadly covered by a randomised sample survey. However, based on local experience, an earlier qualitative pre-project assessment, and the preliminary results of the baseline, the project management recognised that certain sections of the project area were very different than other areas. Therefore, additional intentional sampling was done to get representative information about four distinct cultural areas plus variations due to landscape and geography. This turned out to be very important because, if sampling had not been done in this purposive (intentional) way, the project would have missed out on valuable information about how the mountainous area influences health behaviour.

A list of different purposive sampling strategies that can be used in qualitative studies (either for individuals or groups) is presented in the box on the next page.

Choosing a Sample:

Purposeful Sampling in qualitative evaluation and research

There are several different strategies for purposefully selecting information-rich cases; the logic of each strategy serves a particular data gathering and analysis purpose.

- 1) **Extreme case sampling:** focuses on cases that are rich in information because they are unusual or special in some way. E.g., the only community in a district that has taken the initiative to prohibit pesticides.
- 2) **Maximum variation sampling:** aims at capturing and describing the central themes or principal outcomes that cut across participant or program variations. E.g., persons of different ages, genders, religious groups, and marital status in an area considering family planning interventions.
- 3) **Homogeneous sampling:** picking a small sample with similar characteristics to describe some particular sub-group in depth. E.g., firewood cutters or charcoal makers in a specific area.
- 4) **Typical case sampling:** using one or more "typical" cases to provide a local profile. These cases (individuals, families/households, communities, etc.) are selected with the cooperation of key informants, such as project staff or knowledgeable participants, who can help identify what is typical.
- 5) **Critical case sampling:** looking for critical cases that can make a point quite dramatically or that are, for some reason, particularly important in the scheme of things. E.g., the life history of a poacher.
- 6) **Snowball or chain sampling:** begins by asking people in the project, "Who knows a lot about __? Who should I talk to?" By asking a number of people who else to talk with, the sample gets bigger and bigger. Useful for identifying specific kinds of cases, e.g., critical, typical, extreme, etc.
- 7) **Criterion sampling:** reviewing and studying all cases that meet some pre-set criterion of importance. E.g., the economic strategies of women-headed households.

Adapted from: M.Q.Patton. 1987. How to Use Qualitative Methods in Evaluation. Newbury Park: SAGE Publications (pp. 51-56)

Sample size

In a project environment, M&E activities and resulting sample sizes are determined by limitations of cost and time. The decision whether to gather quantitative or qualitative data in a particular case also influences decisions regarding the scale of the survey and the procedures for selecting respondents. Realistically, sample sizes of 75-125 are adequate for monitoring purposes in

most projects. The application of ‘cluster sampling’ is particularly effective in being able to save valuable resources.

Another approach is to use in-depth case studies of the target group. Qualitative methods are best used with small numbers of individuals or groups – which may well be sufficient for understanding the human perceptions and behaviours which are the main justification for a qualitative approach.

Example of case study approach

The CARE DTC project in Southwest Uganda has begun using case studies specifically as means of trying to show HH level impacts within the lifetime of the project. In this situation, the sampling frame is comprised of HH ‘adopters’ of specific interventions. Taking adopters as the sampling frame allows the project to get an assessment of impact in a shorter period of time than if they sampled the whole target population. Then, from their records of adoption rates in the target population as a whole, they can get an indirect estimate of overall impact in the target population.

The bottom line:

Larry’s Law: *“Sample size is primarily determined by money and politics, not statistics.”*

Dr. Lawrence Grummer-Strawn
Center for Disease Control and Prevention (CDC)

CHAPTER 8

Methods for gathering information - how can we collect the information we need?

Selection of methods and tools for data collection

Selecting methods for data collection can be confusing, even overwhelming, unless it is approached in a logical fashion. These guidelines will try to clarify some of the main issues to consider in the search for the best methods to use. From the outset, it is worth emphasising that rarely is any one method perfect for a given information gathering situation. Instead, using multiple methods helps to validate the monitoring or evaluation results and ensure representativeness for the various perspectives usually present in communities and development settings (see discussion of validity and reliability later this section).

The first selection issue to consider has been mentioned earlier in these guidelines: **secondary vs. primary data** (i.e., previously existing vs. new data).

QUESTION 1: Existing or new data?

Based on the project's specific information requirements (indicators, variables needed), does some or all of the necessary information already exist as secondary data (e.g., as reports, maps, photographs, diagrams)?

Secondary data

If the answer to Question 1 is YES, then the following questions can be used to assess whether the available secondary information is sufficient and useful.

Content

What is the available content, relative to the information needed? Is it only about the local context (e.g., political history, general demography, etc.), or is it specific to the nature and needs of the project?

Disaggregation

Is the information sufficiently disaggregated to be useful (e.g., by age groups, gender, or specific localities)? If not, are the original data accessible and was disaggregated information collected in the original study?

Quality of the data

What is the quality of the available secondary information? Is it from a reliable source? Are the methods of data gathering for the information explained? Is the information in any particular resource also confirmed by any other independent source? Is the information timely, current?

Accessibility

How accessible is the information? Is it easy to obtain copies or access for reading; or is it constrained in any way?

Extracting useful information from secondary data can be facilitated by creating and using a checklist comprised of a set of open-ended questions to be systematically posed to the data (reports, etc.). See Annex 4, file A-2, for suggestions about such a strategy.

Primary data

If the answer to the above question 1 is NO, or if the available secondary data does not completely answer the information needs of the project, then the project will need to gather new information. This leads to additional guiding questions:

QUESTION 2: Qualitative and/or Quantitative?

What types of data are needed – Qualitative (visual or words) or quantitative (numerical)? What precision is needed?

Qualitative and Quantitative data

There are two main types of information produced by the data collection process: qualitative and quantitative. The most obvious difference between the two is that quantitative data is numerical data (e.g., amounts, proportions) and qualitative data is information which can best be described in words or diagrams and pictures (e.g., descriptions of events, observed behaviours, direct quotations, maps)

Quantitative data are obviously needed when a number, rate, or proportion related to the target population must be estimated or a variable such as crop production must be measured. Qualitative data are needed when the attitudes, beliefs, and perceptions of the target population must be known in order to understand its reactions and responses to project services.

Most information systems within projects require the collection of both quantitative and qualitative data. Projects need qualitative data about the nature of results (e.g., beneficial or harmful effects, intended or unintended impacts). Projects also need quantitative data (e.g., about the distribution or intensity of the results) to ensure the accuracy and representativeness of the analysis.

QUESTION 3: Participatory or Non-participatory?

What orientation/approach is desired/needed? How will the process of information gathering be used by the project (or its partners)?

Participatory and Non-participatory approaches

The main methods of primary data collection used in M&E are individual interviews, group discussions and observation. Interviewing has traditionally been the most common data gathering strategy in M&E. But increasing attention is being paid by donors and projects to the value of participatory methods, many of which involve group discussions or observation.

In monitoring and evaluation, interviews with structured questionnaires are widely used for collecting *quantitative data*, i.e., data which can be processed by means of arithmetic and statistical formulas. Many participatory M&E practitioners, however, share a critical view of surveys which are solely dependent on questionnaires.

Two major complaints about questionnaires relate to the loss of human touch and

the extent of technical expertise required. Structured questionnaires are often not well accepted by respondents and have many problems with reliability of the information collected. Doing a good job in carrying out quantitative survey studies requires specialised skills for questionnaire design. If a questionnaire is not well designed, the information will be of poor quality. Among the problems with quantitative surveys are excessive use of pre-coded questions which expect (or allow) answers only within a limited range. Such questions can be asked quickly and rapidly entered into a computer for later analysis, but they can easily become leading questions which only elicit the answers the respondent thinks the interviewer wants.

By starting from local knowledge and empowering people, participatory approaches challenge the conventional tendencies to rely on ‘scientific’ knowledge and a strong central authority. But in accepting this challenge, project staff will need to ask themselves self-critical questions, such as the following:

- How can we be sure that the local classification of soils is really leading to the best use of this resource?
- On what basis should we assume that a traditional means of contraception is really safe and effective?
- To what extent do perceptions of the community history in the region provide a basis for decision-making?
- In what way can we assess or measure the degree of consensus achieved during a participatory planning or evaluation meeting?
- How can we be sure that local institutions are really committed to use external support for maximum community benefit?

Participatory data collection techniques: Some well-known examples

Technique/tool	Objective/use	Means
Participatory mapping (File A-3)	To understand the distribution of activities and resources	People use the ground, floor or paper to make health, natural resource, farm or enterprise maps
Seasonal diagramming	To understand the dynamics between time of year/season and activities/events	People use ground, floor or paper to create matrix showing trends of activities/events by month/season
Opportunities and resources diagramming	To identify social and/or economic relationship or linkages between individuals, groups and institutions	People draw schematic (mobility) maps illustrating links, or use circles to show points of contact and overlaps (chapati/Venn diagrams)
Scoring and ranking (File A-12)	To identify and apply local criteria for rating different items	People use objects or pictures to symbolise various issues, and then arrange the symbols that are of similar value ('pile sort') or put them in value-ranked sequence

File numbers refer to Annex 4

The bottom line:

A question to always keep in mind during a participatory evaluation is:

“Does this process help users generate information to solve problems they have identified, using methods that increase their capacity to solve problems in the future?”

From Narayan, 1993

Main techniques for collection of new data

**A matrix by data expected and strategy/approach:
qualitative/quantitative vs. participatory/non-participatory**

Data products	Strategy/Approach	
	Participatory	Non-participatory
Qualitative	Open-ended interviews Focus group discussions Participant observation Some PRA tools, e.g., mapping, ranking, charts, etc.	Direct observation without discussion Photos (if done by outsider) Spontaneous data (e.g., letters to newspaper)
Quantitative	Some PRA tools (e.g., scoring) Sentinel surveillance surveys Self-completion of questionnaire or records (e.g., by literate farmers or TBAs)	Structured surveys Measurements (e.g., birth weights)

Primary data collection – methods

The major methods of primary data collection include *observation*, *individual interviews*, and *group discussions*. Each of these methods may be carried out with varying degrees of structure and formality, which is linked to their potential for quantitative/qualitative data and participation or not. The various methods also have different strengths and weaknesses, related to the skills and resources required for their implementation. Details about selected methods and tools are given in the following table and in the Files of Annex 4 in these guidelines.

Observation

Observation may be carried out informally, e.g., by paying attention to the state of crops as one drives along a road in a rural area. It can also be done formally with a structured checklist, e.g., assessing specific aspects of the structural and hygienic status of latrines in a given community. While observation has the advantage of relying on physically observed phenomena, it is subjective and can generate mistaken conclusions based on the interpretation of the observer. For example, an observer noticed housewives in a village boiling water and concluded that the villagers were health conscious, boiling water for drinking. When questions were asked for verification, she found out that the water was actually being boiled for the husbands' baths.

Interviews

Interviews basically consist of asking questions and listening to individuals. They can be done very informally, e.g., as conversations with people met on the street or in the fields. In these settings, one question leads to the next based on the responses or answers given to the previous one. On the other end of the scale, highly structured interviews often rely on questionnaires with pre-coded, closed-ended questions that allow the respondent only a limited range of possible answers. In between these extremes are in-depth interviews, which may be done with a topic guide (a list of topics which can be asked in any order and the interviewer creates the necessary questions) or a questionnaire comprised of open-ended questions. Such questions are designed to probe and stimulate the respondent to think rather than just giving quick answers.

Structured questionnaires are easier to complete than unstructured ones and require less skill among data collectors. At the same time, highly structured questionnaires yield little insight into how people feel. With the more open-ended tools, more skills are required of the data collector to avoid being diverted from the original purpose of collecting information. Open-ended data gathering can also generate enormous amounts of data and lead to information overload for the less cautious or over-enthusiastic data collector.

Less structured interviews (e.g., in-depth, open-ended) are more flexible and allow one to revise and adjust the individual interviews or even the whole process of the study. Structured interviews, on the other hand, cannot be altered midstream. The difference between the two can be compared to being on a highway vs. being on a path in a village.

Groups – large and small

Listening and asking questions of groups includes using methods and tools that range from formal to informal such as:

- community meetings (formal, best with large groups)
- focus groups (semi-formal, best with 6-10 people)
- natural groups or conversation (informal, best with small groups), e.g., talking with women while waiting in line at the well.

With groups, information from one individual can be cross-checked with others and more than one opinion gathered. Data collectors with less-structured techniques, however, need many skills, e.g., to carry out a focused group discussion that can easily stray off track. Some individuals may try to dominate

the discussion, others may have good ideas but be shy to mention them. When multiple opinions arise in a group discussion, it can be difficult determining which ones are right.

When unstructured discussion in an informal setting is used to gather information, it is possible to get information without raising expectations. On the other hand, with structured group discussions, it can sometimes be difficult to gather a group, or when they come, they have expectations of some compensation for their time.

Open-ended interviewing and group techniques are best carried out with detailed note-taking aimed at *catching the exact words and phrasing of respondents' answers* (i.e., quotes or "verbatim statements"). Tape recording can be of great assistance in this effort, but only where and when it is acceptable to the respondent(s). There is a need to be sensitive to communities, particularly if recording responses either with a paper and pen, and even more so with a recorder.

PRINCIPAL TECHNIQUES FOR COLLECTING NEW DATA: A COMPARISON CHART TO FACILITATE SELECTION

Techniques	Means	Resulting data	Requirements	Advantages	Disadvantages
OBSERVATION	Observing settings, behaviour, interactions, events, physical/material items Conclusions depend on observer's interpretation unless accompanied by interviews, discussion Can be improved with more than one observer or more than one observation	Mostly qualitative Can be quantitative, especially if done with a structured checklist	Much skill needed for adequate observation. Can be rapid	Is a good way of starting a project Can be a good discovery process	May be biased by observed persons changing their behaviour Is very subjective; needs verification by other methods
• Participant observation	working side-by-side with members of target group, which enables discussion, observation of interactions, first-hand experience	Good understanding of constraints, difficulties, decisions, choices	Careful thinking needed about ethics	Can validate observations on the spot	Time-consuming Individual observer only
INDIVIDUAL INTERVIEWS	Inquiring into another person's perceptions about one or more topics May be structured (e.g., questionnaire survey) or semi-structured (e.g., in-depth interviews)	Qualitative or quantitative data Knowledge, attitudes, beliefs, behaviours	Skill needed in creating the interview guide or questionnaire	Can ask for the information desired Can observe respondent reactions to issues	Interviewer can easily bias the respondent
• Open-ended interviews	Uses a sequence of questions or topics requiring open-ended, long answers (e.g., not a plain 'yes/no' and not a number); needs detailed note-taking Includes in-depth interview and key informant interview (KI). KIs are carried out with persons having specialised knowledge about a topic	Qualitative Good for discovery Good on range and nature of problem Can get verbatim answers (quotes)	Great sensitivity and skills required of interviewer May need to schedule appointments	Way of catching the point of view of the local actors Can rapidly get inside information Can revise questions if needed	Interviewer can easily influence quality and content of information Interviewer can be diverted

Techniques	Means	Resulting data	Requirements	Advantages	Disadvantages
<ul style="list-style-type: none"> Closed-ended interview (survey) 	<p>Uses structured questionnaires: carefully organised questions which allow only a limited range of answers, e.g., yes/no, categorical answer (male or female, etc.), or an answer expressed by a number (time period, distance, land size, etc.).</p> <p>If small scale, can be done in participatory way with community (e.g., sentinel survey)</p>	<p>Quantitative</p> <p>Good for prevalence and distribution of an issue</p>	<p>Much skill needed in creating the questionnaire</p> <p>Requires time for pre-testing, training</p>	<p>May be completed rapidly in the field</p> <p>Less skill needed in interviewers</p> <p>Good for getting information from large numbers of people</p>	<p>Usually done to (not with) the target population</p> <p>Yields little insight into how people feel</p>
<p>GROUP INTERVIEWS, DISCUSSIONS</p>	<p>Asking questions and listening to groups in formal and informal settings</p> <p>May involve group tasks, e.g., mapping, ranking, scoring, charts, etc. (PRA)</p> <p>Can be informal groups, e.g., ‘natural’ or conversation groups such as talking with women while waiting at the well</p>	<p>Qualitative</p> <p>Good for range and nature of issues</p>	<p>Skill and sensitivity needed to keep focused and to get ideas the whole group</p>	<p>Sharing tasks with members of the group can result in much deeper information</p> <p>Inexpensive</p>	<p>Poor for personal information</p>
<ul style="list-style-type: none"> Focus group discussions (FGDs) (File A-6) 	<p>Semi-formal discussions, based on a limited set of topics, with a facilitator and a note-taker, usually about 6-12 persons, preferably similar background</p>	<p>Qualitative</p> <p>Can be very good for perceptions, attitudes</p>	<p>Skill needed in setting topics and facilitation</p>	<p>Multiple opinions at the same time</p> <p>Shows differences and similarities</p>	<p>Can be dominated by one person</p> <p>Sensitive personal data unlikely</p>
<ul style="list-style-type: none"> Community meetings 	<p>Formal discussions, may be done with a semi-structured question guide</p>	<p>Qualitative</p>	<p>Meeting place, Mobilising, Facilitation skill</p>	<p>Good for brainstorming, e.g., for solutions</p>	<p>Easily dominated</p> <p>Little discussion</p>

QUESTION 4: Verbal or less verbal approach?

Are some of the potential sources of information non-literate, e.g., children, or adults who have never been to school? Can some of the information desired be extracted more effectively with maps, charts, photographs, drawings, or skits and role plays?

Relying exclusively on verbal methods (e.g., questionnaires) can be problematic, especially with low literate or mixed language target populations, or in situations where the desired information is not easily expressed in either words or numbers.

Verbal, literate methods:

Verbal or literacy-based techniques include: questionnaires, checklists, tape recording, and diaries or self-completed records (e.g., BAIP farmer records). These methods can be less subject to bias from data collectors than observation and the non-verbal methods. However, they can also be more subject to errors or bias built into the design.

One such problem is the researcher (or evaluator) making assumptions about common understandings of concepts between himself/herself and the target community. For example, a person wanting to know about total household income may not find out about gifts, allowances and barter exchange unless they are specifically asked for since the family is unlikely to consider them as income. Another bias arising from the design can be lack of flexibility. If one is over-structured with a checklist, problems or observations of items not on the checklist may not be recorded.

If a project is using self-maintained records, such as farmer diaries or TBA records, then the data is likely to be biased toward literate members of the target group. There are, of course, ways to compensate for this problem, for example, participatory design with the target population of pictorial records rather than written ones.

Visual and less verbal tools:

Non-verbal methods tend to be more effective for gaining participation of communities and target population. It is good to balance verbal methods with less verbal ones to help minimise misunderstanding and miscommunication. Non-verbal techniques can be very effective discussion starters.

Visual and less verbal tools include the use of:

- *maps*
- *diagrams, charts*
- *photos, video, drawings*
- *role-play, skits*

Viewing visual information can be a powerful stimulus for action, e.g., when the results of visual methods for collecting data are also used for disseminating data. In CARE's UFHP project, for example, gender-based information was gathered with calendars showing how women and men spend their day. Upon reviewing the calendars, health unit staff suddenly realised that their clinics were being closed too early to accommodate community women's daily schedules.

Combining strategies: how to improve the quality of M&E data

As mentioned earlier, information users are concerned about the issues of *validity and reliability* for the findings arising from M&E activities. In conventional research, validity is usually taken to mean how close the findings are to 'reality'; and reliability is equated with constancy of findings. When it comes to participatory and action-oriented monitoring and evaluation, the concept of validity is interpreted somewhat differently. In striving for sustainable development, M&E results may be considered valid and reliable when their utilisation can be linked with an actual improvement of the living conditions of the people, providing also that the change can be replicated and sustained over time.

To help address such concerns about quality of findings and decisions, M&E can make use of a validation method known as *triangulation*. In a strict sense, to triangulate means to utilise at least three different points of view for analysing a given event or situation. More generally, triangulation is based on the idea that using multiple sources and methods is the best assurance of the validity, reliability and completeness of information.

Two main modes of triangulation are used in participatory M&E: *external* and *internal triangulation*.

External triangulation

This is basically a comparison between the information generated by an M&E activity and data from external sources, such as censuses, official statistics, aerial photographs, or local research and technical studies.

External triangulation is based on a review of secondary data, i.e., information already existing and available from national and local agencies, academic institutions or published in papers and books.

Internal triangulation

This refers to strengthening validity within the process of M&E itself, principally by the use of *multiple methods and techniques for exploring the same topic*:

For instance, a description of the way in which the community uses its natural resources may be developed through a combination of observational walks, interviews with groups and a participatory mapping exercise with community members.

To meet the needs for *representativeness* in monitoring and evaluation, three simple solutions have been used most often:

Strategies to enhance representativeness of data

- **Combining qualitative and quantitative methods:** This can be sequential, e.g., by open-ended interviews first to assess the range and nature of responses, followed by closed-ended questionnaires to check on the prevalence and distribution of responses. It is also possible to integrate the two methods, e.g., with semi-structured interviews which use both closed-ended and open-ended questions, or rapid sentinel surveillance type surveys created with the target population (see Annex, File A-9).
- **Rating and ranking techniques:** Semi-quantitative and participatory methods of ranking can help individuals and groups of respondents to express values, opinions, and preferences about different elements (discovered through interviewing and/or observation) in a democratic, and visible way (see Annex , File A-12).
- **open analysis and discussion of findings during the data collection phase:** Analytical discussion of findings can be held with groups which are representative of specific stakeholders, information users, and/or the community at large. These discussions can focus on the prevalence, interpretation, and validity of the findings. The meetings can also explore the significance of emerging issues and elicit recommendations for identified problems or constraints to the project.

EXAMPLES OF DATA COLLECTION METHODS: CARE Projects

Community Reproductive Health Project

IG: Increased Number of Women Seeking Maternal Health Services at a Health Facility				
Indicators	Sources of Information	Methods for data collection	Who to collect	When to collect (Frequency)
# of women referred early to prevent obstetric complications	HMIS records CRHW records Community Women TBAs Service providers Referral units	<i>Secondary data:</i> Review of health service records, including TBAs' records Routine collection of health service statistics <i>Primary data:</i> Key informant interviews Structured questionnaire	Service providers CRHWs TBAs Project staff Partner staff Community members Consultant (for evaluation)	Routine data: daily at service points Monthly review of service records Mid-term & final surveys Annual surveys

Bushenyi-Ntungamo Agricultural Innovations Project

IG: 7000 Participating rural HHs in Bushenyi and Ntungamo Districts achieve significant increases in agricultural production through environmentally sound practices by 1999				
Indicators	Sources of Information	Methods for Data collection	Who to collect	When to collect (Frequency)
% of participating HHs that report increased marketable produce	-Heads and spouses of participating HHs -Farmers' records -Marketing group members -Some non-participating HHs in same area	- Qualitative PRA ranking to assign value to levels of increase -Focus groups with selected participating HHs -Mapping, from PRA and records -Survey of participating HHs	Field Officers and Project Officer (because of their contact) Marketing groups, and other participating farmers Consultant and project staff (to train staff and for unbiased findings)	Baseline Mid-term Seasonal (after harvest) EOP

CHAPTER 9

Analysis methods - how to understand and give meaning to raw data/information

The words “data analysis” often are a source of fear and apprehension for many project staff. Undoubtedly, analysis can be overwhelming, particularly if the amount of data to be analysed is unmanageable, or if the skills or technology for performing data analysis are lacking. However, analysis need not be a complex function involving the use of sophisticated computer programs and technical experts.

The information system planning should include arrangements for analysis and interpretation of all data that is collected. In this way, the project can ensure that raw data is converted into useful information for facilitating decision-making and other applications. This may seem like a common-sense statement, yet there are countless examples where valuable data has been rendered valueless by remaining unanalysed.

General steps in analysis

The following six steps for organising and analysing data can be applied to either qualitative or quantitative findings. Additional specific comments about specific strategies for qualitative and quantitative analysis follow this general section.

Suggested six steps for the analysis and organisation of data:

First - go back to the original objectives and intentions of the study

The original problem should drive the analysis. Just as the project is based on a logical framework, the conclusions of a project information exercise need to be logical. Conclusions about specific content

issues should be clearly linked to the overall project and the objectives of the study (evaluation, review, diagnostic study). The connecting linkages should be traceable through the methods of data analysis, data gathering, sources of information and indicators. (see Chapters 1 and 5)

Always come back to the reasons for the study, and then regularly weigh the available resources and the value of new information. It is easy to be overwhelmed and 'drowned in data'; each new 'finding' or point almost begs for its own full consideration. On the other hand, it is also possible to over-examine a relatively trivial point with too much complexity in the approach; rather than attaching too much importance to some small detail that is present, the significant finding may be a much larger absence of data in another area.

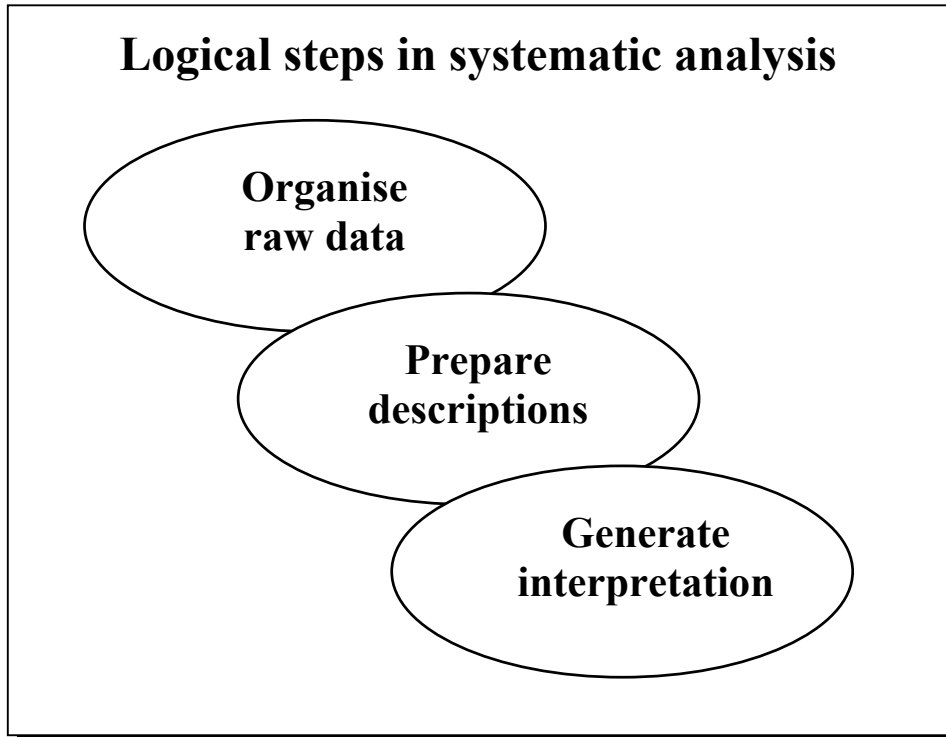
Second - remember to think of 'facts' and their 'interpretation'

The raw data which has been gathered needs to be validated, i.e., confirmed by different sources and/or different methods (see Chapter 8 on triangulation). Data that can be validated by multiple observations (e.g., many people report the same experience, or multiple observers see the same problem) can be considered a 'fact' for the purposes of this particular analysis exercise.

If the analysis process stops, however, with only a set of isolated facts, it is unlikely to be of much value in project planning or decision-making. The facts need to be put into context and assessed in relation to each other, as well as in relation to the study and project objectives. The analytical process of extracting and presenting meaning for these isolated facts is referred to as 'interpretation'.

Third - follow a systematic and logical path in the analysis

Start the analysis process by assembling all the data; a checklist for the planned data will be very helpful in cross-checking against the actual data now present. The checklist might cover: how many focus groups from which locations, how many KIs, how many of any other methods, etc. The original data (questionnaires, interview notes, social maps, etc.) needs to be thoroughly checked to be sure all pieces have adequate identifiers (e.g., place, time, date, who was responsible, who were the respondents, etc.). Check all the data for completeness, e.g., make sure there are no missing pages, missing answers, or pages which are loose and separate from their sessions.



The description process is a way of extracting ‘facts’ from the data and developing generalisations about the sample population. The following steps will be helpful in this activity:

- a) write out lists of issues (themes, indicators), including the key ideas in each sub-category.
- b) note any emerging issues, i.e., ideas that are repeating and substantive, but not included in the original plan of study.
- c) where appropriate, do tabulations, i.e., counting answers (or observed events, etc.)

The final level, interpretation, is the most complex; it is the process of presenting meaning rather than just a description. At this stage, one will be checking carefully on the representativeness and reliability of the data. One should look purposely for contrasting cases and be sure that all cases are developed to the same amount of detail.

Look with care for researcher effects on the respondents and note any researcher bias in the interpretation. Social desirability for certain outcomes can alter the information gotten and its interpretation. The researcher's age, sex, ethnicity, personality, and other aspects will influence what he/she is told or allowed to see and how he/she perceives the information received. For example, in a recent study of household medicines, one person who interviewed members of 12

households found that no-one kept any medicines in the home. In the same village, another interviewer described at least one and sometimes several medicines in each of the 12 homes he interviewed.

Fourth - Discuss the findings and emerging analysis

The process of analysis is continuous, beginning already when the pretesting is going on, and continually being refined during the course of the whole exercise. It is not just an isolated event at the end of the data collection. The persons

responsible should feel comfortable asking new questions of their colleagues, other information users, and the respondents at any stage in the process in order to help clarify the evolving analysis.

Reflect on the findings with other staff, M&E team members, or participating information users/stakeholders. Different perspectives can help clarify puzzling issues and strengthen conclusions. Multiple perspectives are also more likely to generate solutions and recommendations that are feasible and relevant.

Fifth - Consider any limitations to believability

As mentioned in Chapter 2, information users have some common concerns about the quality of information. Accuracy and validity: is the information true and right? Relevance: is the information relevant to user interests? Timeliness: is the

information available in time to make necessary decisions? Credibility: is the information believable?

Sixth - Make specific recommendations

Making conclusions and recommendations as specific as possible will increase their usefulness. Be very clear who will (or should) be responsible, by what time an action is expected, and how will it be

evident to the project management (or other information users) that a response has occurred.

Specific Types of Data Analysis:

There are two major types of data analysis methods, quantitative and qualitative. Both of these methods aim for 'objectivity' by trying to minimise the subjective

or individual point of view. Quantitative methods are used with numerical data, and the analysis is done by statistical manipulation. Qualitative methods use narrative or pictorial information for analysis of content and meaning. These methods have a positive interest in the consequences of differing points of view. The process of analysis should be systematic and verifiable, even if some of the qualitative data seems 'soft' compared to 'hard' numbers. At the end of the process, another researcher should be able to arrive at similar conclusions from the same set of data.

Quantitative Techniques

Data from closed-ended survey or most monitoring questions can be easily quantified, i.e., expressed in numbers. Once the data is in numbers, it can be handled with mathematical or statistical techniques. All of the statistical techniques listed below do not require a university degree; they can be done with a hand calculator.

Descriptive statistics – These statistics are fairly straightforward ways of summarising a single set of scores or numerical results (e.g., the numerical pattern of results if everyone took a test on what they learned in the workshop). They are relatively simple concepts, used in everyday life. Tallies (totals), frequency (sub-totals), averages, proportions, and distribution are among the most common descriptive scores. Two other descriptive concepts are also important: prevalence and incidence.

The concept of *prevalence* refers to how many people have a specific condition (or show a specific attribute like a behaviour) at a given time. For example, the proportion of farmers in a sub-county who mulch their bananas is an indication of the prevalence of mulching practices. The concept of *incidence* refers to how many new cases arise in a given period of time (or how many persons newly demonstrate a specific condition or behaviour). For example, how many farmers newly adopt growing beans within the span of a year.

Inferential statistics – These are somewhat more complicated techniques, but useful analyses can still be done within the capability of hand calculators for monitoring and evaluation purposes. The two main categories are:

- a) examining differences between groups, whether matched or independent (e.g., assessing differences in impact indicators between groups that have participated in project interventions and control groups outside the project area for an ex-post evaluation);
- b) examining relationships between variables, such as cause and effect relations (e.g., assessing differences in the numbers of people who

report changing their family planning behaviour after seeing a video programme versus receiving individual counselling).

Qualitative Techniques

Analysis of quantitative or numerical data can be very seductive. The researcher can manipulate a set of 'facts' and it comes out the same way each time; there is a sense of accomplishment and confidence that it must be 'right'. However, if the question and/or the answer was ambiguous, the researcher cannot be sure his/her interpretation is reliable unless qualitative data and qualitative methods were also available for cross-checking.

Unprocessed, raw data – Sometimes, one can or does use the direct content from the respondents because they are so eloquent in discussing issues that directly affect their lives. Larger examples might include direct unedited texts, maps/pictures, or films that are presented without explanation except that given by the respondents themselves. More often, small, selected extracts from the respondents are used as typical or illuminating quotes. It is sometimes difficult to decide which quotes to use; the selection will be easier, however, if one always comes back to the purpose of the study.

Simple description – Read the full text of all data sessions (interviews, focus groups, observations, etc.) from beginning to end. First look for passages (paragraphs or sentences) that talk about the original topics planned in study. Using the right hand margin, you can mark all the passages that relate to each of the planned and emerging themes. Cluster the passages by their major themes. This can be done, for example, by photocopying or writing the passages on cards and physically grouping the ideas. Review the various sub-groups within any of the major themes; determine whether the listing is complete.

Generating meaning, i.e., interpretation – The key elements at this point are building a logical chain of evidence, seeking plausibility (does it make sense or not?) and assessing significance of the results. Working with qualitative data requires good *summarising skills and insight capabilities* in order to extract meaningful content from the often long and wandering statements provided by respondents.

A variety of useful aids are available for thinking systematically and logically about this data, e.g., diagrams like organisational charts, flow charts, growth charts, or maps. Matrices (tables) can be produced that allow 'eyeballing' the data for trends and patterns. Other helpful approaches are checklists and various ways

of clustering the variables. Consider the use of various *qualitative analysis matrices* (e.g., see SWOL analysis in Annex 4).

Regarding plausibility, check representativeness; for example, when several people are consulted about the same issue, do they give several different opinions or is the same opinion reflected each time? Check for researcher influence, e.g., do different interviewers get very similar or very different responses from female farmers? The bottom line on plausibility, however, is checking with the informants themselves - does the analysis make sense to them and their perceptions of how things are?

Rating the significance of findings is a process of prioritising the most important results for inclusion in the final report. This ranking of importance might be done on the basis of range of respondents' answers (agree/disagree, strong/weak), typical responses (most frequent), or extremes of responses (quite apathetic, very affirmative, etc.). It can also be done by seeing how often the issue was mentioned by the respondents, how strongly they felt about the topic, how much risk they felt was linked to the topic, etc. Note that it is possible, even desirable, to include diverse or opposing opinions and statements.

CARE-Specific Issues Related to Data Analysis

The following issues were raised in the Kabale '96 M&E workshop concerning data analysis within CARE-Uganda:

- **Time constraints:** Project Managers felt that the balance between data collection, analysis, and reporting tends to get skewed. So much time is spent organising data and reporting on it that there is little time to critically analyse information and make sound conclusions.
- **Expectations of what data is for:** While volume of information is a problem for projects, it may not be as big an obstruction to analysis as lack of understanding about the uses of data. Often, project staff and counterparts may perceive that information is just being collected because other people require it, or to prove a point that is already well understood.
- **Knowing how to analyse and interpret:** at present, projects reported frequently needing outside expertise to assist in analysing and interpreting data. Collective or co-operative strategies of analysis within the projects and the country programme have not generally been done. Lack of computers or statistical skills have been overly blamed for lack of analysis.

- **Importance of budgeting for analysis:** While recognising the importance and resource needs of data collection in the budget, analysis is usually not allocated sufficient time and staff resources in project budgets.

The bottom line:

Most, if not all, project M&E can be done with descriptive statistics and qualitative summaries, i.e., there is little or no need for complex statistics for most projects.

Example of analysis logic - CREHP

IG: Increased Number of Women Seeking Maternal Health Services at a Health Facility					
Indicators	Sources of Information	Methods for data collection	Value	Methods for data analysis	Who to analyse
# women referred early to prevent obstetric complications	HMIS records	Routine collection of health service statistics, Review of health service records	Available to a certain extent May be inaccurate Staff & partners able to analyse Limited by standard govt formats	Statistical: frequencies, proportions and comparisons	CRHW, TBA Supervisors Project staff Partner staff: DHT, H/U in-charges
	CRHW records				
	Community Women	KAP survey: structured questionnaire	Surveys expensive	KAP Surveys: quantitative & qualitative synthesis	Project staff & consultants
	Health workers, TBAs	Key informant interviews	Wider scope flexible over time	KIs: qualitative summaries	Project staff and partners

CHAPTER 10

And then what? How can we circulate and use the information effectively to ensure action?

Format of Information

Information needs to be well presented so that it is usable. Formats for presentation will depend on the anticipated users; not all ways of presenting information are appropriate for all users. For example, the format for sharing the results of a reproductive health project with a group of TBAs is likely to be quite different from the format expected by a donor agency. Good quality information will go unused if it is not presented in a suitable way. The following ideas may be helpful in determining how to present information:

Guidelines for presenting information

- Know your audiences (information users)
- Know what they need to know, and why (applications)
- Know when the information is needed (timing, frequency)
- Relate the information presented to the anticipated applications (uses)
- Choose presentation methods that fit the audience (e.g., not using written materials with non-literate audiences; or very long reports for busy politicians)
- Choose a variety of ways to present information (figures, numbers, pictures etc.). Users digest new information in different ways and providing a mix of methods ensures that it will be accessible to all.

The following table shows the linkages between types of information, audiences and reporting formats for CARE.

Comparison of different CARE reporting formats

Tool	PIR	API	Project evaluation	HHLS evaluation
Type of indicator (framework)	Inputs Process Outputs	Outputs Effects	Effects Impacts (potential)	Impacts
Main purpose	Day to day management at the country level	Analysis of sub-sector for CO & sectoral 'big picture'	Midterm: assess changes needed in implementation Final: assess systems and behavioural changes achieved	Assess improvement in: a) HHLS b) institutional capacity
Main users	Project manager (PM) Country office (CO)	RM, PAD, Marketing	Country director Donors	Country director PAD, RM
Other users	PAD, Marketing Donors	Programme SVP PM, CO Donors	Project manager RM, PAD	HQ SMT President Board
Periodicity	Quarterly	Annual	Baseline, Midterm, Final Ex-post	Baseline Every 5-10 years
Format	Narrative Tables: achievements	Questionnaire, quantitative data	Narrative report Research	Report
Data source	Field staff	PIRs	Project documents PIRs, AOPs External assessment may include survey	HHLS baseline Project evaluation Sample surveys
Method of collection	Continuous monitoring	Aggregation of quarterly PIRs	Document review Research	Project evaluation Research
Persons to implement	Project manager / project MIS staff	Project manager / project MIS staff	Project manager CO: sector co-ordinator, M&E co-ordinator	ACD CO: M&E co-ordinator PHLS
Persons to supervise	Country director ACD	Country director ACD	Country director ACD	Country director Global: RM, PAD, PHLS

From: PMTF - API Framework, 1/97

Flows of information

Project M&E systems are generally designed as ‘reporting systems’ which have a tendency to exclusively serve the information demands of the project management team, the higher echelons of the national government (policy making level) and the donor. Unfortunately, information usually flows only one way – from the target population upwards.

Among the reasons for this one-way flow are:

- reports are demanded so frequently by higher level users that project staff do not have the time to use one report before the next one is due.
- the standard type of information contained in reports does not permit the higher level users to generate significant comments, e.g., progress reports that report only on whether targets are being met or not.
- the various information users do not perceive that it is their responsibility to give feedback to the information providers (including to the target population).

Tracking the feedback of information from users back to providers is a key issue for ensuring that M&E information is actually being used. If the target population gets information in a usable way, they can be empowered to participate meaningfully in project planning and activities related to their problems and needs. Two way dialogue also helps ensure motivation in the community to continue involvement with the project.

The chart above showing CARE formats for structured information flow, is basically oriented ‘upwards’. Ideas about ‘downward flow’ of information are presented in the next section.

Dissemination formats

Project information (whether it comes from baseline survey, monitoring, evaluation or diagnostic study) can also be disseminated beyond the upward reporting requirements through a range of outputs (products), from discussion meetings to advocacy papers, from brochures to detailed analytical reports.

Advisory meetings

The validity and utility of analyses of project information can be enhanced by advisory discussions with various stakeholders and users before the report is finalised. At least two different kinds of workshops can be held for presentation of preliminary project information system results. The first level is a very practical session with representatives of the study communities and target populations. A second level is a more technical workshop with managers, professionals, agency representatives, and donors.

A basic purpose of these advisory workshops is to allow information users and project stakeholders to see the preliminary data before a final report has been written. In this way, data interpretation also becomes part of their responsibility, and not solely the domain of the team producing the information. A second major objective of the workshop is to obtain agreement on the implications of the data for the project.

Dissemination meetings

In addition to written documents, target communities and/or districts where the data was gathered can also benefit from multi-sectoral planning meetings to generate local strategies for identified issues. A consensus

building seminar will provide an opportunity to bring together a variety of people, many of whom would not have access to, or time to study, the formal reports. Importantly, the seminar can be the occasion for an interchange of ideas and experiences between those who carried out the study (both researchers and staff), policy makers and planners, district level officials, representatives of other sectors, and community leaders. An interactive workshop format can promote mutual exchange of ideas and provide important insights into alternative strategies for dealing with some of the issues raised during the assessments. Representatives of the media can also be appropriate as participants in this session, since they can be the means of sharing the results with an even larger audience.

Other widespread dissemination

The project should consider diverse methods of dissemination to ensure maximum and widespread use of the findings. These include various methods in order to reach policy makers, professionals in different fields, volunteers and activists in the community sector, and the target population themselves. Seminars and workshops are valuable, as are mass media interviews (e.g., radio has a wide listenership in vernacular

languages in Uganda) and press releases. In addition, the findings can be circulated through academic channels via books, journal articles, newsletters, and other print media which serve those working similar target populations.

Examples from CARE projects

The following charts show examples of upward and downward information flow planned in the Kabale '96 workshop.

Community Reproductive Health Project

IG: Increased Number of Women Seeking Maternal Health Services at a Health Facility			
Indicators	Application	Circulation	How
The percentage (%) of women in the project area who attend ANC at least once in any pregnancy occurring during a given time period	<ul style="list-style-type: none"> Assess trends: (are we on track?: if not, why?): make adjustments Comparative assessment: Setting foundation for measuring change Assess strategy effectiveness and revise strategy Assess project effects 	<ul style="list-style-type: none"> Direct partners CARE Uganda HQ CARE USA USAID Other donors, Interested organisations 	<ul style="list-style-type: none"> Discussion - presentation with support graphs Informal meeting, tables, discussion Reports: PIRs, API Presentation, report/graphics

Bushenyi-Ntungamo Agricultural Innovations Project

IG: 700 Participating rural HHs in Bushenyi and Ntungamo have significant increase in agricultural production via environmentally sound practices by 1999			
Indicators	Application	Circulation	How
# of marketing groups formed by participating HHs	PM-Track Progress, compile reports Field Officer, planning MKT. Dept: Tracking GPS and planning MKTGP-Information	Donors District officials Community AID program CD CARE HQ	Reports Community meetings and discussion API reports (condensed and graphic)

Writing process and style

Be brief, concise and to the point

The report writer(s) should exercise judgement and restraint. It is not necessary to report every minor fact, occurrence and detail. Expand only on the really important data, condense the less important, and recognise that some matters do not require reporting at all. In a really well written report, the reader should be able to understand, on first reading, the main findings and conclusions, without having to refer to the appendices.

Proper balance between text, tables and diagrams makes the report easy to read, as well as clear and informative. It also results in considerable economy of space, as text without supporting tables and diagrams tends to become too long and wordy. Avoid repetition - it lengthens a report unnecessarily and bores the reader.

Use simple, clear language

Use simple words where possible, rather than unusual or highly technical words. A common difficulty to be overcome in an M&E report is the diversity of educational backgrounds among the intended readers. Avoid a stuffy style. Long sentences with too many ideas are confusing. It is nearly always possible to break up long, involved sentences into several shorter ones that are clearly understood.

Divide the text into short paragraphs that concentrate on a single aspect or idea. Link the sequence of paragraph themes by careful use of the first and last sentences of the adjoining paragraphs. The feeling of continuity is increased if the first sentence of the next paragraph takes up the topic mentioned by the previous sentence.

Follow a logical sequence of presentation

A clear, consistent, and logical order in which the topics are discussed is immensely helpful to the reader for two reasons. First, a logical sequence is much easier to understand and to follow. Second, the serious reader will need to refer back to earlier sections of the report as he or she studies it. Referral to other sections is much easier if the report has a consistent and logical order. For convenience of cross-referencing within the report, include

some logical system of numbering and headings for sections, sub-sections, tables and diagrams.

Avoid unsupported statements and recommendations

All conclusions should be backed up with actual data. Intelligent readers will be unconvinced by emotional and subjective statements. Unsupported statements may lead the reader to question the reliability of the writer/researcher to the point of rejecting or ignoring the entire report.

Look back to the objectives, reflect on how the actual results obtained relate to the objectives. Remember that it can help to understand the issues by including opposing opinions, where they exist.

Be pragmatic and constructive

A good evaluation report will be practical in orientation, conclusions and recommendations. In this way readers can easily utilise the evaluation results in their own working situation.

A further justification for the pragmatic approach is that project evaluation and monitoring reports are not principally scientific documents in the first place; instead, they are tools to produce improvement in project strategies and outputs.

Reports also need to be tactful and constructive rather than negatively critical. If the writer fails to do this, then the report is unbalanced and will lose the interest and concentration of all but the most determined and dedicated readers. Instead of becoming widely read, the report will, at best, remain with a small circle of specialists. Specialists are not always the people with the influence or the resources to help implement the recommendations of the report.

Make the final product attractive

Make the report pleasant to read and well laid out. Start with an attractive cover; take pride in your hard work and make the end result look nice. Break up written text with appropriate graphics.

Some information, e.g., discussions and conclusions, is best conveyed in words and text. Other information is better understood when expressed visually as tables, charts and diagrams. Information presented in this way is quick to

understand and it provokes thinking. Maps are particularly useful in presenting data such as catchment areas, population density, or farming systems.

Use firsthand, direct quotations from different perspectives, e.g., target population, community leaders, service providers, planners, etc. Quotes give dry text more flavour and a sense of reality. As much as possible, quotations should be left in the phrasing and words of the respondents. Not only will the report be more readable, but people from the target community will also be more likely to identify with the content and feel that the report is truly or usefully addressing their issues and concerns. Be sure to include a minimal identifier with the quote, (e.g.: women's group, Arua district); this can help the readers to identify patterns without breaking confidentiality.

The following box includes some general guidelines on the size of documents for different groups of anticipated readers.

Formatting findings for different user audiences

Format	Audience/users	Length
Short forms	General public, media release, summary for busy planners	1-4 pages
Medium form	Programme implementers	5-10 pages
Long form	Libraries, interested agencies and programmes, researchers	Unlimited pages

Overview of the final report

The final report should include a discussion of the qualitative and quantitative data collected during the study, organised and analysed in order to provide the project with information regarding: 1) the magnitude of current problems, and 2) the achievements and constraints of the existing project with respect to the expected impacts on these problems. Findings and recommendations will be most usable if they are prioritised in order to enhance planning that can address the most important issues. The final report should provide adequate information upon which to base technical and political decisions to improve the project, ideally including an action plan for the coming year.

Follow-up

Two areas of follow-up are particularly recommended.

a. Strategy implementation and subsequent evaluation

Once specific plans have been designed and strategies implemented in response to the findings, appropriate indicators or descriptors from the study can be selected for monitoring. These could include indicators of output (e.g., did the proposed revisions of the project actually get started) as well as effects (e.g., what were the perceptions and behaviours of the target population in response to the new activities?).

b. Subsequent analyses

Although project information systems have been presented as a relatively rapid action-oriented research strategy, the richness of data they can generate makes it highly desirable to consider additional or subsequent analyses. One such application is to make the data set accessible for secondary analysis by other researchers, e.g., graduate students, planners from various sectors, etc. A second application is to make comparisons between the findings of the study with other research studies. Finally, there are likely to be a number of potential operational research topics emerging from the study which could be prioritised and developed into proposals for funding.

CHAPTER 11

How do we organise it? Issues affecting internal project planning and operations related to M&E

Strategy for developing an M&E plan

Having explored the various elements of an information system for projects, it is now time to consider assembling these elements together as a total M&E plan.

The sequence of steps developed in the previous chapters can be used as a logical path for preparing an M&E plan within projects, e.g., as done in the Kabale '96 CARE M&E workshop.

A monitoring and evaluation plan: step-by-step

Goals

State the project's final and intermediate goals (see Chapter 4). Plan for assessment of the project's intermediate and final goals. This is principally done through a baseline survey, mid-term and final evaluation. Design issues to be considered include whether to use 'before/after', 'with/without', and control groups. (see Chapters 5 and 7)

Indicators

List indicators for each goal which will most accurately indicate their achievement. Specify the data to be collected for each indicator (see Chapter 6).

Data collection

State the data collection methods, tools, data sources, data gatherers, and dates. Show which is routine monitoring and which is evaluation. (see Chapter 8)

Data analysis

Explain how the data will be analysed – description and interpretation. (see Chapter 9)

Dissemination and use

Describe the method to disseminate information to project staff and communities and how it will be used to improve the project (see Chapter 10).

Outline of a formal M&E plan - An example

Table of contents

Executive summary

Project background: general, project objectives, strategies, conceptual model, current status

M&E background: process of designing the M&E plan, operational terminology

The M&E plan

- narrative explanatory statements
- M&E matrix: project log frame objectives, indicators, sources, methods of data gathering and analysis, frequency of collection, circulation of results (i.e., categories in the Information Extension matrix in Chapter 5 of this book);
- project risks/assumptions (including relevant indicators, means of verification);
- project management (indicators, means of verification)
- lines of communication and feedback mechanisms
- monitoring chart: monitoring activity, frequency, person responsible, timing and total for LoP;
- evaluation chart: activity, person responsible, timing

Useful annexes

- forms (quarterly/annual monitoring, key questions for evaluations, etc.)
- GANTT chart for timing of M&E activities
- references used (including specific project documents)

Example based on the IJFHP M&E Plan

Allocating resources - time, personnel, budgets

In order to develop a final M&E plan, one of the intermediate steps will be assembling sufficient management information about tasks, persons responsible and timing. This is an essential step for making decisions about the allocation of resources, including time, personnel and budgets. The following matrix is a tool which can help in this process.

Matrix for generating an M&E workplan

	Why? (purpose)	For whom? (report to..)	When? (schedule)	Who is responsible?	Who participates?	What means? (data collect)	Who to gather data?	Who to analyse data?	How disseminated?
Baseline									
Monitoring system									
Mid-term Evaluation									
Final evaluation									
Ex-post evaluation									

Logistical planning

Planning for project logistics principally refers to the preparation of workplans for personnel (and project activities) and budgets.

Workplan

It is assumed that projects are familiar with the preparation of workplans and budgets. This is just a short reminder that a thorough workplan will be critical to the rapidity and smoothness of information systems, including fieldwork and the ensuing analysis. A good workplan will have a detailed timeline for each activity, budget, equipment and supplies listing, and supervision plan (including persons responsible and tasks).

Budget

The aims of any project related study or information gathering activity should include integrating the information generated with the planning and decision-making process. Therefore, it will also be very important to budget accordingly for the post-fieldwork phases of analysis, write-up, printing, dissemination and subsequent action plans.

Common logistical problems

- Cost overruns, e.g., M&E budget line used up with the baseline study
- Project management takes on a 'controlling' role, e.g., lack of staff and target population participation in M&E
- Donor (or project) insistence on international consultants with inappropriate skills and lack of local knowledge
- Donors adopt a demanding, not consultative, position
- Information system ignores socio-cultural values of the target population.

Detail: planning for a specific study

Logistical considerations for a field study or evaluation (short list only)

Personnel

- stipends and per diem for any non-project staff
- transportation costs and arrangements
- training and preparation for the fieldwork
- hotel and lodging bookings; also venue for any large group/community meetings
- field equipment and supplies (forms, recorders, paper, field manuals, etc.)

Data and communications flow

- secretarial and data entry support
- data entry arrangements: photocopying (if computers are being used, then: computers, software, printers, diskettes, etc.)
- storage (for raw data)
- communications (phones, faxes)

Administration

- administrative support
- office accommodations
- notification to facilities and communities of visits

Data management

Data generated in the process of M&E comes in many forms, e.g., maps, diagrams, field notebooks, computer generated spreadsheets, etc. There has to be a common system of managing and storing data within a project. Among the considerations is whether the information is expected to be the common property of both providers and users. If so, it will need to be kept organised in a form and location where both groups can have access to it. Ideally, management of data should be centralised and co-ordinated throughout all the categories of users.

How the data is managed has implications on the sustainability of the M&E system itself. For example, if the data is kept exclusively on a computer, it will be difficult to involve people who:

- lack access to the computer
- don't know how to use the computer (or the software)
- don't have the resources to maintain it.

Suggested criteria for a project information system

- Must be able to consistently and honestly measure key indicators of project impact, effects and outputs to support CARE's goals, including Household Livelihood Security (HMLS).
- Should measure only necessary and sufficient project data for management decision-making.
- Should enable measurement of bottom-line portfolio performance for CARE global information system
- Should consider needs to measure empowerment, participation, impact disaggregated by gender and other key target groups
- Managers in the field and headquarters should be held accountable for implementing sound project management
- Should not be overloaded with excessive data gathering requirements (for HQ or project). Too much data leads to bad data and 'information overload', and therefore is not utilised.
- Need to narrow the focus to the most important indicators of impact and outputs

Adapted from PMTF-API framework, CARE 1996

The bottom line:

A good M&E system is useful to its audiences (information users), practical to implement (feasible for the project), timely, conducted ethically, and technically sound.

Annex 1

Glossary

Activity

A specific project task that requires resources (personnel, funds, time, etc.) and transforms the resources into outputs. E.g., training sessions, workshops, etc.

Adoption

The acceptance and application of project interventions by the target population, whether governments or rural households. Adoption may be ‘primary’ (occurring among persons who have been contacted directly by the project) or ‘secondary’ (occurring among persons who have learned about some portion of the interventions from primary adopters).

Assumption

Circumstances or conditions important for the success of a project but not within its control. These may include beliefs held by the designers of a project about the environment in which the project takes place. They can include assumptions about outside influences (e.g. external conditions such as trends in weather patterns or national economies, or the role of government or other agencies), and assumptions about participants (e.g. that women in a target group can control HH income, or that farmers can control grazing on fields planted with trees). Even though a project may not have direct control over many of these factors, it is important to state them (in a log frame), and to monitor them during the life of a project, so that changes can be made in project design if necessary.”

Baseline study

In CARE projects, the baseline is a preliminary assessment of target populations carried out shortly before starting implementation. Baselines are collected at the outset of a project (or an activity) to establish the pre-project conditions against which to measure future change. The information gathered (and analysed) in the baseline consists of indicators specifically chosen for their anticipated use at a later time to investigate project effects and impacts. The investigation is done by carrying out repeat assessments using the same set of indicators after the implementation of project interventions (see ‘before and after’). Indicators (and methods of data collection and analysis) used in baseline surveys may be qualitative or quantitative.

Before and After (design)

An evaluation design that uses the data generated in the project baseline for comparison with a comparable study after project interventions have been in place for some time. Typically, this means a repeat data collection similar to the baseline will be carried out at the end of the project. The follow-up survey can also be done some years after the project when there is concern about sustainability of impacts (i.e., an ‘ex-post’ evaluation).

Beneficiary

Direct beneficiaries are individuals who receive services or resources directly from CARE or through a joint implementation partner. This category is sometimes referred to as participants, clients, or recipients. Indirect beneficiaries are individuals who benefit indirectly from the project.

Bias

Distortion of data/information (whether monitoring, evaluation, or research) brought about by various errors: planning (design error), selection of respondents (sampling error), collection (interviewer error), social desirability (respondent error), or analysis (researcher error).

Closed-ended question

Questions answered by marking an answer from a set of predetermined choices in a questionnaire.

Control (control group)

An evaluation design for determining whether any changes observed over time in the target community are actually effects and impacts due to project interventions. The control group design requires identifying and periodically assessing a non-intervention community (i.e., a group of persons or households that will not be getting project interventions) for comparison with project target areas. This ‘control’ community must be as identical as possible to the project target communities, so that comparisons between the two communities can show which changes are attributable to the project. (see with/without)

Data

Facts, figures, opinions, observations which become information when they have been analysed and interpreted.

Data sources

The origin of information, including people, records, documents, soil, water, etc.

Diffusion

The spread of knowledge or practices beyond the point of initial project contact (sometimes referred to as ‘secondary adoption’), e.g., the spread of improved banana cultivation among farmers who have not been directly taught or visited by a project. This spread is usually a desirable effect of projects, but it may require special methods in sampling and evaluation studies in order to be identified and assessed.

Effects

In CARE terminology, effects refer to target population responses (e.g., changes in behaviours), or improvements in system conditions (access to or quality of resources) that result from the use of goods and services provided by the project. Project effects describe results in the target populations that happen at the Intermediate Goal (IG) level as a consequence of some degree of exposure to project interventions. These intermediate level changes provide beneficiaries with the necessary tools to bring about

sustainable improvements in their well-being (i.e., leading to project impacts). Effects can be positive (beneficial) or negative (harmful, e.g., adopting cash crops that increase women's labour without increasing their access to funds). People who act as a result of project interventions may or may not be aware of the project (e.g., diffusion of farming practices to farmers who have never been directly contacted by the project, or "secondary beneficiaries").

Effectiveness

The extent to which a project meets its objectives through its interventions (delivery of goods and services).

Efficiency

The extent to which a project uses resources appropriately and completes activities in a timely fashion.

Enumerator

A common term for the person who collects data to complete a structured (quantitative) questionnaire; contrasts with an interviewer.

Equity

The extent to which the resources and opportunities generated by the project are equally distributed within and among households. It pertains to the allocation of resources according to gender, ethnicity, social status and class.

Evaluation

An evaluation is a careful examination and analysis of an on-going or completed project (see mid-stream, final, ex-post). Evaluations usually include examination of the project design (goals and plans), implementation (inputs and outputs) and results (effects and impacts). Typically, evaluations look at project efficiency, effectiveness, sustainability and relevance. Attention is paid to both intended and unintended results, and to factors affecting the level and distribution of any benefits produced. The main purpose of evaluation is to guide decision-makers (see stakeholders).

Ex-post evaluation

This is an evaluation conducted at a substantial time interval after the termination of project interventions, e.g., 5-10 years after the end of a project. The purpose of ex-post evaluations is to investigate the sustainability and nature of long-term project impacts. In reality, ex-post evaluations are rarely done because few donors are willing to fund them. (see also evaluation)

Final evaluation

This is an evaluation that occurs at or near the end of the project (sometimes referred to as "summative" evaluation); and contributes to the end of project summary report. In order to examine the effects and impacts of the project, the final evaluation is usually linked to the conditions in the target population before the project by collecting and analysing similar information to that done in the baseline study (see "before and after").

Final goal

In log-frame terminology, this refers to what the project hopes to achieve in the long term (i.e., beyond the life of the project). Usually stated as substantive improvements (impacts) that are expected to take place in some aspect of the lives of the project participants or target population.

Focus group discussion

A semi-structured discussion with a small group of individuals selected on set criteria so that they are relatively homogeneous. The discussion is guided to elicit individual and group ideas, reactions, opinions, perceptions, and solutions to a short list of key topics.

Hypothesis

In terms of project design, refers to presumed correlations between outputs (causes) and effect, and between effect and impact. For example, a common hypothesis is that the provision of sources of clean water will lead to reduced incidence of water-borne diseases. If a hypothesis can not be accepted (e.g. by citing research literature or evaluations of projects where this hypothesis was proven under essentially similar conditions) it may need to be tested as a part of project's evaluation design.

Impacts

As used in CARE project terminology, 'impact' refers to fundamental and sustainable changes in the human conditions or well-being of target populations, reflecting the satisfaction of basic needs. Basic needs include food, health services, favourable environmental conditions (potable water, shelter, sanitation), primary education, and community participation. To obtain the essential resources necessary to meet basic needs, households must have adequate access to finances, skills, time and social positions. To qualify as impacts, these changes should be observable at household level, and be able to be attributed to project interventions. Because of the duration of time needed to attain household level impacts, they may be difficult to identify within the lifetime of a project. Impact indicators are usually the ones associated with the final goal level in the project's logical framework. As with 'effects', impacts may be intended or unintended and beneficial or harmful.

Implementation

This phase in a project is when project interventions directed to target populations are taking place. The project is drawing on the resources specified in the project document (and log frame) to carry out activities toward the described project objectives.

Indicator

Something which provides a basis to demonstrate change as a result of project activity for a target population, i.e., for measuring progress towards objectives. It may express quantitative elements (i.e., be written as numbers) or qualitative aspects (i.e., descriptive words). An indicator is like a 'marker' which shows what progress has been made (targets show what progress is still expected). Indicators may also be summary measures, e.g., when they are a *composite* of several lower level indicators into a single *index indicator*, such as the Human Development Index used by the UNDP

Input

Inputs are the resources needed by a project to implement activities. These include the human and financial resources, physical facilities, equipment, materials, in-kind contributions. Inputs only occur during the life of a project. Inputs are one of the items routinely tracked in project monitoring, especially for cost-effectiveness and accountability.

Intermediate goal

A log-frame term that states the changes intended by a project in systemic or behavioural conditions in order to reach the final goal.

Interventions

The physical items and services to be delivered through a project to its intended target population.

Key informant interview

An interview with a person having special information about a particular topic, e.g., someone with first-hand experience of a certain condition, someone who is providing training or other direct services to people with a certain condition, or in a particular community, etc. These interviews are generally conducted in an open-ended or semi-structured fashion, allowing the interviewer to probe and follow up topics of interest in depth.

Logical framework

The logical framework (log frame) is a planning tool, designed before the start-up of project activities. The main elements of the log frame illustrate the project's hierarchy of objectives and targets, its indicators for assessing achievements of the objectives, sources of the indicator information, and key assumptions outside the scope of the project that may influence its success. A log frame is constructed in a systematic and logical manner based on an analysis of information collected on constraints and opportunities for interventions to a specific problem. The log frame is referred to continuously throughout the life of a project; it is the most important document telling in detail what the project intends to achieve, and how it intends to achieve the objectives.

Mid-term evaluation (mid-stream)

Mid-term evaluations are generally carried out about half-way through the life of a project, with the anticipation that implementation of project interventions is in full operation. These evaluations, which are also known as 'formative' evaluations, are intended principally to assess project progress and make recommendations for strengthening the project during its second half.

Monitoring

Monitoring refers to the on-going process of regularly collecting, analysing and using information to guide project implementation. The main foci of monitoring are project inputs, performance and progress. A well designed M&E plan links monitoring

information with evaluation, including periodic measurement or output and effect indicators (when feasible). An effective monitoring system is crucial to good project management.

Open-ended question

A question that allows for a full-text, freely given answer in the respondent's own words, rather than a closed-ended question that restricts responses to predetermined categories.

Outcomes

Outcomes (or results) often refer to all that happens as a consequence of a project's interventions. This concept is usually divided into the more specific terms of effect and impact.

Outputs

Outputs are the products that the project produces. They are direct results of project activities, i.e., generated through the project and within project control. They are usually expressed numerically (quantitative data) and have a time frame. Outputs occur within the life of the project, and are among the items assessed in routine monitoring. Monitoring indicators of outputs allows projects to track project efficiency, i.e., achievements versus expected targets. Project outputs may refer to: a) the results of training, such as the number of farmers trained in improved agricultural techniques (note that this can include assessment of changes in knowledge, skills and attitudes); b) capacity building, such as the number of extension staff trained, water systems built, committees established; c) service outputs, such as an increase in the number of project locations; and d) service utilisation, such as the number of people fed, or number of children measured.

Participant observation

A method of observational data gathering wherein the observer lives with the people being observed and takes part in their daily activities.

Participation

The active involvement of intended beneficiaries in project needs assessment, design, implementation, monitoring, evaluation and decision-making. The main purposes of participation are to encourage self-determination and sustainability of the development process.

Pre-code

A method for structuring and limiting the possible responses to questions on a questionnaire. This technique can facilitate rapid data gathering, but requires very careful design and pre-testing to be sure that the instrument is accurately obtaining the desired information.

Pre-test

To be sure of efficacy, accuracy and feasibility, it is essential to pilot test (make a trial run of) questionnaires and other data gathering instruments with a small group of respondents before conducting an actual data collection exercise. A full-scale pre-test

would also give a trial to methods of respondent selection, data management and analysis.

Primary data

Data collected specifically to meet information requirements of a project, e.g., a baseline survey or a set of focus groups for an evaluation. Is contrasted to secondary (existing) data from sources outside the project.

Probability sample

A method of selecting respondents (or other sources of information) where all members of the source group (e.g., households in a project target area) have an equal chance of being chosen. Also known as a 'random sample'. Can be combined with purposive sampling, e.g., a random sample of female-headed households.

Processes

The interventions or set of activities through which project's inputs are used to obtain the expected outputs. This is the activity level for CARE. These activities include management and supervision, counterpart training, logistics and service delivery, technical assistance and the monitoring and evaluation information systems.

Purposive sample

A method that selects respondents (or other sources of information) based on specific, defined criteria. The criteria are not based on mathematical (statistical) probability, but other intentional choices, e.g., extreme examples for in-depth study that illustrate the potential range of a given situation.

Qualitative information (or methods)

Qualitative data is descriptive, expressed in words or visual/auditory images, and gives a more holistic picture of a situation than one can get with quantitative data. Qualitative approaches are particularly useful for describing the range and nature of issues in a given situation; for eliciting perceptions, beliefs, and explanations; and for spontaneous discovery of issues emerging from the field.

Quality of services

Quality is assessed by the range of choices that clients have, the completeness of information given to clients, technical competence of the provider, quality of interpersonal relations, and appropriateness of services available.

Quantitative data (or methods)

Quantitative data is numerical, i.e., it is data in a form that can be counted (numbers) and manipulated mathematically (statistically). Quantitative approaches are especially good for assessing the prevalence and distribution of a phenomenon. It is easier to aggregate numerical information, but it can be subject to misinterpretation, i.e., 'missing the point'. Quantitative approaches can be good for testing hypotheses, but less satisfactory than qualitative methods for identifying the core issues to include in a hypothesis in the first place.

Questionnaire

A data collection instrument containing a set of questions organised in a systematic way (as well as a set of instructions to the enumerator/interviewer about how to ask the questions).

Reliability

The extent to which a study (or evaluation) can be repeated, i.e., the degree to which data collected are consistent among different observers or the same observer at different times. For example, if ten persons (trained as data collectors) observe the same farm practice using the same checklist, they should be reporting the same findings.

Sample

A portion of a larger population selected for data collection in order to reduce time, labour and cost. Ideally, the sample should be qualitatively and quantitatively representative of the larger group from which it is drawn.

Sample size

The number of source members in the sample. The sample size depends on precision requirements for the data, as well as feasibility and resources available.

Sampling frame

The list of all potential respondents (e.g., a list of all villages or all households in the target area) from which the sample will be drawn.

Secondary data

Data collected by someone outside the project, for purposes outside the project, e.g., national census data.

Stakeholders

Potential or actual ‘owners’ of a project, i.e., persons who have a direct interest in the project. Often taken to mean persons (or organisations) that have the capacity to make or influence decisions affecting the design and implementation of a project. Typically, these include the target population/participants, project and country office staff, counterparts, donors, and other interested agencies.

Stratified sample

A sampling procedure that combines purposive and random sampling. Purposive sampling is done to identify relevant sub-groups or ‘strata’ out of the overall population, e.g., female-headed households. The potential members in each sub-group are then listed (preparing the sampling frames), and random sampling is used to select the final respondents from within each of the sub-groups.

Sustainability

The concept of sustainability, as it is applied to projects, includes multiple aspects. Some of the main ones are: a) potential for project’s impact to continue after CARE’s intervention terminates; b) capacity of target population to be able to continue to practice an innovation or technique without continued project intervention; c) Capacity of local institutions to continue project activities after the project ends. This includes

self-financing of activities via contributions of users of goods and services provided, complementary funding from local funding sources, and decreasing dependency on complementary funding from external sources; d) Sustainability also has an aspect of environmental protection. In this case, sustainability refers to the maintenance or enhancement of resource productivity on a long-term basis, minimising the depletion of non-renewable resources and enabling communities to care for their own environment.

Systematic sampling

A method of sampling respondents whereby the first member in the sampling frame is selected, followed by every 'nth' member (e.g., every third household in a north-south line through the centre of a village). These periodic selections become the sample.

Target

Numeric expression of achievements anticipated by a project. These may be written in absolute terms (e.g., 10,000 farmers will replace tobacco farming with alternative cash crops), or as a proportion/percentage change (e.g., the proportion of single adult men reporting use of condoms at their last sexual encounter will increase from 5% to 50%). Targets are generally embedded within objectives, which specify the time frame in which the achievement is supposed to occur.

Target population

Some projects are targeted at particular population groups (who thereby become special interest groups, i.e., 'target groups'). Examples include women farmers, demobilised soldiers, forest dwellers, sexually active adolescents, etc. Sometimes the projects are aimed at or focus on whole communities, i.e., 'target communities'.

Validity

The extent to which the findings accurately represent the actual or true situation. There are three main kinds of validity. Design validity means that the structure of a data collection exercise can yield the desired information (e.g., a 'before and after' design to be able to assess achievements). Technical validity means that the methods of data gathering will get the necessary data (e.g., observation of farms to see adoption of crops, rather than relying on reports by non-farming public officials). Instrument validity means the instrument being used will measure what it is supposed to measure (e.g., in a study of safe water, questions about boiling water will find out about water being treated for drinking purposes, and not be confused by water being boiled for bathing).

Annex 2: Abbreviations (acronyms)

[terms in **bold** font are related to CARE]

ACD	Assistant Country Director
AIP	Annual Implementation Plan
ANR	Agriculture and Natural Resources
API	Annual Project Implementation report
BAIP	Bushenyi-Ntungamo Agricultural Innovations Project
CBO	Community-Based Organisation
CD	Country Director
CREHP	Community Reproductive Health Project
CRHW	Community Reproductive Health Worker
DHT	District Health Team
DME	Design, Monitoring and Evaluation
DTC	Development Through Conservation project
EARs	Expenditure Analysis Reports
EOP	End of Project
EPI	Expanded Programme on Immunisation
FEW	Field Extension Workers
FG	Final Goal
FO	Field Officer
GNP	Gross National Product
GoU	Government of Uganda
HH	Household
HHLS	Household Livelihood Security
HMIS	Health Management Information System
IG	Intermediate Goal
IOP	Individual Operating Plan
KI	Key Informant
LC	Local Council (government administrative unit)
LF	Log Frame (part of the project document)
LFA	Logical Framework Approach (to planning)
LOP	Life of Project
MoU	Memorandum of Understanding
MOV	Means of Verification
MTE	Mid-Term Evaluation
M&E	Monitoring and Evaluation
NGO	Non-Governmental Organisation
OFR	Overseas Financial Report
OVI	Objectively Verifiable Indicator
PAD	Programme Assessment and Development (part of CARE-USA Programme Division)

PIR	Project Implementation Report
PM	Project Manager
PRA	Participatory Rapid Appraisal
RDC	Resident District Commissioners
RMU	Regional Management Unit (part of CARE-USA Programme Division)
SWOL.....	Strengths, Weaknesses, Opportunities, Limitations
TBA.....	Traditional Birth Attendant
UFHP	Uganda Family Health Project

Annex 3

Suggested components for some key M&E documents

1. Evaluation report

- cover (authorship, date of report, reporting period)
- executive summary (and data base abstract for CARE evaluation data base): short description of project, including final and intermediate goals, purpose of the evaluation, overall assessment and conclusions, main findings and recommendations, lessons learnt (addressed to other professionals who design and evaluate similar projects)
- table of contents
- background of project (start/finish dates, origin of concept, goals (and targets), description of interventions, persons involved; wider context in which project has taken place, including key events likely to have affected the project)
- description of evaluation (purpose, design, methodology, outcome/effect measures, implementation measures)
- findings/results (identification and appraisal, implementation and monitoring, outcome/effect and impact; achievements and distribution of benefits; beneficiaries; institution-building, organisational linkages; problems; sustainability)
- discussion (including attribution, cost-benefit considerations, potential for replication)
- summary of conclusions and lessons learnt
- recommendations (the project management, to CARE, to donors, for subsequent M&E of this project and others)
- annexes: ToR, itinerary and list of persons consulted, references, methods of data collection, statistical information

2. Terms of reference for an evaluation or research study

- background and purpose of the study
- questions to address
- study approach – data collection and analysis methods
- special skills and characteristics of the investigator(s)
- time frame and level of effort
- reporting requirements – final work plan, preliminary and final reports, participatory review meetings, other
- deliverables

3. **Contract: final agreement about services and responsibilities for an evaluation**

- parties to the agreement and date
- focus of the evaluation (major questions, outcomes/effects, implementation, costs, other)
- instrumentation (tests, questionnaires, interviews, observations)
- data collection plans (sites, methods, sampling, persons involved and their roles, schedule)
- methodology to be used for analysis
- staff/project participation: roles in co-operating with data collection and analysis; participation in reporting and review meetings, data to be made available
- reporting: participatory review meetings, date of draft report, review period, final report, dissemination (audience)
- budget

Annex 4

Methods: Selected techniques for M&E data collection and analysis – short takes

- File A-1 Introduction: participatory rapid toolkit
- File A-2 Reviewing and analysing secondary data
- File A-3 Social mapping (PRA)
- File A-4 Historical mapping (PRA)
- File A-5 Rapid social organisation profile (PRA)
- File A-6 Focus group discussions
- File A-7 Semi-structured interviews
- File A-8 Qualitative interviews
- File A-9 Rapid surveys
- File A-10 Question design for surveys and interviews
- File A-11 Group brainstorming (PRA)
- File A-12 Ranking exercises (PRA)
- File A-13 Strengths, weaknesses, opportunities, limitations/threats (SWOL/T)

File A-1

INTRODUCTION: PARTICIPATORY RAPID TOOLKIT

This toolkit emphasises qualitative methods, including interviews and PRA (Participatory Rapid Appraisal) tools, because most monitoring and evaluation efforts will need to use them for limited, non-random coverage of respondents.

Various *participatory tools for information gathering, communication, education and project management* have been developed; we can refer broadly to this growing family of managerial tools for participatory and sustainable development as “participatory learning and action” or “action research” methodologies. The main features of action research include:

LOCAL FOCUS:

- * ***A strong link with local, community-based development initiatives.***
Action research aims at generating information and supporting decision-making processes useful for local project planning, implementation, monitoring and evaluation purposes.
- * ***Involvement of local actors and development professionals in a joint learning process.***
Action research is participatory by definition. It promotes collective discussion and negotiation, on the basis of facts, between local actors' and development professionals' perceptions about the issue(s) under investigation.
- * ***A focus on the felt needs of community members and local institutions.***
Action research deals with issues directly experienced and explicitly acknowledged as problems by the people who are asked to participate.

ACTION ORIENTATION:

- * ***Minimal time-gap between data collection and feedback.***
Timeliness of analysis and rapidity of feedback are meant to increase cost-effectiveness of the research and promote the practical use of its results.
- * ***Carrying results into planning and action.***
Action research goes beyond just *recommending* changes based on the findings (as often happens with conventional research). The action research process generally incorporates methods for translating the knowledge gained into practical decisions and/or feasible courses of action.

PARTICIPATORY PROCESS:

- * ***Equal concern for process and results.***
Action research consists of collecting “fairly quick and fairly clean” information, but it doesn’t stop there. It also aims at making all participants aware of the implications of the issue (problem, situation, etc.) being investigated and supporting them in undertaking relevant action.
- * ***Built-in communication and educational strategy to facilitate local involvement.***
While final written reports are useful for institutional or training purposes, active-learning workshops are considered the most important means for providing feedback to local institutions and the community at-large.

* ***Re-definition of the role of the development professional.***

The professional is expected to act more as a “facilitator” and less as an “expert” in his or her field. Working methods are selected and assessed from the perspective of "appropriate technology" for the community. Precision and accuracy of findings are traded off against timeliness and user-friendliness of research and decision-making techniques.

Together with skilful and non-intrusive facilitation, creative use of *visual aids* is an important strategy for supporting group exercises in action research. Some examples of visual techniques that can be used (for data gathering, for analysis, for dissemination and for planning) include the following:

- *Graphic representations* by means of pie-charts or bar-charts (or better yet – pictograms – graphs built of pictures) are suitable for conveying quantitative information even to non-literate participants. The pictograms (whose shape is often inspired by daily objects such as trees, animals, pottery or food) can be used to describe and analyse time trends; patterns of relationship among different actors; or sequences of causes, problems and solutions.
- *Sorting, counting and ranking exercises* may be done in written form, but if literacy is low, they can equally be carried out with everyday objects, such as seeds, stones or simple sketches on small slips of paper.
- *Maps and transect representations* can be used very effectively in groups to describe and analyse the community’s spatial distribution of features of special interest (e.g., natural resources, types of soil, vulnerable families, types of services, water points, land tenure patterns, etc.).
- *Drawings, posters, pictures, and slides as well as open-ended stories, popular theatre and community-directed videos* are widely used as an entry point for focusing group discussions.
- *Analytical matrices* (e.g., column and row, Venn/chapati diagrams – see Chapters 3 and 4) can be used to organise and analyse findings, including qualitative statements. They can also be used on flip-charts or chalkboards for assembling the ideas developed in a brainstorming session with a group.

[Barton et al, 1996]

File A-2

REVIEWING AND ANALYSING SECONDARY DATA

A review of existing data has several potential benefits, such as: refining specific objectives, identification of potential informants for interviews, further clarification of target groups in the population, and summarising what is known versus what remains to be answered in the field. Costs are very low, information can be gathered quickly and it can usually be done with a relatively small amount of local travel. Depending on its quality, existing data can also permit greater depth of analysis for the population and environment situation.

However, there are also some potential limitations. Data may be incomplete, biased, or unreliable. The methods originally used to collect the data may not be described. Access to the materials will vary; and some agencies may expect a fee to respond to information requests, others may not allow access without several permission letters.

The exercise of extracting content and meaning from secondary data will be improved if a set of open-ended questions are systematically used with the data. Some potential questions are as follows:

Problems (nature, range, distribution)

- What information do we already have about the population and environment; problems that affect persons in this region?
- What do we know about the distribution of leading problems among the residents in the study region? E.g., what are the influences and relationships between age, gender, ethnicity, residence location, family structure, educational status, etc.?

Behaviour patterns

- What behaviours place the communities at risk? which behaviours are protective?
- What do we know about factors affecting behaviour change among people in this region? E.g., social competencies, supportive attitudes, social groups, etc.?

Context

- What do we know about external factors affecting the problems? E.g., social norms, religion, economics?

Institutional responses

- What policies exist that aggravate or solve any of the problems?
- What programmes and services are currently addressing the problems?
- What is their coverage and how effective are they?
- Who is funding and who is conducting these activities and services?
- What future activities are planned?

At the conclusion of the documents review, there are two other useful questions:

- a) *What additional information about population and environment is needed but not available?*
- b) *For whom would this information be useful and why?*

File A-3

SOCIAL MAPPING

Participatory mapping starts with collective discussions among groups of community members and then proceeds to drawing maps of their perceptions about the geographical distribution of environmental, demographic, social, and economic features in their territory. The participants are usually requested to draw their own map, e.g., on a flip-chart or on the ground, plotting features with symbols that are understood and accepted by all members of the group, regardless of literacy. In certain cases purchased maps or aerial photographs can also be used.

Purposes

Participatory mapping is especially useful for providing an overview (or "snapshot") of the local situation. It can also serve as a good starting point for environmental and social assessment. Use of periodically repeated participatory mapping is very helpful in monitoring and evaluating changes in the target community (e.g., adoption of farming practices, distribution of social resources like schools and health units) and in the use of natural resources. 'Historical' and 'anticipated future' mapping (i.e., drawing a series of maps referring to different moments) is helpful in describing and analysing trends over time.

Steps in using the technique

- * Explain the purpose of the exercise to the participating group.
- * Agree beforehand on the subject of the mapping exercise and on the graphic symbols to be used. Allow participants to choose their own symbols.
- * Ask a participant to be responsible for drawing or plotting symbols according to the suggestions of the group.
- * Promote participation of all group members by posing individual questions. Allow the group to discuss different opinions and perceptions.
- * Once the map is finalised, ask participants to interpret the overall picture. Suggest that they identify the main problems revealed by the map and ask them about possible solutions within the locally available resources (which are already drawn, or could now be drawn, on the map).
- * Remember that the map is community property; leave a good copy of the map in the community for their own use.

Strengths and weaknesses

- + Mapping and the associated discussions quickly provide a broad overview of the situation .
- + Encourages two-way communication.
- + Helps people in seeing links, patterns, and inter-relationships in their territory.
- + Individuals who are non-literate can participate.
- Subjectivity and superficiality: mapping exercises must be complemented by information generated by other participatory assessment tools.
- Some cultures may have difficulties in understanding graphic representations.

File A-4

HISTORICAL MAPPING

Historical mapping uses a series of participatory mapping exercises to portray the demographic and natural resources situation of the community at different moments of its history. Three maps are drawn showing the situation as it existed one generation ago, at the present time, and what is expected after one generation's time in the future.

Purpose

Historical mapping can be extremely helpful to introduce the time dimension in participatory environmental appraisal and/or participatory census exercises. It can provide visual evidence of changes that have occurred and expected trends. In this way it can help identify determinants of environmental degradation and population growth and enable participants to consider more suitable means of balancing or controlling these issues.

Steps in using the technique

- * A map of the current demographic and environmental situation is drawn with participants.
- * With the help of older community members, the same exercise is repeated to show the situation as it was approximately twenty years ago.
- * The current and past maps are then compared, often with a brainstorming, to collectively identify major changes and their root causes.
- * Based on the list of changes and causes, a prospective map can be drawn by the participants to show their expectations of the situation which will exist in the community in 20-30 years from now if the current trends are maintained.
- * The future map can be reviewed to explore differences between what is projected and what a desirable future status would be. This discussion can then progress to identify potential means for addressing environmental degradation and population growth.

Strengths and weaknesses

- + The technique can be very appropriate to summarise the results of a comprehensive participatory appraisal on environment and population dynamics.
- + It may increase participants' understanding that most positive and negative changes in environments and populations are shaped by historical, man-made actions.
- + It can help to identify mid- or long-term solutions to the population and environment problems affecting the community.
- The exercise is long and complex. At least three sessions with the group will be needed to get through the whole sequence of mapping and discussion.
- Sensitive issues from the past may be raised, including conflicts within the community and between the community and outsiders.
- The analysis is likely to identify effects and causes which are beyond community control. Discouragement and frustration may develop among participants.

File A-5

RAPID SOCIAL ORGANISATION PROFILE (PRA)

Information about social groups can be readily identified by community members as a participatory discussion and analysis tool. Use a flip chart with the community working group to facilitate their collective work on this exercise. The categories listed below (see also the following matrix) are usually very useful; additional columns, however, could be added by the community, e.g., date group started, where group is located, etc. Such additions are quite acceptable, if they are not too many, and if the community can express how they think the extra information might be used.

Group name – the group’s own name, in vernacular

Size – of the group; number of members (if there are degrees of membership, or individual and household members, that information would also be useful.

Gender of members – may be one gender or mixed; if mixed, give proportions

Age – of members; can be given as a range, with some indication of whether there is a particular pattern of most members in a certain range

Admission rules – how do persons acquire membership status: by appointment, nomination, paying a fee (and if so, how much), residing in a certain location, etc.? Is there a recurrent fee to maintain membership, e.g., on a monthly or annual basis?

Activities: level, focus – what is the nature of the group and what are its principal activities (e.g., cultivation, rotating credit, assistance to orphans, income generation, religious fellowship, political, etc.)

Date group started – when was the group formed? This gives some idea of the stability of the group.

Location – where do the group’s activities take place? At times, it can also be useful to get the mailing address or physical location for the group.

Link person in the group – generally a resident of the community, and often the chairperson for the group. Someone who can be contacted about group activities, or sharing information with the group.

Link person in the project – if this data is being collected for a project activity, e.g., planning an intervention, there may be multiple project-related persons in contact with the community, but usually one individual who has or can have a stronger tie to the particular group for information sharing.

Potential relevance to project – projects have different objectives (e.g., development, health education, gender sensitisation, social research, etc.); this column can encourage thinking about the importance of all groups in the community.

After completing the matrix, a discussion can lead to an exploration of the groups as resources, including potential relevance to the project (e.g., development, health education, gender sensitisation, social research, etc.). Seeking comments and opinions from the community and project staff about the potential relevance of each group can help to discourage dependency on an external project.

COMMUNITY ORGANISATIONAL PROFILE

Community _____

Date form completed _____

Person completing form _____

Group name	Size	Gender of members	Age	Admission rules	Activities: level, focus	Date group started	Location	Link person in group	Link person in project	Potential Relevance to project

File A-6

FOCUS GROUP DISCUSSIONS

Focus groups are semi-structured discussions with a small group of persons sharing a common feature (e.g., women of reproductive age, shareholders in an irrigation system, users of a certain service, etc.). A small list of open-ended topics, posed as questions (see example, boxes 3.14, 3.15), is used to focus the discussion.

Purposes

Focus groups have been increasingly used in participatory research to identify and describe insider perceptions, attitudes, and felt needs.

Steps in using the technique

- * Design a discussion topic guide (interview framework) (see boxes 3.14, 3.15).
- * Decide on the number of focus groups. In a small community, two groups of 6-12 persons each and representing key opposing categories (e.g., men and women, peasants and herders, wealthy and poor, etc.) may be sufficient. Be ready to hold additional sessions if the discussion does not succeed (e.g., people don't show up, the facilitator can't keep the discussion on course, etc.)
- * Select appropriate facilitators; which may involve matching by age, gender, or language ability (focus groups are best done in the local vernacular)
- * The interviewer acts as a group facilitator, and a second person acts as a rapporteur (note-taker). The rapporteur needs to write rapidly to capture people's expressions as exactly as possible. It may be useful to tape record the session, but only if the community and the group give permission.
- * Conduct practice focus groups with members of a similar nearby community; in small communities, this helps prevent people coming with pre-set answers.
- * Before starting, explain the purpose of the session to the group. After posing topics, be sure each person has at least one opportunity to provide his/her ideas. Over-talkative participants need to be controlled and silent ones stimulated.
- * As with semi-structured interviews (see File A-7), the facilitator is free to use a variety of probing questions to help extract ideas and to keep the talk focused. Limit the length of the session to about an hour (including introduction).
- * Notes and recordings of interviews should be carefully reviewed immediately after the session (and tape recordings transcribed as soon as possible).
- * Analysis consists of extracting key statements from the discussion. These statements should be reported in the matrix exactly as phrased by the participants.

Strengths and weaknesses

- + Group interaction enriches the quality and quantity of information provided
- + Focus group discussions are quite good at disclosing the range and nature of problems, as well as eliciting preliminary ideas about solutions.
- Practice and experience in qualitative research procedures are needed.
- Large amounts of information are easily obtained, necessitating skills in extracting and summarising for the analysis

File A-7

SEMI-STRUCTURED INTERVIEWS

Semi-structured interviews are lists of broad, open-ended questions to be addressed to knowledgeable individuals in a conversational, relaxed, and informal way. The interviewer is left free to rephrase these questions and to ask probing questions for added detail (e.g., "Who?", "Where?", "When?", and "How?") based on respondents' answers and conversation flow. This form of interview is more likely to yield in-depth opinions and perceptions than can be done with a rigid closed-ended questionnaire.

Purposes

Semi-structured interviews can be used to obtain specific quantitative and qualitative information. Household features, gender-related issues, use of natural resources, household economics, and many other topics can be effectively explored.

Steps in using the tool

- * Design an interview guide and a results summary form.
- * Decide who is going to be interviewed (purposeful sampling procedures); and select appropriate interviewers (may mean matching respondents and interviewers by age or gender; will depend on topic and local cultural values)
- * Pre-test the questionnaire guides with several individuals who are representative of the types of persons to be interviewed in the actual study (make sure the questions are comprehensible, that the answers are relevant, etc.)
- * Conduct a training for all persons who will be doing the interviews (i.e., the interviewers); be sure the training includes a number of practice interviews with other interviewers or community members and subsequent review to improve performance.
- * Teach the interviewers to make relatively brief notes during the interview, filling-out the summary form immediately after the interview; this will require practice to capture exact words and phrasing for quotations
- * Arrange for daily (or nightly) editing of all forms for completeness, errors, etc.
- * Hold daily discussions about problems encountered during the interviews and to review the preliminary results with other members of the team.

Strengths and weaknesses

- + Less intrusive than questionnaires; can be paced to fit the needs of the respondent
- + Encourages two-way communication.
- + Administered in an atmosphere that makes respondents feel at ease, which may include privacy and confidentiality, depending on topic.
- + Can obtain very detailed information and richly expressive quotations
- Practice and experience are needed for appropriately using this tool; requires sensitivity and the ability to recognise and suppress one's own biases.
- Interviewers should have good literacy, communication, and summarising skills.
- Interviewers will need some grasp of the general topics covered in the interview.
- Facilitator support is needed for analysing data.

File A-8

QUALITATIVE INTERVIEWS

One of the most important sources of information for monitoring and evaluating agriculture and rural development projects is qualitative interviews. Qualitative interviews with project participants and other key informants help in understanding the complex ecological, sociological, cultural and other situations with which the project must deal. They can also provide an in-depth understanding of the perspectives, attitudes, and behaviour patterns of the target population, which will not be fully captured by other modes of data gathering. Moreover, qualitative interviews can be used to generate hypotheses and propositions which can then be tested on a wider population using a structured questionnaire.

Qualitative interviews are usually classified according to three broad types: a) informal, conversational; b) topic-focused; and c) semi-structured, open-ended.

Reliability and validity of the interview

How is the reliability of the information generated by a qualitative interview to be assessed? How can we be sure that the respondent has provided accurate information? This problem, of course, is not unique to qualitative interviewing; it is common to all types of interviews. But because of the subjective nature of the written summary notes, the issue of reliability is particularly pertinent in this context. Because by definition, there is no totally objective test that can be applied in qualitative interview situations, judgement of accuracy must be based on an assessment of respondent-related factors.

Knowledge

Obviously, the first consideration is the knowledge that the respondent may be expected to have. Remember, too, that the respondent may be knowledgeable about some items and relatively ignorant about others. Therefore, the interviewer should ask himself the following questions with reference to each of the principal sub-topics in the interview. Questions for a checklist include:

- is the respondent's knowledge of the matter direct and first-hand?
- is the respondent in a position to provide accurate information?
- if the respondent is relying on second-hand information, are these sources credible?

Credibility

Some people have a tendency to boast; others have a fertile imagination and unconsciously exaggerate; still others aim to enhance their self-importance by giving misleading answers. Questions for a checklist include:

- is the respondent eager to make strongly authoritative statements?
- does the respondent consider before replying and seem perceptive about the issues?
- are the respondent's answers based on practical considerations?

Ability and willingness to respond

Some respondents find it difficult to articulate their feelings, judgements, and opinions, especially to outsiders. This problem is compounded when the interviewer comes from a higher socio-economic stratum.

Ulterior motives

Respondents may have an ulterior motive for providing inaccurate information. Extension staff may exaggerate the performance and impact of agricultural extension activities. A health worker may magnify the problems encountered on reaching out to target populations. Staff directly involved in project efforts have a professional stake in promoting their activities and covering their shortcomings; often this bias is more sub-conscious than a deliberate attempt to mislead. Questions for a checklist include:

- was the respondent trying to paint only a positive picture?
- was the respondent trying to rationalise a distasteful fact?
- was the respondent dwelling excessively on problems and difficulties in order to seek sympathy?

Bars to spontaneity

The social context of the interview also affects the expression of ideas and opinions by the respondents. For example, when a farmer is interviewed in the presence of government officials or project staff, he might not reveal the truth because he is afraid to antagonise them. Questions for a checklist on this include:

- were there some people around whose presence might have affected the respondent's answers?
- was he anxious that others might overhear him?
- was the location private enough to ensure total confidentiality for the interview?

Desire to please

There is a tendency for respondents to give answers which they believe the interviewer wants to hear, either from politeness, hope of benefits, or in the hope of shortening the questioning. In such a case, it is particularly important to avoid giving the respondent clues regarding the interviewer's opinions. Questions for a checklist:

- did the respondent show undue deference?
- did the respondent seek the interviewer's opinion before replying?
- did the interviewer say anything which silenced the respondent or changed the thrust of his responses?

Other factors

Finally, one should not forget that recent events might have influenced the views expressed by the informant. The mental and physical status of the respondent also affect his responses. When he is tired, he can be irritable and react negatively to questions.

[Casley and Kumar, 1988]

File A-9

RAPID SURVEYS

Methodology notes:

- 20 questions (or less), fitting on one to three sheets of paper with room for answers
- about 2/3 of questions pre-set, rest to be contributed by or specific to the concerns of the given community
- capable of being administered by local people (e.g., local volunteers) in collaboration with trained supervision (e.g., divisional staff)
- capable of being analysed rapidly in the field and raw results given to the community during the field phase
- able to generate reasonable prevalence data for the community (e.g., based on visits to every household, or a sample of households which has been identified and numbered on the social resource map)

Alternative strategies for identifying information to gather

- Community-generated: what do community leaders want or need to know that would help them to better serve the needs of their community? Begin with qualitative techniques (focus groups, key informant interviews, etc.) to get community input into what should be included in a survey questionnaire.
- Project-generated, exploratory: what range of activities would the project like to consider for this area (or the programme for the project); what indicators would help in deciding where to focus their efforts
- Project-generated, specific: based on a selected group of anticipated activities, what indicators would be likely to be measured at the outcome stage (and therefore need to be collected at the baseline for later comparison)?
- Service-related: based on services reportedly available in the area, how often have the individual households received or made use of any services and what services from these various providers?

Other data considerations

- Data to be gathered should be useful (i.e., not just collected because it is ‘nice to know’)
- Data should be anticipated to be more accurate (exact) or more accessible through a survey approach than would be possible in group sessions
- Information to gather at the community level might already be available at a larger scale, but not for the micro-environment of the community, e.g., employment patterns, reasons for school drop-out, nature of disability, adolescent health (sexual and reproductive), latrine quality and usage, etc.

File A-10

QUESTION DESIGN FOR SURVEYS AND INTERVIEWS

Avoiding inappropriate questions

To make sure our questions are appropriate, we must become familiar with respondent groups – their knowledge of certain areas, the terms they use, and their perceptions and sensitivities. What may be an excessive burden for one group may not be for another. And what may be a fair question for some may not be for others. For example, in a survey of the handicapped, those who were not obviously handicapped were very sensitive about answering questions while the converse was true for the obviously handicapped.

Questions are inappropriate if they:

- cannot or will not be answered accurately
- are not geared to the respondents' depth and range of information, knowledge and perceptions
- are not relevant to the evaluation goals
- are not perceived by the respondents as logical and necessary
- require an unreasonable effort to answer
- are threatening or embarrassing
- are vague or ambiguous
- are part of a conscious effort to obtain biased or one-sided results.

The best way to avoid inappropriate questions is to know the respondent group and not rely on stereotypes. A brief story may bring this point home. A researcher was pretesting a questionnaire on people who used mental health services. During the test, the researchers expressed surprise that this group of respondents could handle certain difficult concepts. Annoyed, one of the respondents rejoined, "I may be crazy, but I'm not stupid."

[GAO, 1986]

File A-11

GROUP BRAINSTORMING

Brainstorming is a basic idea gathering technique employed in many group exercises. It is based on a freewheeling discussion started by an open-ended and somehow provocative question forwarded by the facilitator. At the same time, avoid opening statements that are leading, i.e., ensure that they do not promote or overemphasise a particular point of view that can bias the ideas of the participants.

Purpose

Brainstorming can elicit multiple perceptions of a given issue, and the group discussion which follows can help find the basis for a consensus among group members.

Steps in using the technique.

- * The issue to be discussed is introduced by the facilitator.
- * The key-question is written on the blackboard or on a flip-chart.
- * Participants are asked to provide short answers, i.e., no speeches at this stage.
- * An important point to stress at the beginning is that ‘all ideas are good ideas’; if anyone does not agree with someone else’s point, they should give what they think is a better idea. Accept only additional contributions during the brainstorming, not disagreements or arguments; defer them to the discussion afterwards. Encourage fresh ideas rather than repetitions of earlier items.
- * Each participant is allowed to express his/her view. Over-talkative participants will need to be quieted, and silent participants can be explicitly asked for ideas.
- * The facilitator picks the basic point out of participant statements and ensures that it is written (or portrayed with a picture) on large cards tacked to a bulletin board or wall. Appropriateness of the summary is checked with the concerned participants.
- * Keep the brainstorming relatively short, i.e., 15-30 minutes is usually sufficient to obtain most of the ideas on a specific topic without tiring the participants.
- * Review the results with the participant group. Remove duplicated items and cluster groups of similar ideas. (Having the ideas on cards facilitates rearranging them.) Highlight differences of opinion and discuss until a consensus is achieved.
- * Results of the brainstorming can then be summarised and kept for future reference.

Strengths and weaknesses

- + A properly conducted brainstorming facilitates participation of all group members in the idea-building process.
- + It helps to understand and, if needed, consolidate the degree of consensus and homogeneity within the group.
- + It is a good introduction for more structured and focused exercises.
- Solid experience in dealing with group dynamics is needed by the facilitator to keep the discussion on track as well as good mediation and summarising skills.
- Setting and dynamics may hide conflicts existing within the group and affect the reliability of the brainstorming results.

File A-12

RANKING EXERCISES

Ranking exercises, which may be done with groups or individuals, are a way to enable people to express their preferences and priorities about a given issue. The technique may generate insights about the criteria through which different individuals, groups or social actors make decisions on the kinds of issues under investigation.

Purpose

Ranking exercise have been used for a variety of specific purposes, such as:

- identification of needs, priorities and preferences
- quantification of opinion and preferences as elicited through interviewing or brainstorming;
- comparison of preferences and opinions as expressed by different social actors.

Steps in using the tool

- * Make a list of items to be prioritised (these could come from a brainstorming exercise);
- * Recruit appropriate participants to be involved in the exercise;
- * Define a simple ranking mechanism. This may be based on a pair-wise comparison of items in the list; on sorting cards representing items in order of preference; or by assigning a score to the different items.
- * Prepare a matrix on which preferences identified by participants could be jotted down (e.g., on the ground, with a flip chart, on a chalk board)
- * Explain the ranking mechanism to each participant and ask them to carry out the exercise (e.g., give them three stones to place on any categories they want in response to a specific guiding question – which crop is the most difficult, which type of health provider is the most effective, etc.);
- * Ask participants to explain the criteria on which their choice has been made
- * Carry out a quantitative analysis of ranking series and interpret the findings on the base of qualitative statements about the criteria of choice.

Strengths and weaknesses

- + Ranking is a flexible technique which can be used in a variety of situation and settings.
- + Whenever categorical judgements are needed, ranking is a suitable alternative to closed-ended interviewing.
- + Ranking exercises are generally found to be amusing and interesting by participants and are helpful to increase their commitment to action-research.
- + Information is provided on both the choices and reasons for the choices.
- Pre-testing is needed for the ranking mechanism and the tools to be used to facilitate it.
- Choices may be affected by highly subjective factors. In order to generalise results to the whole community, a proper sampling strategy is needed.

File A-13

STRENGTHS, WEAKNESSES, OPPORTUNITIES AND LIMITATIONS (SWOL) ANALYSIS

SWOL analysis is a powerful tool for group assessment of the issues of concern, particularly interventions or different potential courses of action. It is based on a structured brainstorming aimed at eliciting group perceptions of the positive factors (strengths), the negative factors (weaknesses), the possible improvements (opportunities) and the constraints (limitations) related to the issue.

Purpose

SWOL analysis is especially useful for evaluating activities carried out in the community. It can be focused on services provided by external agencies, as well as using it for self-evaluation of the interest group's own performance.

Steps in using the tool

- * A four column matrix is drafted on the blackboard or on a flip-chart and the four judgement categories are explained to participants. It will help to phrase the four categories as key questions, to which participants can respond.
- * The facilitator starts the brainstorming by asking the group a key question about strengths. Responses from the group are jotted down on the relevant column of the matrix.
- * For each strength, the related weaknesses, opportunities and limitations are also identified by the group.
- * Participants may have different opinions about an issue, and contradictory statements may be forwarded. In such cases, the facilitator can work toward a consensus, which may require a point to be discussed at some length. Each entry is left on the final matrix only after achieving a group agreement.

Strengths and weaknesses

- + The technique stresses consideration of different sides (positive and negative) of the issues. It therefore helps to set the basis for negotiations and trade-offs.
- + SWOL is a good means to build a consensus within the group and to prepare the group to discuss with outsiders.
- + SWOL can promote group creativeness. It helps to link perceptions of things as they are with realistic expectations about how things could be.
- Sensitive topics and differences of opinion may arise during the discussion.
- Some group members may dominate the discussion.
- Summarising long discussions in short statements requires that the facilitator have good synthesising skills.

Annex 5: Alternative terms for log frame concepts

Organisation/Agency	Citation	Impact	Effects	Outputs	Processes	Inputs
CARE terminology	1	Impact	Effects	Outputs	Processes	Inputs
CARE LogFrame terms		Final Goal (FG)	Intermediate Goals (IG)	Outputs	Activities	Inputs
CIDA	2	Overall goal	Project purpose	Results/outputs	Activities	Inputs
DANIDA	3	Development Objective	Immediate Objective	Outputs	Activities	Inputs
European Union	4	Overall objectives	Project purpose	Results	Activities	
FAO	5	Development objective	Immediate objectives	Outputs	Activities	Inputs
GTZ	6	Overall goal	Project purpose	Results/outputs	Activities	Inputs
NORAD	7	Development objective	Intermediate objectives	Outputs	Activities	Inputs
ODA	8	Goal	Purpose	Outputs	Activities	
PC/LogFrame	9	Goal	Purpose	Outputs	Activities	
UN Agencies	10	Impact	Effect	Outputs	Processes	Inputs
USAID	11	Final goal	Strategic goal, objective	Intermediate results	Activities	202E
World Bank	12	Goal	Project purpose	Outputs		Inputs

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Annex 6

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