Contents

Acronyms ................................................................. vii
Glossary ............................................................... ix
Introduction: How to Use this Guidebook ......................... xiii

1 An Overview of Monitoring and Evaluation ....................... 1

2 Clarifying Project Goals, Objectives and Information Needs . 23
   Pre-Design Tasks .............................................. 23
   Clarifying Project Goals and Objectives ...................... 23
   Mapping the Project ......................................... 26
   Determining Information Needs ............................... 31

3 Designing a Monitoring System ................................... 35
   Monitoring for Project Improvement with a Management
   Information System (MIS) ..................................... 36
   Responding to Monitoring Results ........................... 47
   Monitoring the Budgetary Health of the Project ............ 51
   Planning the Flow of Information ............................. 53

4 Selecting an Evaluation Design .................................... 59
   Designs for Evaluation ....................................... 60

5 Preparing for Evaluations .......................................... 73
   Planning an Evaluation ...................................... 73
   Determine the Sample Size ................................... 74
   Identify a Control Group ..................................... 75
   Choose a Sampling Frame ..................................... 77
   Collecting Pre-Project Information through a Baseline Survey . 79
6 Selecting Indicators .......................................................... 81
   What Is an Indicator? ...................................................... 81
   Characteristics of a Good Indicator .................................. 81
   Types of Indicators for Measuring Program Effectiveness ...... 86
   How to Select Indicators .................................................. 88

7 Deciding Data Collection Strategies ................................. 91
   Qualitative vs. Quantitative Data Collection Methods .......... 91
   Maximizing the Efficiency of Data Collection .................... 99
   Controlling for Bias through Data Collection Methods .......... 100

8 Developing Data Collection Instruments .......................... 103
   Steps in Designing M&E Instruments ............................... 103

9 Analyzing the Data ....................................................... 115
   Analyzing Quantitative Information ................................ 115
   Analyzing Qualitative Information .................................. 129
   Returning to the Conceptual Framework ........................... 131

10 Maximizing the Usefulness of Results ............................ 133
   Ownership of the M&E Process ....................................... 133
   Effective Presentation of Findings and Recommendations ...... 136
   The “Usability” of Results .............................................. 137

Annexes
   1: Program Constraints Assessment ............................... 143
   2: Conceptual Framework Examples from Three Nutrition Projects .................................. 145
   3: General M&E Checklist .............................................. 149
4: Illustrative Data Collection Forms Which Facilitate “Management by Exception” ......................... 151
5: Sampling Tips .......................................................... 175
6: Instrumentation Checklist .............................................. 179
7: Illustrative Use of the Conceptual Framework Model for Backwards Mapping ......................... 181

References ................................................................. 185
## Acronyms

<table>
<thead>
<tr>
<th>Acronym</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>BMI</td>
<td>Body mass index</td>
</tr>
<tr>
<td>CNP</td>
<td>Community nutrition promoter</td>
</tr>
<tr>
<td>CNO</td>
<td>Community nutrition organizer</td>
</tr>
<tr>
<td>CNW</td>
<td>Community nutrition worker</td>
</tr>
<tr>
<td>CS</td>
<td>Cluster sampling</td>
</tr>
<tr>
<td>FFW</td>
<td>Food-for-work</td>
</tr>
<tr>
<td>HAZ</td>
<td>Height-for-age Z-score</td>
</tr>
<tr>
<td>ICDS</td>
<td>Integrated child development services</td>
</tr>
<tr>
<td>IDD</td>
<td>Iodine deficiency disorder</td>
</tr>
<tr>
<td>LBW</td>
<td>Low birth weight (&lt; 2,500 grams)</td>
</tr>
<tr>
<td>MIS</td>
<td>Management information system</td>
</tr>
<tr>
<td>M&amp;E</td>
<td>Monitoring and evaluation</td>
</tr>
<tr>
<td>NGO</td>
<td>Non-governmental organization</td>
</tr>
<tr>
<td>PRA</td>
<td>Participatory rural appraisal</td>
</tr>
<tr>
<td>RRA</td>
<td>Rapid rural appraisal</td>
</tr>
<tr>
<td>SD</td>
<td>Standard deviation(s)</td>
</tr>
<tr>
<td>SRS</td>
<td>Simple random sampling</td>
</tr>
<tr>
<td>SS</td>
<td>Systematic sampling</td>
</tr>
<tr>
<td>StS</td>
<td>Stratified sampling</td>
</tr>
<tr>
<td>TINP</td>
<td>Tamil Nadu Integrated Nutrition Project</td>
</tr>
<tr>
<td>UPGK</td>
<td>Family Nutrition Improvement Program in Indonesia</td>
</tr>
<tr>
<td>VAD</td>
<td>Vitamin A deficiency</td>
</tr>
<tr>
<td>WAZ</td>
<td>Weight-for-age Z-score</td>
</tr>
<tr>
<td>WHZ</td>
<td>Weight-for-height Z-score</td>
</tr>
</tbody>
</table>
Glossary

**Benefits**—the broader, sustainable changes in public health or economic status that a program seeks to achieve but which are inevitably influenced by a wide range of other factors.

**Constraints Assessment**—the systematic identification of constraints inhibiting project effectiveness. The constraints are then organized to permit the identification of technical, policy, research, and training means of addressing them.

**Control Group**—a group of individuals in an evaluative study who share the same characteristics as a participant group.

**Cost-Delivery Analysis**—study of the cost incurred to deliver a specified set and quantity of goods and services (outputs) to a targeted population.

**Cost-Effectiveness Analysis**—study of the cost incurred to achieve a specific change in nutritional status (impact) in a targeted population.

**Focus Groups**—small group discussions led by a trained moderator who introduces a topic and facilitates participation by all group members.

**Goals**—the broad aims of the project, the significant, longer-term changes that planners expect to occur as a result.

**Indicator**—an objectively verifiable measurement which reflects the activity, assumption, or effect being measured.

**Key Informant Interviews**—a face-to-face meeting between a trained interviewer and a person selected to represent a certain group whose knowledge, attitudes or practices are being monitored or evaluated, or a person likely to offer informed views.

**Proxy Indicator**—a measurement used as a substitute when true indicators are too difficult to measure directly.
Impacts—changes in the condition of the target population which generally reflect the primary objectives of the project.

Inputs—the materials, goods and actions necessary to carry out the primary project activities.

Input assumptions—the expectations regarding the effectiveness and quality of the project inputs.

Evaluation—a process of data collection designed to assess the effectiveness of the project in attaining its originally stated objectives, and the extent to which observed changes are attributable to the project.

Experimental Design—a rigorous evaluation design which includes a control group, randomization, and pre-post project data.

Management Information System—a tool, often computerized, which is used to compile and analyze monitoring data.

Monitoring—the ongoing collection and review of information on project implementation, coverage and utilization of inputs.

Objectives—operationalized goals which specify the results and the level of change expected.

Outcomes—the intermediate effects, often behavioral, resulting directly from project outputs that may be necessary to achieve a desired impact.

Outputs—the provision of project goods and services to the target population. The primary project activities.

Output Assumptions—expectations regarding the ways goods and services (outputs) will be used by the target population.
Sample—subset of a population which is used to represent the entire group.

Sensitivity Analysis—a means of exploring how plausible changes in assumptions about uncertain variables affect conclusions.

Special Studies—studies to investigate issues raised before or during project implementation which can not be addressed through ongoing project monitoring.

Stakeholders—individuals or organizations associated with or affected by a project.

Quasi-experimental Design—evaluation designs that eliminate competing explanations of project effects without the benefit of a true control group.
In international nutrition, as in other development fields, there has been a growing recognition of the need for monitoring and evaluation (M&E) systems. Monitoring is closely linked to project management and designed to assess and improve project performance. Evaluation, additionally, permits decision-makers to assess whether project objectives are being met. The absence of M&E in large numbers of nutrition projects, despite continued evidence of their value, suggests that, beyond resource constraints, some project staff may not yet have the necessary skills or confidence to develop and operate such systems.

This guidebook is designed specifically to assist World Bank and other nutrition project task managers with responsibilities they are likely to have for project monitoring and evaluation. Even if these responsibilities do not include the actual development of M&E systems, effective task management is likely to require an understanding of how such systems work, the key factors that render some M&E systems better than others, and the critical questions to ask of M&E operations.

While much has been written on the monitoring and evaluation of social services, these materials are often general in nature or geared to services operating in industrialized countries, and not always useful for specific developing country applications. We will present recognized M&E processes in ways that they can be easily understood and put into practice. In addition, we use examples to demonstrate how these processes have been used in programs addressing malnutrition in Asia, Africa and Latin America.

We begin with an overview that defines monitoring and evaluation and presents the basic framework that will be used throughout the book. The core of the guidebook then leads the reader through the steps involved in developing and implementing monitoring and evaluation systems. These sections are supplemented by a set of annexes which provide application of M&E tools to specific examples and additional information to be used for M&E.
The guidebook has been prepared for use either as a self-teaching manual or as the basis for group training programs. Where they are needed, references to other information sources are included. In the case of formal evaluations, particular steps are likely to require the assistance of a professional statistician. Nonetheless, Sections 4 and 5 present, in summarized fashion, the necessary steps involved and the common pitfalls encountered in setting up an evaluation—this based on the belief that project planners and managers need to be more involved in these issues than has normally been the case.

In addition, though we provide a broad array of nutrition project examples, we do not provide detailed M&E procedures for each category of nutrition intervention, particularly those addressing individual micronutrient deficiencies. Fortunately a growing number of excellent manuals on the monitoring of particular micronutrient interventions are being developed by UNICEF, WHO, the Micronutrient Initiative, OMNI, PAMM, and the micronutrient consultative groups* to help address this need. By contrast, there are numerous examples from the first Tamil Nadu Integrated Nutrition Project (TINP I) which, to date, has provided the most thorough, and probably the most effective example of a monitoring and evaluation system associated with a large scale nutrition project.

We have tried to keep the guidebook brief without sacrificing clarity and examples, and to assume an audience of professional managers with some background both in nutrition projects and in project planning and design. Readers familiar with the fundamentals of monitoring and evaluation may find the guidebook useful primarily as a check list for nutrition project M&E systems. Others who are less familiar with such processes may find it more useful as a step-by-step guide.

*The micronutrient consultative groups are the International Vitamin A Consultative Group (IVACG), the International Counsel for the Control of Iodine Deficiency Disorders (ICCIDDD) and the International Nutritional Anemia Consultative Group (INACG).
Finally, we seek to counter the idea that M&E need to be a harsh, user-unfriendly regimen imposed by outsiders on overworked project implementers. In fact, M&E can and should be an adaptable and participatory process. When monitoring and evaluation are used properly, programmatic efforts to improve nutritional well-being or, more broadly, to improve the human condition, can be strengthened—an aim central to most development practitioners.