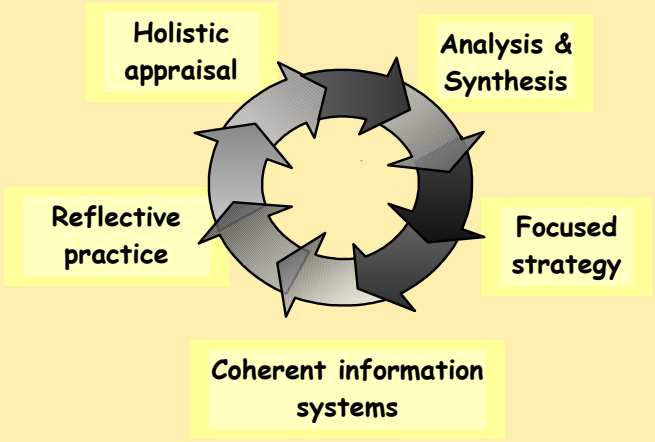
Project Design Handbook



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(See also condensed version: "Essentials of Project Design")

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Foreword

We in CARE are on a journey from the 'old days' of the CARE Package, 'truck-and-chuck' and direct service, to Household Livelihood Security and the incorporation of Rights-Based Approaches, working with partners to address underlying causes of poverty through the empowerment of people and advocating for gender equity, human rights and social justice.

We now have a common CARE International vision that compels us to "**seek a world of hope, tolerance and social justice, where poverty has been overcome and people live in dignity and security.**" It goes on to state, "**CARE International will be a global force and a partner of choice within a worldwide movement dedicated to ending poverty. We will be known everywhere for our unshakable commitment to the dignity of people.**"

Our CARE International Mission complements that Vision Statement:

> *"To serve individuals and families in the poorest communities in the world. Drawing strength from our global diversity, resources and experience, we promote innovative solutions and are advocates for global responsibility. We facilitate lasting change by:*
>
> - *Strengthening capacity for self-help;*
> - *Providing economic opportunity;*
> - *Delivering relief in emergencies;*
> - *Influencing policy decisions at all levels;*
> - *Addressing discrimination in all its forms.*
>
> *"Guided by the aspirations of local communities, we pursue our mission with both excellence and compassion because the people whom we serve deserve nothing less."*

We could spend time meditating on those Vision and Mission statements, 'est' style, like 'visualizing world peace,' hoping that somehow it will happen if enough people really believe in and are committed to that vision. But we're practical people. We want to do what we can to translate that vision into reality – to fulfill that mission.

How do we do that? Well, the means we have to translate vision, principles and values into action are through programs and projects. Whether in the form of long-term program strategies, or specific time-bound and funded projects, there have to be processes of planning programs or designing projects. In order for those processes to translate good intentions into practical realities, there are a number of basic 'good practice' procedures and methodologies required.

That's what this Project Design Handbook has been compiled to help us do.

Acknowledging a perception that we should be doing a much better job of project design, there has been a high demand expressed by many for guidance on what constitutes 'good practice' in design, and how to apply it. Knowing of his many years of experience training the staff of CARE and other development agencies in many countries around the world, we asked Rich Caldwell to condense his best guidelines into the form of a handbook. This

volume is the result of many years of his work, informed as well by many others who have also been involved in promoting better project design.

The essence of good design practice requires holistic, logical, systematic, participatory diagnosis of situations, getting agreement on priority problems to be addressed, identification of the underlying causes of those problems, choosing interventions that CARE and partners can implement that have maximum potential for leveraging desired change, and then designing projects to do that effectively. Projects must also be cost-effective, minimize negative side effects, and maximize their positive impact on the quality of life of poor people – those who most deserve help.

Over the past several years there has been a major effort (the Impact Evaluation Initiative or IEI) involving many of us to identify the most essential elements of good Design, Monitoring and Evaluation. These have evolved into the Project Standards that have been officially endorsed by the CARE International Board.[1]

We recognize the need for a whole series of guidelines and tools to accompany the CI Project Standards, to help practitioners understand and apply them. This Project Design Handbook is a major part of that guidance. This Handbook is addressed to those responsible for project design, whether full-time CARE staff, consultants, or partners.

It is being initially issued as a "working draft" to give time for additional input. We seek feedback from you, the user, on how to make it even more useful. How can it be improved? In particular, we seek more examples of project designs, especially logic models, from a variety of sectors and situations. We especially need examples of projects that are more explicitly addressing human rights and social injustice; projects that are incorporating gender equity and diversity; projects that are working with or through partner agencies; projects that focus on building institutional capacity and promoting civil society; projects that advocate for policy change. We're also looking for additional tools and methodologies you have found useful in diagnostics and design.

This Project Design Handbook is a work in process. For the latest version go to the main DME (Design, Monitoring and Evaluation) website: www.kcenter.com/care/dme. (There you will also find links to other DME-related materials, produced by CARE and many other sources.) Your recommendations for how to improve this Handbook are solicited – especially more examples of logic models. Please send these to rugh@care.org. Our goal is to have a final, published version of this Project Design Handbook completed before the end of FY 2003. In the meanwhile, we hope that you find it useful in its present form as you design projects, or use the material to teach yourself and/or others how to do so.

Jim Rugh, CARE Coordinator of Program Design, Monitoring and Evaluation
Atlanta, 17 July 2002

[1] The CI Project Standards can be seen in Annex 1.1 (page 113).

Chapter 1

Introduction

Project Design Handbook Overview
Objectives
Project Design Defined
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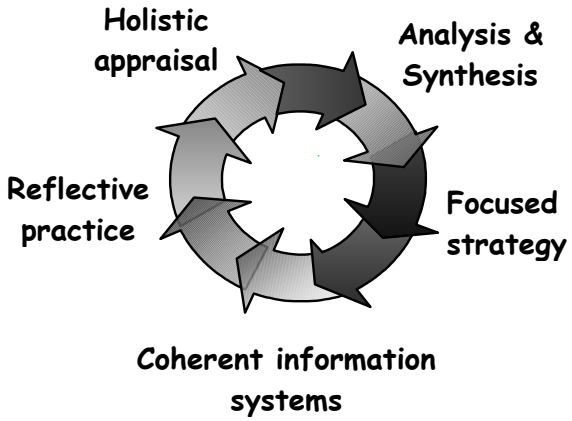
Frameworks for Project Design



This Introduction Chapter provides an overview of design and its association with CARE's DME cycle. It offers a definition of project design and provides a suggested hierarchical framework of objectives. Other conceptual frameworks used in CARE are also explored and their relevance to design is discussed.

Chapter 1: Introduction

1.1 Project Design Handbook Overview

This guide introduces a conceptual framework, or roadmap, to program and project planning. It is designed to help development practitioners understand the process of design specifically as it relates to development assistance promoted by CARE. The terminology and stages of design that will be presented are consistent with CARE's Impact Evaluation Initiative Guidelines[2] and the CI Project Standards[3] that offer norms and practices that will help programmers design projects for impact using CARE frameworks.

The rationale for this guide to project design is simple. CARE wants to place more of the responsibility for project design into the hands of its own personnel, partners and participants, rather than relying too heavily on outside consultants. Well-designed projects are crucial to the operation of development organizations and must be carefully crafted in such a way that the desired beneficiaries realize the intended effects and impacts.

The purpose of this handbook is to provide you with a general understanding of project design procedures and with several new skills that can improve the quality of the programs and projects that you take part in designing. The skills and knowledge gained by using this handbook should also help you better understand the projects and programs you are currently implementing or evaluating, thus contributing to overall program quality and effectiveness.

Issues Box 1

Programs versus Projects

Historically, design efforts within CARE have been geared towards the project level. CARE is currently placing greater emphasis on a more broadly consolidated program approach as a means to achieve comprehensive and sustainable impact on improving household livelihood security and thus reducing poverty. Though projects may be situated within a broader programmatic framework – based on sectoral, geographic or synergistic impact criteria – they will continue to be the basic units of CARE's development interventions. Thus, this handbook focuses on project-level design, though the design *process* presented here applies to the program level as well. Keep in mind that projects operating within a programmatic framework should be clearly linked to program level goals.

The design framework offered in this handbook is based on five discrete phases: a holistic situational appraisal around which a project is conceived; an analysis and synthesis of information that leads to rational choices; a focused strategy that leads to specific outcomes; a coherent information system; and reflective practices that seek continual improvement. A "roadmap" of this framework is illustrated in Figure 1.

[2] CARE Impact Guidelines 1999

[3] CI Programme Standards Framework 2002.

Figure 1

CARE's project design framework

1. Holistic appraisal

Purpose - Learning (more) about the context in which you plan to work

Key Steps/Tools:

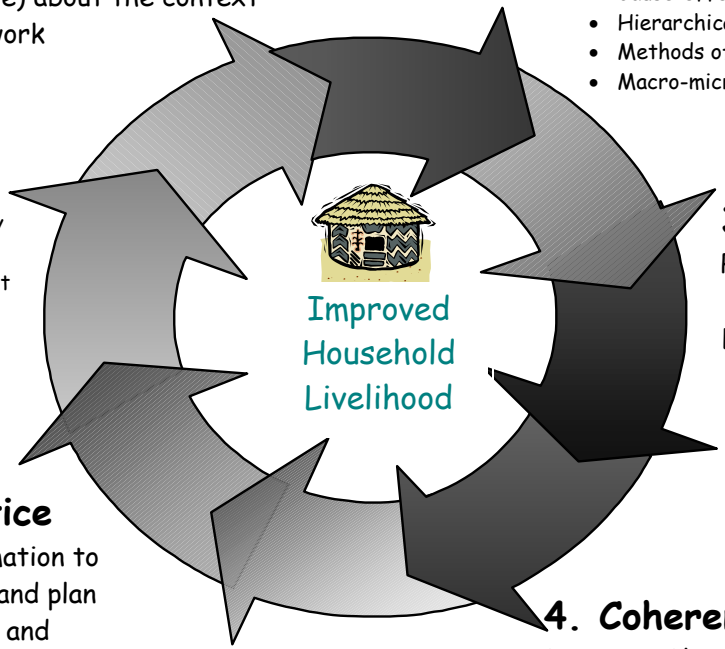
- Operating environment
- Diagnostics
- Target groups
- Needs assessment
- Understanding diversity
- Stakeholder analysis
- Institutional assessment
- Gender analysis
- Rights assessment

2. Analysis and Synthesis

Purpose - Organizing, synthesizing and understanding the data from your appraisal

Key steps/Tools:

- System perspective
- Cause-effect logic in project design
- Hierarchical analysis
- Methods of causal analysis
- Macro-micro linkages



3. Focused strategy

Purpose - Choosing project interventions and designing the project

Key steps/Tools:

- Selecting causes to address
- Making key choices on interventions
- Stating the project hypothesis
- Developing logic model
- Examining proposed interventions from a rights perspective

4. Coherent information systems

Purpose – Planning for how processes will be monitored and outcomes evaluated

Key steps/Tools:

- Clear goals
- Appropriate indicators
- Set targets and benchmarks
- Outputs, activities and inputs
- Detailed M&E planning

5. Reflective practice

Purpose – Using M&E information to make informed decisions and plan necessary changes in this and future projects

Key steps/Tools:

- Incorporating reflective practice in design
- Intended/unintended changes
- Benefits/harms analysis
- Review impact on vulnerable groups, e.g., by gender, age, poverty status
- Institutional learning
- Change management

Modified from CARE SWARMU Design Workshop (2000) and O'Brien (2001)

1.2 Objectives

The overarching objectives of this handbook are listed below. However, you may have your own reasons for improving your knowledge and skills related to design. Perhaps you are preparing yourself to take on responsibility for a project design process. Perhaps you have just completed a concept paper, design document, or a project proposal and were not totally satisfied with the process and want to learn other, more systematic methods. Or, perhaps you are new to these areas and seek a broad understanding of basic design concepts.

Objectives of this Project Design Handbook

- **To improve the quality of CARE's projects and programs, with specific emphasis on improving:**
  - Program effectiveness
  - Effect and impact level changes
  - Coherency of information systems (and hence the measurability of impact, as well as an understanding more broadly of the project's effect)
  - Reflective learning and its use in project management

- **To promote innovation in program/project design, particularly with respect to:**
  - The use of current CARE frameworks, the programming principles and CARE International Project Standards relating to the program cycle
  - Project design within a broader and more holistic planning process
  - Participatory methodologies and empowerment approaches
  - CARE's growing role as a facilitator of projects involving multiple institutions of a community, civil society, government and private sector nature
  - Incorporation of other program frameworks, lenses and approaches, especially rights-based approaches, benefit/harms and gender analysis.

There are relatively few good examples of guidelines or blueprints for planning projects. Part of the reason for this is that, historically, development projects were planned primarily from a technical perspective, and the "guidelines" for design were the best practices from the technical fields themselves. It is still common to find a design team headed by and composed primarily of sector experts. The development community has only recently started to implement more holistically and systematically planned projects, requiring the participation of individuals from a number of disciplines.

Another reason for poorly designed projects is that often more training and focus is placed on evaluation and not design. For example, there are national and global organizations whose primary purpose is promoting quality evaluation (e.g., American Evaluation Association, African Evaluation Association) but we know of no organization anywhere dedicated solely to

promoting good program and project planning. This is something like putting the cart before the horse. As a result, we often have highly skilled evaluators assessing weak projects. Speaking of poor projects, look what The World Bank's own assessment of the quality of their development projects reveals (Issues Box 2).

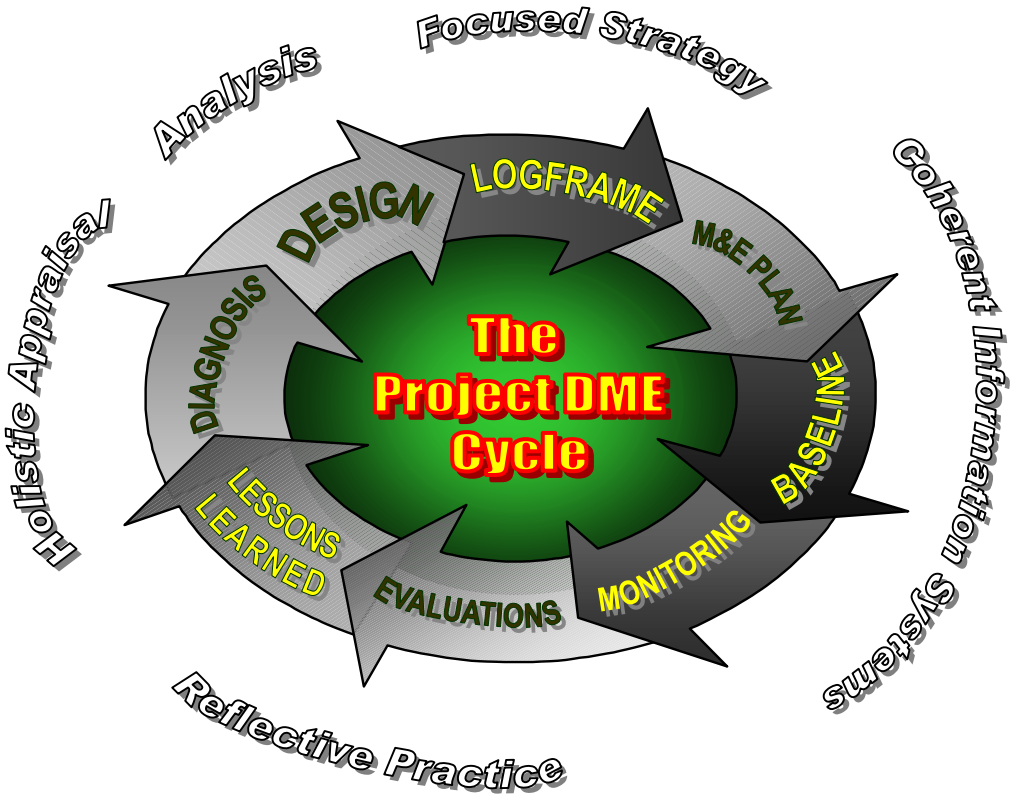
Issues Box 2

Evaluation of project designs for development

The World Bank Operations Evaluation Department (1987) reported that only 80% of World Bank projects completed in 1985 could be classified as "worthwhile" and that the proportion was significantly lower for complex projects in low-income countries where major social and economic transformations were required (Valdez and Bamberger, 1994). Of the 112 projects approved in calendar year 1993 and subject to CBA [cost-benefit analysis], 20% were rated good or better, 42% average or acceptable, 25% barely acceptable or marginal, and 13% were rated as poor. (Kirkpatrick and Weiss, 1996)

How do we, then, improve the quality of project designs? Obviously one way is to train more people in design processes. To do this effectively, we need a design framework that can be shared and used and, hopefully, improved upon over time. Despite the usefulness of a common framework, *no strict blueprint exists* for project design. If CARE were in the bridge construction business, things would be relatively more straightforward. The design of development assistance projects, however, is complex if for no other reason than the fact that we work with complex human systems.

Figure 2: The Project DME Cycle



Project design is an important step or stage of the design, monitoring and evaluation (DME) cycle. It is useful to review the general DME cycle in order to understand which stages influence project design and how project design influences other stages in the life of a project. Note in Figure 2 that design is an integral part of the DME cycle. Design itself is shown following a diagnostic phase, which could be, for example, a Long-Range Strategic Plan or other form of holistic program-level diagnostic, a field-based assessment, or even a diagnostic of a donor request for interest in a particular development activity. Later we will discuss a diagnostic phase within the project design process itself. This should not be confused with a diagnostic event that guides strategic planning.

One of the important outputs of design, as shown in the DME cycle, is a logical framework (or some other form of a logic model) that clearly shows the cause-effect relationships upon which the project is based. In effect, this tool serves as an executive summary of the goal hierarchy and hypothesis of the project and usually includes the project's objectives along with verifiable indicators and assumptions.

Another product that results from design is a monitoring and evaluation plan (M&E plan). These range from the simple to the complex, and provide details on how anticipated changes will be measured, when, and by whom. The baseline phase of the project in many ways symbolizes the start of project activities and is a qualitative/quantitative study whose main objective is to establish the initial state of indicators at the start of interventions. Some compare it to taking a photograph of a person or a place so that in the future, if you take another photograph you can evaluate changes. Baselines and other monitoring and evaluation phases are parts of the reflective learning aspects of the DME cycle. Learning leads to a set of lessons, or collective knowledge, related to how well the project is meeting or has met its objectives. These lessons are then available as information to improve the current project or to design new projects.

1.3 Project Design Defined

Definition Box 1

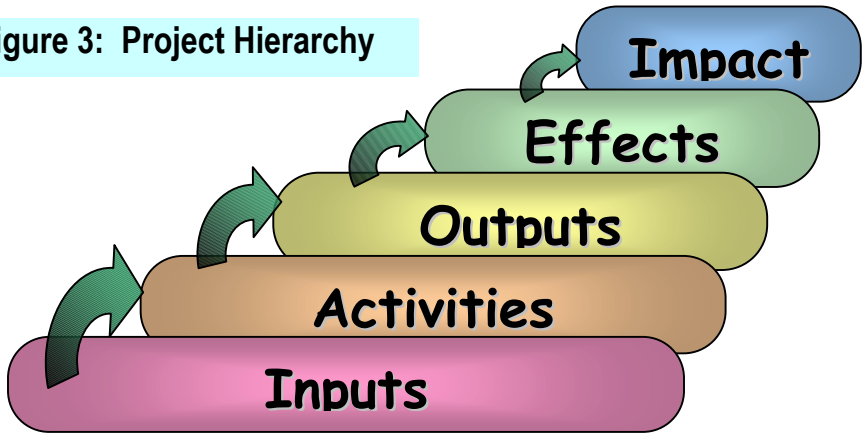
Project Design
The collaborative and systematic identification and prioritization of problems and opportunities and the planning of solutions and ways of assessing project outcomes, which together will promote fundamental and sustainable change in target populations and institutions.

Suffice it to say that project design is the systematic identification and prioritization of problems and opportunities and the planning of solutions. A stricter definition is not needed, for good project design can be many things, depending on the circumstances.

All project designs, however, should have at least five elements or layers. Project design systematically formulates and describes each of the basic elements: inputs, activities, outputs, effects, and impact (Figure 3).

Each element is defined, in part, by the previous element. As we will see later, project design should start with defining the desired impact. So we work from the 'top' down: What effects are needed to achieve the desired impact? What outputs are needed to achieve the desired effects? And so on.

Figure 3: Project Hierarchy



Projects, almost without exception, should follow this strict yet simple hierarchy. The lowest level in the hierarchy is inputs (Table 1). All projects require inputs such as time, finances, human resources and materials. Inputs have to be budgeted, and so the project budget will detail most of the required inputs and the quantity required. Inputs such as time can be presented in the project's time-line or Gantt chart.

All projects involve a series of activities such as communicating, training, organization, construction and management. The implementation of project activities converts inputs to outputs. Outputs are the basic goods and services that the project produces by carrying out the activities. These three levels -- inputs, activities, and outputs -- include resources and actions that a project takes in order to bring about desired change. The interventions that we design in projects are also composed of these three elements. That is to say, interventions are a strategic combination of inputs, activities and outputs.

Outcomes, including effects and impact, represent desired changes the project hopes to bring about. Each project is unique and is aimed at achieving a set of different outcomes, and the most important types of outcomes for CARE are client/participant outcomes and institutional outcomes (see example in Issues Box 3 below). Note that a project has direct control up to the output level. If the project's hypothesis is sound and does its work well, its outputs should lead to desired outcomes. However, the outcomes are beyond its direct control. Outcomes are what others do (influenced by the project).

Issues Box 3

Example: Impacts and effects

A project aimed at improving health care systems by strengthening decentralization and local decision-making, and restructuring how services are accessed and financed, has a desired impact of "improved health status for those living in the community served." The effect changes include effective decentralization (systemic), improved local decision making (systemic), changing use (access) by households (behavioral) and restructuring finance (systemic).

Table 1: Terms for Project Hierarchy Defined

	Definition and explanation	*Agroforestry Examples*
Impact:	Equitable and durable improvements in human wellbeing and social justice. The ultimate outcomes of development and emergency assistance (e.g., improved health status or wellbeing), measured at the individual, social, geographic or administrative level. *Comments:* There are various levels of impact, from more tangible and immediate to broader impact that may not be manifested or discernable until some time later. Programs aim at "higher level," longer-term impact. Projects aim at levels of impact that can be manifested during their lifetimes, given their resources.	Increased income for practicing farmers; improved safety nets for vulnerable households; increased environmental stability; improved diet (from fruit trees or new crop alternatives)
Effects:	Changes in human behaviors and practices as well as systems. Systems changes can include institutional competency (e.g., improved health-care systems), policy change (e.g., new or revised policies, change of enforcement) or service changes (e.g., more effective extension system). *Comments:* Effects result from the successful achievement of outputs but their realization is dependent on the logic of the project hypothesis being sound. Effects are what others (such as beneficiaries) do on their own (influenced by the project's outputs as well as external factors).	Farmers incorporating trees into their agricultural practices; agroforestry committee advocating tree ownership issues to local government; proper tree management by farm households; new policies enacted and enforced on tree tenure; sales of agroforestry goods such as lumber
Outputs:	The goods and services produced through project activities. Outputs include such things as trained individuals, physical structures, documents or newly formed institutions. *Comments:* This is the highest level over which project implementers have direct control.	Viable tree saplings for distribution; trained farmers willing to participate; demonstration farm; agroforestry manuals in local language; agroforestry committees organized
Activities:	The actions or interventions that convert project inputs into outputs (e.g., communicating, training, construction, organization and management).	Farmer-to-farmer training; seedling management training; extension activities
Inputs:	All resources (e.g., money, materials, time, and personnel) needed to undertake a set of activities.	Tree seedlings; participant labor; land for demo farm; plastic sacks; fertilizer, transportation

Effect changes represent the first level of desired outcomes that we want to design for and later verify. There are two basic types of effect outcomes - behavioral and systemic. (These terms are defined more precisely in Table 1). Our project design logic tells us that these effect changes will occur as a result of all the goods and services (the outputs) a project produces, plus the fulfillment of key assumptions regarding external factors.

The success or achievement at one level in the hierarchy is dependent on those levels below. Thus, the desired change at the effect level will be the result of the successful

completion of the project outputs. If the project produces all of its planned outputs but the effect level changes do not occur, then something was wrong with the project's logic, leading to the selection of an improper set of interventions. Alternatively, the logic was correct but something significant changed while implementing the project.

The final level in the hierarchy is impact. CARE defines impact as an "equitable and durable improvement in human wellbeing and social justice."[4] This includes, for example, decreases in malnutrition, increases in income, positive changes in health status, etc. It is the ultimate aim of our project or program. Again, project logic tells us that if our outputs are successfully achieved they will lead to the planned effect changes, which, in turn, will lead to our desired change(s) at the impact level. If this doesn't happen, even if the quality of our process and outputs was adequate, then perhaps our design logic was flawed or key assumptions did not hold.

We will see throughout the course of this guide how design logic is constructed and how we must think about what external factors could disrupt this logic and cause our planned changes not to be achieved.

Remember that project design is not a hard science. If you search for information on project design in your local library or through the Internet, you may have a difficult time finding much information. Few academic papers, and even fewer books, have been written about project design or planning. You will, however, find some guidelines similar to these developed within specific agencies or institutions. Perhaps it is this way because project design has not traditionally been given serious merit by academicians or by donor agencies. Many assume that it is purely common sense and that anyone experienced in their technical subject area -- be it nutrition, health, agriculture, water, etc. -- can design a good project.

History has taught us otherwise! Everyone who has had experience in managing projects knows that there are well-designed projects and there are poorly designed projects. Although nobody sets out to purposefully design a poor project, there are many avoidable circumstances that commonly increase the likelihood of a poor design.

"Those who forget the past are doomed to repeat it."
George Santayana

We recommend that a project planning team spend as much time as necessary reviewing the most frequent causes of project failures and successes, as well as any relevant local project or project component/sectoral successes and failures in recent memory. This can be done through reviewing evaluation reports and 'best practice' guidelines. To not take this step is to ignore history, and thus risk repeating it.

Table 2 provides some reasons that some projects are successful. The more of these items that you can check off as completed during your design process, the more chance you have of designing a winning project!

[4] CI Project Standards, IEI-II Conference Report, Nov. 2001.

Table 2: Some Common Factors That Contribute to Successful Projects

Lessons learned about why projects succeed	***Is this practice present in your project? (yes/no)*** (See chapters below to learn more)
1. A formal project planning (design) process is utilized	Chapter 1.1 – 1.3
2. Presence of a "winning" strategic plan, focused on achieving fundamental change, to which all programs/projects contribute	Chapter 1.4-1.5
3. Presence of a comprehensive and detailed holistic appraisal of the existing situation.	Chapter 2.2 – 2.4, 5.5
4. Clear lines of responsibility and understanding with other organizations in the project area, so it is easy to assess success or failures (attribution is evident up to output level, contribution to effect and impact levels)	Chapter 2.4 – 2.5
5. A thorough, systemic problem analysis is completed	Chapter 3.1 – 3.5
6. Potential constraints are considered, key questions answered, and assumptions identified	Chapter 3.4.1, 4.3 – 4.4
7. Stakeholders intimately involved in the design process (they have "buy-in" to the project)	Chapter 2.3, 2.4, 3.4.2, 4.2ff
8. Clear linkage of project design to a comprehensive program logic	Chapter 4
9. Lessons learned from previous project failures and successes (e.g., by reviewing evaluation reports and 'best practice' guidelines) are incorporated in new designs	Chapter 4.2
10. Alternative, more cost-effective approaches are considered during the design stage	Chapter 4.2
11. Clear and measurable indicators of outcomes (effect and impact changes)	Chapter 5.1
12. Indicators are linked to the right levels (inputs, outputs, effects, impact)	Chapter 5.2
13. Indicators that can be measured in an objectively verifiable manner	Chapter 5.2
14. Clear specifications for quality and quantity of deliverables	Chapter 5.4
15. Inputs and/or outputs are linked to effect objectives or impact goal	Chapter 5
16. Time, inputs, and outputs are logically connected	Chapter 5.3
17. Progress in achieving the project's objectives is measured and reported	Chapter 5.5
18. Anticipate changes made to the original design during the life of the project (promote flexibility – if reasonable and the reasons are documented and approved by key stakeholders)	Chapter 6

1.4 Designing CARE Projects

The nature and scope of projects that institutions undertake is potentially limitless. However, some projects are not worth doing and should never be designed, or they may not have a high priority when compared to others that could be designed with the same money. Other projects may be beyond the capabilities of the implementing organization. To bring coherence to an

institution's portfolio, there needs to be guidance that governs the choice of projects that are designed. This chapter describes the directives used by CARE and how they relate to projects that are ultimately designed.

Vision and Programming Principles

Organizations operate on some mix of principles and philosophical ideals. Indeed, most institutions have a mandate or vision statement that provides a broad direction to guide choices of what actions will be initiated and what objectives will be pursued. An organization's vision is often an abstract statement or mental picture of where an organization wants to be sometime in the future. It is not always attainable, but should reflect an organization's values and ideals. Finally, a vision is often a means of differentiating an organization from its peers or competitors.

Definition Box 2

Programming Principles
Frameworks that can be used to define appropriate problems to address. These frameworks also help clarify a project's context and how a project links to larger program goals.

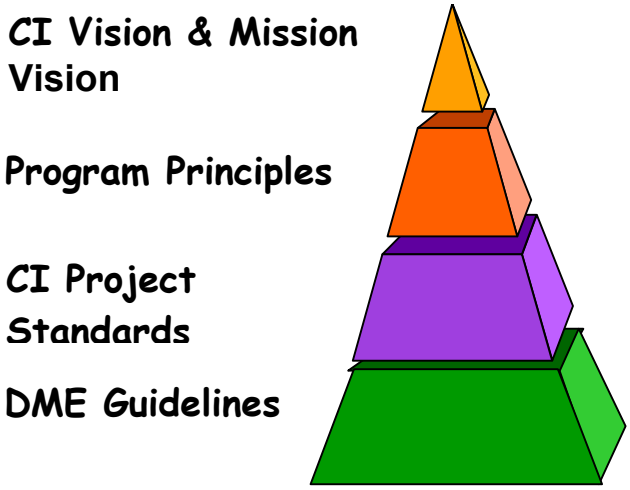
An environmental organization might be dedicated to the preservation of biodiversity worldwide or to the promotion of sustainable agriculture. Other institutions might be committed to enhancing the rights of women or children, to ending hunger or to eradicating diseases. For each of these institutions, the projects they design should be consistent with the vision and mission of the organization.

Issues Box 4

CARE International's Vision Statement
We seek a world of hope, tolerance and social justice, where poverty has been overcome and people live in dignity and security. CARE International will be a global force and a partner of choice within a worldwide movement dedicated to ending poverty. We will be known everywhere for our unshakable commitment to the dignity of people.

CARE's vision statement (Issues Box 4) tells us that its projects will be linked to eradicating poverty and promoting social justice. This at once tells us that we design projects that contribute in some way to these ultimate impacts. CARE International's vision is only one of several organizational directives that guide the design of its projects. Figure 4 shows other "levels," including Program Principles, Project Standards and DME Core Guidelines. Together, these elements provide design guidance on the genre of projects compatible with CARE's core business.

Figure 4: "Levels" of Direction Provided by CARE for Designing Projects



CARE International has a set of five fundamental principles that form the basis of all CARE's work in development and relief. Each CARE project is expected to embody all five principles.[5]

They are:

- Significant scope
- Fundamental change
- Working with poor people
- Participation
- Replicability

Each CARE project, then, must identify an opportunity to resolve a problem that makes an important difference in the lives of significant numbers of poor people. Each project must promote fundamental change. This means that the impact of a project must contribute to a meaningful change in the lives of people. (We see this reflected in CARE's definition of impact: "equitable and durable improvements in human wellbeing and social justice.") Projects must work with and for the benefit of the poorest people (whether this be done through direct service or indirectly through partnerships, advocacy, etc.). Projects must involve meaningful participation by a broad range of stakeholders. Finally, projects must be replicable, i.e., they must have lessons learned that can be applied to new projects in different geographic locations and with different participants. This includes scaling up to extend benefits to a greater number of persons.

In addition to an organizational vision and program principles, CARE International has developed a set of standards for the design, monitoring and evaluation of programs and projects (Issues Box 5). These standards have been developed with broad participation of CARE International Members and Country Offices. They represent what CARE considers as best practices for good programming. As noted in the introduction to the CARE International Project Standards[6], if a project cannot meet one or more standards, it must at a minimum provide an explanation of why, and what will be done about it. These standards, as well as guidelines in this Project Design Handbook, are used to guide the work of project designers, as a checklist for approval of project proposals, as a tool for periodic project self-appraisal, and as a part of project evaluation.

[5] At the time this Handbook was being completed the CI Programme Working Group was reviewing these principles for possible revision.

[6] As endorsed by the CARE International Board, May 2002.

Issues Box 5

CARE International Project Standards

Each CARE project should:

1. be consistent with the CARE International Vision and Mission, Programming Principles and Values.
2. be clearly linked to a Country Office strategy and/or long term program goals.
3. ensure the active participation and influence of stakeholders in its analysis, design, implementation, monitoring and evaluation processes.
4. have a design that is based on a holistic analysis of the needs and rights of the target population and the underlying causes of their conditions of poverty and social injustice. It should also examine the opportunities and risks inherent in the potential interventions.
5. use a logical framework that explains how the project will contribute to an ultimate impact upon the lives of members of a defined target population.
6. set a significant, yet achievable and measurable final goal.
7. be technically, environmentally, and socially appropriate. Interventions should be based upon best current practice and on an understanding of the social context and the needs, rights and responsibilities of the stakeholders.
8. indicate the appropriateness of project costs, in light of the selected project strategies and expected outputs and outcomes.
9. develop and implement a monitoring and evaluation plan and system based on the logical framework that ensures the collection of baseline, monitoring, and final evaluation data, and anticipates how the information will be used for decision making; with a budget that includes adequate amounts for implementing the monitoring and evaluation plan.
10. establish a baseline for measuring change in indicators of impact and effect, by conducting a study or survey prior to implementation of project activities.
11. use indicators that are relevant, measurable, verifiable and reliable.
12. employ a balance of evaluation methodologies, assure an appropriate level of rigor, and adhere to recognized ethical standards.
13. be informed by and contribute to ongoing learning within and outside CARE.

As approved by the CI Board on 24 May 2002. See brief explanatory statements in Annex 1.1.

Note that the CARE International Project Standards speak of both the CARE International Vision as well as Country Office strategies. Each Country Office may have its own vision statement as well as a long-range strategic plan, both of which provide further guidance on what types of projects are appropriate to design.

D, M&E Core Guidelines

For explicit guidance on project design, monitoring and evaluation, CARE is developing a comprehensive set of core guidelines based on the CARE International Project Standards, and to expand upon them. These guidelines are meant to facilitate planning and execution of projects and serve not only CARE staff but also others, such as partner organizations and consultants, who assist CARE in it design efforts. This Project Design Handbook is the Core Guideline for the design portion of D, M&E.

Strategic Directions

Strategic directions are the actions organizations undertake to achieve their vision. In a given organization, a strategic planning process—at the international, national or regional levels—is a likely method used to define the strategic direction. Projects represent the operationalization of such strategic plans. Defining and acting upon strategic directions has two major components: programming decisions and institutional decisions. Projects should not be isolated, but clearly embedded in long-term program and strategic frameworks.

Issues Box 6

Planning links between programmes and projects

Long-range Strategic Plan (Country office or area) → Program Plans → Project(s)

1. *Programmatic Decisions:* A strategic plan generally explores a wide range of contextual information to guide the project design process. It defines strategies including target population(s), priority problems to be addressed and the broad implementation approach(es). The plan can also define the sequence in which one or more project interventions will be implemented and identify the resources available from government, non-government and community organizations plus the private sector to support such projects, as well as identify specific project zones or geographic areas.

Ideally, project design should fit within programmatic strategies (see Issues Box 6) and correspond in part to the intervention strategy, which is described later in Chapter 4. The results of a program diagnostic assessment and problem analysis should help the program/project design team to link the strengths and capabilities of the organization and its partners in the community with the needs and rights to be addressed.

2. *Organizational Capacity:* Project designers try to match the institution's capabilities with potential interventions. However, an organization need not be limited by its current capacity when making programmatic decisions. It can choose to develop its own capacity, so that it is capable of carrying out programs and projects it deems vital, or it can choose to partner with organizations that have the capacity. An analysis of organizational capacity should examine its structures, systems and processes as well as the skills and training needs of permanent staff and associates. More often CARE

programs will focus on the institutional development or institutional capacity building of partner institutions, so that they, in turn, can be more capable of planning and implementing programs that improve the lives of their clients – the ultimate beneficiaries we all care about.

Issues Box 7

Multi-sectoral programming

Multi-sectoral programming is a conceptual approach to program and project design that looks at the full range of requirements of vulnerable populations. A holistic diagnostic of needs and opportunities is conducted under a multi-sectoral framework, though this does not necessarily need to lead to a fully integrated project. The approach seeks to identify those actions that will best help these populations fulfill fundamental rights and meet basic needs by empowering them to acquire adequate and sustainable access to income, resources, and rights.

The benefits of a multi-sectoral approach to project design include:

- Improving an organization's ability to target poor and vulnerable populations in its programming;
- Assisting organizations to achieve complementarity among projects in the same geographical region;
- Focusing attention on addressing underlying causes and promoting sustainable, positive change in the wellbeing of people;
- Helping identify interventions with a high potential for impact;
- Providing a learning tool (framework) for improving staff capacity to look at development problems from a multi-sectoral perspective;
- Promoting cross-sectoral indicators for measuring meaningful change.

1.5 Design Frameworks

Definition Box 3 describes household livelihood security – a multi-sectoral framework used by CARE to guide programmatic decisions. In designing CARE projects one also needs to consider frameworks that are in use by the organization and how they influence the way a project is designed. These frameworks represent development paradigms in use by the organization. They relate quite specifically to the vision and principles established by CARE and, in fact, they are borne out of the organization's strategy for meeting its objectives.

HLS is the basic framework used by CARE to guide its programming. Recently RBA has been added as an important approach for addressing HLS by more explicitly examining underlying causes of poverty and social justice from a human rights perspective.

Household Livelihood Security

Since 1995, CARE USA has promoted the use of a livelihoods approach to its programming worldwide. The idea of Household Livelihood Security (HLS) as defined in Definition Box 3 embodies three fundamental attributes: the possession of human capabilities (such as education, skills, health, psychological orientation); access to tangible and intangible assets; and the existence of economic activities. The interaction between these attributes defines what livelihood strategy a household pursues and is thus central to CARE's Livelihood Security Model outlined in the Figure 5 on the next page. This model is continuously evolving and it has had a major impact on the way that CARE designs its development assistance projects. In fact, much of the content of this handbook reflects the influence that HLS has had on project design (e.g., holistic appraisal as a discrete design step).

Definition Box 3

Household Livelihood Security

HLS is a multi-sectoral design framework employed by CARE and other development organizations. It can be defined as "adequate and sustainable access to assets and resources necessary to satisfy basic human needs." HLS emphasizes households as the focus of analysis because they are the social and economic units within which resources are organized and allocated to meet the basic needs of the household members.

Livelihoods comprise the adequate stocks and flows of food, cash and other resources to meet basic needs. They can be made up of a range of on-farm and off-farm activities that together provide a variety of procurement, storage, utilization and management strategies to meet their needs. The basic rights and needs of households include a wide range of commodities and services such as food, nutrition, potable water, health services and facilities, educational opportunities, housing, social freedom, and so on.

Livelihoods are secure when households have secure ownership of or access to resources and income-earning activities, including reserves and assets to offset risks, ease shocks and meet contingencies. The long-term sustainability of livelihoods is assured when Households can:

- cope with and recover from stress and shocks;
- maintain their capability and assets; and
- provide sustainable livelihood opportunities for the next generation.

Note - Because the livelihood security of a household is determined by the cumulative actions of its members, the rights and responsibilities/ tasks of all the household members and its community (broadly defined) must be taken into account when designing projects. It is important to be aware that the HLS framework does not require CARE to work directly at the household level, but rather, CARE may work with and through community or regional institutions, or even through policy advocacy. But the point is that ultimately the impact needs to be manifest at the household level (in the lives of real people).

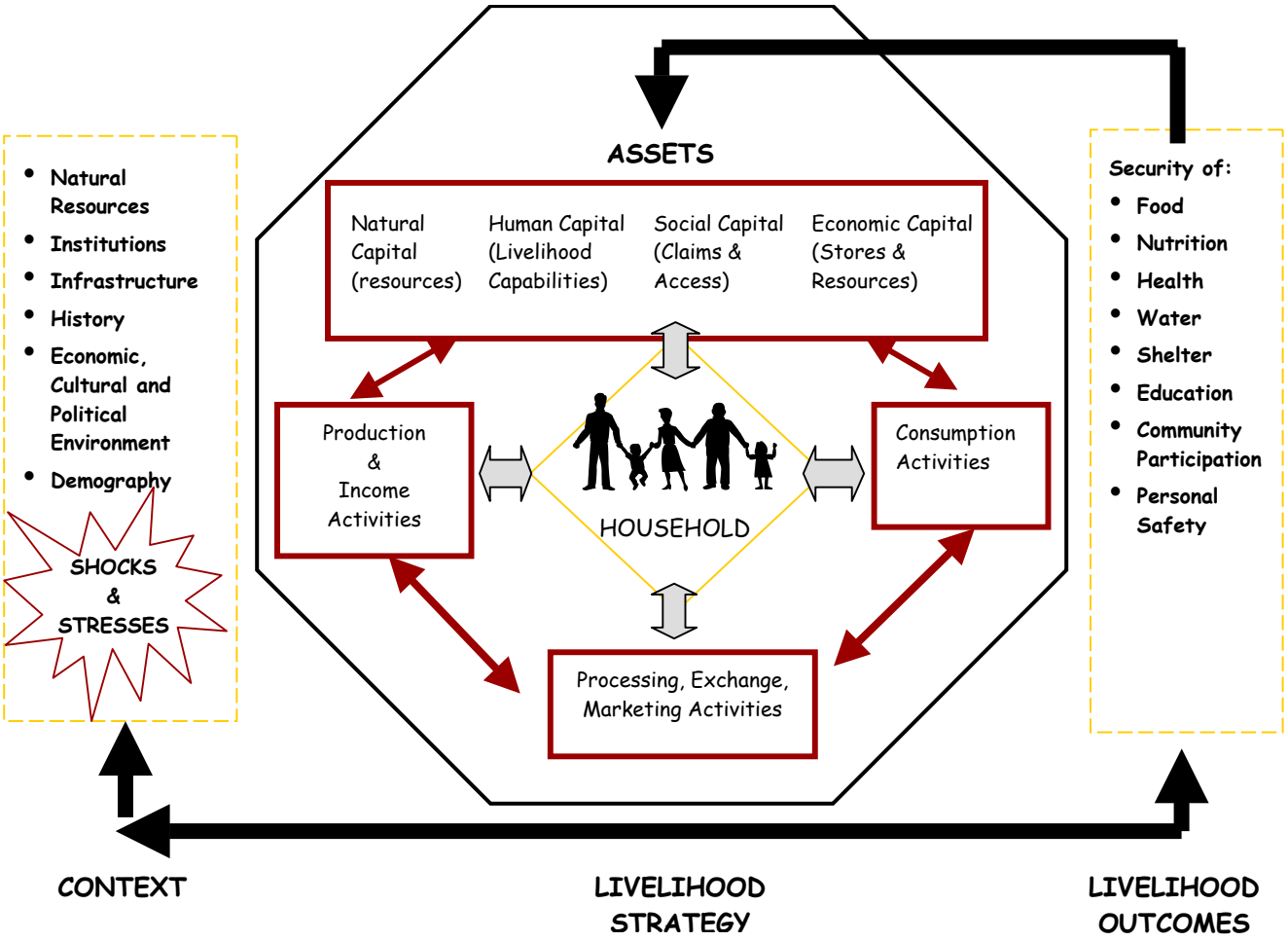
Unlike more traditional 'resource-focused' projects, the livelihood approach requires design staff[7] to gain a good understanding of the overall context in which households are operating, before seeking to design

[7] The term 'design staff' represents anyone involved in any stage of the design process. This can range from a small group of people within CARE to a large and diverse group that includes community members, partners, and other key stakeholders. Maximum participation should be sought whenever practical.

appropriate interventions, and then subsequently to evaluate the impact of interventions on livelihoods of people. This is captured in CARE's three basic design principles for livelihood programs:

- Programs must be founded on a *holistic analysis* of the contextual environment.
- Programs must be *strategically focused*.
- Programs require *coherent information systems*.[8]

Figure 5: CARE's Household Livelihood Security Model



From: Frankeberger, Drinkwater and Maxwell 2000

A livelihoods approach builds heavily on participatory poverty assessments. In many of CARE's livelihood promotion projects we have taken this a stage further and made participatory approaches the basis of not only the analysis, but also the design, implementation, monitoring and ongoing sustainability of the project. More will be said about HLS in the context of specific project design stages throughout this handbook.

[8] This coherence is critical for programs (which may be made up of a number projects) not just individual projects, yet is something which is rarely satisfactorily achieved by NGOs, and poses an even greater challenge for donors. Adapted from Drinkwater

Rights-based Design

Since 1999, CARE has been developing rights-based approaches. CARE's definition of a Rights-Based Approach (RBA) is provided in Definition Box 4. RBA is compatible with, complementary to, and in many ways builds on, the HLS framework. Both approaches emphasize holistic analysis, participation, and rooting out poverty and injustice by addressing underlying causes of human suffering.

Definition Box 4

Rights-Based Approach

'A rights-based approach deliberately and explicitly focuses on people achieving the minimum conditions for living with dignity (i.e., achieving their human rights). It does so by exposing the roots of vulnerability and marginalization and expanding the range of responses. It empowers people to claim and exercise their rights and fulfil their responsibilities. A rights-based approach recognizes poor, displaced, and war-affected people as having inherent rights essential to livelihood security – rights that are validated by international law.' Jones, 2001

As we saw with the HLS framework, there are important design principles that accompany a rights-based programming (RBA) approach.[9]

- *RBA affirms people's right to participate in decision-making processes that affect their lives* – The right to participate in such processes includes the right to have access to relevant information. Genuine participation and control over our own destinies is not a luxury; it is a right. Relevant decision-making processes take place at all levels of governance, from the community to the national and even international levels, as well as in other spheres (e.g., the decisions of private actors – including CARE – intervening at the local level).

- *RBA requires identifying and seeking to address the underlying causes of poverty and suffering* – The achievement of rights and, indeed, poverty eradication are impossible without embracing a holistic perspective and identifying and addressing the underlying, basic causes of people's inability to realize their rights, e.g., to food, health, etc. Interventions that fail to target these causes can only have limited, if any, sustainable impact on poverty and people's ability to live in dignity and security.

- *RBA refuses to tolerate discrimination and inequities that impede peace and development* – An emphasis on the equal dignity and worth of all underlies the promotion of tolerance, inclusion, nondiscrimination, and social justice. The building of more just societies requires identifying and overcoming barriers that prevent excluded or oppressed people from realizing their rights. It also calls for a specific focus on empowering such groups to stand up for their rights and effectively assume responsibility for their own futures.

- *RBA holds all of us accountable for respecting and helping to protect and fulfill human rights* – We all are born not only with rights, but also with duties, or responsibilities. Affirming our moral nature and mutual

[9] Jones 2001.

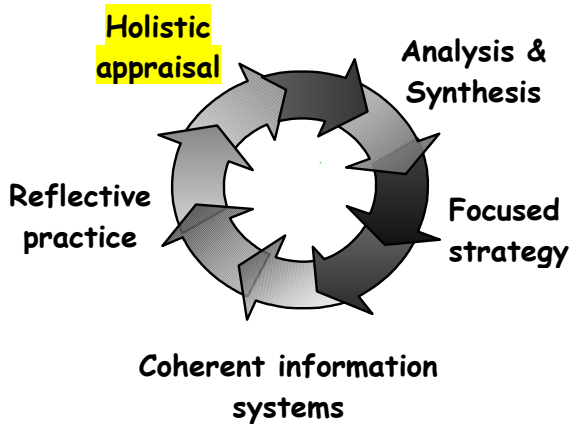
> solidarity, the Universal Declaration of Human Rights is explicit on this fundamental point. Unlike needs, which can be viewed in isolation, rights generate responsibilities - and those responsibilities are tied to defined and universally agreed standards. The relational nature of rights adds new force to our commitment to be advocates for global responsibility.

Throughout this handbook, there will be references to how rights-based programming can be accommodated during specific design steps.

Chapter 2

Holistic Appraisal

Operating Environment
Diagnostic Assessment
Participant Groups
Differentiation/ Disaggregation
Stakeholder Analysis
Institutional Assessment
Gender Analysis



This Chapter provides guidance for conducting a holistic program diagnostic assessment, the first stage in our project design framework. Holistic appraisal provides us with a number of tools to collect information we can use to identify constraints and opportunities around which the project will be designed.

Chapter 2: Holistic Appraisal

The first stage in our project design process is holistic appraisal. The term holistic appraisal implies a multi-dimensional view of livelihoods and factors, both internal and external, which influence livelihoods. Holistic appraisal is used to identify priority needs, describe livelihoods and search for key conditions that have an impact on livelihoods, and will lead us to the identification of the most vulnerable households. It will also place peoples' priorities and aspirations for improving their livelihoods firmly at the center of our analytical and planning process.

Holistic analysis concerns the assessment and analysis of human conditions, at a more macro level in strategic planning and a more micro level (geographically speaking) in project design. Though holistic analysis applies to both the program and the project levels, in reality it is usually more in-depth at the program level, as it is often neither feasible nor cost-effective to conduct a thorough, holistic diagnostic assessment for each individual project.

The holistic appraisal stage utilizes a number of tools for assessing problems and opportunities, identifying participants, and understanding the context of the geographic, institutional, economic and social setting around which the project will be designed. This chapter will provide you with general guidelines for using these tools to assess a project's operating environment. We will define diagnostics, their uses in identifying participants, and present some of the many useful tools used in holistic appraisal including needs assessment, differentiation/disaggregation, stakeholder analysis, institutional assessments and gender analysis. Issues and guidelines for incorporating both a household livelihood security and rights-based approaches into holistic appraisal are covered throughout the chapter.

Incorporating CARE's Household Livelihood Security approach into holistic appraisal

CARE's holistic approach to determining problems and their underlying causes, as well as opportunities for program and project activities, is a key principle of CARE's Household Livelihood Security framework. An HLS approach to program planning and project design encourages the use of secondary data reviews as well as participatory people-centered diagnostic tools. Participation and empowerment are the basic tenets of the approach. An HLS Assessment involves taking into account the following components:

Context - What are the social, economic, political, historical, and demographic trends that influence the livelihood options of a given population and what are the risks to which they are exposed?

Resources - What are the various assets (financial, physical, social, human and natural) that households and communities have access to and how are they differentiated and disaggregated? Vulnerability is

determined by the risks that households and communities are exposed to and their ability to use assets or other means to cope with these risks.

Institutions and Organizations - The institutions that operate within a given context will be critical to sustainable livelihood outcomes. It is important for CARE and its partners to identify which government, civic groups and private sector institutions operate in a given livelihood setting to determine their relative strengths and weaknesses in delivering goods and services essential to secure livelihoods. The private sector has usually been left out of such analyses even though it can play a critical role in providing goods and services. A stakeholder analysis is a critical first step in any diagnosis

Livelihood Strategies - A Holistic appraisal attempts to identify the various strategies people use to make a living and how they cope with stress. These are also referred to as adaptive strategies and coping strategies in the food security literature. It is important to determine the variability that may exist across ethnic groups, households and individuals in the pursuit of different strategies to tailor interventions appropriately.

Livelihood Outcomes - Outcomes are measured to determine how successful households are in their livelihood strategies. These outcomes can be based on normative standards (e.g., nutritional status) or be based on criteria identified by the communities (e.g., wealth ranking). Such outcome measures often need to be differentiated and disaggregated across groups (e.g., livelihood category, socio-economic status), households (e.g., by wealth status, gender of the head of household) and individuals (e.g., including gender and age).

Incorporating CARE's Rights Based Approach into holistic appraisal

Incorporation of a rights-based approach requires the capacity to understand and take into account vulnerability and marginalization, diagnose power relations, and incorporate legal, policy and institutional analyses.

Broadening our analytical framework to include all human rights.
Human rights reflect an integral vision of what humanity is and, as such, represent a comprehensive yardstick for measuring human wellbeing. Even while CARE focuses on livelihood security conditions (e.g., food, water and sanitation, nutrition, health, education, and economic opportunity), we have to consider other conditions affecting livelihood security and, more broadly, life with dignity (i.e., the enjoyment – or lack thereof – of additional human rights, such as personal security, freedom of movement, and participation in public affairs). Such conditions are interdependent. For example, the pursuit of secure livelihoods is frustrated where members of a certain ethnic group are physically prevented from getting their goods to market, or women are not allowed to participate in community health or education associations.

While awareness of major gaps in the enjoyment of human rights may, in some cases, lead us to focus on new programmatic areas (e.g., domestic

violence or women's political participation), our "core business" will remain the advancement of livelihood security (or economic and social rights). In pursuing our core business, we will better understand the bigger picture facing the communities we serve, the inter-relationships between different rights, and the need for collaborative and complementary action with other organizations focusing on other parts of the human rights spectrum.

Analyzing more deeply underlying and basic causes. CARE is accustomed to undertaking in-depth causal analysis of why households behave the way they do. We are less accustomed to (and less equipped for) analyzing, in a thorough, meaningful way, the political, economic, and socio-cultural systems and relations at all levels that so powerfully influence household-level conditions. Such analysis is essential for helping us to understand the limits of more traditional responses (focusing on the more immediate causes) and to explore the potential for higher impact interventions.

Efforts are underway to build our capacity to analyze causes and power dynamics between groups (i.e., relational analysis). Recent efforts to incorporate greater analytical capacity in gender dynamics may be instructive. In addition, our commitment to partnership and, more generally, inter-organizational collaboration holds the promise of fruitful relationships with groups that conduct research and analysis in just these areas.

2.1 Operating Environment (setting and context)

As discussed in Chapter 1, project design begins with the identification of problems or opportunities and their causal linkages. In designing a project, you identify the needs of participants and communities and then propose strategies to address those needs. To do this effectively, keep in mind that problems/opportunities and their solutions are contextual. In other words, the characteristics of the setting in which livelihoods are conducted are critical to understanding the nature of the problems and opportunities and designing appropriate responses.

The setting of a project refers to the social, political, economic and environmental factors that can influence the nature of a problem and its underlying causes. A term commonly used for describing the context or setting of a design is the operating environment (see definition box 5, next page). The operating environment is like the stage of a play – it is the context within which people act out their livelihoods. The setting can be with reference to a particular geographic area or community. Specific elements of the operating environment will play a more prominent role depending on the participants.

To illustrate the importance of the operating environment, consider the following example. Suppose you are involved in the design of an agroforestry project in a part of your country where you have not worked before. You

Definition Box 5

What is an Operating Environment?
The operating environment consists of the characteristics of a setting in which livelihoods are conducted. It includes the elements that define the context for a project and which can have a positive or negative effect on its success. The key elements that make up the operating environment include:

People – demography and human resources: cultural/ethnic groups, their numbers and distribution, relationships, ages, gender, educational levels, occupations, labor pool, etc.
Environment - vegetation, climate, natural resources
Public/private Infrastructure - roads, schools, hospitals, water and sanitation
Beliefs and Practices - religious, cultural, political, social beliefs
Economics – nature and distribution of wealth, assets, income, employment
Institutions – policies, governance, projects, civil society

have recently completed a very successful agroforestry project in one region and hope to apply the lessons learned in the new region. However, the new region is very different. The only land farmers have access to consists of steep slopes, there is no access to irrigation, the government extension service is much weaker than in other parts of the country, and the local government is not actively enforcing recent government policy giving households land tenure rights.

The actions needed to study and understand the operating environment are not discrete and finite. Rather, they can include a wide range of research and analysis that occur throughout the design process. Depending on circumstances, much of the information about the operating environment may be available through secondary sources. It can also come from the types of diagnostics and assessments discussed in this chapter. During the holistic appraisal, you may discover gaps in knowledge that require further research. What is important is that the knowledge you gain about the operating environment be accurate and comprehensive.

In Annex 2.1 you will find examples of outlines or guides to conducting a thorough analysis of the operating environment for four sectors: small business development, health, agriculture/natural resource management, and education.

2.2 Diagnostics

In Chapter 1 we reviewed the concept of 'strategic directions' that CARE uses for identifying appropriate project opportunities. The design team draws on CARE's vision and programming principles, and strategic and design frameworks to narrow the project focus and establish a contextual framework for the project design process. Holistic appraisal requires a more in-depth diagnosis to identify the important factors at work in the specific context. Diagnostics are undertaken for the purpose of setting priorities and making decisions about project or program direction and the

Definition Box 6

Diagnostics
A systematic set of procedures undertaken for the purpose of gathering and analyzing information needed for setting priorities and making decisions about project or program direction and allocation of resources.

allocation of resources. The priorities are based on identified needs.

Here we will focus primarily on diagnostic tools influenced by the Household Livelihood Security approach, including needs assessment, disaggregation and differentiation, stakeholder analysis, institutional assessment and gender analysis. We begin with a brief discussion of participants, the identification of which will result from the use of one or several diagnostic tools. In addition to these methods, there are many other potentially useful tools for exploring the existing reality of a given community. Issues Box 8 provides a brief description of some other commonly used diagnostic tools.

Issues Box 8

Examples of diagnostic tools

Participatory Rural (or Rapid) Assessment (PRA) is based on the idea that communities and households are quite capable of analyzing their own constraints and arriving at their own solutions. The external investigator acts as a facilitator to the participatory process.

Benefits-Harms "profile" tools offer a practical way to broaden our analytical framework to include all human rights, which, for purposes of simplicity, are divided into three categories: economic and social, political, and security rights.

Stakeholder Analysis is a data collection activity that focuses on the identification and concerns of key individuals and institutions that have a direct or indirect interest in the project. It analyzes the social and political interactions of individuals and institutions.

SWOT Analysis uses group brainstorming to determine the internal Strengths and Weaknesses, and external Opportunities and Threats (or limitations) of a given project idea. Besides being useful in needs assessment, SWOT analysis is a valuable tool for participatory evaluation.

2.2.1 Identifying Participants (Target Population)[10]

Participants are specific populations (e.g., individuals, households, institutions, etc.) that are directly affected by the problem the project seeks to address and stand to benefit and/or change because of project interventions. Often participants are identified according to poverty or livelihood status, or institutional affiliation. Participants can also be identified according to geographical area, such as communities within a forest buffer zone (Table 3). Identifying participants helps the design team to develop project focus and design interventions that facilitate participation by (or the flow of benefits to) a

Definition Box 7

Participant Group
A population of individuals or institutions directly affected by a problem and which might benefit from a proposed intervention.

[10] These can also be referred to as intended beneficiaries. The assumption is being made here that these beneficiaries will actually be enable to *participate* in project design, implementation, monitoring and evaluation.

specific group. Frequently, participants include vulnerable groups, such as youth, single mothers, unemployed persons, victims of natural disasters, displaced families, and people with low-paying or low-status jobs.

Participants, then, are the individuals, households and institutions that the project will serve, also referred to as target groups, clients, beneficiaries, and primary stakeholders. In conducting an assessment as part of a holistic appraisal, we generally define a 'study group,' a collection of individuals and institutions that help us to understand the situation and who may or may not become participants.

It is possible to select participants in a number of ways. Multi-sectoral assessments are well suited to identifying groups vulnerable to constraints in meeting basic needs. In addition to the assessment tools summarized in this chapter, useful approaches to identifying vulnerable groups include rights-based analysis, anthropometric measurements, or vulnerability mapping (see issues box 9 below).

Issues Box 9

Common criteria for selecting participants

Social	Institutional	Geographical
• Wealth vs. Poverty • Vulnerability • Age cohorts • Gender • Life style • Livelihood • Ethnicity	• Government level • Private Sector • NGO or CBO • New or emerging institution • Specialization (e.g., technical area)	• Urban • Rural • Regional Population • Environment • Agroecological zone • Proximity (e.g., time and distance to services)

Participants must be identified in the context of one or more specific problems, since virtually every member of a community is vulnerable to something. Thus, you can investigate who in the community is most vulnerable in relation to access to a nutritious diet, education, health care, shelter or whatever other themes are prioritized in the assessment and direct interventions accordingly. For example, if your assessment reveals that diarrheal diseases are significant in a community, and that a limited supply of potable water is a contributing factor, you should find out who in the community has insufficient access to clean water. It may prove to be a specific group, such as landless farmers, a particular ethnic group, the poorest economic strata, widows and single mothers -- or it may be defined by a geographic area such an urban neighborhood or a watershed area.

CARE's guiding principles require that projects must work to benefit poor people. However, it may not always be feasible for the poorest members of a community to directly participate in a particular intervention. To achieve this, interventions may target less vulnerable individuals or households that are likely to participate in and benefit from these interventions. Consider an agricultural project that aims to introduce soil conservation techniques: the poorest farmers in a community may not have the resources (e.g., time,

available land) to risk participating in an intervention to train farmers and establish a demonstration plot. If the new techniques prove successful for those farmers who do participate, however, the poorest farmers may choose to participate as well. In this way, the poorest sector of the community may be identified as indirect project beneficiaries.

Table 3: Examples of Participant Groups

Project Name	**Participant Group** (vulnerable to the core problem(s) the project could potentially address)	**Inclusion Criteria** (targeted to obtain relevant and appropriate benefits of this project)	**Study group** (potential respondents and participants in diagnostic assessment)	**Selection reasons** (likely to be able to give useful diagnostic information)
Buffer Zone Management Project	Members of communities living within the buffer zone	Households that use forest resources – to facilitate use of alternative resources, less destructive methods, shared ownership and management, etc.	Members of participating communities Local authorities Natural resources authorities	Aware of local needs and patterns of forest use/off-take (felt needs) Responsible for these communities Responsible for the forest area
HIV/AIDS Education	Adolescents	Out-of-school adolescents – higher risk of early and unprotected sex, less reliably reached by standard public health education, less likely to have adequate life skills	Unmarried and married out-of-school adolescents in participating communities Cultural and opinion leaders, especially youth leaders Local authorities	Aware of local risk behaviors Influential determiners of beliefs Responsible for the community

In order to focus project interventions and increase the potential to measure effect and impact changes, it is important to identify target groups of potential project participants as clearly as possible. This can be a difficult task. Boundaries of a population group are often fluid, shifting as people move in and out of geographic areas or organizations. Households themselves may shift their economic status or level of vulnerability due to changes in their resources. Targeting one specific group of participants may lead to the exclusion of others. A thorough holistic appraisal can assist the project design team in collecting information needed to identify and select target groups.

2.2.2 Needs Assessment

A need can be defined as a discrepancy or gap between "what is," or the present state of affairs of a target group or area, and "what should be," or a desired state of affairs. A needs assessment seeks to identify the gaps, examine their nature and causes, and suggest priorities for future action. It often highlights key issues or constraints that, along with consideration of programmatic principles and strategic objectives, identify the main problems and opportunities on which the project interventions will focus.

Needs may be categorized in different ways, e.g., by type of person affected, by nature of need, by level or degree of need, etc. Needs of beneficiaries include those of farmers, household members, women, children, etc. Needs

of service providers and policymakers involve people such as teachers, parents, health-care workers, merchants, or government. Needs related to resources refer to things such as infrastructure, technology, programs, working conditions and benefits.

Definition Box 8

Needs Assessment
A specific data collection activity that focuses on identifying unmet needs of the project participants. Needs are often categorized according to felt, relative and normative. Needs assessment helps identify the problems and causes the project will address, the existing local resources and opportunities for action, and constraints that have prevented the target population from solving their problem.

Needs assessment can be an important tool for targeting vulnerable groups within the larger community. By focusing on such subsets of a population, you simplify the causal analysis and are more likely to identify clear causal linkages. In addition, by focusing causal analysis and subsequent project interventions on particularly vulnerable groups, you are most likely to achieve significant and measurable impact.

One caution about using needs assessment: By focusing on the needs or problems of communities and individuals, an unintended yet perverse consequence is the mistaken perception that the identified needs represent the complete "picture" of the community or group. Based solely on a needs perspective, one may conclude that communities, neighborhoods or people are devoid of the capacities to effectively address their needs. What is often lacking is a complementary assessment, which identifies the capacities or assets of people and their community. We need to understand the perceptions of the community about their most pressing needs, but we also must assess the ways in which people can make meaningful contributions to their own development. A methodology that focuses on this approach is called Appreciative Inquiry. (See references in Bibliography annex.)

2.2.3 Classifying Needs

Definition Box 9

Categories of needs

Normative Needs
Professional, expert, or policy judgment regarding "desirable" conditions based on national or international standards.

Felt Needs
Needs based on people's perceptions and attitudes.

Relative Needs
Need in one area in comparison to the same need in other communities, locations, or even points in time.

The degree to which individuals or communities are in need is based on three distinct definitions of needs: normative, felt, and relative.

Normative Needs are based on professional, expert or policy judgment regarding desirable conditions. Normative conceptions are value judgments that change over time as the values, knowledge and practices of society change. To define a normative need, policy statements from experts, usually political or professional, are used. For example, the Ministry of Health in a particular country may state that all individuals should have access to safe drinking water. Once operational definitions of "safe water" and "access" have

been determined, this standard becomes the norm against which all drinking water is compared. If individuals or communities do not have access to drinking water of that quality, they are considered to be in need.

Felt Needs are what people themselves say they need. Often, the most accurate way to demonstrate felt needs is by engaging the population in exploratory processes that reveal more accurately how individuals view their world. Caution must be taken, however, to ensure that the felt needs expressed represent the views of the general population or particular vulnerable group, and not just those of a dominant or vocal group. People's statements of needs may be limited or inflated by their personal perceptions and experience. Some communities, for example, may be reluctant to admit a need, while others may request a service though it may not address a normative need and would not be used if it were available.

The tools used to gather these data include focus groups, observation, interviewing (key informant, conversational, investigative), community meetings, problem stories, and social dramas or skits. The data generated by these tools are usually narrative and require carefully structured analysis and subsequent confirmation by the population. People are capable of ranking their needs although perceptions may differ according to sub-populations: by gender, age, ethnicity and status.

Relative Needs compare a project area with other communities, locations or even other points in time. If individuals or communities with similar characteristics are not receiving the same services, the lesser served is said to be in need. Most often, comparative need is relative to socio-economic status and location, although gender, age, religion, and race can also be important characteristics. For example, if in one region the vast majority of households have flush toilets, those that do not are thought to be in need. On the other hand, people in a poor rural area who do not have piped water systems might not be considered to be in need of flush toilets

Statistical analyses are commonly used to determine comparative needs. In the health sector, for instance, mortality and morbidity rates are compared to identify groups at higher risk for certain diseases so they can be targeted for specific interventions.

Differentiating between and balancing normative, felt and relative needs can be a delicate task. A case study is included in Annex 2.2 that describes the rationale for and results of a needs assessment conducted in a hypothetical but typical rural community. The material presented illustrates the different classes of needs and the difficulties you may face in resolving differences among these three types of needs.

2.3 Understanding Diversity – Differentiation and Disaggregation

The purpose of differentiation or sub-dividing populations is to reveal and understand variations among individuals, households, communities and institutions. This is a vital process in a holistic appraisal because it helps us identify degrees of vulnerability for particular individuals or groups. Tools for exploring diversity can be applied by community members to identify persons in their community who are the poorest and have the least stable livelihoods. Understanding diversity in this way helps us to both target better and to develop more sustainable interventions appropriate to specific groups. These techniques can allow members of communities to express factors that make households different from one another, and thus help everyone to understand the constraints under which different social classes live.

Definition Box 10

Differentiation/Disaggregation
Techniques used to identify different socio-economic groups within a community based on a set of criteria; a means by which to identify a specific target population or audience.

Differentiation and disaggregation are used to assess variation between and within groups specific to the nature of the problem the project seeks to address. In the case of a project addressing child malnutrition, for example, the team may need to differentiate groups of women and children geographically based on their relative proximity to adequate health care facilities. Note that differentiation techniques are used in design to categorize groups and make determinations about the differences among groups.

Some designers prefer the term 'disaggregation' when they use participatory consultation to involve the target group itself in determining the categories of diversity. In the example of wealth categorization, the first step is consulting with community members to identify key local characteristics or criteria of poverty and wealth, which are then used to determine a set of useful categories appropriate to the local context.

Table 4 (below) displays an example of "Wealth Ranking", a means by which programmers can disaggregate a community's households into categories of very poor, poor, better off, and well to do. Each category is cross-referenced with an indicator such as food, clothing or education to better define each category's characteristics. Without proper differentiation or disaggregation of data, a program will not be able to maximize its impact on vulnerable households or individuals because of an unclear definition of its target population. (This table is a selection of the ranking criteria developed by the women of Chikhutu, Zambia. See Annex 2.3 for the full set.)

Issues Box 10 shows an alternative to wealth ranking termed "Wealth Categorization." It is quite similar to wealth ranking, but it simply categorizes a population by poverty. This may be sufficient, especially when what is needed is poverty programming and targeting or understanding the dynamics of wealth and poverty in a particular community.

Table 4: Wealth Ranking example – selection from Livelihood Profiles by Women

Criteria for ranking	Wealth categories			
	Category 1: Very poor	**Category 2: Poor**	**Category 3: Better off**	**Category 4: Well-to-do**
Livestock	None	Usually have small chicken	One goat One chicken	Usually have cattle, goats, pigs, chicks, sheep, pigeons
House structure	Live in abandoned house No kitchen, toilet or bathroom	House thatched with grass One room to sleep in No kitchen, toilet or bathroom	Houses have kitchen, toilet and bathroom	Roofed with iron sheets Maintained with cement Kitchen, bathroom and toilet
Possessions (assets)	Have a clay pot A few plates	Have two plates One cooking pot (small)	Two cooking pots At least four mats	Beds for all the family Ox –cart, Buckets, Cupboard, Table, Plates, Bicycle, Household items
Employment	Piecework or casual labor, e.g., working on someone else's farm, pounding maize.	Piecework labor similar to first category, but more regular	Look after house, e.g., sweeping and farming	Several workers, and house servant

CARE Zambia, 1999

Issues Box 10

Wealth categorization - an example from Uganda

Wealth is a continuum, but the boundaries of the categories are fuzzy, there are marginal individuals and households, and there is mobility between categories over time. Instead of ranking, categorizing a population by wealth or poverty is sometimes sufficient.

The first step is to discuss with community members and identify some of the key local criteria or characteristics of poverty and wealth. It is important to try to avoid derogatory classifications, instead choosing terms that are broadly acceptable. For example, one community in Uganda agreed on a four-fold classification of:

1. "Those who can manage", a euphemism for the relatively wealthy who could look after their own interests without help from anybody;
2. "Those who have something", i.e., had some small assets, such as a few animals, some equipment, and an opportunity of developing;
3. "Those who earn slowly", i.e., they had no real capital assets, but struggled on a daily basis to make ends meet; and
4. "Those who cannot manage" (the opposite of the first group), persons who were destitute and therefore required external support to survive.

The general characteristics of each social group could then be explored and described. Broad approximation can be made of the relative proportions of these, either by observation or social mapping. Further insights can be obtained by individual household analysis, biographies, key informants, or identifying households with serious problems, e.g., food shortage, lost all their animals.

Adapted from: IIDS 1995

2.4 Stakeholder Analysis

Definition Box 11

Stakeholder Analysis
An analysis of individuals and/or organizations that are involved in or may be affected by project activities.

At an early stage in holistic appraisal, the design team needs to identify those entities– local and national government, CBOs (Community-Based Organizations), utility organizations, national and international NGOs (Non-Governmental Organizations, including CARE), research institutions, private sector (small and large), donor(s), the target group itself – that may have something to gain or lose from the project. These entities are defined as stakeholders: individuals or institutions with interests in the process and outcomes of CARE-supported activities and the ability to significantly affect a project, positively or negatively. Stakeholders may be partners, recipients of project resources, or organizations that have a vested interest in the outcome of the project (e.g., donors, local government, etc.)

It is important to identify and understand the relationship between stakeholders and the proposed project. Some stakeholders will benefit more than others; key individuals (perhaps representatives of an organization) may have personal interests at stake. Stakeholder analysis thus aims to identify: who are the entities with potential interests in the problem the project seeks to address, what their interests and roles might be, and how to incorporate strategies into the project design to mitigate conflict or turn potential situations of conflict into opportunities for collaboration. Looking for opportunities to build constituencies for what CARE does can create the weave that enables services to be provided in appropriate ways within communities.

There are four main steps to conducting a stakeholder analysis:[11]

- Identify principal stakeholders.
- Investigate their interests, roles, relative power and capacity to participate.
- Identify relationships between stakeholders, noting potential for cooperation or conflict.
- Interpret the findings of the analysis and determine how this will affect project design and success.

Three sample matrix formats that can be used to help structure a stakeholder analysis are presented in the tables below. Table 5 can be used to present a summary profile of stakeholders, their interests and roles relative to project focus, and relationships with other stakeholders.

[11] For further discussion of Stakeholder Analysis refer to: Reitbergen-McCracken and Narayan 1997; IDRC 1998; AusAID 2000.

Table 5: Stakeholder Analysis Profile Matrix

Stakeholder	Interests in the project	Effect of project on interest(s)	Capacity/motivation to participate	Relationship with other stakeholders (partnership or conflict)?

Key stakeholders can significantly influence or are important to the success of a project. *Influence* refers to the degree to which a stakeholder has power over the project and can therefore facilitate or hinder project interventions. *Importance* refers to the degree to which achievement of project goals depends upon the involvement of a given stakeholder. A simple matrix such as the one presented in Table 6 can be useful to assess the relative influence and importance of stakeholder groups. (Place the name of the stakeholder group in the appropriate cell, depending on its influence on and importance to the project.)

Table 6: Relative Influence and Importance of Key Stakeholders

Influence of Stakeholder	*Importance of Stakeholder to Project Achievement*				
	Unknown	Low	Moderate	Significant	Critical Importance
Unknown					
Low					
Moderate					
Significant					
Highly Influential					

When considering a stakeholder's capacity or motivation to participate in or otherwise influence the success of a project, it can be useful to develop a matrix to identify various stakeholders according to the level of their involvement and the stage of the project cycle during which they would most likely participate (Table 7).

Table 7: Stakeholder Analysis Participation Matrix

Stage in Project Planning	*Type of Participation*		
	Inform (one-way flow)	**Consult** (two-way flow)	**Partnership** (joint involvement; potentially includes co-planning, decision-making, shared resources, joint activities)
Diagnostic Assessment			
Project Design			
Implementation			
Monitoring			
Evaluation			

These tables also fit with an RBA orientation, in which stakeholder analysis involves identifying responsibilities that various duty bearers have vis-à-vis the rights of target beneficiaries. In Table 5, for example, key stakeholders with a high degree of influence and importance to project success are potential project partners. Stakeholders with a high degree of influence, but a limited role relative to project achievement, may be involved through periodic consultations.

Early in the design stage for a child malnutrition project, for example, the design team may anticipate forming partnerships with the Ministries of Health and Agriculture. As the team identifies specific project interventions (see Chapter 4), however, the team may determine to focus on a health intervention, thus forming a partnership only with the Ministry of Health, yet continuing to inform the Ministry of Agriculture through periodic project updates.

These simple matrix formats can be adapted to include different or additional information about the main stakeholders. The design team should review and update the stakeholder analysis throughout project planning, as the scope of the project becomes more focused and new information becomes relevant to the planning process.

2.5 Institutional Assessment

Definition Box 12

Institutional Assessment
A group activity to look at the organizational capacities of CARE and other institutional stakeholders; processes used to make key choices on with whom we are likely to seek collaboration, and how we make decisions about the respective roles of other organizations and CARE.

Definition box 13

CARE's Definition of Partnership
Partnerships are "relationships that result from putting into practice a set of principles that create trust and mutual accountability. Partnerships are based on shared vision, values, objectives, risk, benefit, control and learning, as well as joint contribution of resources. The degree of interdependence is unique to each relationship, depends on context, and evolves over time."

Institutional assessment focuses on an analysis of internal and external capacities (human, financial and material) to implement specific activities and absorb inputs such as training. It is complementary to stakeholder analysis, differing in that it focuses more specifically on the capacity of potential institutional partners – including CARE – to collaborate in project implementation, and possible roles and responsibilities of other collaborating agencies. For example, during a holistic appraisal of issues surrounding child malnutrition, the design team identifies the local health department as a key stakeholder and potential project partner. Therefore, the team elects to conduct a thorough assessment of the department to identify particular assets of the agency, or institutional capacities that may need strengthening to ensure project achievement. In this example, the assessment was part of a holistic appraisal, but in practice, an institutional assessment may be more practical once the project strategy becomes defined, so that it is clear which institutions need to be considered.

Illustrative Tools and Methods for Institutional Analysis

1) *Partnership analysis:* How are CARE and its potential partners compatible in terms of vision, values, mission and capacity? What is the common ground? Where are the areas of divergence? What is the nature of the relationship? What are the possibilities for enhancing the relationship? What are the constraints to making the relationship productive for partners? (See Issues Box 11 for a discussion of partnering in CARE, and Issues Box 12 for examples.)

Issues Box 11

CARE and prospective partners

An area of increased exploration within CARE in recent years is the growing range and intensity of operational relationships with other organizations. Gone are the days when CARE saw itself primarily doing direct delivery of goods and services to those affected by emergencies. There are multiple reasons for this, but some of the pre-eminent are:

- CARE increasingly sees its role in programming as one of experimenting with innovative approaches, developing new models from these, and then promoting their wider replication.
- Replication, scale-up and spread of programs, in order to achieve a more widespread impact, all require the influencing and cooperation of a wide range of other agencies.
- The achievement of real and lasting benefits to livelihoods is not something that can be easily achieved by one agency operating alone. It requires building of new and innovative partnerships, which include governmental, civil society, private sector and donor agencies.

These factors lead CARE to increasingly see its responsibility to learn from, collaborate and to influence an ever growing variety and number of agencies. This is happening at all levels of CARE: internationally, regionally, nationally and locally within country contexts. CARE's new role is to facilitate partnership, multi-agency collaboration, and the creation of linkages between community-based and other CSO actors, government and private sector agencies that commonly have not worked together previously.

<u>The major objectives for CARE's partnering include:</u>

- Ensure sustainable service delivery capacity;
- Expand the scope and scale of programming;
- Increase impact.

<u>The major partnership principles advocated by CARE include</u>:

- Weave a fabric of sustainability;
- Acknowledge interdependence;
- Build trust;
- Find shared vision, goals, values and interests;
- Honor the range of resources;
- Generate a culture of mutual support;
- Find opportunities for creative synergy;
- Address relationship difficulties as they occur;
- See partnering as a continuous learning process.

Adapted from: Stuckey et al, 2000

Issues Box 12

Examples: Partnering by CARE

One example of CARE's partnership relationships is the Strengthening Capacities for Transforming Relationships and Exercising Rights (SCAPE) project in South Africa. South Africa is a country of multiple institutions, but often with limited capacity and limited scope to their activities, whether in the complex three-tiered government structure or in civil society. All are struggling to adapt after the coming of a democratic government in 1994, which resulted in the country's non-white population gaining rights it lacked previously, but where old attitudes and practices hinder the evolution of more empowering development approaches. In this situation, people are not enabled to gain confidence and understanding of how to exercise their new rights and benefit their livelihoods. This applies equally to local communities, civil society organizations working with them, and to local government, all of which retain an expectation that resources and solutions will be provided centrally. Accordingly, the CARE South Africa office has been developing and piloting a program that works with multiple partners in furthering the transformation of both the horizontal and vertical relationships that affect the nature and effectiveness of local development policies.

More commonly, many CARE country offices are working in partnership with Municipal Governments. For example, in Latin America, both CARE Bolivia and CARE Honduras have been working with Municipal Governments in their project areas, focusing on strengthening planning and service delivery. One of the key findings from a recent evaluation of the program in Bolivia was that Municipal partners are very effective institutions to promote HLS programming. This is because these institutions are holistic in their service delivery. Similarly, in Southern Africa, urban livelihood programs have established successful partnerships with municipal authorities in Zambia, Madagascar, Mozambique and Angola. Stuckey et al 2000

2) *Force Field Analysis*: How do institutions support program objectives? How do they represent a resisting factor or barrier to change? What is the susceptibility to change the institution? What is the potency of the institution for influencing positive change?

Table 8: Force Field Analysis (Example of a tool)

VISION (Describe desired vision here):			
DRIVING FORCES → (fill in driving forces)	**TODAY** (current situation)	←**RESTRAINING FORCES** (fill in restraining forces)	**VISION GAPS** (missing elements of desired vision)
→		←	
→		←	

To achieve change towards a goal or vision three steps are required:

- First, an organization has to unfreeze the driving and restraining forces that hold it in a state of quasi-equilibrium.

- Second, an imbalance is introduced to the forces to enable the change to take place. This can be achieved by increasing the drivers, reducing the restraints or both.
- Third, once the change is completed the forces are brought back into quasi-equilibrium and refrozen.

Definition Box 14

Force field analysis
Force field analysis is used in change management to help understand most change processes in organizations. In force field analysis, change is characterized as a state of imbalance between driving forces (e.g., new personnel, changing markets, new technology) and restraining forces (e.g., individuals' fear of failure, organizational inertia).

3) Trends *analysis and historical timelines*: Who are the key groups or institutions that have influenced the issues problems or opportunities) over time? What are their relationships with the target population, and how have they changed over time?

4) Institutional *Mapping*: Who are the organizations involved in addressing key issues and problems? What do they do? Where do they work? How do they interact with the target population? Where are the overlaps? Where are the gaps? What are the strengths and weaknesses of the institutions? What are the organizational profiles/typologies?

5) Venn *diagrams*: How do program participants/target groups interact with organizations and institutions? How do the organizations work together? Identify subsets of organizations. What is the relative importance of these associations? How are these associations linked? What is their value and importance to the target population and their livelihoods? What is the level of access? What are the constraints to access and participation?

Issues Box 13

Institutional Assessment: A Rights-Based Approach

To broaden our assessment of institutions and their relations to rights realization, we need to assess and consider what other actors are doing, at different levels, in relation to conditions on the ground. The HLS assessment process includes an institutional mapping component, which focuses on mapping the activities and long-range plans of other institutions working in the area in order to determine CARE's role/comparative advantage. Under RBA, institutional mapping would be expanded to include a broader range of responsible actors (covering the wider spectrum of rights issues) and to identify how such actors advance or impede rights realization for the target population. The assessment would also need to include a component that helps us understand local perceptions of the legitimacy and/or value of these institutions. The institutional assessment process will become critical as RBA inherently calls for working in coalitions, networks, etc. and for engaging in advocacy vis-à-vis key responsible actors.

2.6 Gender Analysis

Gender analysis focuses on identifying and understanding different gender roles, rights and responsibilities. It seeks to better understand women's needs and roles in relation to men's, and to their social, cultural, political and economic context, acknowledging that neither women nor men are homogenous groups. Gender analysis considers the roles, rights, and responsibilities of both men and women in all aspects of their lives, e.g., production, reproduction, management of household and community activities, and access to community resources. In project design, gender analysis helps us to 1) identify gender-based differences in access to resources to determine how different members of households will participate in and be affected by project interventions, 2) incorporate gender equity and empowerment into the project design process and subsequent goals and interventions.

Issues Box 14

Gender analysis tools

Resource Access Assessment. This participatory technique provides insights into how access to and control of domestic and community resources varies according to gender. Simple activities can be adapted for use in various professional and cultural contexts, drawing on the daily experience of participants. One particular gender analysis technique used three large drawings of a man, a woman and a couple, and a set of cards depicting different resources and assets owned by people in a community (e.g., house, land, animals, farm implements). Participants then assign the resources to the man, woman or couple, depending on the patterns of ownership (as distinct from use) in their community (Rietbergen-McCracken and Narayan 1997).

Activities Profile. Also known as Analysis of Tasks, this is a gender analysis tool that raises awareness of the distribution of domestic, market and community activities according to gender. An activities profile solicits information essential to the planning of effective project interventions, allowing project designers to identify the degree of role flexibility associated with different activities and participants' allocation of time to existing tasks. World Bank 1996

Because gender planning is part of the overall project design process, the composition of the planning team, the timing and approach of the holistic appraisal, and the integration of gender concerns into the identification of causal linkages, the development of project goals and interventions, and monitoring and evaluation are all critical to project achievement.

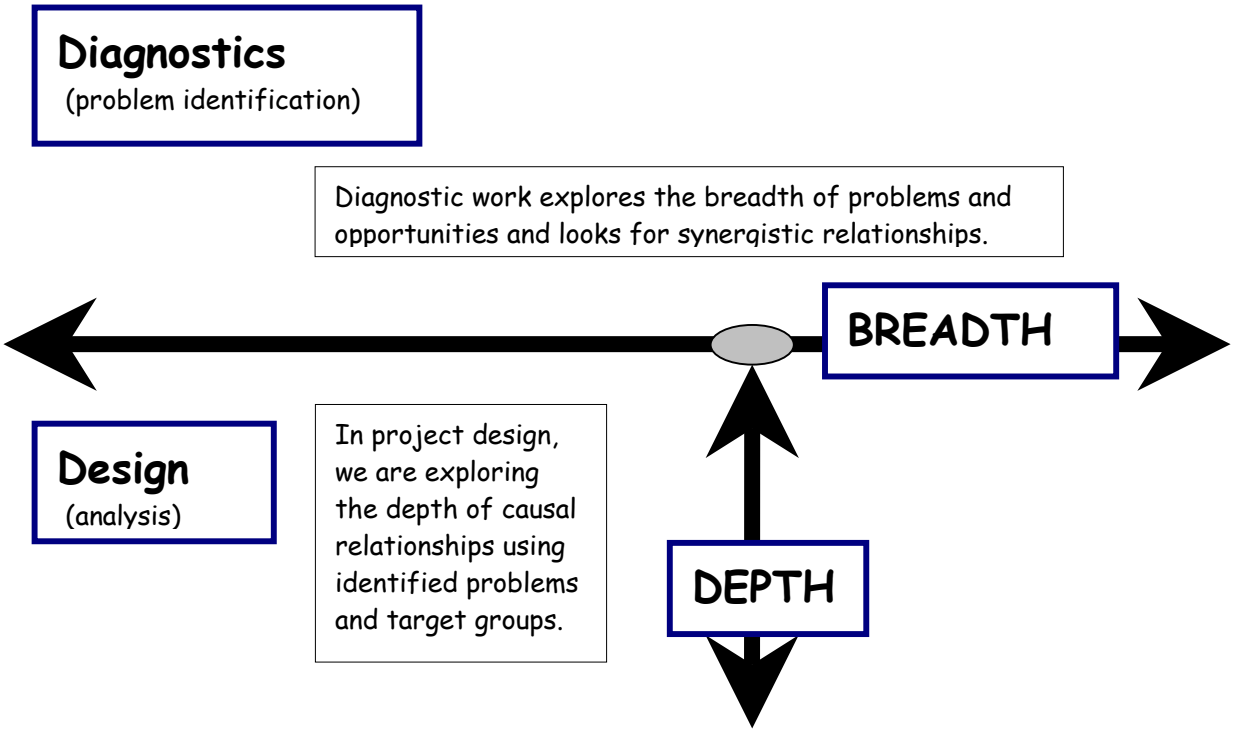
Each of the diagnostics described in this chapter can be useful in conducting a gender analysis. Needs assessment, for example, can be used to understand how the needs of women differ from those of men. Table 4 (page 35) earlier in this chapter shows how wealth ranking can be used by village women's groups to disaggregate households. Issues Box 14 summarizes two additional tools useful in gender analysis, resource access assessment and activities profile. Gender analysis techniques can be used as group activities involving both women and men. For women to feel comfortable

expressing themselves openly, in many design contexts it will be preferable– or perhaps even necessary – for men and women to meet separately.

2.7 Breadth versus Depth

Holistic appraisal is an exploratory phase of project design. Also called diagnostic assessment, it is a process often undertaken during initial design activities. Its primary purpose is to understand the range of constraints, needs, problems, opportunities, etc. that are present in a defined group or area. Our initial work, then, in the holistic appraisal stage, is to gain a general understanding of individuals, households and communities. In the diagram below (figure 6), the horizontal line labeled 'breadth' illustrates this initial work.

Figure 6: Breadth versus Depth of Diagnosis and Design



Later in the design process, we will focus in on a narrower range of issues and seek to understand these issues in much more depth. There is rarely enough understanding of an issue after one round of assessment to design a good project. It is usually necessary to focus in on a sub-set of issues, and then conduct more research (i.e., secondary literature reviews, further assessment work) to gain a fuller understanding of the livelihood and rights issues.

2.8 Sequencing of Activities

A successful holistic appraisal relies upon the ability of the project design team to choose and adapt existing tools (or develop new ones) that are most appropriate to the particular context of the project design. The methods described above comprise a number of techniques designed to collect, understand and exchange information. A brief description of these and other tools and terminology used in holistic appraisal is presented in Annex 2.4.

In conducting a holistic appraisal, the exact sequencing of assessment and diagnosis will vary depending on the objectives of the analysis and information requirements. The sequence of a full-blown HLS Assessment, presented below in Issues Box 15, can provide guidance for a project design team.[12] Remember, it may not be cost-effective to conduct such a thorough, holistic diagnosis assessment for a single project. However, it is recommended for determining the strategic directions of a long-term, comprehensive area program. This information can be subsequently used to guide the design of a number of projects focused on specific problems faced by communities in that area.

An example of a sequenced approach for participatory livelihood assessments in Malawi is displayed in Table 9 on page 46.

[12] These are laid out in much greater detail in several other resources. See: Frankenberger and McCaston 1999; Maxwell and Rutahakana 1997; and Pareja 1997.

Issues Box 15

Steps of a full-blown Household Livelihood Security Assessment

- **Objective setting** Clear objectives are fundamental to keeping the entire diagnosis process on track.
- **Review of existing information** A comprehensive review of existing information from secondary sources and an assessment of its validity, reliability, and comprehensiveness set the parameters for primary information collection.
- **Identification of major issues for field data collection** Where there are gaps in existing information, tools for gathering this information have to be designed.
- **Stakeholder validation of conclusions from secondary information and gaps** Prior to investing time and resources in field data collection, experience shows it is useful to validate preliminary conclusions emerging from the secondary information. Stakeholders to contact include representatives of communities where activities may take place, members of partner organizations that may be involved in diagnosis, design and implementation, local authorities, and other organizations or research institutes that may have experience or information.
- **Site selection** Locations for field data collection must reasonably represent locations where programs will be implemented, but can rarely be statistically representative due to resource restrictions. Therefore, careful thought must go into purposive selection of sites, and the number of sites must be adequate to capture the breadth of variation in livelihood systems, constraints and sources of vulnerability.
- **Community preparation** The quality of information gathered is only as good as the quality of response from groups participating in the information collection, so good communication with communities is the sites selected is critical. Likewise, it is important to inform communities that projects or "aid" may not necessarily follow immediately (or ever).
- **Field team training** Often field teams include staff from partner organizations or local government, representing multi-disciplinary viewpoints and expertise. Incorporating HLS concepts and rigorous field methods into a mixed team is a challenge that needs to be allocated adequate amounts of time. This is also a good time for pretesting tools/methods.
- **Field data collection/entry/analysis iteration** Capturing information, organizing it and making it retrievable (and backed up!), and beginning to synthesize findings, is all part of fieldwork. In general, at least a day for these activities is required for every day of actual information collection, and is best built into an iterative process, rather than lumping information collection and entry/analysis into separate activities and timeframes.
- **Analysis and design workshops** Refinement and synthesis of information, identification of problems and causal linkages, and selection of strategically focused interventions, usually occur in design workshops that follow the field exercise. (These stages of the project design process will be covered in detail in Chapters 3 and 4 of this Handbook.) Often times, multiple stakeholders including community representatives are involved in this process. Once a set of intervention themes has been identified, these are subjected to a series of analyses to determine the key leverage points for follow-up project design. These selected themes are reviewed with the community to determine if they are valid community priorities.

Table 9: Example - Methods Used And Key Information Collected in Malawi

Level of Analysis	Methods	Key Information Collected
Community level environmental and economic analysis	i) Resource mapping and focus group discussions around resource map ii) Historical time line iii) Seasonality calendars iv) Venn diagramming v) Matrix ranking	• Infrastructure, key services, land use, farming systems, land tenure, natural resource base, availability, access, quality, and historical changes. • Historical analysis, changes over time, trends, past efforts. • Seasonal farming activities, income, expenditure, stress periods, coping and adaptive strategies. • Institutional identification, operation, interaction, level of service, performance. • Economic activities, priorities, performance, trends, gender.
Household level social analysis	i) Identification of livelihood indicators ii) Identification of livelihood categories iii) Livelihood category profiles iv) Social mapping v) Case study and household interviews	• Economic, social, and environmental criteria used for classifying households by wellbeing. • Difference by gender. • Location and names of households • Proportional livelihood status • Vulnerability, shocks, stress, coping and adaptive behavior. • Potential opportunities. • Validation.
Problem prioritization, analysis and opportunity identification (synthesis)	i) Problem identification analysis. ii) Cause – effect analysis iii) Opportunity analysis	• Prioritized problems by gender. • Problem linkages, causes and effects. • Previous efforts, successes, failures. • Roles and responsibilities. • Potential opportunities and strategies.

Malawi Participatory Livelihood Assessment, July 1998.

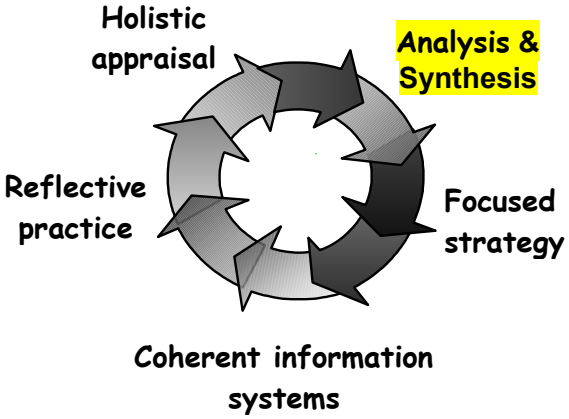
Chapter 2 Review: Holistic Appraisal

Key concepts	Focus questions	Notes
2.1 Establishing the operating environment for your project design	• Have you considered the context in which your project will be set? • What factors will be important to assess in the holistic appraisal stage?	
2.2 Diagnostic tools for holistic appraisal	• Following your review of available secondary data, what diagnostic tools will be most appropriate to holistic appraisal? • Have you clearly defined the project target group?	
2.2.2 Needs Assessment 2.3 Understanding Diversity (Differentiation/ Disaggregation) 2.4 Stakeholder analysis 2.5 Institutional assessment 2.6 Gender analysis 2.7 Breadth vs. Depth	• Have you determined which tools will provide you with the information you need to understand: – The "needs" of the target group; – Appropriate categories for disaggregating information; – The relative importance and influence of various stakeholders; – Opportunities for collaboration or potential for conflict with stakeholders; – Institutional capacities of partners or target groups; – Gender-based differences affecting project interventions?	
2.8 Sequencing activities for holistic appraisal	• Have you developed a logical sequence for the assessment, based on the objectives of the analysis?	

Chapter 3

Analysis & Synthesis Techniques in Design

Systems Perspective
Logic of Cause and Effect
Using Cause and Effect in Project Design
Hierarchical Causal Analysis
Methods of Causal Analysis



Chapter 3 provides guidance on synthesis techniques used to organize information collected during the holistic appraisal. Here we define Causal Analysis and discuss methods for applying Causal Analysis in project design.

Chapter 3: Analysis and Synthesis

The analysis and synthesis stage of project design is used for organizing information collected during the holistic diagnostic assessment stage and extracting meaning from this information. We often have more information than we can reasonably assimilate using summary techniques. Therefore, we need tools to help us to organize information.

The holistic appraisal stage of design identified a set of constraints (we can also refer to these as problems or needs) of varying complexity and importance relative to a defined geographical area and population. Developing a strategy to eliminate constraints of realized possibilities requires an in-depth knowledge about the underlying causal factors that lead to an analysis of the problem. One of the tools we have for exploring causal relationships is called Cause-and-Effect Analysis, and it is a commonly used tool in project design. You may also hear it referred to as simply Causal Analysis or Problem Analysis or Logic Modeling.

Causal Analysis is based on cause-effect relationships. Cause and effect has its roots in the physical sciences. Laws of physics, for example, dictate that nothing happens by accident, that something causes something else to happen, and that what happens in the beginning determines what happens at a later point in time. These notions of cause-effect are periodically challenged in the social sciences. In other fields, researchers can establish cause-effect relationships (or at least strong correlative relationships) using statistical probability -- for example, that smoking is a major causal factor in a high percentage of lung cancer cases, or that hydrocarbon emissions from automobiles are a causal factor of airborne particulates that result in smog in major cities. When working with social systems, as we do in the development field, we often do not have the luxury of clear statistical rigor. Nevertheless, causal analysis based on cause-effect relationships is still one of the best tools we have for systematically exploring events or factors that lead to a problem or opportunity.

In design, Causal Analysis normally does not refer to rigorous methods of mathematical causal path analysis but, rather, consists largely of qualitative procedures. A logical cause-effect stream is established which illustrates, *to the best of our ability*, the relationships among behaviors, conditions, and problems. In this way, Causal Analysis is used to discover factors that lead to constraints and to bring project designers closer to the real needs of target populations.

Definition Box 15

Causal Analysis

Causal Analysis is a systematic process used to determine causes and consequences of a problem and to link them based on cause effect relationships.

3.1 Systems Perspective

Needs do not exist in a vacuum. Needs are contextual, which is why we start the design process by conducting a holistic appraisal and exploring, for example, the Operating Environment. Needs exist within systems, whether educational, social, political, familial, governmental, or business. Thus, anything that affects one part of the system also interacts with other parts of the system. The causal analysis that we do for project design reflects this systems thinking, and the livelihood framework used in our holistic appraisal promotes a systems perspective by looking at needs across multiple sectors. Issues Box 16 summarizes the strengths and limitations of the Causal Analysis tool applied to project design.

Issues Box 16

Causal Analysis Tools

What the tools do well…

- Improves our analysis of constraints and causal linkages, at both the program and project levels.
- Advances the interaction among practitioners in the analysis of constraints.
- Provides a starting point to select appropriate effect and impact level indicators.
- When done at the program level, provides us with a base to develop further assessment for project design.
- Facilitates data analysis from exploratory assessment.

What needs more understanding…

- Analysis of cross-causal linkages.
- Relative contribution of different causal streams.
- Linkage/complementarity/use with capacities and opportunities, prioritizing leverage points for influencing sustainable change.

3.1.1 The Pareto Principle

Another concept we need to keep in mind as we explore causal analysis is called the Pareto Principle, which states that only a few causal streams that lead to a problem are responsible for the bulk of the problem (Juran and Gryna, 1988). You often hear statements like "90% of repeated violent crimes are caused by 5% of the population," or "80% of the yield reduction is caused by two major plant pests." This principle is well established in fields such as manufacturing and assembly, administrative and support services, and marketing. It is also relevant to development and social systems, and reminds us to assure that the most critical pathways are identified during design. See example below from agriculture (Issues Box 17).

Definition Box 16

Causal Streams

A sequence of conditions or factors, linked by cause-effect logic, that contributes to a pre-defined problem. Can also be referred to as cause-effect linkages.

Issues Box 17

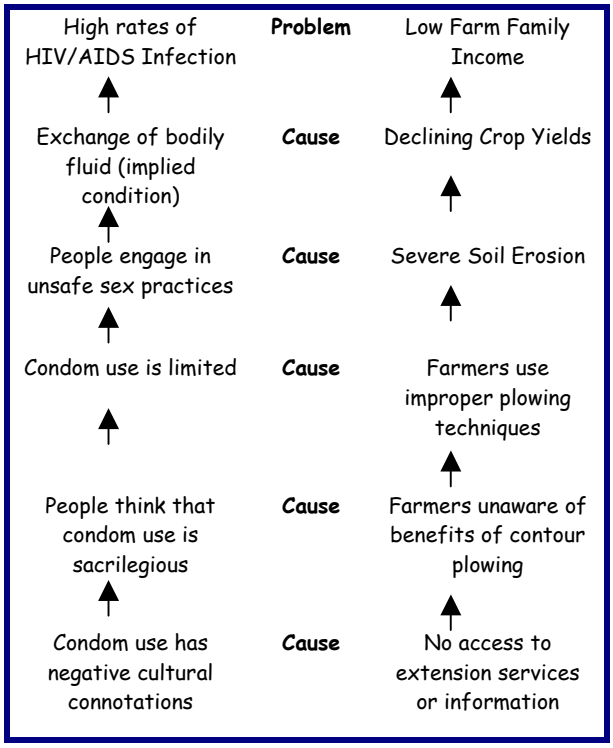
Causal analysis example using the Pareto Principle in the agriculture sector

In Country X, the problem of decreasing farm family income was investigated through the use of a survey of 100 households. 65 households mentioned the primary cause as the lack of resources (access to land, irrigation, inputs) to support production, 20 households mentioned lack of access to markets to sell their goods, and 15 identified their lack of knowledge of improved farming practices as the primary cause of a decreasing farm family income.

3.2 Logic of Cause and Effect

Causal analysis helps organize the many concerns and needs identified in a community into a logical hierarchy of cause-and-effect relationships. However, what exactly do cause and effect mean? Consider a particular "problem" you have encountered (say, dangerous driving conditions on city streets), and then ask yourself, what the most influential factors are that most directly lead to that problem. Likely answers might include too many vehicles, roads in poor condition, or a lack of streetlights and other safety features. These are the 'causes' leading to the problem of dangerous driving conditions.

Figure 7: Two Causal Stream Examples



Each cause identified above is in turn the "effect" portion of another cause-and-effect relationship. For example, what might lead to the condition "too many vehicles," which was identified as a direct cause of the problem? A logical answer (i.e., the cause in this cause-effect relationship) would be a lack of public transit. This condition – a lack of public transit – is in turn the effect of specific causes, which may in turn be the effects of other causes. The result is a sequence or stream of conditions or factors that lead to the core problem. Figure 7 offers two sample causal streams that further illustrate this cause-effect logic for high HIV infection rates and decreasing family farm incomes. For some people, developing (or following) a pathway of events is quite difficult. This may be a result of inexperience with relational thinking beyond a one-step process. It may also happen because the causes of many problems are quite complex and require more than a singular, linear causal stream to adequately analyze them.

3.3 Using Cause and Effect Logic in Project Design

Definition Box 17

Problem
A condition or set of conditions that affect people in a negative way (e.g., death, infectious diseases, poverty, low income, low agricultural production, inadequate housing).

Underlying Causes
Major causes of problems that are often the effects of other causes and must be defined during the synthesis stage of design.

The first step in developing a causal analysis in project design is to identify the problem that the project will address. The objective here is to use cause-and-effect logic relative to a pre-defined problem, since the causal logic is always relative to a particular problem, which leads to other effects, also termed consequences. If you change the core problem, then the causal analysis will also change. Of course, local social, political and economic conditions will partly determine the identification of the project's focus, however other factors will also influence it.

Problems are selected based primarily on such **criteria** as:

- The degree to which resolution of the problem (or seizing of the opportunity) will result in a fundamental change in the lives of the target group
- The significance and scope of the problem (i.e., the degree to which society considers it a serious problem and the number of people it impacts);
- The identification by the affected community that this is a priority problem;
- The organization's programming principles;
- The organization's comparative advantage (ability to address the problem);
- The interests of donors and the opportunity for resources.

The process of defining the problem in the project design phase in most cases will begin at a very general level. For instance, a holistic appraisal is often conducted with the rather generic "problem" of low livelihood security in mind, and data is collected around basic needs, access to resources, and other factors associated with livelihood security. An initial cause-effect analysis can be conducted with the problem defined as low livelihood security and the result will be an understanding of the major causes of low livelihood security. As mentioned above, these major causes are often too broad for a single project, and are themselves the effects of other underlying causes. The project design team will need to clarify these underlying causes before going further in the project design process, as the suitable focus for a project is more likely to be found at this level in the causal stream. Thus, causal analysis should be an iterative and on-going process through the life of the project to continuously ensure proper project focus.

Causal analysis is a fundamental tool for building the central logic of any project design. The primary reason for carrying out a causal analysis is to develop a hierarchical relationship between causes and effects identified

through the holistic appraisal. Causal analysis allows us to assess the relative contributions of causal streams to the problem and therefore select factors to address through project interventions. Other reasons to use causal analysis in project design include:

- Selection of appropriate effect and impact indicators;
- Exploration of multiple causal interactions (synergy);
- Mobilizing "buy-in" to a project design for staff, partners, community participants, donors, etc.

3.4 Hierarchical Causal Analysis

Causal Analysis describes a set of complex relationships among system variables in a hierarchical manner. In most cases, the sequence of causes in a causal stream fall in the following hierarchy:

- The direct causes of the problem are often specific physical or social conditions;
- These conditions, in turn, are typically 'caused' by human behaviors or by systemic shortcomings;
- Systemic shortcomings might be caused by low institutional capacities, or underlying power dynamics (e.g., duty bearers who have control);
- Human behavior is determined primarily by people's knowledge, attitudes and beliefs (although there can be conditions that themselves influence behavior); and
- People's knowledge, attitudes and beliefs have their roots in the context or the environment in which the target area is found.

Figure 8 illustrates the causal hierarchy. Note that this is generic and illustrative only. Most causal analyses are much more detailed, and thus more complex. The figure, though, illustrates the primary relationships found in hierarchical causal analysis. There are specific reasons in project design that we model our cause-effect logic using a hierarchical analysis, as we will see later in this chapter.

Definition Box 18

Consequences
Social, political, or economic conditions that result from a problem. A cause-effect linkage where the consequence is the effect and the problem is the cause.

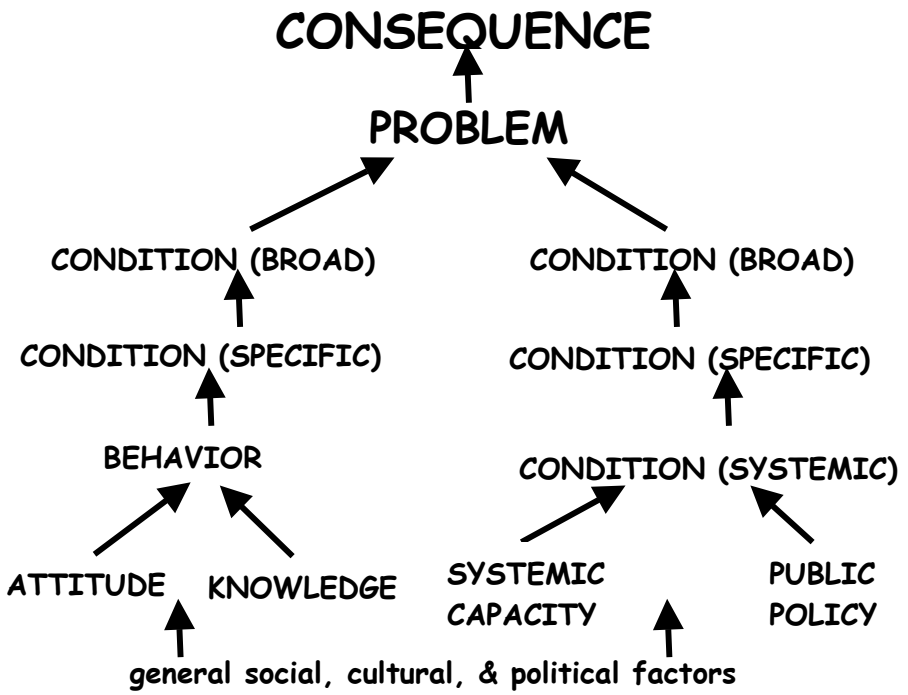
Conditions
Factors that exist in the household, community, or external environment which contribute to a problem.

The higher-level consequences of a problem in the hierarchy are the result of the problem, and are based on the same cause-effect logic as the conditions and other causes. If a project makes a significant contribution towards resolving the problem that it addressed then the consequences will themselves change.

Conditions are identified as direct causes of the problem, and frequently exist because of certain human behaviors or gaps in necessary systems. For example, the condition whereby water is contaminated by human waste could be caused either by a negative human behavior such as failure to use

latrines, or by a system shortcoming such as a lack of a municipal sewage treatment facility.

Figure 8: Hierarchical Causal Tree



Human behavior is based primarily on our knowledge, beliefs and attitudes. As human behavior often contradicts them, we must be careful to distinguish between stated and implicit beliefs. Thus, the next level of cause in the causal analysis hierarchy describes what is causing the targeted human behavior. The findings may show reluctance of nursing mothers in a specific community to eat foods high in protein – a gender-linked behavior usually based on cultural beliefs, gender roles and rights, and perhaps a lack of knowledge of good nutrition.

Finally, you should examine the external environment for basic factors that influence or lead directly to causes at each level in the hierarchy. For instance, a dominant religion can be a factor in the cultural environment that leads to specific beliefs or attitudes. Government policies or the availability of resources can cause shortcomings in certain basic services or systems. Project design must take these factors into account.

Recognize that behavior (and attitudes and beliefs) also applies to duty bearers, persons in power who have influence over institutions and systemic structures. These have a great deal of influence over the fulfillment of people's rights. Whether constraints at these levels should be addressed specifically by projects or broader program strategies, they should not be ignored, for often the underlying causes of problems (denial of rights) can be traced to these sources.

Issues Box 18

Incorporating a Rights-Based Approach into synthesis techniques

Holistic appraisal sets the stage for synthesis leading to program design. Put simply, a rights-based approach focuses us on those most severely affected by discrimination, exploitation, and neglect, on the inter-related roots of their predicaments, and on how different actors are or are not living up to their responsibilities for addressing human suffering and poverty.

Targeting the key leverage points or factors which, if not addressed, will impede significant, lasting impact. A core principle of a rights-based approach is the focus on the roots of poverty. Addressing underlying or basic causes means going beyond addressing immediate causes of livelihood insecurity. For example, instead of solely working to improve farm production, CARE may need to promote pro-poor agricultural policies. To some extent, addressing basic causes of livelihood insecurity implies addressing areas that previously fell into the "assumptions" column in program design, particularly the policy dimensions of poverty's roots. These assumptions have sometimes been viewed as out of CARE's control or too political in nature. However, with a rights-based approach, no fundamental causes or "drivers" of livelihood insecurity should automatically be "assumed away" as too political, sensitive, or complex for CARE. In fact, if our analysis shows that a certain cause is a critical leverage point, we should carefully assess opportunities for and potential risks of addressing it at different levels. We should not necessarily take direct action. In some cases, we should assume a purely indirect and discreet role of mobilizing or facilitating action by those who have stronger mandates and/or greater resources to address the situation.

The causal-responsibility analysis tool developed by CARE's Human Rights Office is one simplified methodology for framing and stimulating analysis of root causes and responsible actors, setting the stage for the development of coalitions and focused intervention strategies.

Jones 2001

3.4.1 Phrasing Problems, Causes and Consequences

There are a few simple rules for the proper phrasing of problem, cause and consequence statements. To write the problem statement, first determine the condition the project is intended to address. This is the "what" of the problem statement. Next, identify the population affected by the condition. This is the "who" of the problem statement and is sometimes referred to as the target population. Finally, state the area or location of the population. This describes "where" the problem occurs. The following are examples of problem statements.

- High mortality in children under five living in Jalapa District.
- Dehydration in children living in Western Nepal.
- Low nutritional status of small farm households in Dangriga.
- Low income for small-business women living in peri-urban areas of Guatemala.

The causes and consequences are phrased in a similar fashion. First, identify the subject or the "who" of the sentence. Then, state the verb(s) of the sentence. Finally, state the objects of the verb (examples 1 to 4 below) or the subjective completions (examples 5-8 below). The following are samples of properly written causes and consequences.

1) Children have frequent diarrhea.
2) Mothers do not wash hands.
3) Farmers cut trees.
4) Families pay for funerals.
5) People are uneducated.
6) People have no power to influence decisions that affect their community.
7) Farm families cannot own their own land.
8) Community-based irrigation committees are not functioning.

A word of caution: There is an unfortunate tendency to use phrases such as "lack of education or knowledge" for causes. Stating problems as a lack of something presupposes the solutions. In other words, you assume that the lack of education is the cause when in fact education may be one of several possible solutions. To help you improve your ability to detect differences among problem-cause and consequence statements, practice exercises are included in Annex 3.1.

3.4.2 "Positive " Approaches to Analysis

New approaches are being developed by some designers in response to what they perceive as the 'negativist' connotations of the 'problem-based approach' to project design. Their premise is that a problem-based approach

Issues Box 19

Positive approaches to causal analysis

Assets Approach – The assets approach highlights resources within the community and designs community-building activities using those resources. Implicit in this method is the idea that among the most important of these resources are the people of the community – including youth, women and other sometimes marginalized groups – and that by getting these people involved in the process, there is more likely to be a successful outcome.

Appreciative Inquiry – Frequently used in institutional development processes, appreciative inquiry helps participants go beyond problem identification and focus on a positive vision for the future. In an appreciative inquiry, a facilitator guides participants through four phases: Discovery – appreciating what gives life (i.e., the best of what is); Dream – envisioning what might be (i.e., what is our world or community calling for); Design – group construction of the ideal vision; and Delivery – strategies to achieve the ideal. (See also Annex 3.6)

Positive Deviance – This concept proposes that progressive influences in a community often come from those people who conduct themselves in a way that is outside local behavioral norms. Development projects seek to identify and work with progressive farmers who, unlike the majority, try new techniques or materials in an attempt to be more productive. Assessment based on positive deviance would seek such individuals from all sectors of society so that their successful discoveries could be shared, and other community members encouraged to copy them.

focused on seeking problems and their solutions is unhelpful for two main reasons. First, the spirit of partnership can be damaged when the development agent pays attention primarily to what a community lacks. In addition, the problem-based approach may not pay adequate homage to opportunities or assets locally available in the form of skills, capacities and human resources. There are approaches that take a more positive point of view, and it is valuable to be aware of some of the new terminology and tools being promoted (see Issues Box 19).

3.5 Methods of Causal Analysis

As we saw in Chapter 2, there are many tools that project design teams can use during the holistic diagnostic assessment stage to collect information relative to the project focus area or problem. Synthesis techniques can be used to organize this information to determine cause-and-effect relationships and establish priorities for project interventions. There are many methods available for conducting a causal analysis. We will focus primarily on the use of causal trees, but it is worth mentioning some of the other techniques here, because any one of the techniques can be used.

Group Brainstorm/Consensus

The simplest form of analysis is for a group to brainstorm possible causes, discuss them, and then prioritize. This can be done with any size of group but works best when guided using good facilitation techniques. It is often more useful, however, to use more structured methods which capitalize both on the experience of team members and on the visual representation of the "system" aspects of the causal analysis.

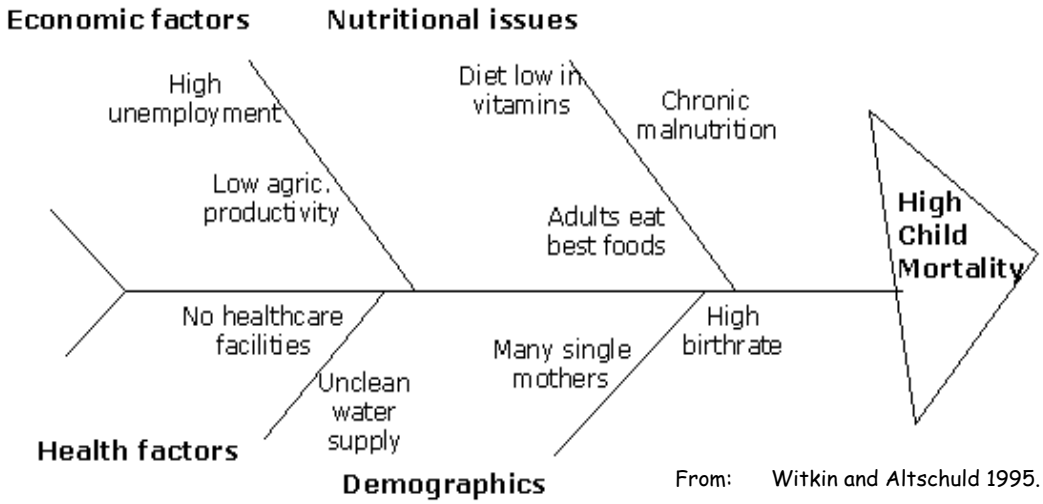
Fishboning

Fishboning is an easy and effective tool for exploring causes of identified problems. The fishbone can be useful with a relatively small number of causes. Figure 9 is a basic fishbone diagram, with the head of the fish at the right and the ribs extending to the left. The problem (or opportunity) statement is written on the head. Categories or labels can be placed on the ribs, which help identify and categorize potential types of causes that lead to the head.

Fishboning is useful as an exploratory method, especially during assessments that seek to identify a number of constraints. The method is also a useful participatory tool because the process of diagramming facilitates group involvement. Fishboning does not, however, help clarify the sequencing or hierarchy of causes, a point we will see is important to project design. Nor does the method provide us with much insight on the relative contribution of each of the causal streams. Consequences are often left out of the diagram. One other limitation is that this structuring of the diagram assumes only problem enhancing (negatively contributing) streams, and does not portray forces that oppose these streams (positively contributing to solutions). For example, while the present diagram can show risk contributing behaviours, like non-use of condoms, poverty and pressure for

commercial sex, there is no way to show cultural beliefs and behaviours that contribute to delaying the age of first sex in adolescents, and thereby decrease their risk of HIV transmission.

Figure 9: Example of the Fishbone Method of Diagramming Problems



From: Witkin and Altschuld 1995.

Cause and Consequence Analysis

Another convenient method for exploring problems is called Cause and Consequence Analysis. It is designed to aid in uncovering both causes and consequences (effects) of phenomena in order to determine factors that contribute to the present situation and the future. It is a form of risk assessment and works best with small groups and key informants. It is visually represented in matrix form. One important output of the process is a priority ranking of problems based on severity of causes and consequences. The general format for this analysis is illustrated below in Table 10.

Table 10: General Format for Cause and Consequence Analysis

Problem/Need	Causes	Consequences	Difficulty to correct - low, medium, high	Criticality - 1 2 3 4 5

Witkin and Altschuld 1995

To arrive at the final two columns in the format, each participant makes individual judgments using rating sheets with numbers keyed to the problems on a master chart. One of the major uses of this type of analysis is to set priorities for addressing problems. In this sense, it may be more useful for strategic or program planning and not project design, where the problem has already been defined.

Nevertheless, groups generally like using this type of analysis and it is simple to learn and apply. Each problem will have more than one cause, and a

given cause may be related to more than one problem (which starts to show the interaction among causal factors, but still not very efficiently).

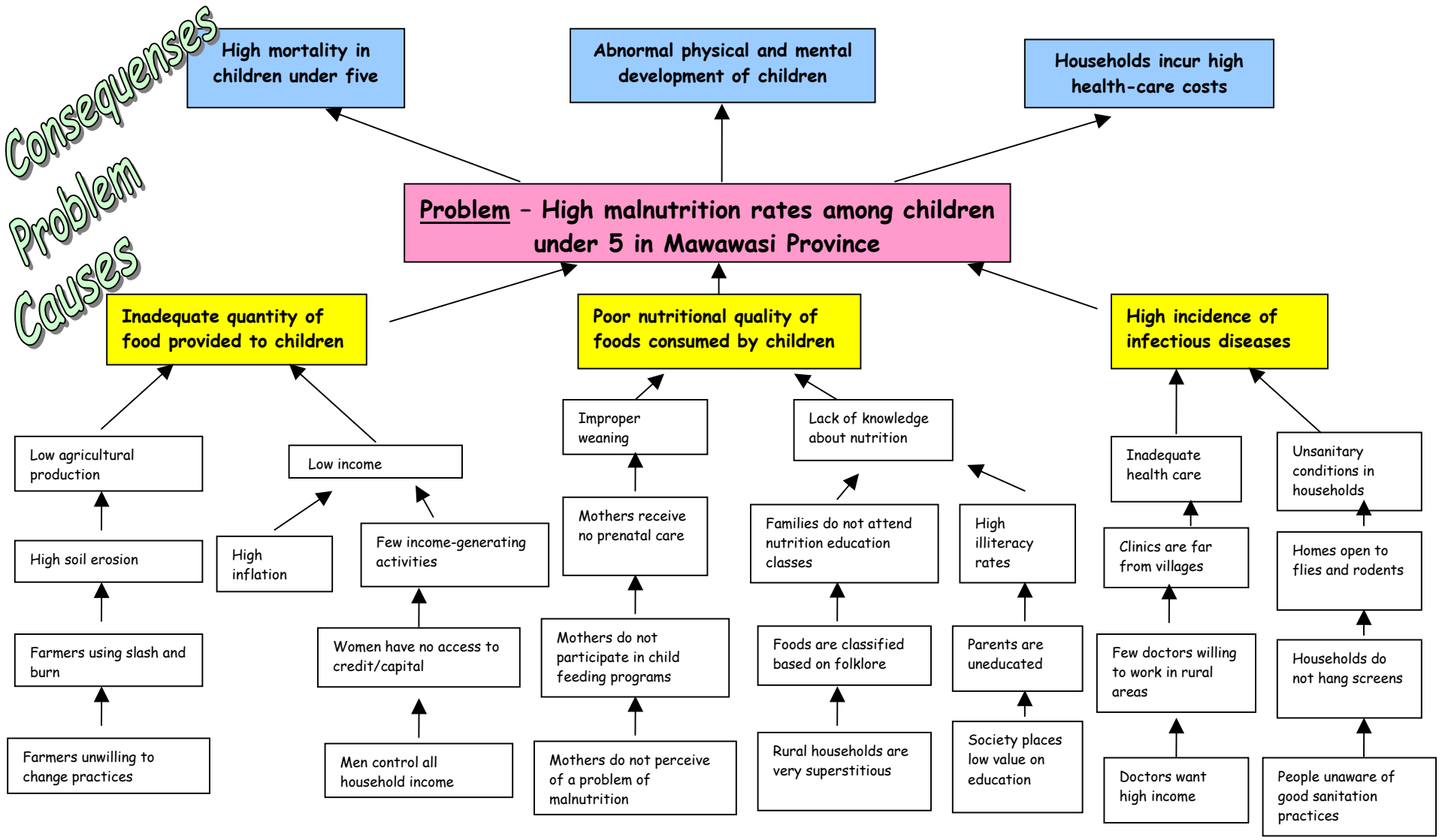
Causal Trees

A recommended method to consider is Causal Trees. Other terms for this method include Fault Tree Analysis, Causal Analysis, and Problem Trees or Diagrams. Causal Trees represent a systems approach to analyzing cause and effect, and in this light, they are extremely useful for project design. It is the most complex of the three methods we have discussed, as well as the most powerful. It is a useful tool for synthesizing the information collected during the holistic diagnostic assessment stage because it helps us to identify multiple causal linkages. The hierarchical causal analysis technique discussed earlier (Section 3.4) outlined the basic structure for the development of Causal Trees.

The sample Causal Tree presented in Figure 10 addresses the problem of high child malnutrition. Relating the diagram to the Hierarchical Causal Tree presented earlier (Figure 8), we see that the direct consequences of the problem are identified as high child mortality, abnormal physical and mental child development, and high health care costs incurred by households. Thus, the identified problem is also a cause of higher-level consequences.

Recall that conditions are identified as direct causes of the problem. In our example here, the conditions are the inadequate quantity of food provided to children, the poor nutritional quality of that food, and high incidence of infectious diseases.

Figure 10: Example of Causal Tree for Child Malnutrition



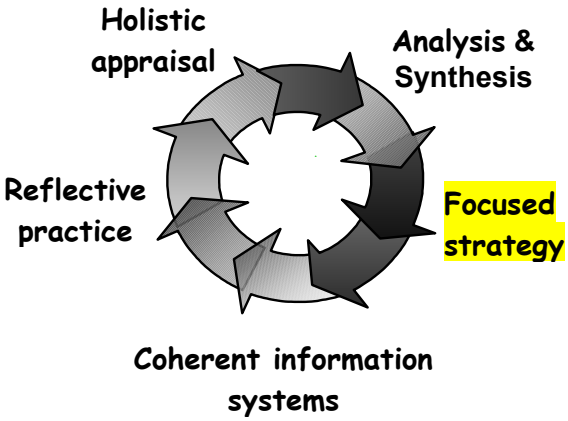
Chapter 3 Review: Analysis and Synthesis

Key concepts	Focus questions	Notes
3.1 Systems perspective reflected in Causal Analysis	• How does Causal Analysis promote a systems perspective? • What are the strengths of the Causal Analysis tool? • How does the Pareto Principle apply to Causal Analysis?	
3.2 The logic of cause and effect	• What is meant by cause and effect? • What are the factors that most directly contribute to the problem your project will address?	
3.3 Using cause and effect logic in project design	• Have you considered the criteria you use to define the problem the project will address? • Have you established underlying causes?	
3.4 Hierarchical Causal Analysis	• Have you identified the hierarchical causal levels that contribute to the problem your project will address? • Have you clearly differentiated between problems, causes and consequences? • Does your causal analysis promote a positive approach?	
3.5 Methods of Causal Analysis	• Have you selected the most appropriate method for causal analysis? • Does your method clarify the hierarchy of causes and clearly identify causal streams?	

Chapter 4

Focused Strategy

Selection of Causes from the Causal Analysis
Making Key Choices on Interventions
Project Hypothesis and Logic Model
Assessing Project Interventions: A Rights-based Framework



This chapter discusses the development of a focused strategy, the third stage of the project design process. A project strategy defines how the project will address constraints by targeting specific causes identified during the synthesis stage. Developing a strategy involves selecting causes from the Causal Analysis that should be addressed by a project, choosing appropriate interventions, and constructing a project hypothesis and logic model.

Chapter 4: Focused Strategy

Once a community's problems or opportunities have been identified and all of the major linkages have been explored, the design team can turn its attention to developing a strategy that will lead to important changes in practices and systems. A project strategy defines how the project will address constraints and take advantage of opportunities by targeting specific causes in the causal analysis. Developing a strategy is no trivial task, and many design efforts fail at this stage even when a good analysis and synthesis has been done.

Developing a strategy involves five key steps:

1. Selecting specific causes to address from the synthesis;
2. Developing interventions for each selected cause; and
3. Constructing a project hypothesis and logic model;
4. Identifying key assumptions; and
5. Identifying and responding to unintended project impacts.

Selecting specific causes to address from the causal analysis can be problematic. Ideally, one would want to address all of the causes that lead to a problem. This is rarely possible. Fortunately, if fifty causal streams were identified as leading to child malnutrition, it is likely that three or four of these causal streams would account for 80% or more of the problem. This is the Pareto Principle discussed in the last chapter. The key is to correctly identify the causes that contribute most significantly to the problem and then define a strategy that will eliminate the causes of the problem.

Definition Box 19

Strategy
Based on the cause-effect logic of problem analysis, the strategy is the approach through which project inputs and resulting outputs bring about the desired changes leading to sustainable impact on human wellbeing.

Based on cause-effect logic, the strategy describes how project inputs and resulting outputs are going to bring about desired effect and systemic changes that will lead to sustainable impact on improving livelihoods. Interventions are a discrete package of actions and procedures that are developed and implemented. They are designed to directly (or sometimes indirectly) address a cause of identified phenomena. While generally an intervention is designed to address only one cause, sometimes a situation calls for interventions that address multiple causes. A project is commonly composed of multiple interventions which together work toward solving a defined problem.

Interventions are often referred to as solutions to a problem. The word intervention, however, is perhaps more meaningful here since the ultimate solution to a problem depends on what actions are taken and how effective these actions are carried through. Thus, while all interventions are designed as solutions, their success in resolving the cause of a problem depends on many factors. At least some of these other factors may be external, and outside the control of the project, but they still need to be considered and

included in the project design under the topic of assumptions, which will be covered in section 4.3.2 (later in this chapter).

Interventions can include such things as advocating for policy changes, information-education-communication (IEC), extension education, procurement and provisioning of resources such as seeds and tools, training of individuals or staff of an organization, institutional capacity building, etc. Not all interventions require creativity and innovation. In many cases, tried and tested interventions are entirely appropriate. For example, oral rehydration therapy is internationally accepted as a treatment intervention for diarrhea. Certainly, this intervention should be considered in a program addressing diarrhea, but it is also worth considering other options or other approaches, e.g., health education, improving water supplies, building sanitation facilities, etc.

A key step in project design is the construction of the project hypothesis. In this step, we shift the focus of the design process from the problem to the solution. We restate the causes of our problem as anticipated outcomes of the solution. By adding our selected interventions to the project hypothesis diagram, we can check the logic of the cause-effect relationship identified in the causal analysis.

At this stage in the design process, we need to step back and evaluate the project strategy for the overall potential impact. Tools from the Benefits-Harms Analysis approach can help us to consider and respond to unintended impacts of the project. Impact and decision tools used to evaluate the project strategy may lead to a redesign of the interventions.

4.1 Selection of Causes to Address from the Causal Analysis

A good causal analysis reveals all of the major cause-effect linkages that contribute to an identified constraint. Rarely, however, can all of the causes be addressed in one project. Therefore, we need to ensure that causes we choose to address contribute significantly to the resolution of an identified problem.

We select causes to address based on several criteria, including those which:

1) Show good potential that we (with our partners) really **can** make a significant difference in eliminating the cause in a sustainable and cost-effective way;
2) Make a significant contribution to the problem;
3) Have high synergy in relation with other interventions;
4) Fit our organization's comparative advantage;
5) Have potential for partnering;
6) Make sense to participants – indeed, involvement by representatives of target communities in the whole design process is an important factor in enhancing a project's potential to be successful.
7) In these and other ways consistent with the CI Project Standards.

Make a Significant Contribution to Solving the Problem

We try to address causes that will solve the problem and provide the greatest degree of impact. Each cause-effect linkage contributes to X percent of the problem. The difficulty is that we rarely know what the exact percentage is. There are no simple tools for determining the contribution of each cause to the problem. Research around a particular problem analysis can reveal important insights, but we cannot usually afford the required time or costs to do it very rigorously. Simply ranking the causes by the frequency they are cited (for example, in a household survey) gives an idea of how common a problem is, but still does not provide you with knowledge of what contribution the cause makes to the problem.

So, what do we normally do in project design to identify the primary causes?

- Ask key sector specialists.
- Research secondary data and literature reviews, including evaluations of previous projects that addressed similar problems under similar circumstances.
- Collect additional primary data if needed.
- Look for convergence of evidence.

Issues Box 20

Determining the significance of a cause: example from child malnutrition

As shown in the Causal Tree presented in Chapter 3, the causal analysis of child malnutrition revealed three major primary causes: food quantity; food quality; and infectious diseases. In a survey of 100 households with malnourished children, 65 mentioned a shortage of food, 23 mentioned a shortage of high-quality food, and 12 mentioned an occurrence of infectious diseases within the previous two months. Based on this information, we might conclude that in these households, food quantity is the most *frequent* contributor to malnutrition. We cannot determine without more in-depth analysis, however, that food quantity accounts for the majority of the malnutrition problem.

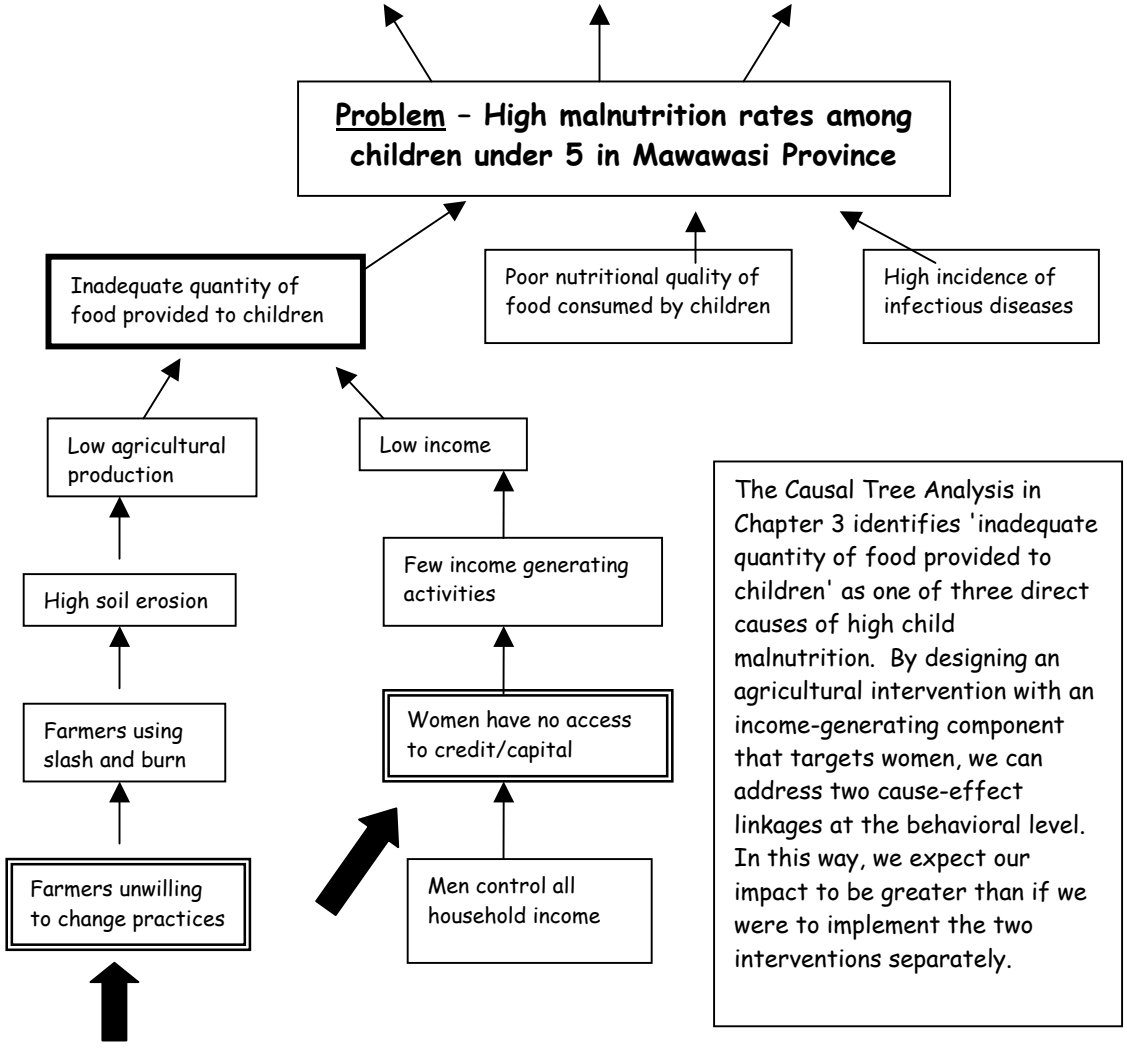
High Synergy

Often we can have greater impact toward solving a problem by addressing highly inter-related causes. In design, the idea of synergy is that the combined impact of addressing two or more causes is greater than the sum of addressing each cause individually. In other words, the payoff of working on certain combinations of causes is greater than if we work on each cause separately. In the case of high child malnutrition, for example, if we can identify an intervention that will address multiple causes for the inadequate quantity of food provided to children, and these causes are synergistic, we can expect greater impact on the problem of malnutrition (see example in Figure 11, next page).

In many cases, it is neither feasible nor advisable for a single project to address multiple causes of a higher-order problem. This is an important reason to incorporate a program strategy. Two or more projects can each

address particular causes of a problem, thereby achieving a synergy that enables a higher-level impact than either project could accomplish on its own. Again, there are no simple tools available for identifying synergistic relationships among different cause-effect linkages. We can rely, in part, on our experience and common sense but we often need to pilot interventions in order to determine synergy. As more and more projects combine efforts of different sectors, we should gain more knowledge of synergy among cause-effect linkages. Caution – note that it is equally important to avoid or

Figure 11: Addressing Synergistic Causes – Example from Child Malnutrition



Intervention 1: Extension education to convince farmers to practice farming methods that are less detrimental to the environment yet provide their households with sufficient food and income.
Intervention 2: Micro-lending scheme for women farmers growing food crops in forested areas: By providing small scale loans to women farmers who are growing food crops traditionally cultivated in forested areas, the intervention provides an incentive to farmers to maintain forested areas, thereby changing practices of slash and burn that lead to soil erosion. Additionally, the intervention will enhance the opportunity for women to control a portion of household income, through profit gained through access to agricultural credit.

minimize 'competition' (which could be called 'negative synergy'). This negative outcome can occur between project interventions, between projects, or between partners/agencies. For example, in Tanzania, CARE found in one area that they had a project encouraging women to stay home and spend more time with the children – for improving nutrition and child development. In the same location, there was another CARE project promoting women's involvement in microenterprise and IGAs (income generating activities) that was taking the women out of the home more of the time.

Comparative Advantage of the Organization

Definition Box 20

Comparative Advantage
Capacity of an organization in terms of skills, experience and other resources.

We want to ensure that the causes we select to address are those that the organization can implement. Normally a design team considers capacity or the comparative advantage of an organization as one of its selection criteria for choosing interventions. Of course, an organization can alter its comparative advantage by hiring new staff with skills required for addressing a cause. Given CARE's cumulative experience with Household Livelihood Security, a CARE design team may have a comparative advantage in addressing causes at the household and community levels. In this way, we should look for causes that will provide good entry points into communities. In choosing causes to address to impact childhood malnutrition, for example, a design team may prefer to focus on sanitation practices in households, or child nutrition, or food production. It is important to note, however, that the HLS framework does not require CARE to work at the micro level. Depending on the comparative advantage of the implementing organization, a project design team could chose to work at regional or national levels, or in institutional capacity development or in policy advocacy.

Potential for Partnering

Cause-effect linkages can also be selected with partnering in mind. A conscious decision can be made - and often is - by an organization to identify partner organizations that can address specific problem causes related to sectors in which they specialize. For example, partnering with another organization might allow CARE to focus on the micro-level causes of the problem, while the partner addresses macro-level causes of the problem. This may increase the overall scope of the project, while also better targeting and delegating responsibilities to project actors.

4.2 Making Key Choices on Interventions

After deciding which causes to address, the next step is to develop intervention themes for each cause. Choosing intervention themes includes several sub-steps:

- Develop intervention alternatives
- Select criteria to decide which intervention is preferable
- Choose an intervention to develop

Develop Intervention Options

Definition Box 21

Intervention
A discrete package of actions and procedures that are developed and implemented. They are designed to directly (or less often indirectly) address a cause of an identified problem.

Choosing the best intervention for any given cause requires a good list of alternatives. This is where creativity in project design is important! All too often, design teams are biased in their thinking of possible interventions ("this is how we've always done it here"), or they are particularly swayed by one person's opinion, or they are misinformed by not including broad participation. Consider bringing others into the design process to help identify appropriate interventions, such as community members, partner organizations, government officials, outside experts, or even other people from your organization (e.g. CARE staff in other units or sectors).

To generate ideas about interventions, a design team should hold a brainstorming session to develop a list of possible alternatives, both conventional and unconventional. The point is to be as creative as possible. The ideas that individuals will have for alternative interventions come from several sources, including:

- Current best practices (including latest HLS, RBA, DME, sectoral and other guidelines)
- Lessons learned from previous projects (including evaluation reports)
- Individual and institutional experiences
- Inputs from communities on desired solutions
- Ideas from review of research and secondary literature

We should always consider best practices since they are interventions that have proven to be effective over time and in a large number of contexts. Don't forget that best practices are contextual and may not always provide the best strategy for all situations. However, our selection of intervention themes must always consider the operating environment of the project being designed and the influence it has on what is feasible. There will likely be a variety of intervention options for any given cause.

Issues Box 21 provides examples of multiple interventions appropriate for three causes. As these examples demonstrate, there are often several valid intervention options to address the cause(s) of a problem. While sometimes the situation calls for some combination of all interventions, it is also common that only one intervention is chosen, the successful implementation of which makes the implementation of others unnecessary.

Select Criteria to Decide on Preferred Interventions

Once all alternatives have been expressed, the next step is to examine and eventually select one of them. The selection process can be as simple as arriving at team consensus or as complicated as applying decision tools to make the choice. The final chosen intervention can be a hybrid of several different ideas. Regardless of how a team ultimately arrives at selecting an

intervention, it is important to develop criteria on which to base decisions. Each team should be responsible for developing its own criteria. However, some common criteria used for selecting interventions include:

- Cost-effectiveness
- Social acceptability
- Required management support
- Community support
- Sustainability
- Technical feasibility
- Political sensitivity
- Level of risk

Issues Box 21

Possible project interventions

Cause (behavioral level): Farmers are not applying sustainable practices for hillside cropping

Possible Interventions

- Trained extension agents to work with farmers in the zone
- Model farms where proper methods can be observed
- Direct technical training of progressive farmers in the zone
- Radio and television public-service spots promoting improved cropping practices

Cause (behavioral level): Inadequate diet provided to children

Possible Interventions

- Community-based nutritional education for young mothers
- Billboards and radio spots promoting proper nutrition
- Physical growth monitoring and counselling
- Supplementary feeding in community kitchens
- Supplementary feeding in schools

Cause (system-level): Unreliable supply of medicines

Possible Interventions

- Periodic import and distribution of donated medicine
- Community-managed pharmacies
- Greater availability of traditional and/or locally produced medicines
- Private sector promotion in pharmacy
- Advocate change in government policy to promote medical supplies

Choosing the Best Intervention

The Multiple Criteria Utility Assessment tool and the Pairwise Ranking Matrix, presented in the following two pages as Issues Boxes 22 and 23, are tools that can be used by project design teams when selecting interventions. Samples are included to help illustrate the tools' functions.

Issues Box 22

Multiple Criteria Utility Assessment tool

The MCUA is a powerful tool for choosing among intervention options using several selection criteria. Using a quantifiable tool such as MCUA preserves a record of decision-making processes and helps mitigate disagreement among individuals. The steps to an MCUA are:

1. Use brainstorming or other means to generate a list of acceptable alternative interventions for each cause of the problem listed in the project design.
2. Create a table as illustrated below for each set of interventions. Write the corresponding cause at the top of the table.
3. Determine and list in the left column the criteria against which to evaluate each potential strategy (for example, cost-effectiveness, sustainability).
4. Assign a numerical value (weight) to each criterion according to its importance relative to the others (1=least important, 5=most important). Show this in the 2nd column.
5. List the alternative intervention strategies generated for this particular cause (e.g., community-managed courses, etc.).
6. Score - For each intervention strategy, rank each criterion from 1 to 3 (1=least favorable, 3=most favorable) for the estimated degree to which the strategy will meet the criteria.
7. S x W - Multiply the score of the criterion by its weight and enter the value.
8. Total - Add the values under the S x W column. The greatest values are those strategies which are the "best" according to the MCUA.

CAUSE (1): POOR PERSONAL AND DOMESTIC HYGIENE PRACTICES

		Optional Intervention Strategies					
		#1 Community-managed Hygiene Courses		#2 Independent Counseling		#3 Short Courses	
Criteria	Weight	Score	Score x Weight	Score	Score x Weight	Score	Score x Weight
Cost Effectiveness	4	1	4	2	8	2	8
Social Acceptability	5	3	15	2	10	3	15
Political Feasibility	4	2	8	2	8	2	8
Administrative Feasibility	4	2	8	3	12	1	4
Sustainability	3	2	6	1	3	1	3
Community Participation	3	1	9	1	3	1	3
Total			**50**		**44**		**41**

Based on the criteria used by the design team, the first intervention in this example is the most likely to succeed in correcting the problem of personal/domestic hygiene. The next step would be to ask if the results of this MCUA exercise make sense to the key stakeholders.
Note: While it is true that many of these choices are subjective, generating a good participatory discussion about them -- leading to agreement on relative weights and scores – the tool adds objectivity and transparency to the process.

Issues Box 23

Pair-wise Ranking Matrix

Another tool used frequently for participatory prioritization of intervention options is the Pair-wise Ranking Matrix. This tool is less precise than the MCUA but is a bit simpler and perhaps more comprehensible to partners new to these methodologies. This tool facilitates the comparison of many items on a list by having participants prioritize items two at a time (hence the name 'pair-wise ranking'). Note: In certain communities, it is important that an experienced facilitator lead the Pair-wise Ranking given the need for thorough discussion and consensus before intervention selection.

The steps to conducting the Pair-wise Ranking methodology are presented below:

1. A group should first brainstorm for a list of intervention options.
2. A matrix such as the example on the right should then be created with sufficient rows and columns to allow all options to be entered.
3. Each option should be written sequentially in both the rows and columns. Symbols or objects may be used if space is a problem, or if the group works better with visual representations.
4. Each option in the matrix should then be compared with the others, one pair at a time. Through voting, consensus, or other means, the team should then decide which item is preferable for each pair.
5. The 'winner' should be noted in the cell where the row and column meet for the two items being compared. Illustrated in the sample matrix to the right, the group decided that arranging for transport is a better option than building a clinic and noted that choice in the appropriate cell.
6. The team should then repeat this process for each unique pair of options. (Note: The matrix cells are blocked out when they represent the intersection of the same item from row and column, or when they repeat a comparison already made.)

The basis of comparison in the Pair-wise Ranking Matrix may differ depending on the needs of the team. In the example shown here, comparisons were based on the question, 'Which intervention option is most cost-effective?' They could have been based on other criteria such as technical feasibility, social acceptability, or time needed to complete the project.

Example: Interventions to address women's lack of access to pre-natal care

LIST OF INTERVENTION OPTIONS

1. Build a clinic in the community.
2. Facilitate transportation to clinics in neighboring towns.
3. Have a visiting nurse provide periodic care.
4. Train a community member in pre-natal care.

Criteria: Which intervention option is likely to be more cost-effective?

CREATE MATRIX AND CONDUCT PAIRWISE RANKING

	Clinic	**Transport**	**Nurse**	**Training**
Clinic		Transport	Nurse	Training
Transport			Nurse	Transport
Nurse				Nurse
Training				

TALLY RESULTS

1. Have a visiting nurse provide periodic care. (three votes)
2. Facilitate transportation to clinics in neighboring towns. (two votes)
3. Train a community member in pre-natal care. (one vote)
4. Build a clinic in the community. (zero votes)

4.3 Project Hypothesis

Definition Box 22

Hypothesis
Presumed correlations between outputs and effect objectives, or between effect objectives and impact goal. The hypothesis is either accepted (from, for example, a secondary literature review) or tested during project implementation.

The Project Hypothesis is a critical step in the design of a project. It is in this step that we are going to shift from being predominantly problem focused to being predominantly solution focused. It is the core of the logic model upon which the project is designed. In this regard, it is an important step for us to take.

Many people with experience in project design will tell you that this step does not need to be as mechanical as it will seem here. This is true, and many people will even do most of the project hypothesis as a mental exercise and not as a structured diagram as presented here. It is important to walk through it step-by-step, however, so that we are all clear about how it works.

Completing the project hypothesis diagram will position you to develop clear and precise goal or objectives statements, a step in the design process that many people have trouble with. It is also a stage in the design where key questions and assumptions need to be explored. In addition, it will help us to determine whether our logic is sound when we add our recommended interventions to the diagram.

4.3.1 Constructing the Project Hypothesis

Developing a project hypothesis involves five basic steps, outlined in Issues Box 24 below. By completing the simple exercises, the problem hierarchy has been converted to a form that summarizes the core content of the project. The project hypothesis clearly states what interventions will be used to address which causes. The examples on the following page (Issues Box 25) illustrate the steps outlined below with a child malnutrition project. A second example for developing a project hypothesis is included in Annex 4.1.

Issues Box 24

Five basic steps in constructing a project hypothesis

1. Convert the problem and its key causes to solutions and anticipated outcomes.
2. Develop a diagram that illustrates the cause-and-effect relationships of these solutions and outcomes. See Issues Box 25 and the Annex 4.1 for examples of the project hypothesis diagram.
3. Add interventions (as identified in the project strategy) to the project hypothesis diagram (see next section).
4. Identify assumptions and insert them appropriately to complete the project hypothesis diagram; simultaneously identify and resolve key questions affecting the project hypothesis.
5. Complete the project hypothesis diagram.

Issues Box 25

Constructing a Project Hypothesis – Example of Child Malnutrition

Step 1: Converting the Problem and Its Key Causes to Solutions and Anticipated Outcomes

Problem: Poor nutritional status of children

Causes: Children consume inadequate combinations and amounts of nutrients

Children frequently suffer from diarrhea

Children who get diarrhea are not given ORT (Oral Rehydration Therapy)

Anticipated outcomes:

(1) Childhood nutritional status will improve (Solution to the Problem)

(2) Children's consumption of nutrients will rise to adequate level (Cause #1)

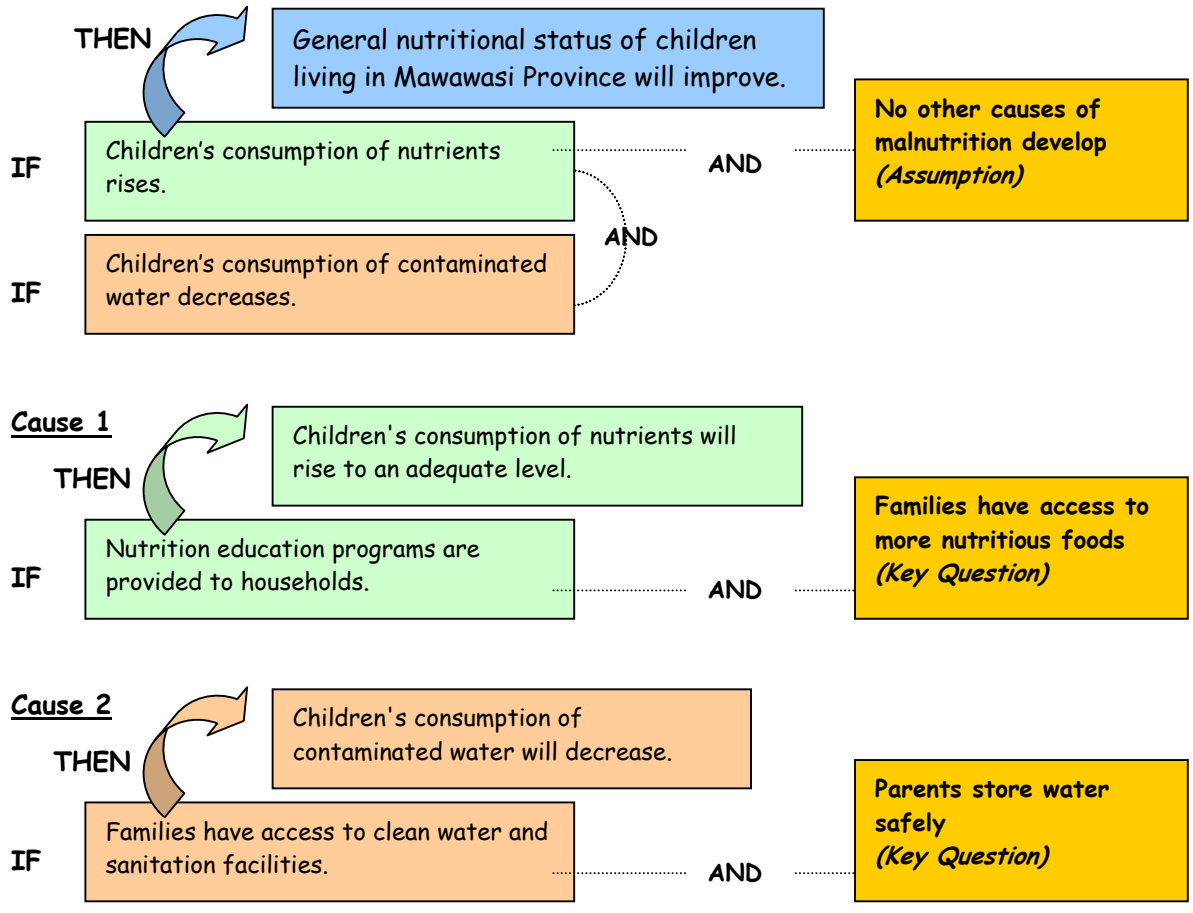
(3) Children's consumption of contaminated water will decrease. (Cause #2)

Steps 2-5: Developing a Project Hypothesis Diagram

- Step 2 illustrates the cause-effect relationships of the anticipated outcomes.
- In Step 3, interventions are added to the diagram.
- In Step 4, assumptions and/or key questions are inserted.
- Reviewing the diagram in Step 5 ensures that the project hypothesis diagram is complete.

***Project Hypothesis Diagram:* Child Malnutrition Problem**

(Read from bottom up)



4.3.2 IDENTIFYING Assumptions and Key Questions

Definition Box 23

Assumption
Circumstances or conditions important for the success of the project but beyond direct control by the project. This may include beliefs, essentially improvable, held by the design team about the environment in which the project takes place. It can also include assumptions that other agencies will do their part to address related causes. (Note that such assumptions should be monitored during the life of a project.)

Key Question
All questions you can and should answer during the design of a project. Differs from an assumption in that it can lead to action. Key questions are also used to guide evaluations.

Identifying assumptions and key questions is one of the most difficult aspects of project design to both teach and comprehend. Ample time should be spent trying to understand what are and what are not useful assumptions. It is important not to confuse assumptions with key questions.

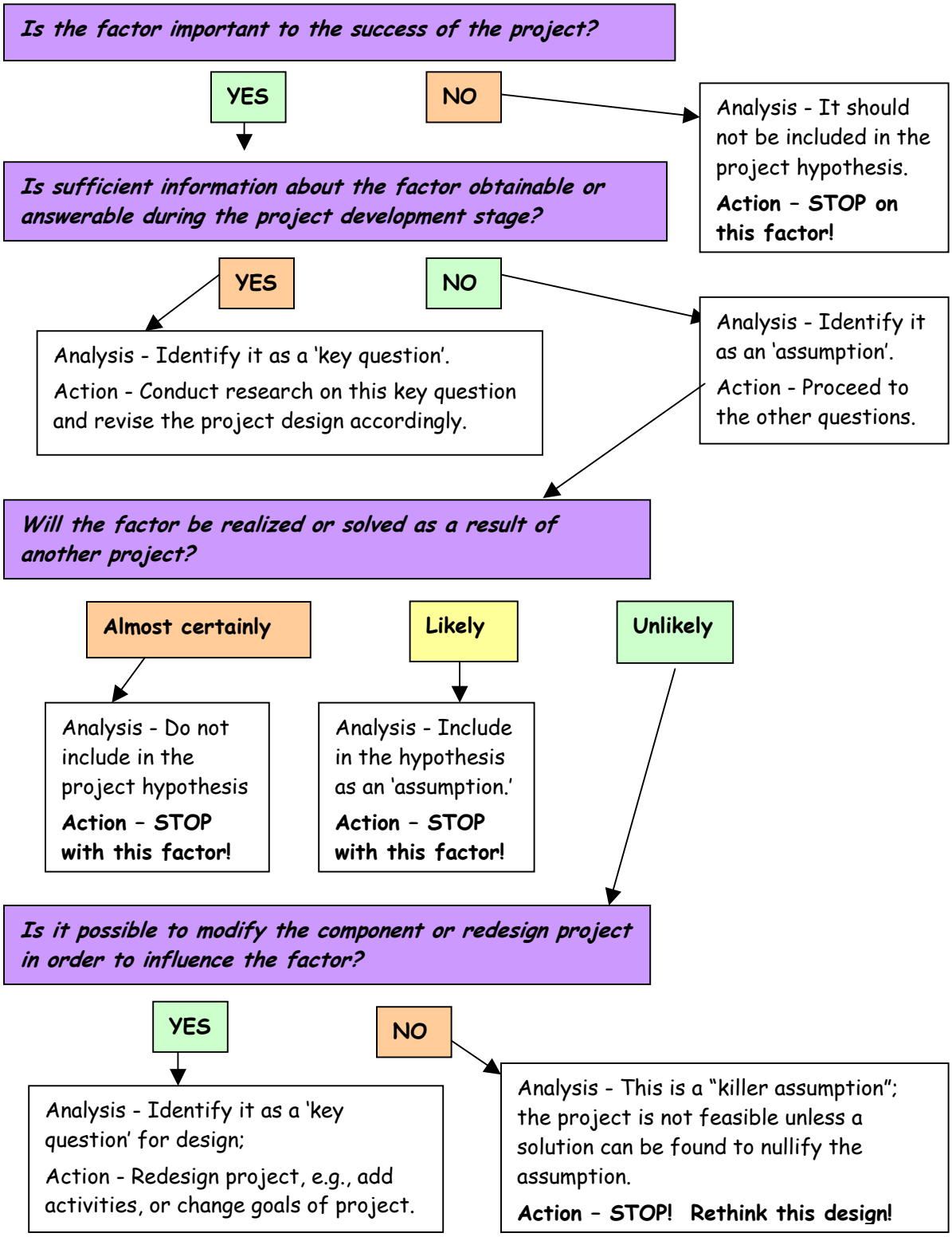
Assumptions are conditions that are important to the success of a project, but beyond its control. Key questions, on the other hand, are those queries you can and should answer during the design of a project. For example, if you are designing a project with a nutrition-education component, a key question would be, 'Are there adequate nutritious foodstuffs available to the households?' This is obviously important to know when designing interventions. By simply *assuming* nutritious foods are available, you may be condemning the project to failure.

Assumptions can be identified through the following process:

1. Identify external factors recognized as causes during problem analysis but not addressed directly by the project.
2. Identify external factors not recognized in the project hypothesis logic but important to the success of the project.
3. Determine if information on external factors is both critical and obtainable. Conduct research on these key questions and revise the project design accordingly.
4. Assess the importance of each remaining external factor (assumption) and the likelihood of it being realized. If questionable, the project could fail (the infamous 'killer assumption'). Depending on the conclusions:
   - If it almost certainly will happen, do not bother to include it as an assumption.
   - If it is likely to happen, include the factor as an assumption
   - If the factor is important but is unlikely to occur – it is a killer assumption; stop - redesign the intervention; add factors to ensure success.
5. Enter valid assumptions into the project hypothesis diagram at the appropriate level.
6. Check to verify that intervention logic is still valid and does not overlook important factors.

Figure 12 is an algorithm (a series of questions to be answered in sequence) to assess the importance of various external factors to the project hypothesis.

Figure 12: Algorithm to Assess Importance of External Factors



Issues Box 26

Important Caution
Keep in mind that any external factors that can be further assessed through additional research should be considered 'key questions' rather than 'assumptions'. Examples of key questions: Does additional household income actually lead to better diet for children in this setting? Will families in the proposed area actually use latrines if they were available?

Issues Box 27 shows how the algorithm is used to differentiate between key questions and assumptions in the Child Malnutrition Example.

Issues Box 27

Using an algorithm for assumptions and key questions - Child Malnutrition example

External Factor A: *No other causes of malnutrition develop in Mawawasi Province during the life of the project*

Design question →	Response →	Analysis and action to be taken
Is this factor important to the success of the project?	YES	Proceed to next question
Is sufficient information about the factor obtainable or answerable during the project development stage?	NO	Identify as an 'assumption'. Proceed to next question.
Will the factor be realized or solved as a result of another project?	LIKELY	Include in the hypothesis as an 'assumption'. **STOP** with this factor!

External Factor B: *Families have access to more nutritious foods*

Design question →	Response →	Analysis and action to be taken
Is this factor important to the success of the project?	YES	Proceed to next question
Is sufficient information about the factor obtainable or answerable during the project development stage?	YES	Identify as a 'key question'. Conduct research on this key question and revise the project design accordingly.

4.4 Logic Models

A logic model documents the essence of a program or a project: what activities does the project do with what resources? What outputs does it produce for what customer groups? What effects or outcomes do these outputs have? What longer term, strategic goal or impact is the program trying to achieve? What contextual factors influence success? And what are the logical, causal linkages among these? (See: Jordan, Gretchen. Sandia National Laboratories.)

Throughout this handbook, we have taken a systematic cause-and-effect approach to project design. Recall that in Chapter 1, a project hierarchy was presented that identified input, activity, output, effect and impact levels. This hierarchy corresponds with a problem hierarchy based on the same cause-and-effect logic. Issues Box 28 illustrates the relationship between the problem and project hierarchies and shows how the hypothesis forms a link between the two. Within the project hierarchy, if certain chosen activities are successfully implemented – if inputs are effectively converted to outputs – then change at the effect and ultimately impact levels will be expected to be observed, if the hypothesis is well founded.

Issues Box 28

Example: Cause and Effect Logic in the Problem and Project Hierarchy

Results of Problem Analysis	Hypothesis (read from bottom upward)	Project Hierarchy
Problem (Decreasing Farm Family Income)	**Expected Outcome** (Farm family income increases)	**Impact Goal** (Income Increases Where, When, for Whom, by How Much)
	Then this outcome can happen / *If this change happens*	
Direct Causes (Low Crop Yields)	**Change in Condition** (Crop Yields Increase)	**Effect objective** (Farmers Use Better Methods as Measured by Increased Crop Yields)
	Then this change can happen / *If this change happens*	
Indirect Causes (Severe Soil Erosion)	**Change in Condition** (Soil Fertility Improves)	**Effect objective** (Farmers use better methods as measured by improved soil fertility)
	Then this change can happen / *If this intervention happens*	
Behavioral Causes (Farmers use improper plowing techniques)	**Intervention** (Agricultural Extension Program Implemented)	**Outputs** (People Trained, Educational Materials Produced, etc.)
Base Causes (Farmers have no knowledge of improved methods)		**Activities** (Training, Writing, Building, etc.)
		Inputs (Staff Time, Money, Materials, etc.)

Note on diagram in Issues Box 28: For simplicity purposes, only linear cause-effect paths are shown here. In most cases, there are multiple causes, thus there will need to be multiple activities and outputs, plus assumptions regarding what others will do to address related causes that the project will not address directly.

By completing the steps necessary to develop the project hierarchy, the project design team has identified the primary components of the logic

model.[13] The logic model provides a structure to the process of planning and summarizes the output of the design process. The model should show how proposed interventions and anticipated outputs would result in stated effects and impact. It should identify key assumptions and validate the central project hypothesis.

Note: We are introducing logic models here at the end of the Focused Strategy chapter because a logic model summarizes a project design. However, as we will see in Chapter 5, as we further refine goals and objectives, and as we develop specific indicators leading to a monitoring and evaluation plan, we will be able to refine and add more detail to our project's logic model.

When we have assigned precise goals at the effect and impact levels – and selected indicators to allow for the measurement of change, and presented this information in a logic model, we will have developed a framework for a monitoring and evaluation system to track project progress. As project information changes during implementation, such as modifications recommended in mid-term evaluations, logic models and frameworks can also evolve.

Logic modeling can be as simple or as complex as needed for the audience and situation. The interest in logic models has increased with the increased requirements to explain relevance and measure the performance of public programs. Depending on the logic model you choose, you can manage and communicate – to varying degrees of detail – what the project intends to do and how. There are many ways to portray a logic model:

- Descriptive text
- Line diagram
- Table
- Objectives hierarchy
- Flow diagram
- Sequential flow diagram

Other examples of project/program logic models including logical frameworks can be seen in Annexes 5.4-5.8.

4.5 A Rights-Based Assessment of Interventions

Another framework being developed in CARE is the "Benefits-Harms Analysis". Benefits-harms analysis draws on the Household Livelihood Security approach, in that it aims for a fuller understanding of the conditions that affect the ability of people to satisfy their basic needs and realize basic human rights. (See Chapter 1 for a discussion of HLS.) The approach also builds upon the "Do No Harm" framework in promoting critical analysis in relief and development work. The purpose of Benefits-Harms Analysis is to assist CARE and other relief and development organizations to better

[13] A common form of logic model is the logical framework (logframe) matrix. However, we are using the more generic term 'logic model' here because there are other forms that can be more helpful in giving a picture that summarizes a project design.

understand and take responsibility for the *overall* impact of projects, and to minimize unintended harms.

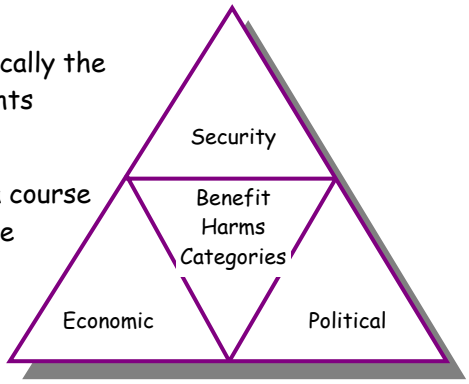
The benefits-harms tools can be useful at various stages throughout the project design process. When developing a project strategy or designing an intervention, impact and decision tools, summarized below in Issues Box 29, can be particularly useful to assess our project hypothesis for unintended impacts and to ensure that our recommended interventions maximize positive impacts. These tools help us to step back and reconsider the internal and external factors that affect desired change and to situate interventions within the broader context of rights and responsibilities in which we work.

Issues Box 29

Benefits-Harms Analysis

Benefits-harms analysis is grounded in three categories of rights and impacts: 1) political rights, 2) security rights, and 3) economic, social and cultural rights. The approach offers three types of flexible tools; of these, a design team can use the decision and impact tools at this stage of the project design process to help identify and address unintended human rights impacts that may result from proposed interventions.

- **Profile tools** help project planners consider holistically the political, security, economic, social and cultural rights environment in any given context.
- **Decision tools** help a project design team choose a course of action to minimize unintended harms or maximize previously unforeseen benefits.
- **Impact tools** help project planners consider the causes and effects that may lead to unintended impacts.



The tools can be used in a variety of ways depending on time constraints, the agency's resources and capacities, and the operating environment. If, for example, the project design team will be implementing an intervention to address causes of high childhood malnutrition in a conflict setting, the design team may choose to use impact and decision tools focusing on security rights. CARE's *Benefits-Harms Handbook* discusses the approach in detail and provides guidelines for using the full set of tools. (See: "*Benefits-Harms Handbook*." CARE International. 2001.)

Incorporating a Rights-Based Approach into a focused project strategy

A focused strategy grows out of the synthesis of our assessments and analysis and centers on the design of CARE's interventions. Incorporation of a rights-based approach highlights the importance of investing in local participation, empowerment, and dialogue on rights, responsibilities, and

power relations, of working at multiple levels, and of seeking to have significant positive impact on people's overall ability to live with dignity. *Anticipating and avoiding (or at least minimizing) harms that may result from our interventions* - CARE is an outside agency with significant resources relative to the communities we serve. Even strategically focused, well-designed projects and programs can have negative side effects. An agricultural production intervention may, for example, contribute to exclusion and oppression of small landholders or landless people. Or a revolving loan project targeting women may lead to their being victims of violence at the hands of male spouses who resent their newfound economic empowerment. A rights-based approach is concerned with the full range of impacts our interventions are likely to have, and seeks to maximize the net positive impact on human dignity and self-worth.

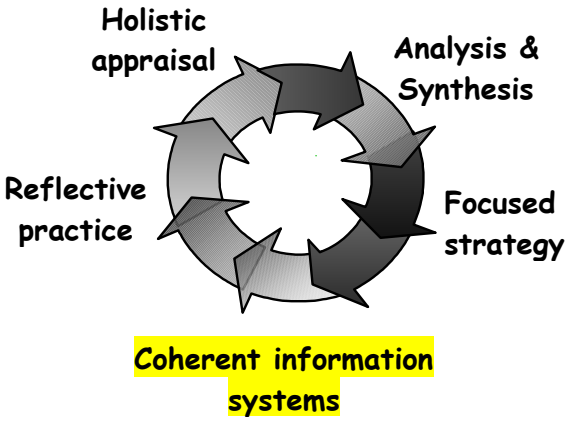
Chapter 4 Review: Focused Strategy

Key concepts	Focus questions	Notes
4.1 Select causes from the causal analysis	• Do the causes make a significant contribution to the problem? • Do they have high synergy? • Have the cause effect linkages been selected with partnering in mind?	
4.2 Make key choices on interventions	• Have you brainstormed a wide range of possible interventions? • Does your list include interventions "outside the box"? • Have you developed sound criteria for selecting key interventions?	
4.3 Construct the project hypothesis	• Have you constructed a clear project hypothesis? • How will you differentiate between assumptions and key questions? • Does the project hypothesis illustrate clear cause-effect logic?	
4.4 Summarize the project design in the form of a logic model.	• Have you added more detail to the project hypothesis with at least an initial matrix showing the links between goals, objectives and planned activities?	
4.5 Evaluate the overall impact of the strategy using rights based and benefit-harms analysis	• Have you evaluated your project strategy and interventions for potential unintended impacts? • How will you respond to opportunities or constraints to maximize the project's overall positive impact?	

Chapter 5

Coherent Information Systems

Clear Goals/ Indicators
Benchmarks
Outputs, Activities & Inputs
Planning for Monitoring and Evaluation



Chapter 5 discusses the formulation of clear goals and objectives, benchmarks, and indicators for measuring progress. These elements form the basis for a coherent information system, which is based on and provides complementary detail to a logic model. It is the responsibility of the project designers to develop a preliminary monitoring and evaluation plan that can be validated after the project baseline has been completed.

Chapter 5: Coherent Information Systems

5.1 Goals

Establishing goals and selecting indicators are key steps in the design of a good project. Even a well-designed project can turn out poorly if the goals are not clearly defined before implementation. Other stakeholders can also be misled if the goals are not clearly stated. Fuzzy or poorly articulated goals can be interpreted differently; thus, people may never agree whether or not they are being met during implementation.

In simplest terms, the goals are the specification of what the project wants to accomplish. There are some important concepts to know about establishing goals:

- Any project that you design must be logical in terms of the impact goal that benefits people in some way. If a project does not have a real and meaningful benefit, why bother? Make sure the impact goal of a project meets your organization's criteria for meaningful change. You should be able to clearly describe outcomes, magnitude of changes, and the benefits to the target population of achieving the goal.

- Project goals should link to a larger program goal. Within CARE, there is an effort to develop cohesive design, planning and evaluation guidelines that link projects to wider programmatic strategies. Projects should operate within this programmatic framework. Project designers must establish achievable goals that make significant contributions to goals at the higher program level.

- Project goals must be carefully thought out and should link back directly to the problem analysis. Even the most obvious questions as to the worthiness of the goal should be asked.

- Goals need to be developed by consensus among the key stakeholders (including participants and partners) and reviewed periodically to assess their validity. Don't get trapped into trying to achieve a goal that cannot be attained due to changes in circumstances.

Of course, even projects with inappropriate goals can be implemented. If your goal is to build a bridge over the Nile River, you might feel satisfied when the bridge joins the two banks of the river. However, if the bridge collapses under the weight of rush-hour traffic, your bridge project really wasn't of much use. In fact, it was a waste of money and had serious negative impact.

What's in a Name?

You may notice that the terminology used in these guidelines may be different from what you are accustomed to. All development projects follow the general project logic hierarchy as presented in this handbook in the Introduction (Figure 3). Some insert additional intermediate logic steps between the elements described here. Most organizations also create their own terminology that corresponds to the different levels of the hierarchy. For example, the terms *Overall Goal*, *Final Goal*, *Overall Objective* and *Strategic Aim* all refer to impact-level changes but each is used, or has in the past been used, by a different organization. Each organization may want to believe that they are approaching project design in a unique manner, but the fact is projects are all based on a cause-effect, logical hierarchy. Table 11 compares the terminologies used by different international donors[14].

5.1.1 Definitions and Characteristics of Goals

In order to develop goals, however, we need to be clear on what they represent. For CARE, the goal that corresponds to the specific problem or opportunity we are trying to address is called the project final or **impact goal**. The intermediate or **effect objectives** are the intended changes that must be achieved to accomplish the impact goal.

Impact Goal (Project Final Goal)
The ultimate aim or purpose of the project, written to reflect an improvement in human conditions expected to take place in a target group.

> *Example:* By the end of 2007, 8000 small farm families in the Rio Blanco community will have increased their incomes by 20% over what they were in 2002.

Characteristics of an Impact Goal

- Presents the anticipated improvements in some aspect of the lives of project beneficiaries.
- Describes what you expect the project setting to be like after interventions have been completed.
- Is the result of the achievement of all effect-level objectives.
- Contributes to higher (program) goals (broader consequences).
- Must be significant, yet achievable and measurable during the life of a project.[15]
- Must also be realistic - do not state that a project can accomplish more than it possibly can. This implies that the targets must be based on evidence, and are therefore able to be justified, not just pulled out of the air to make a proposal look good.

The impact goal statement includes:

- Identification and number of intended beneficiaries
- Type of foreseen improvement (quality change) / impact
- When change is expected to take place (time)

[14] ***Note***: Different documents produced by these agencies may contain different terminologies.
[15] See CI Project Standard #6.

Table 11: Comparison of Donor Agency Terminologies for Results/Logical Frameworks

	Ultimate Impact	Long-term Outcomes	Intermediate Outcomes	Outputs	Interventions	
CARE terminology[16]	**Program Impact**	**Project Impact**	**Effects**	**Outputs**	**Activities**	**Inputs**
CARE logframe	Program Goal	Project Final Goal	Intermediate Objectives	Outputs	Activities	Inputs
AusAID[17]	Scheme Goal	Major Development Objectives		Outputs	Activities	Inputs
CIDA[18], GTZ[19]	Overall goal		Project purpose	Results/outputs	Activities	Inputs
DANIDA, DFID[20]	Goal		Purpose	Outputs	Activities	
European Union[21]	Overall Objective	Project Purpose	Results	Activities		
FAO[22], UNDP[23], NORAD[24]	Development Objective		Immediate Objectives	Outputs	Activities	Inputs
PC/LogFrame[25]	Goal		Purpose	Outputs	Activities	
UNHCR[26]	Sector Objective	Goal	Project Objective	Outputs	Activities	Inputs
USAID Logframe[27]	Final Goal	Strategic Goal/ Objective	Intermediate results		Activities	202E
USAID Results Framework[28]	Strategic Objective	Intermediate Results		Outputs	Activities	Inputs
World Bank	Long-term Objectives		Short-term Objectives	Outputs		Inputs

Compiled by Jim Rugh for CARE International and InterAction's Evaluation Interest Group

[16] CARE Impact Guidelines, October 1999.

[17] AusAID NGO Package of Information, 1998

[18] Guide for the use of the Logical Framework Approach in the Management and Evaluation of CIDA's International Projects. Evaluation Division.

[19] ZOPP in Steps. 1989.

[20] A Guide to Appraisal, Design, Monitoring, Management and Impact Assessment of Health & Population Projects, ODA [now DFID], October 1995

[21] Project Cycle Management: Integrated Approach and Logical Framework, Commission of the European Communities Evaluation Unit Methods and Instruments for Project Cycle Management, No. 1, February 1993

[22] Project Appraisal and the Use of Project Document Formats for FAO Technical Cooperation Projects. Pre-Course Activity: Revision of Project Formulation and Assigned Reading. Staff Development Group, Personnel Division, August 1992

[23] UNDP Policy and Program Manual

[24] The Logical Framework Approach (LFA). Handbook for Objectives-oriented Project Planning.

[25] PC/LogFrame (tm) 1988-1992 TEAM technologies, Inc.

[26] Project Planning in UNHCR: A Practical Guide on the Use of Objectives, Outputs and Indicators for UNHCR Staff and Implementing Partners, Second Ver. March 2002.

[27] The Logical Framework Approach to portfolio Design, Review and Evaluation in A.I.D.: Genesis, Impact, Problems and Opportunities. CDIE, 1987.

[28] Results Oriented Assistance Sourcebook, USAID, 1998.

In other words, a good goal statement should clearly identify who is to benefit, in what way, how much and by when. A well-articulated goal should provide clear guidance to project implementers and project evaluators. See Issues Box 32 later in this chapter for more specific guidelines.

Effect Objectives[29]
The intended changes in systemic conditions or behaviors that must be achieved in order to accomplish the impact goal; that is, each effect objective is a necessary condition to achieving the impact goal.

They reflect changes in behavior by members of the target group or of systems that influence them; changes that are needed to bring about positive change in human condition (reflected in the impact goal). Typical effect objectives include, for example, such things as functioning farm credit systems (systemic), adoption and correct use of appropriate technology (behavioral).

Example: By December 2004, 3000 participating farmers from Rio Blanco Province will be using improved seeds and appropriate cropping practices.

Characteristics of Effect Objectives

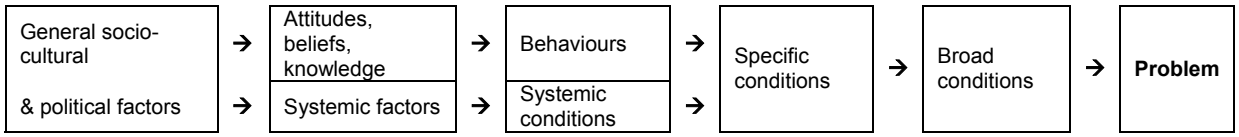
- Describe the reported changes in system conditions or behaviors that must take place in order to achieve the impact goal.
- An essential condition to achieve the impact goal.
- Indicate what practices will change and how and when the foreseen change will take place.
- Verifiable at some point during or at the completion of the life of the project.
- Described as endpoints, not processes.

5.1.2 Linking Goal Statements to Causal Analysis and Interventions

Up to this point, we have focused on identifying problems and causes and developing interventions to address selected causes. In addition, we have developed a project hypothesis diagram to describe how our proposed interventions will lead to the anticipated outcomes. These anticipated outcomes form the core of our goal statements for the project. Table 12 (next page) summarizes the cause and effect logic in a typical project. You can see how the logic is related as we move from causal analysis to the hierarchy of goals and objectives.

[29] In our business the word 'goal' is often used interchangeably with 'objective.' We are here proposing that what has typically been referred to in CARE as 'intermediary objectives' we identify as 'effect objectives' to clearly identify the level in the hierarchy they address. Since we already have Program Impact Goal and Project Impact Goal (See Table 11), we're using 'effect objectives' to make the distinction.

In Chapter 3, we established the cause and effect logic of the causal analysis as follows:



This translates to the problem and its causes in this way:

Indirect Causes → **Direct Causes** → **Problem**
(Attitudes/Beliefs) (Behaviors) (Specific or Broad Condition)

In Chapter 4, we developed interventions to directly address the causes that, in turn, would address the problem.

Interventions → **Causes (Direct and Indirect)** → **Problem**
(Outputs) (Effect Objectives) (Impact Goal)

Table 12: Cause and Effect Logic in a Typical Project (agricultural example)

Levels of the Causal Analysis	*Output of the Causal Analysis*	*Output of the Strategy Selection*	*Hierarchy of Effect and Impact Goals*	*Cause and Effect Logic*
Broad Condition (poverty)	**Problem** (low income)	**Problem** (low income)	**Program Impact Goal** (increase income)	**Ultimate Impact** (poverty condition)
Specific Condition (low production)	**Direct (Immediate) Causes** (high soil erosion/low fertility)	**Particular Cause** (high soil erosion/low fertility)	**Project Impact Goal** (increase yields)	**Intermediate Impact** (increased productivity)
Behaviors (poor planting practices)	**Indirect (Secondary) Causes** (farmers plant on steep slopes)	**Causes** (farmers plant on steep slopes)	**Effect Objectives** (farmers will adopt new cropping practices, including contour planting)	**Effects** (change in behavior)
Attitudes & Beliefs (tradition must be followed)	**Behavioral Causes** (farmers plant in vertical rows; do not practice contour planting)			
Social, Political, Economic, Cultural and Environmental Factors (no access to improved technologies)		**Interventions** (extension education)	**Outputs** (establish extension system)	**Outputs** (goods & services produced)
			Activities (hire and recruit extension workers; organize farmer groups; conduct trainings)	**Processes** (activities to turn inputs into outputs)
			Inputs (labor, cash, transportation necessary to establish extension service)	**Inputs** (resources necessary to achieve outputs)

In this cause-effect logic, the project interventions generate outputs; the effects of the project are the result of achieving intermediate or effect objectives, which address attitudes, beliefs and behaviors of the target

population; and the impact of the project is the final or impact goal, which addresses the problem and relates to a fundamental change (improvement) in human condition.

The table in Issues Box 30 shows an example of how the problem, causes and interventions can be converted into impact goals and effect objectives and outputs in a water project.

Issues Box 30

Example of problem hierarchy and goal statements for a water project

Problem	→	**Impact Goal**
High incidence of water/excreta-related disease among villagers in Bella District		To decrease incidence of excreta/water-related disease by 10% (from X% to Y%) in project villages by the end of 2007.
Causes	→	**Effect Objectives**
Villagers do not have access to adequate clean water		To increase the percent of villagers who use potable water from 10% to 75% by 2007.
Villagers do not wash hands regularly; Fecal contamination gets into food		To increase by the number of villagers that properly use improved hygiene practices by 2004.
Villagers do not use latrines		To increase usage of latrines by village HHs from 0% to 50% by the end of the project.
Interventions	→	**Output Targets**
Drinking Water System		W number of drinking water systems serving X households
Hygiene Education		Y number of people completing training
Latrines		Z number of latrines built

Characteristics of Clear and Precise Goals

Impact and Effect goals must be **specific** (what and when) and **measurable** (how much) and must **describe what is desirable** (suitable and appropriate for the situation) and **obtainable** (realistic). The 'SMART' checklist (Issues Box 31, next page) helps define proper impact and effect goals. A goal statement does not necessarily have to be written to provide all of the specificity required to meet the above criteria. However, if it does not do so, then details must be provided in an operational definition. Annex 5.10 is a practical exercise on how to write clear, precise goals.

Issues Box 31

"SMART" checklist for impact and effect goals/objectives

S – Specific ..... Is the goal clear in terms of what, how, when, and where the situation will be changed?

M - Measurable ..... Are the targets measurable (e.g., how much of an increase or how many people)? What evidence will there be of goal achievement?

A - Area-Specific..... Does the goal delineate an area (village, province, agricultural zone) and/or a population group (gender, age, ethnic, occupational group)?

R - Realistic ..... Is the project able to obtain the level of involvement and change reflected in the goal statement? Is it reasonable to expect to produce this degree of change, based on past experience under similar conditions, with the level of resources available?

T - Time-Bound ..... Does the goal reflect a time period in which it will be accomplished?

Operational Definitions

We use operational definitions to describe more precisely the terms used in goal statements. They facilitate the selection and evaluation of indicators by describing the details embedded in or implied by goal statements. Making use of operational definitions allows the design team to simplify and shorten goal phrases. Examples of terms that require these definitions include: appropriate, efficient, effective, strengthened, properly used, well-managed, sustainable, health status and improve. Technical terms not universally recognized or understood also require operational definitions. Keep in mind that a term may be defined differently for different projects depending on context. Examples of operational definitions for a hypothetical water project appear in Annex 5.11.

Definition Box 24

Operational Definition
Describes specifically the terms used in goal statements and indicators to simplify and shorten those statements and provide practice in selecting appropriate indicators.

5.2 Indicators

Indicators are quantitative or qualitative measures that enable one to assess the degree to which project inputs, activities, outputs, effects and impact have been achieved. There are five general types of indicators:

Definition Box 25

Indicator
A variable, measure or criterion used to assist in verifying whether a proposed change has occurred.

Input indicators - describe what goes into the project, the amount of money spent, the amount of staff time devoted to the project, infrastructure (training center, office, transportation) made available;

Activity indicators - document the number of activities or their percent completion (e.g., - the number of training events completed);

Output indicators - describe the goods and services produced by project activities (such as the number of community workers trained, the number of condoms distributed, the number of women enrolled in mothers' clubs, IEC materials disseminated);

Effect indicators - describe the change in systems or behavior resulting from achievement of an intermediate goal (such as the number of community clinics meeting quality of care standards [systemic] or the number of women breastfeeding their babies for six months [a behavior]);

Impact indicators - measure actual change in conditions of the basic problem identified, e.g., changes in livelihood status, health, wealth, etc.

Input, activity and output indicators are easier to achieve and measure than effect and impact indicators, but they provide only an indirect measure of the success of the project. The project hypothesis may state that the achievement of certain activities will result in desired change, but outcome indicators need to be measured to demonstrate it. Activity and output indicators also provide a standard against which to measure, or assess, or show, the progress of an activity against stated targets or benchmarks.

The selection of proper indicators can be a delicate task. Try to balance restrictions such as time and available resources, the need for measurement accuracy, logistic or cultural restrictions, etc. Some established criteria can provide guidance, such as the ideal characteristics of indicators listed in Issues Box 32 below.

Issues Box 32

Ideal characteristics of indicators

MEASURABLE.....Indicators should be measurable by the use of specific quantifiable variables and/or through other factual, objective evidence obtained through qualitative methods.

TECHNICALLY FEASIBLE..The indicators should be capable of being assessed or measured with the skills available.

RELIABLE.....Conclusions based on these indicators should also be verifiable or objective if measured by different people at different times and under varying circumstances.

VALID.....Indicators should be capable of measuring the phenomena.

RELEVANT.....Indicators should apply to project objectives at the appropriate level in the hierarchy.

SENSITIVE.....They should be sensitive to changes in the situation being observed.

COST EFFECTIVE.....Information obtained should be worth the time and money involved to procure it.

TIMELY.....It should be possible to collect and analyze and report the data in a reasonable period of time.

Use of Aggregate and Operational Indicators

It is useful to divide indicators into two broad classes called *aggregate* (or broad) and *operational*. The distinction is beneficial because it helps us to clarify exactly what we will be measuring, and it helps us link interventions with indicators. See Table 13 (page 95) for sectoral examples of indicators at different levels in the project hierarchy.

Aggregate indicators: These indicators are variables that broadly describe progress toward a goal. They are useful as an intermediate step to defining indicators that are more specific and measurable. In fact, when we are trying to decide on appropriate indicators to measure an effect or impact goal, our first thought is usually an indicator that generally describes the changes we want to see occur. The problem is that aggregate indicators are usually not very specific as to what will be measured, so that if two people were to independently measure the indicator they would likely measure different things, thus perhaps coming up with different conclusions.

Definition Box 26

Aggregate Indicators
Indicators that broadly describe progress toward a goal. They are useful as an intermediate step to defining and summarizing more specific and measurable indicators or variables.

In the upper part of the example on the next page (issues box 35) are some examples of effect objectives and aggregate indicators for an agricultural project. Note that the first indicator would show the farmers whose behavior reflects safe application of pesticides. The second indicator would reflect farmers who are using the right pesticides with proper doses, etc. Measuring both these indicators would give us some information to assess whether the behavioral changes related to pesticide use are occurring or not.

Operational indicators: Indicators at the 'aggregate' level are usually not specific enough to reflect what is or will be actually measured in the field. We need to be more specific in order to develop tools for data collection and analysis, as illustrated by the example in Issues Box 33. The first step in doing this is to look at the operational definitions that were developed for the words 'safe' and 'proper' use. The interventions related to pesticide use will include a number of project activities related to training farmers in specific methods of pesticide application and use. Eventually we want variables that measure the adoption rate of the methods being promoted by the project. These variables are referred to as "operational indicators." Operational indicators reflect a sub-set of the aggregate indicator. They are variables that are more specific in terms of what to measure and are based on the criteria developed for the aggregate indicator. For each operational indicator, it should be obvious as to what will be measured.

Definition Box 27

Operational Indicators
Variables that reflect a sub-set of the aggregate indicator. They are more specific in terms of what to measure and are based on the criteria developed for the aggregate indicator.

Issues Box 33

Example: Indicator development – aggregate and operational indicators

Effect objective:
50% of project farmers in the Rio Negro community will apply pesticides to potato, beans and rice fields, using safe and proper techniques, by July 1999.

Aggregate Indicators:

A. % of farmers safely applying pesticides in their fields
B. % of farmers properly applying pesticides in their fields

Operational Indicators (examples):

For aggregate indicator A:

1. % of farmers safely using hand pump sprayers to apply pesticides
2. % of farmers who properly use the coke bottle method to apply pesticides to their crops during two growing seasons after training
3. % of farmers who wear protective clothing while applying pesticides

For aggregate indicator B:

1. % of farmers who apply pesticides in the recommended dosage
2. % of pesticides applied which are appropriate to control the identified pest or disease

Note: Be clear on the denominator for operational indicators. In the above example, which and how many farmers are targeted? I.e., how many adapters would it take to be 100%?

See Annexes 5.1-5.3 for examples from various sectors of indicators at different levels of the project hierarchy.

Issues Box 34

Incorporating a Rights-Based Approach into coherent information systems

This stage of the program cycle focuses on planning for monitoring and evaluation. Incorporation of a rights-based approach entails a commitment to various accountability mechanisms, including ongoing, open engagement with program participants.

Gauging program impact in relation to the realization of human rights. A rights-based approach explicitly focuses on people achieving their human rights. Project goals or objectives should be thought of as concrete steps on the path to realising the rights identified in the overall program goal. Program goals framed as incremental improvements in livelihood security are not sufficient without reference to the minimum standards of the human rights framework. These "minimum conditions for living with dignity" are standards defined in international law, although the indicators used to measure their achievement are not necessarily well defined. Recognizing this, CARE has committed to "work with others to define human rights indicators and apply them as the standard against which we measure impact." Jones 2001

5.3 Targets and Benchmarks

Setting Goal Targets:

Often project proposals contain targets stated against goals that have not been carefully thought through. Too often, project designers set unrealistically high targets, hoping to impress donors. There are examples of projects that claim they will reduce malnutrition by 40%-50% without even knowing for sure what the present (baseline) rate is in the target community, nor by how much similar projects in the past have been able to reduce malnutrition rates.

A well-written goal includes the statement "change the rate (of the indicator related to the problem being addressed) from X% to Y%." To know what X is requires a baseline survey, done with the same degree of rigor as the precision that will be required for the final evaluation. To know what the target (Y) should be requires researching how much change has been achieved by previous projects working in similar communities. We need to set goal targets that challenge us to strive for excellence, yet keep them realistic enough that we're not embarrassed when the final evaluation reports what the project actually achieved.

Indicators are simply variables that we measure in order to ascertain whether a change has occurred. It is fairly easy to propose what change we want to occur, where and when, but to predict the degree of change sometimes seems impossible. Despite this difficulty, it is essential for monitoring and evaluation that project designers estimate the magnitude of change you expect for each indicator and the rate of change over time.

Definition Box 28

Benchmarks
Expected values or levels of achievement at specified periods of time.

In order to understand the rate of change over time of an indicator, we need to establish benchmarks. Benchmarks are expected values or levels of achievement at specified periods of time. For example, suppose you have a five-year project and, in addition to measuring change in use of safe drinking water at the conclusion of the project, you want to track the number of households using safe drinking water over time.

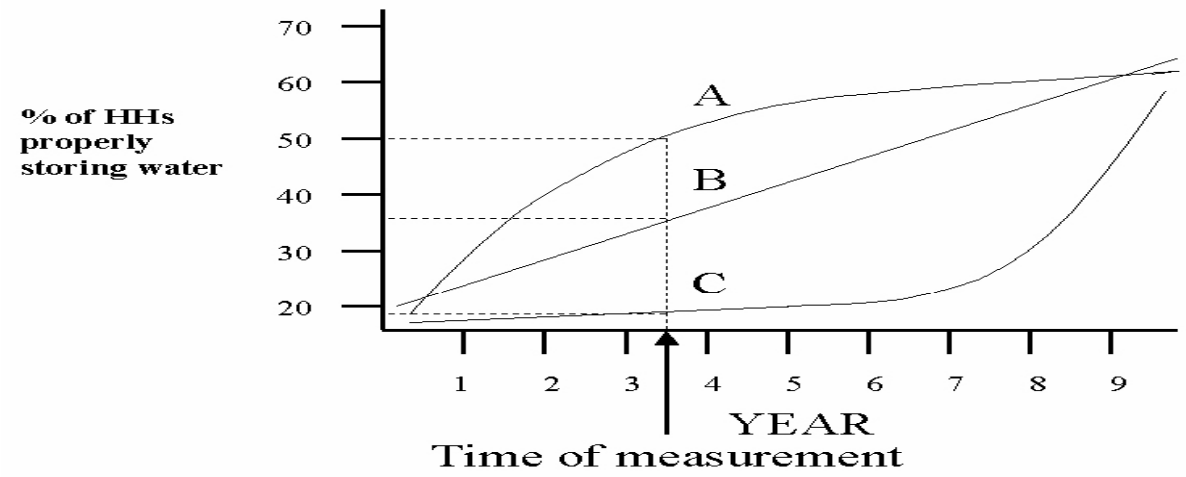
Your benchmarks could look like those in the example to the right. The initial value (year 0) was measured during the baseline survey. The values 15%, 25%, 40%, 60% and 85% are benchmarks. These values indicate, for instance that if households were surveyed at the end of Year 3 you would expect about 40% to be using safe drinking water. The benchmark for year 5 – the final target – would also be the quantity as stated in the corresponding goal statement. Thus at the end of the project you expect most of the households (85%) to be using safe water.

Example: Benchmarks for water project

Year	% of households using safe drinking water
0	10%
1	15%
2	25%
3	40%
4	60%
5	85%

It is important to establish benchmarks so that we can track planned progress. In Figure 13 (below), you see three different curves, A, B and C. Curve A represents a situation in which you expect the indicator to change rapidly in the beginning of a project and then the rate of change slows down. Such is the case with immunization campaigns–as time goes on it becomes more and more difficult to find people who have not been immunized. Curve B represents a constant rate of change over the life of the project. A road-building project might have such a curve since it is probable that about the same length of road could be laid each year. Curve C represents a slow rate of change in the beginning and then later in the project the change becomes very rapid. Such would be the case, for instance, where new farming practices were being promoted to rural populations. Early on, there would likely be a reluctance to adopt the new practices, but as people see successes, they would likely become more willing to try. Of course, the rates of change might also be the result of factors such as project phasing or expansion/reduction of activities.

Figure 13: Example - Comparison of Different Benchmark Trends



The rate of change of an indicator can depend on many factors, including timing of the intervention, level of resources committed to the intervention, anticipated spread effect of the intervention, etc. Note in the example above if you measured the indicator between years 3 and 4 you would get very different values depending on which response curve reflected the expected rate of change. We set benchmarks so that we know what rate of change to expect and, thus, help us during monitoring and evaluation to determine if we are on course.

To estimate final benchmarks, which need to be reasonably accurate and realistic, make use of information from a variety of sources. The 'Final Benchmark' or target value is the desired level of an indicator that one expects to see as the result of the changes brought about through the implementation of an intervention. Secondary sources can often provide

average values for the indicator at national, regional and local levels. Project documents may be available that show the results of similar interventions in other zones. Design teams should also consider other resources available to their project and potential limitations to achievement. By analyzing all of this information, the team should reach an acceptable figure as a final benchmark or goal target. Table 13 provides a tool to help us record and use this information to arrive at realistic and achievable final benchmark values:

Table 13: Final Benchmark Value Tool

Indicator	Indicator value, as found through a baseline study at the community level	Indicator value at the municipal or department level (from secondary sources)	Trend that the indicator shows in national surveys (from secondary sources)	Changes that have been achieved in the indicator in the past, through implementation of similar projects	Reported values of the indicator for sectors of the population that have better living standards (for example, urban vs. rural sectors)	Final Target Benchmark (End of Project Status)

5.4 Outputs, Activities and Inputs

Now that goals and indicators at the effect and impact levels have been determined and appropriate interventions developed, the hard work of project design is over. While the earlier stages of project design can be very difficult, particularly problem analysis and definition of goals and indicators, it is relatively easy deciding on outputs, activities and inputs. Nevertheless, defining outputs, activities and inputs along with corresponding indicators is essential to establishing a project monitoring and evaluation plan. Indeed, these steps should be completed before any project begins.

The clearer the goal, the easier it is to define what actions or interventions need to be taken to bring about the change that will lead to the fulfillment of that goal. We refer to these actions that the project will take as its activities. They require resources, have a sequence and have persons responsible for carrying them out. It is critical to monitor and periodically revise activities as experience is gained, and as conditions change. Through activities, outputs may be achieved. Outputs are the products needed to assure expected change at the effect level, and eventually the achievement of the desired impact.

Basic steps for developing project outputs, activities and inputs:

1. **Define outputs for each effect objective.** The project team must decide what products will be needed to assure expected change at

the effect level. Remember that for successful monitoring and evaluation, the link between outputs and the corresponding effect objectives must be clear. Indicators for output goals are typically a simple enumeration of products or services delivered.

2. **Develop activities and targets for each output.** The list of activities should include both actions to be taken and proper sequence for implementation. In addition, timeframes and quantified targets are important components of each activity goal. As with output objectives, indicators usually require project monitors to record the number of activities successfully implemented. Well-written activity statements include a precise verb, quantified target and timeframe. (See examples in Issues Box 35, below)

3. **Define inputs.** Objectives at this level are simply the quantities of basic resources required (money, materials, technical assistance) for each activity. Typically the budget shows most of these.

Issues Box 35

Example: Developing project outputs for three projects

Tree planting example:

Output Objective - 2000 trees planted by 2007
Output Indicator - number of trees planted and surviving
Sustainability Indicator – number of trees surviving after two years

Institutional Capacity Building example:

Output Objective – Trained staff of partner agency have enhanced skills in extension education
Output Indicator – Number of staff passing a test of knowledge and demonstration of skills
Sustainability Indicator – Partner agency has demonstrated competency to continue effective extension program on its own.

Advocacy project example:

Output Objective – Advisors to the Minister of the Environment recommend adoption of comprehensive environmental policy.
Output Indicator – Number of government-level key policy makers that favor proposed environmental policy.
Sustainability Indicator – Number of community representatives actively involved in drafting environmental policy, and learning how to conduct similar advocacy campaigns.

[Last example from CARE Advocacy Tools and Guidelines, 2001]

5.5 Planning for Monitoring and Evaluation

Up to this point, the design team has assigned clear and precise goals (or objectives) at each level of the project hierarchy, selected corresponding indicators to allow for measurement of change, and summarized this information in the logic model. By following a systematic cause-and-effect approach to project design and summarizing this information in the logic model, we have set the foundation for a project monitoring and evaluation plan. Note that the development of a project logic model (logframe) is an iterative process. As goals and indicators are more precisely defined, and the M&E plan is being developed, it would be good to refine the logic model.

Definition Box 29

Monitoring and Evaluation Plan

Describes what steps will be taken to monitor its process and evaluate the progress towards achieving effect and impact goals.

An M&E plan outlines what information needs to be collected during and after the life of the project, in order to assess the completion of activities and outputs and achievement of effect and impact goals.

It is important for the project design process to include planning for monitoring and evaluation to ensure coherence and continuity between project design, monitoring of implementation and evaluation of results. It is also important to develop a plan during the design stage so that monitoring and evaluation activities can begin prior to or shortly following project start-up – particularly a baseline study, and to ensure that adequate resources are budgeted and directed toward conducting M&E activities.

Issues Box 36

DME Capacity

Findings from an assessment of CARE's Design, Monitoring and Evaluation (DME) capacity worldwide show that many project design teams are increasingly developing SMART goals (65% of projects) and logical frameworks (84% of projects) in the project design phase. The use of sound logic models demonstrates attention to the causal linkages between inputs and impact among CARE project teams. Fewer projects, however, take the logic model one step further to develop a monitoring and evaluation plan – an important step to ensure project continuity and coherence. Johri 2002

In this chapter, we will define M&E and summarize some useful approaches and tools, emphasizing the importance of developing an M&E plan as a part of a coherent information system. CARE staff should particularly note the wise guidance provided by the CI Project Standards (see Annex 1.1), and the related *Impact Guidelines*. A number of other resources for M&E are available to project design teams, including the *How Are We Doing?* basic

CARE M&E guidelines[30]. Currently, CARE is developing *Baseline & Evaluation Guidelines*, an additional essential reference for CARE project managers and staff.

Monitoring and Evaluation Defined

Definition Box 30

Monitoring
The process of routinely gathering information on the process of project implementation.

Monitoring is the process of routinely gathering information with which to make informed decisions for project management. Monitoring provides project managers with the information needed to assess the current project situation, identify project trends and patterns, keep project activities on schedule, and measure progress toward expected outcomes.

Close monitoring allows project teams to adapt project strategies, make decisions regarding human, financial and material resources, minimize project costs and enhance effectiveness. Monitoring is an essential and continuous management practice that should be written into the project work plan, and should incorporate participants' own criteria. A monitoring system should be in place before project start-up to allow for the collection of useful and timely information throughout the life of the project. Table 14 (page 102) provides information guidelines for project monitoring.

Definition Box 31

Evaluation
An assessment of the extent to which a project is achieving or has achieved its stated outcome goals.

Evaluation is the process of gathering information to inform judgments about a project's achievements and value. Some evaluations are conducted to determine whether a project has met (is meeting) its goals. Others examine whether or not the project hypothesis was valid, and whether or not it addressed priority needs of the target community. Depending on the purpose of a particular evaluation, it might assess project progress in the work plan, the establishment of systems, implementation of activities, production of intended outputs, achievement of outcome goals, cost-efficiency, effectiveness, impact and/or sustainability. Findings from evaluations allow project teams and stakeholders to learn from experience to improve future activities and intervention strategies. While monitoring is an ongoing activity, evaluations occur periodically, typically at mid-term and at the end of the project. See Issues Box 37 (page 101) for a summary of useful evaluation approaches and tools.

- **A Baseline Study** is the first phase of a project evaluation. It is used to measure the 'starting points' of indicators of effect and impact. Baseline data collection allows organizations to begin the process of measuring progress toward achieving their goals. The baseline study differs from assessments conducted during the Holistic Appraisal stage in that it

[30] Barton 1997.

focuses on the specific information needs derived from indicators of intended outcomes in the logic model (M&E plan).

- **Process** and **formative evaluations** occur during the course of the project (typically at mid-term) to assess activities or functions to make recommendations for improving project implementation.
- **Summative evaluations** are carried out at the end of a funding period to assess positive and negative impacts and examine the effectiveness of a project. Lessons learned from final evaluations should contribute to the formation of future projects and programs.

Monitoring and Evaluation Plans

A monitoring and evaluation plan should be developed during or immediately after project design. The elements of the plan derive from the project hierarchy and indicators summarized in the logic model. To complete the M&E plan, all that is required is the incorporation of additional project details such as the specific information on the data necessary to measure indicators, the logistics of data collection, and broad guidelines for analysis of data and interpretation and dissemination of results. Table 14 (page 102) provides an example of a monitoring and evaluation plan for evaluating effect objectives. Annex 5.9 provides a sample framework for a monitoring and evaluation system plan based on the project hierarchy.

Characteristics of a Monitoring and Evaluation System Plan:

- **Derive from the logic model.** The best way to ensure coherence and continuity between project design and subsequent monitoring and evaluation stages is to use project planning tools such as logic models, not only to summarize project strategy but also as a basis for planning, monitoring and evaluation. It is essential to review logical frameworks or equivalent logic models at the outset of each stage of the monitoring and evaluation process.

- **Relate to program monitoring and evaluation.** Project managers should focus on achieving and measuring goals at the project level rather than the program level. A good project design, however, should be able to demonstrate how the project's goals contribute to a higher level program goal.

- **Establish a management information system** for complete, accurate and timely information for a monitoring and evaluation system. A design, monitoring and evaluation information system (DME-IS) is the set of activities, staff, equipment and processes necessary to collect, manage, analyze, report and disseminate information useful for decision-making. Ideally, the system should be in place at the time of project start-up, including a clear workplan with responsibility assignments and a realistic budget/resource plan.

- **Include collection of baseline data.** In Chapter 3 we reviewed the Holistic Diagnostic Assessment stage of project design. We use this information to inform project design and develop sound goals and

indicators based on cause-and-effect linkages. In contrast, a baseline study should focus on measuring the initial status of indicators of effect and impact within the corresponding target populations, using both qualitative and quantitative techniques. Baseline studies must describe indicators at the start of the project with enough precision to allow for later evaluation to clearly measure change over the life of project as compared with this initial assessment. This means that the same indicators must be measured in the same population using the same methodology for at least two points in time.

Issues Box 37

Monitoring Processes and Measuring Systems: an RBA Framework

Monitoring processes. Within a rights framework, inclusion, participation, and empowerment become essential program objectives, not only for their potential to enhance our impact on food, health, and educational insecurity, although this is important, but, rather, in their own right. A rights-based approach requires a commitment to evaluating impact not only in outcome terms (i.e., in terms of conditional change), but also in terms of systemic addressing of rights and responsibilities.

Adapting and extending our measurement systems. The HLS framework compels us to understand better and document the household-level impact of our programs. This is harder to do with higher-level, longer-term rights-based interventions than it is for standard service delivery projects. The former raise questions concerning the household-level impact of often longer-term effects that rights-based programs have on, among other things, participation in public affairs, capacities of local groups, institutional policies and practices, and legal and other systems. It is important that we develop intermediate and community-level measures and indicators for tracking these often less tangible, slower to materialize changes at the local level.

Jones 2001

Issues Box 38

Evaluation Approaches and Tools

The most commonly used tools for data collection in evaluation are described below, including important advantages and disadvantages.

- **Surveys** These are standardized written instruments that contain questions about the issues being evaluated. Sample surveys are complementary to and often informed by participatory methods. Advantages of sample surveys: they generate detailed information about a population from a small sample, answers to standardized questions allow comparisons across groups, and data can be aggregated quickly. Disadvantages - they are highly extractive, can be costly, are often poorly implemented leading to measurement error, take time to process, and have a tendency to collect too much data.
- **Participatory Rapid Assessments** These are interactive techniques with open-ended questions and exercises for exploration of program issues. Advantages - they have substantial strength in qualitative information, ordering of priorities, income/wealth ranking and involvement of distinct social groups. They are often quick and low cost, can provide an initial basis for further quantitative work, and can provide insights to quantitative findings. Disadvantages: they are prone to bias in interpretation, are not statistically representative, and analyzing and summarizing findings from multiple community PRAs can be very time-consuming.
- **Key Informant Interviews** These are interviews using a semi-structured set of topics and questions with selected individuals approached for their views on the issues. Advantages - Such interviews are useful to get information on complex issues or sensitive topics. The key to maximizing the value of this method is triangulation, meaning that the views and opinions of diverse individuals are solicited. Disadvantages - some informants may have agendas that are not explicit, and viewpoints of less powerful groups are not always represented.
- **Focus Group Discussions** A focus group is a facilitated discussion with 6-12 individuals using a semi-structured set of open-ended topics or interactive exercises. A key to success is using pre-set criteria to select homogeneous participants, with the criteria linked to the discussion topic. Advantages - focus groups can help to: 1) understand how project participants feel about services; 2) identify reasons for problems in the project; and 3) develop and test messages for communication or social marketing strategies. Disadvantages - you cannot reliably generalize findings to a wider population; special skills are needed to properly analyze data obtained from multiple focus group sessions.
- **Individual and Household Case Studies** Case studies usually involve a semi-structured list of questions allowing for a mixture of qualitative and quantitative data to be collected. The output is usually in the form of a portrait of each individual or household. Advantages – it can be quite low cost, it can give deeper insights into the lives of individual households; it can also yield preliminary impact information, including negative impacts, long before the end of a project. Disadvantages - because random sampling methods are not usually followed, there is a risk that the cases chosen are too biased or

Table 14: Sample Monitoring and Evaluation System Plan

A monitoring and evaluation plan should be included as a part of project design. M&E activities should be scheduled on annual implementation or work plans. Note: To save space on this matrix, rather than repeating details here, just list the monitoring or evaluation events. In a separate table, give the details (e.g., schedule, data collection methodology, etc.) for each M&E event (e.g., baseline, monthly monitoring, annual self-evaluation and report, mid-term and final evaluation, etc.)

Level of Project Hierarchy	***Operational Indicators*** Measures from the logic model used to ascertain or verify that a planned change has occurred.	***Data Needed*** What specific data will be necessary to characterize the indicator? Depending on the indicator, one or many types of data (variables, types of evidence) may be needed.	***Timeframe*** How often will data be collected? (e.g., at baseline and project end? Monthly? Quarterly?)	***Source/ Collection*** From where and how will the data be collected? (e.g., household survey, community PRAs, district-level secondary data)	***Data Analysis*** How will the data be analyzed? (e.g., statistical tests, tables, cross-tabs, graphs)	***Dissemination/ Utilization*** What reports will be generated from the information? How and with whom will it be shared and used to improve the project?	***Responsibilities*** Who is responsible for data collection and analysis?
Impact Goal							
Effect Objectives							
Outputs							
Activities							

Chapter 5 Review:

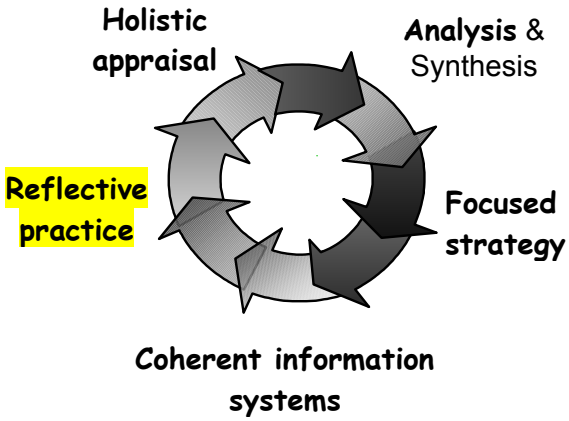
Coherent Information Systems

Key concepts	Focus questions	Notes
5.1 Setting clear goals at the right level	• Does the project final goal address impact? • Do the project's intermediate objectives address effect-level changes? • Can the goal statements pass the 'SMART' test?	
5.2 Defining appropriate indicators for measuring goal achievement	• Have aggregate (broad) indicators been translated into objectively verifiable (measurable) indicators? • Do the indicators meet the characteristics listed in Issues Box 34?	
5.3 Setting realistic yet challenging targets and benchmarks for achievement	• Were other sources checked for setting reasonable targets? • Do you have an approximate estimate of baseline levels? • Is the proposed change over the life of the project reasonable given experience of others?	
5.4 Defining Outputs, Activities and Inputs	• Did you use the Causal Analysis to identify a set of outputs that will be needed to achieve each effect objective? • Have you described key activities to produce needed outputs? • Are the needed inputs included in the budget?	
5.5 Developing a plan for monitoring process and evaluating outcomes	• Has an M&E plan been drawn up that adds sufficient detail to the logic model?	

Chapter 6

Reflective Practice

What is Reflective Practice?
The Role of Reflective Practice in Project Design
Some Tools for Promoting Reflective Practice



Chapter 6 discusses reflective practice, a term now used to denote actions and behaviors that promote continual learning in a project. In design, reflective practice is an empowering process.

Chapter 6: Reflective Practice

6.1 What is Reflective Practice?

Self-reflection is much like the process of orienteering, where an individual uses both map and compass to navigate through unfamiliar territory. The ultimate goal is to stay on course and find your destination. Reflective practice is the art of continual self-reflection, which enables us to routinely assess whether we are on course to achieve our goals. It is a practice that we often do in our personal lives (for example, as one plots her/his course of education leading to a career path) but less often in our professions.

Schon (1987), credited as the founder of the concept, describes reflective practice as a professional activity in which the practitioner (you!) reflects, both *in-action* and *on-action* in order to improve his or her practice. When applied to development in general and project design in particular, this means that we both experiment with our own actions while they are being carried out and evaluate them through verbalizing, writing and appropriating relevant knowledge about them from other sources. Put another way, reflective practice is a mode that integrates or links thought and action with reflection. It requires individuals to assume a role of external observer/evaluator.

According to Schon (1988), the stage is set for reflection when "knowing-in-action"--the sort of knowledge that professionals come to depend on to perform their work spontaneously--produces an unexpected outcome or surprise. This surprise can lead to one of two kinds of reflection: *reflection on action*, which occurs either following or by interrupting the activity, or *reflection in action*, which occurs during (without interrupting) the activity by thinking about how to reshape the activity while it is underway. We will get to some practical illustrations shortly.

Reflection-on-action takes place after the activity, when full attention can be given to analysis without the necessity for immediate action and when there is opportunity for the professional to receive assistance from others in analyzing the event. Project mid-term and final evaluations are a type of reflection-on-action in which project outcomes are compared to expectations.

Reflection-in-action, which occurs during the event, may be more effective in improving practice. It results in on-the-spot analysis to adjust and improve actions even though it requires simultaneous attention to the behavior and the analysis as if from an external perspective. This reflection consists of strategies of action, understanding of phenomena, and ways of framing the situations encountered in day-to-day experience. This reflection-in-action may take the form of problem solving, theory building, or re-appreciation of the situation (Schon, 1985). In CARE projects, reflection-in-action depends on monitoring data for insight as well as individual insight into how systems and behaviors are changing. Some call this simply learning. Learning is dependent upon the integration of experience with reflection and of theory with practice.

> *"Professional practice has at least as much to do with FINDING the problem as with SOLVING the problem."* Schon 1983

6.2 The Role of Reflective Practice in Project Design

What does all of this, you may be asking, have to do with project design? Project design is based on what we know and believe at a particular moment in time. The entire process, even if based on sound cause-effect logic, is dependent to some degree on imperfect understanding of systems, human behavior, and the role of external influences. Our project logic is based on operating environments that change, sometimes in a subtle way, other times in a not-so-subtle way. As both project designers and project implementers, we need to constantly challenge the logic of our projects, both to add new insights as we learn more about the communities and institutions with which we work, and to make adjustments during implementation to ensure that our goals are met.

In designing a project, we need to assure that key questions have been addressed and all relevant assumptions have been identified. We then need to develop monitoring and evaluation frameworks that effectively track the livelihood status of the populations with whom we work. Based on such on-going 'reality checks', our reflective practice should contribute to periodic re-design.

Historically, project (and program) information systems have largely been dependent on a reflection-on-action approach. All too often, learning has relied on external evaluators, and the identification of 'best practices'. Monitoring has often focused on resource flows into the project and on outputs (goods and services), with less attention to implications.

Reflective practice is a powerful empowering process if it is allowed to nurture and grow in a project. Project staff are encouraged to question the practical limits of project interventions, discuss results as they emerge in communities and institutions, and propose alternative strategies to improve the effectiveness of project deliverables. It is not only empowering to challenge staff to be reflective in their practice, it makes good development sense. In reflective practice, the relationships between outputs and effect changes are viewed as a dynamic process that takes constant adjustment. In a project, for example, some often overlooked but critical activities to support this reflection are monitoring of project assumptions, and analysis of the implications of changes in program direction within CARE and/or the country office.

The reflective practitioner in CARE analyzes lessons in order to increase her/his control over variables that affect changing human behaviors and systems. Much like action research, the reflective project manager (or any other staffer) selects a problem to study, collects the necessary data and

analyzes their information to improve their performance by directly studying their work. Here's what reflective practice steps may look like from a development perspective:

- Recognizing barriers to behavioral or systemic change, including changes in the operating environment;
- Responding to a barrier by recognizing both similarities in other situations and the unique patterns of the particular situation;
- Framing and reframing the barrier;
- Experimenting with alternatives to discover the implications of various solutions; and
- Examining the intended and unintended consequences of an implemented solution and evaluating it by determining whether the consequences are desirable.

Note that it is important to think about these consequences from the perspective of all the stakeholders, which, of course, is easiest to do if representatives of all of them can be regularly included in the reflection process.

6.3 Tools for Promoting Reflective Practice

Reflective practice is easier said than done, and it requires not only individual discipline, but also effective support systems and practical tools. In project design, this discipline is guided by monitoring and evaluation plans but also relies on other systems that promote reflective practice (e.g., freedom of expression, collective reflection, etc.). Engaging in reflective practice takes time and effort but the rewards can be great.

The following practices are things CARE staff can do to promote reflective practice.

General Strategy

The following "top ten" list summarizes reflective practice processes (Roth 1989):

1. Questioning what, why, and how one does things and asking what, why, and how others do things
2. Seeking alternatives
3. Keeping an open mind - Comparing and contrasting
4. Viewing from various perspectives
5. Asking "what if...?"
6. Asking for others' ideas and viewpoints
7. Considering consequences
8. Hypothesizing
9. Synthesizing and testing
10. Seeking, identifying, and resolving problems

Action Research

There are two main ways to use action research to aid in making decisions as a development practitioner. The first is to review the literature and apply the relevant findings to your project. The second is to do an action research study as part of your project implementation.

In addition to being cyclical, action research tends to be:

- Participative—the clients and informants are involved as partners, or at least active participants, in the research process – and in the planning and decision-making based on that research;
- Qualitative—it deals more with language than with numbers; and
- Reflective—critical reflection upon the process and outcome is an important part of each cycle.

Perhaps the most important part of action research is the reflection on collected data. Having asked a question that begs an answer, and designed a plan for collecting that information, staff need to reflect on their experiences and ask such questions as:

- What were the anticipated effects?
- Were there some unanticipated effects?
- What have we learned from this?
- What might we have to relearn or unlearn in our work?
- What are our next steps?
- Should we stop doing this because it doesn't work as well as we had planned?
- Continue doing this because it is getting results we find desirable?
- Start doing something else that may be more likely to succeed?

One justification for action research methods is that they can be responsive, at least in the short term, to the situation in a way that many other research methods cannot. They can also help mobilize participant target groups to have significant 'buy-in' to the resulting plans and implementation efforts.

DATA

Peters (1991) describes a process called DATA that consists of four steps:

- Describe (practice or system needs to be changed)
- Analyze (identify factors that contribute to current practices)
- Theorize (what alternative approaches are possible)
- Act!

First, the problem, task, or incident representing some critical aspect of practice that the practitioner desires to change is described. For example, a CARE field manager may wish to become less directive and more collaborative in her/his efforts to build capacity of partner organizations.

In the DATA model, the staff member would identify the context in which capacity building takes place, how s/he feels about the directive approach, and reasons for changing it.

Next, through analysis, s/he would identify factors that contribute to the current directive approach. An important part of this stage is to identify the assumptions that support this approach and bring to light underlying beliefs, rules, and motives governing capacity building and learning. Here, the staff member can uncover the theory behind the directive approach.

The third step of the DATA process involves theorizing about alternative ways of approaching capacity building by taking the theory derived from the previous step and developing it into a new one. In this step, the staff member is developing an espoused theory to govern a new, collaborative approach.

Finally, s/he will act and try out the new theory. The goal of this step will be to minimize any discrepancies between the espoused theory and the theory in use, but this will only occur through further thought and reflection.

Other tools useful for reflective practice

Case Studies - Case studies are very useful for viewing a situation from various perspectives, and then reflecting on the circumstances of each situation in order to inform the direction that future activities should take. Case studies are also a good reflective practice tool in that they encourage dialogue with participants, promote documentation, and make practical use of anecdotes.

Deviant or Extreme Case Sampling – A refinement of the case study approach is the deviant or extreme case sampling, which facilitates comparing and contrasting. During implementation, one looks for successes and failures. This can be with individuals, households, institutions or any other "unit." In any endeavor, there are those who do well and those who do not so well. In deviant sampling, one identifies cases where things are going quite well and cases where things are not going very well at all; then one studies each to try and determine what the factors of success and failure are. After this analysis, the elements that make cases more successful can be applied to the project at large. As well, the factors of failure can be recognized and avoided. Deviant sampling tests assumptions about homogeneity and promotes reflection on what goes well and what goes badly.

Reflective Journaling - A writing out of confusions, frustrations, questions, intentions, hypotheses, and assumptions pertaining to our work, how a project is going, or a particular event. Journal entries are informal and are not a retelling of the event's content, but a summary and reflection of thinking and awareness of self-talk.

Reflective Discussion - Reviewing the reflective journaling entries either with peers or supervisor(s) in terms of what happened and what was learned.

Retrospection - Drawing together materials, linking to previous reflections, and developing and articulating those values, beliefs, and concepts that guide reflective decision-making.

Reflective Supervision - Utilizing a supervisory relationship to review intentionality, beliefs and base assumptions surrounding a disorientating professional event can aid in clarifying patterns and themes necessary for learning and professional growth.

Descriptive Reflection - Descriptive reflection is a documentation process that includes both a description of events and some reasons for why they occurred. It is helpful in documenting the interpretation of logic or theory.

6.4 Incorporating a Rights-Based Approach into Reflective Practice

Reflective practice utilizes and expands upon project logframes and M&E plans to encompass deeper organizational reflection, learning, and change management at all stages of program implementation.

Monitoring the intended and unintended results (i.e., benefits and harms) of our interventions. As emphasized in the rights-based discussion in Chapter 5, our interventions can harm people's rights, in spite of our best intentions. From a rights perspective, what's important is for us to be aware of how our interventions may be harmful, to select appropriate indicators to track overall impact – positive and negative – we are having, and to monitor these indicators on an ongoing basis. Where harms become more significant to the point that they may approximate benefits, we need to consider suspending programs.

Disaggregating data in order to monitor the impact of our programs on different marginalized groups. Although this was flagged as a cross-cutting principle above, it bears repeating here. To ensure that we are achieving our intended impact and positively affecting women or other marginalized groups, it is critical to disaggregate our monitoring and evaluation data. In addition to gender, other distinctions may be important to make, for example along racial, ethnic, class/caste, age, or religious belief lines. Without this disaggregation, it will be impossible to fully monitor positive and negative (intended and unintended) results.

Learning from a diversity of rights-based approaches and their resulting impact. Successes and shortcomings in achieving our rights-based goals and objectives are precisely what we want to explain, with an eye toward learning from different approaches employed in different contexts. The program cycle is complete when such learning is folded back into our holistic analysis, synthesis, and development of focused strategies in the future.

Fostering an internal culture that encourages innovation, dissent, the airing of disparate views, and critical review. Without such an organizational culture, the transformative nature of a rights-based approach

will not take hold. And a supportive internal environment is indispensable to genuine reflection, learning, and change. This is a daunting task, in reality, comprising shifts in organizational culture, systems, and processes, as well as in staff composition.

The benefits-harms “impact” and “decision” tools help staff to think about unintended impacts and make the necessary adjustments when it becomes clear that programs are having significant negative impacts on people’s overall ability to live with dignity and self worth.

Chapter 6 Review:

Reflective Practice

Key concepts	Focus questions	Notes
6.1 What is reflective practice?	• Do you understand what reflection in-action and reflection on-action mean?	
6.2 The role of reflective practice in project design	• Did you incorporate reflective practice during your project design process? • Has such reflection helped you improve the project design? • Are there plans for continued reflective practice to be used to periodically refine the design?	
6.3 Some tools for promoting reflective practice	• Reading over the list of tools are there some that you see would be helpful in your project? • How can these be built into your project's M&E plans?	
6.4 Incorporating a Rights-Based Approach into reflective practice	• What can RBA perspectives add to the reflective practice in reviewing your project design process? • How can these perspectives be built into your project's M&E plans?	

Annex 1.1: CARE International Project Standards

Introduction: [31]
These CARE DME standards apply to all CARE programming (including emergencies, rehabilitation and development) and all forms of interventions (direct service delivery, working with or through partners, and policy advocacy).

These standards, as well as accompanying guidelines, should be used to guide the work of project designers; as a checklist for approval of project proposals; as a tool for periodic project self-appraisal; and as a part of project evaluation. The emphasis should not be only on enforcement but also on the strengthening of capacity to be able to meet these standards for programme quality. At the time of initial approval, if a project can not meet one or more standards, allow for explanation of why, and what will be done about it. More than a "passed/failed" checklist, these call for a description of how well a project meets each standard.

Each CARE project[32] should:

1. be consistent with the CARE International Vision and Mission, Programming Principles and Values.

Projects and programmes should fit comfortably within the spirit and content of the CARE International (CI) Vision and Mission statements. In other words, CARE projects should show how they will contribute, ultimately, towards lasting improvements in human wellbeing, hope, tolerance, social justice, reduction in poverty, and enhanced dignity and security of people. They should be guided by CI Programming Principles that synthesize and integrate with central elements of CARE's evolving programme approaches, including livelihoods, basic rights, gender and diversity, partnerships and civil society.

2. be clearly linked to a Country Office strategy and/or long term programme goals.

Projects should not be isolated, but clearly embedded in long-term multi-project programmes and strategic frameworks that address the underlying conditions and root causes of poverty and social injustice. Doing so provides a larger framework in which project decisions are made, but does not preclude strategic innovation and experimentation. CARE's strategies should be clearly linked to the development efforts of others (e.g., government, multilaterals, NGOs).

3. ensure the active participation and influence of stakeholders in its analysis, design, implementation, monitoring and evaluation processes.

[31] Original draft developed by CI Design, Monitoring & Evaluation Advisory Committee (DMEAC) in Atlanta October 1999. Revised version based on recommendations by IEI-II workshop participants in Wood Norton, UK, 31 August 2001 and follow-up communications. Endorsed by CARE USA SMT 16 January 2002; by CI Programme Working Group (PWG) 5 April 2002; officially approved by CARE International Board 24 May 2002.

[32] These standards refer specifically to CARE **projects** (whether implemented directly or through partners). However, where there are specific longer-term **programme** plans these standards should apply to them as well.

Every project should be explicit about its process of participation and consultation, aiming for openness and transparency. "Stakeholders" will be understood to include target communities, partner organizations, governments, and CARE staff. The interventions of the various actors should be coordinated and reinforcing and, individually and together, work together to achieve sustainable impact.

4. have a design that is based on a holistic analysis of the needs and rights of the target population and the underlying causes of their conditions of poverty and social injustice. It should also examine the opportunities and risks inherent in the potential interventions.

The diagnostic assessment and subsequent analysis should be based upon a clear frame of reference and include an analysis of problems and their causes from a range of perspectives including institutional as well as opportunity analysis. Social analyses could examine how needs and rights are related to gender, social class, ethnicity, religion, etc. The analysis should lead to an understanding of institutional capacity, power relationships, and the exercise of rights and responsibilities, as well as household level conditions.

5. use a logical framework that explains how the project will contribute to an ultimate impact upon the lives of members of a defined target population.

The project plan should be clearly summarized in a logical framework that shows how proposed interventions and anticipated outputs will result in defined effects and impact. It should specify level of intervention (household, community, institutional, societal) and how the project will ultimately contribute to sustainable impact for a specific target population. It should identify key assumptions and provide validation for its central hypothesis.

6. set a significant, yet achievable and measurable final goal.

A project final goal must be achievable and measurable during the life of the project. This calls for project designers to clearly define what the project will be held accountable for achieving. It should be practical and do-able, yet be at the outcome level (intermediary impact or at least effect) rather than output level.

A project final goal must also be clearly and explicitly linked to, and significantly contribute to, "higher level" programme or strategic goals. Programme goals should address underlying causes of poverty and social injustice, but their impact – "equitable and durable improvements in human wellbeing and social justice" – should be ultimately manifest at the household or individual level.

7. be technically, environmentally, and socially appropriate. Interventions should be based upon best current practice and on an understanding of the social context and the needs, rights and responsibilities of the stakeholders.

The project must be designed in a way that is likely to make a significant and positive difference, with minimal undesired social or environmental consequences. Interventions must make reference to technical or sectoral experience or standards, developed by CARE or others, to demonstrate the viability of their approach. Environmental analysis could include assessment of current status, analysis of potential impact, and regional environmental issues. These may require technical appraisal by those with expertise in the relevant professions.

8. indicate the appropriateness of project costs, in light of the selected project strategies and expected outputs and outcomes.

Programme designers must be able to defend the budget of a project relative to its outputs, scale and anticipated impact. Also, the M&E plan should include methods for measuring cost effectiveness, i.e., to demonstrate that the costs of project interventions are reasonable and commensurate with the outputs and outcomes achieved.

9. develop and implement a monitoring and evaluation plan and system based on the logical framework that ensures the collection of baseline, monitoring, and final evaluation data, and anticipates how the information will be used for decision making; with a budget that includes adequate amounts for implementing the monitoring and evaluation plan.

M&E plans should provide sufficient detail to clearly identify evaluation design, sources of data, means of measurement, schedule for measurement, data processing and analysis, dissemination of information to and utilization by key stakeholders, and responsibilities for each of these processes. Sufficient budget should be allocated for designated tasks, and planning should ensure that CARE staff and partners have the capacity required for their implementation. Monitoring information should be useful and timely to promote reflective practice, for management decision-making, and for adapting project approaches and strategies. M&E plans should incorporate methods to measure risks and assumptions and to track unintended effects.

10. establish a baseline for measuring change in indicators of impact and effect, by conducting a study or survey prior to implementation of project activities.

There needs to be a distinction between a diagnostic assessment and a baseline study. The former gathers a little information about many conditions and is used to inform project design. A baseline study, on the other hand, should focus on measuring indicators of effect and impact with a level of rigor required for a "before-and-after" comparison with evaluation. Baseline studies can use qualitative as well as quantitative data, as long as they describe the initial situation with sufficient precision to be able to clearly measure changes over the life of the project.

11. use indicators that are relevant, measurable, verifiable and reliable.

Indicators should be capable of yielding data that can be disaggregated to the individual level according to criteria that reveal vulnerabilities, such as gender, age and social class. Both qualitative and quantitative measures are acceptable as long as they can illustrate discernible and significant change. For indicators to be reliable denotes that they are robust and will be useful and credible throughout the life of the project. CARE should draw upon the international development community's great wealth of experience with indicators.

12. employ a balance of evaluation methodologies, assure an appropriate level of rigor, and adhere to recognized ethical standards.

Evaluation should be incorporated as standard practice as a basis for accountability and for documented, institutionalized learning. Although various forms of evaluation should be planned, such as internal or external, formative (mid-term) or summative (final) or even ex

post (to evaluate sustainability), the minimum is that there should be at least a final evaluation that summarizes the achievements and lessons learned by the project.

Diagnostic assessments, baseline studies, monitoring, and evaluations should utilize a balance of methodological approaches to ensure triangulation, a richness of data, and mutual modifications. Evaluations should assure appropriate levels of rigor and precision in their designs and selection of methodologies. Informant confidentiality should be protected. Each evaluation event should draw upon previous ones and anticipate subsequent events. Evaluation processes must be documented and carefully archived, allowing subsequent project phases to replicate methods and draw upon comparative data.

13. be informed by and contribute to ongoing learning within and outside CARE.

It is critical that relevant research and previous project evaluations inform the initial proposal preparation stage. More than that, learning should also apply throughout the life of a project and beyond. The lessons learned from a project should be adequately documented for utilization in the design of other projects. Project management should support the documentation of project processes, including re-designs. Reflective practice, such as the regular use of monitoring data, should be built into every project. Learning should be an organization-wide priority supported by frequent meta-evaluations.

Annex 2.1: Operating Environment–Analysis Themes

Sectors Themes	Small business development sector	Health sector	Agriculture/natural resource management sector	Education sector
Target group	*Demographic Characteristics* *Age and Gender;* *Education and literacy;* *Race/religion/ethnic background* *Economic Activities* *Significant goods and services;* *Scope of operations and sales;* *Time in operation of businesses* *Cultural Characteristics* *Business traditions or customs;* *Cultural and group cohesion;* *Attitudes towards credit, improved technology, etc.*	*Demographic Characteristics* • Age and Gender • Education and literacy • Race/religion/ethnic background • Family status *Economic Status* • Distribution of household wealth/income • Economic activities and sources of household income • Household expenditures *Cultural Characteristics* • Cultural traditions and attitudes regarding health themes • Customs related to health care and disease prevention	*Demographic Characteristics* • Age and gender • Education and literacy • Race/religion/ethnic background • Family status *Economic Characteristics* • Distribution of household wealth/income • Economic activities and sources of household income • Household expenditures *Cultural Characteristics* • Traditions or customs related to agriculture and natural resources • Cultural or group cohesion	*Demographic Characteristics* • Age and Gender • Education and literacy • Race/religion/ethnic background • Family status *Economic Status* • Profile/spread/distribution or relative household wealth/income • Economic activities and sources of household income • Household expenditures *Cultural Characteristics* • Cultural traditions and attitudes regarding formal education
Environment	*Economic Environment* • Current inflation rate and historic trends; • Current economic growth rate and historic trends *Accessibility* • Transport and communications infrastructure; • Urban/rural population densities *Market Environment* • Market structure; • Local, regional and external opportunities; • Cash or barter economy *Government Policies* • Small business regulations; • Financial sector regulations; • Subsidies and tax policies; • Import and export restrictions	*Significant Endemic Diseases* • Diseases and frequency of occurrence • Historic trends • Demographic groups most affected *Other Major Health Concerns* • Concerns (e.g., malnutrition, accidental injury, etc.) and frequency of occurrence • Historic trends • Demographic groups most affected	*Economic Environment* • Local markets for farm and forest products • Access to regional and international markets *Agricultural Sector* • Major and secondary crops; cropping system • Water availability and access • Access to fertilizers, pesticides and other inputs • Plant pest problems *Livestock Sector* • Chief livestock types and husbandry methods • Animal disease problems • Uses of animal products; Exploiting fish or game *Forest and Range* • Distance and access to communal forest and range land • Distance to and relationship with national parks or protected areas • Common plant species and their uses *Government Policies* • Land tenure policies or customs • Restrictions on use of natural resources	*Accessibility* • Distance and accessibility to educational institutions • Access issues related to gender, race or other demographic characteristics *School Environment* • Physical quality of schools and infrastructure • Existence and status of libraries, laboratories, school gardens, etc. *Instruction* • Training and experience of teachers • Availability of textbooks and other materials • Teacher/student ratios *Government Policies* • National attendance and performance standards • National curricula and testing
Existing sources of services	*Types of Partners* • Non-governmental organizations • Financial institutions • Business or commodity associations • Government agencies • Federation of community-based organizations (CBOs) *Inventory of Services* • Government and non-government • Credit institutions	*Types of Health-care providers* • Government hospitals and clinics • Private hospitals and clinics • Individual doctors, nurses, midwives • Pharmacies • Traditional healers *Accessibility of Services* • Distance, means of transport to care • Cost of services relative to income levels • Availability and cost of key medications	*Types of Partners* • Governmental and non-governmental extension services • Commodity associations • Sales outlets of inputs and materials • Veterinary services	*Types of Partners* • Government schools and educational institutions • Private or religious schools • Community schools • Gov't agencies or NGOs in education • Parent-teacher associations *Inventory of Services* • Assessment of governmental and non-governmental work in education

Annex 2.2: A Needs Assessment Case Study

A project design team composed of staff from the Laafas Ministry of Health and CARE/Laafas conducted an analysis of major health problems in rural areas. Preliminary surveys identified excreta/water-related disease as a significant problem. Among the major conditions linked to this problem were contaminated water sources, poor personal and domestic hygiene practices, and under-use of latrines. Before strategies could be developed to solve the problem and its major causes, the design team conducted a needs assessment.

The first step in the needs assessment was to establish some sort of national norm against which to compare conditions in the project areas. To do this, the design team interviewed Ministry of Health (MOH) officials and reviewed MOH policy documents regarding disease, water supply and sanitation, and health education. Once norms were established, the design team decided to gather statistics in order to compare disease rates in the project areas to similar areas and the national averages. After data from MOH surveys and previous project documents and evaluations had been collected and analyzed, the following results of the secondary data review were produced.

Results of secondary data review

Disease	Project	Region 1	Region 2	National
Amoebic dysentery	>50	<25	>55	35
Ascariasis	>30	<15	>48	26
Shigellosis	>28	>54	>46	32
Diarrhea	>73	>45	>80	39
E. coli	>60	>50	>62	45
Giardiasis	>46	>45	>50	20
Rotavirus	>56	>43	>61	31
Scabies	>58	>25	>52	18
Tineas	>38	>30	>41	29
Louse-borne Fever	>40	>12	>12	7
Conjunctivitis	>72	>78	>78	40

Since reliable water-quality data were not available, the planning team sent several field staff to take water samples from communities in the project area and two adjacent regions. National averages regarding water quality were not available. Concurrently, also due to the lack of statistics regarding latrines and hygiene practices, the planning team developed a short questionnaire and observation guide, trained field staff, and conducted the survey in the communities mentioned above. For this survey, drinking water stored in a clean and protected container was used as an indicator of other domestic and hygiene practices. The data provided represent the results of surveys conducted in villages chosen at random in the project zone and in Regions 1 and 2.

Results of water survey

Topic	Project	Region 1	Region 2	National
Water Quality (coliform bacteria per 100 ml water)	35,040 (range from 200 to 100,000)	2,913 (range from 50 to 10,000)	75,600 (range from 2,000 to 300,000)	N/A
% access to latrine	10	35	8	52
% proper water storage	7.4	27.8	4.8	34

In the last phase of the needs assessment, the design team decided to find out how the residents of the project areas perceived the problem and its causes. The question was, is the residents' perception of the problem the same as the external investigators and do they see the need to try and solve it? To gather this supplemental data, the team used a combination of focus group sessions, conversational and open-ended interviewing, and Knowledge, Attitudes and Practices (KAP) surveys. From the data generated, the team summarized the answers as follows.

Results of perception and behavior study

GENERAL QUESTION #1: What is the residents' perception of the importance and magnitude of the various water- and excreta-related diseases?

A small percentage linked diarrhea to water-based diseases, while most felt that it was linked to foods being eaten, moods or behavior or acts of God. There was a significant level of fatalism regarding the community's ability to solve the problem.

GENERAL QUESTION #2: Do the residents of the project areas believe the water source is contaminated and causes disease?

Almost all respondents felt that the water was of good quality. The problem for some was difficult access. They advocated a piped water supply in homes.

GENERAL QUESTION #3: Do residents in the project areas connect poor hygiene practices to disease?

Poor hygiene was not felt to contribute to disease. In fact, some felt that bathing too often was bad for your health.

GENERAL QUESTION #4: Do residents think latrines are important in preventing disease transmission?

No, although many did not like the unpleasant odor caused by public defecation.

Case Study Practice Questions

Before the design team can continue the design process, it must review information from the National Averages and answer important questions. Pretend the planning team has asked you to answer the following questions:

- *How well does the needs assessment substantiate the problem and identify its causes in the project areas?*
- *Is there sufficient need in the project areas to warrant intervention (to address the problem and its causes)? Why?*
- *What information has been obtained regarding felt, relative and normative needs, and how should that information be used in designing a project?*
- *Based on the results of the needs assessment, what recommendations would you make to the planning team at this point in the design process?*

From: Caldwell 1999

Annex 2.3: Wealth Ranking example

Wealth Ranking –from Livelihood Profiles by Chikhutu Village Women

	Category 1 Very poor	Category 2 Poor	Category 3 Better off	Category 4 Well-to-do
Food/diet	Maize husks, okra, wild vegetables; 1 meal per day	Nsima, beans, fish, vegetables, 1 meal per day	Nsima beans, fish, vegetables, 2 meals per day	Nsima, tea, rice porridge for breakfast, meat, fish, eggs, vegetables, 2 meals per day
Clothing	Wear rags	Have one set of clothing One piece of cloth	Change cloths Wash clothes with soap	Change clothing frequently.
Livestock	None	Usually have small chicken	One goat One chicken	Usually have cattle, goats, pigs, chicks, sheep, pigeons
Education	No education Not gone to school	Very little education Standard 4/5	Usually reached Standard 8	Usually reached Form 4 and are working
House structure	Live in abandoned house No kitchen, toilet or bathroom	House thatched with grass One room to sleep in No kitchen, toilet or bathroom	Houses have kitchen, toilet and bathroom	Roofed with iron sheets Maintained with cement Kitchen, bathroom and toilet
Bedding	Usually cover themselves with meal sacks	Usually cover themselves with one chitenge which is also worn during the day	Have at least one blanket	Sleep on a bed with a mattress and enough blankets to keep warm
Access to water	Use a clay pot Get water from where pigs bath	Use can with a hole to collect water; have to mend can using mud. Get water from shallow well	Draw water using good buckets Wells are personal	Water from borehole Personal boreholes Locked up when not in use
Size of field	Fields usually less than 1 acre	Usually have fields that are between 1-2 acres	Usually have fields that are between 2-3 acres	Large piece of land Have farm, Lots of tools Have husks to give to the poor
Yields from crops	No yield	A bit or very little	Harvest one granary of maize per season	Harvest variety of crops Three granaries of maize.
Types of crops grown	No seed Grow nothing	Grow a bit of maize and g/nuts No fertilizer	Grow maize, tobacco, soya beans Have a vegetable garden	Grow maize, tobacco, g/nuts, beans, soya, sweet potatoes, vegetable and a variety of other crops
Possessions (assets)	Have a clay pot A few plates	Have two plates One cooking pot (small)	Two cooking pots At least four mats	Beds for all the family Ox –cart, Buckets, Cupboard, Table, Plates, Bicycle, Other household items
Employment	Piecework, e.g., working on someone's farm, pounding maize.	Piecework similar to first category, but more regular	Look after house, e.g., sweeping and farming	Several workers, and house servant
Food stocks	Have no food	Same as first category	Have very small granary; Eat grasshoppers	Have 2-3 granaries full of maize. Have g/nuts, tobacco, cowpeas, soya beans, and others in store

CARE Zambia, 1999

Annex 2.4: Glossary of Tools

(From The World Bank Participation Sourcebook)

Each of the methods described in this chapter is a combination of tools, held together by a guiding principle. Dozens of exercises exist to cultivate collaborative development planning and action. These are the tools with which social scientists and other development practitioners encourage and enable stakeholder participation. Some tools are designed to inspire creative solutions; others are used for investigative or analytic purposes. One tool might be useful for sharing or collecting information, whereas another is an activity for transferring that information into plans or actions. These brief descriptions are intended to provide the reader with a glossary of terminology that practitioners of participatory development use to describe the tools of their trade.

Ω *Access to resources.* A series of participatory exercises that allows development practitioners to collect information and raises awareness among beneficiaries about the ways in which access to resources varies according to gender and other important social variables. This user-friendly tool draws on the everyday experience of participants and is useful to men, women, trainers, project staff, and field-workers.

Ω *Analysis of tasks*. A gender analysis tool that raises community awareness about the distribution of domestic, market, and community activities according to gender and familiarizes planners with the degree of role flexibility that is associated with different tasks. Such information and awareness is necessary to prepare and execute development interventions that will benefit both men and women.

Ω *Focus group meetings*. Relatively low-cost, semi-structured, small group (four to twelve participants plus a facilitator) consultations used to explore peoples' attitudes, feelings, or preferences, and to build consensus. Focus group work is a compromise between participant observation, which is less controlled, lengthier, and more in-depth, and preset interviews, which are not likely to attend to participants' own concerns.

Ω *Force field analysis.* A tool similar to one called "Story With a Gap," which engages people to define and classify goals and to make sustainable plans by working on thorough "before and after" scenarios. Participants review the causes of problematic situations, consider the factors that influence the situation, think about solutions, and create alternative plans to achieve solutions. The tools are based on diagrams or pictures, which minimize language and literacy differences and encourage creative thinking.

Ω *Health-seeking behavior.* A culturally sensitive tool for generation of data about health care and health-related activities. It produces qualitative data about the reasons behind certain practices as well as quantifiable information about beliefs and practices. This visual tool uses pictures to minimize language and literacy differences.

Ω *Logical Framework or logframe.* A matrix that illustrates a summary of a project design, emphasizing the results that are expected when a project is successfully completed. These results or outputs are presented in terms of objectively verifiable indicators. The Logical Framework approach to project planning, developed under that name by the U.S. Agency for International Development, has been adapted for use in participatory methods such as ZOPP (in which the tool is called a project planning matrix) and TeamUP.

Ω *Mapping.* A generic term for gathering in pictorial form data on a variety of indicators. This is an excellent starting point for participatory work because it gets people involved in creating a visual output that can be used immediately to bridge verbal communication gaps and to generate lively discussion. Maps are useful as verification of secondary source information, as training and awareness raising tools, for comparison, and for monitoring of change. Common types of maps include social maps, health maps, institutional maps (Venn diagrams), and resource maps.

Ω *Needs assessment.* A tool that draws out information about people's varied needs, raises participants' awareness of related issues, and provides a framework for prioritizing needs. This sort of tool is an integral part of gender analysis to develop an understanding of the particular needs of both men and women and to do comparative analysis.

Ω *Participant observation.* A fieldwork technique used by anthropologists and sociologists to collect qualitative and quantitative data that leads to an in-depth understanding of peoples' practices, motivations, and attitudes. Participant observation entails investigating the project background, studying the general characteristics of a beneficiary population, and living for an extended period among beneficiaries, during which interviews, observations, and analyses are recorded and discussed.

Ω *Pocket charts.* Investigative tools that use pictures as stimuli to encourage people to assess and analyze a given situation. Through a "voting' process, participants use the chart to draw attention to the complex elements of a development issue in an uncomplicated way. A major advantage of this tool is that it can be put together with whatever local materials are available.

Ω *Preference ranking.* Also called direct matrix ranking, an exercise in which people identify what they do and do not value about a class of objects (for example, tree species or cooking fuel types). Ranking allows participants to understand the reasons for local preferences and to see how values differ among local groups. Understanding preferences is critical for choosing appropriate and effective interventions.

Ω *Role-playing.* Enables people to creatively remove themselves from their usual roles and perspectives to allow them to understand choices and decisions made by other people with other responsibilities. Ranging from a simple story with only a few characters to an elaborate street theater production, this tool can be used to acclimate a research team to a project setting, train trainers, and encourage community discussions about a particular development intervention.

Ω *Seasonal diagrams or seasonal calendars.* Show the major changes that affect a household, community, or region within a year, such as those associated with climate, crops, labor availability and demand, livestock, prices, and so on. Such diagrams highlight the times of constraints and opportunity, which can be critical information for planning and implementation.

Ω *Secondary data review.* Also called desk review, an inexpensive, initial inquiry that provides necessary contextual background. Sources include academic theses and dissertations, annual reports, evaluation reports, archival materials, census data, life histories, maps, project documents, and so on.

Ω *Semi-structured interviews.* Also called conversational interviews, interviews that are partially structured by a flexible interview guide with a limited number of preset questions. This kind of guide ensures that the interview remains focused on the development issue at hand while allowing enough conversation so that participants can introduce and discuss topics that are relevant to them. These tools are a deliberate departure from survey-type interviews with lengthy, predetermined questionnaires.

Ω *Sociocultural profiles.* Detailed descriptions of the social and cultural dimensions that in combination with technical, economic, and environmental dimensions serve as a basis for design and preparation of policy and project work. Profiles include data about the type of communities, demographic characteristics, economy and livelihood, land tenure and natural resource control, social organization, factors affecting access to power and resources, conflict resolution mechanisms, and values and perceptions. Together with a participation plan, the socio-cultural profile helps ensure that proposed projects and policies are culturally and socially appropriate and potentially sustainable.

Ω *Surveys.* A sequence of focused, predetermined questions in a fixed order, often with predetermined, limited options for responses. Surveys can add value when they are used to identify development problems or objectives, narrow the focus or clarify the objectives of a project or policy, plan strategies for implementation, and monitor or evaluate participation. Among the survey instruments used in Bank work are firm surveys, sentinel community surveillance, contingent valuation, and priority surveys.

Ω *Tree diagrams.* Multipurpose, visual tools for narrowing and prioritizing problems, objectives, or decisions. Information is organized into a treelike diagram that includes information on the main issue, relevant factors, and influences and outcomes of these factors. Tree diagrams are used to guide design and evaluation systems, to uncover and analyze the underlying causes of a particular problem, or to rank and measure objectives in relation to one another.

Ω *Village meetings.* Meetings with many uses in participatory development, including information sharing and group consultation, consensus building, prioritization and sequencing of interventions, and collaborative monitoring and evaluation. When multiple tools such as resource mapping, ranking, and focus groups have been used, village meetings are important venues for launching activities, evaluating progress, and gaining feedback on analysis.

Ω *Wealth ranking.* Also known as wellbeing ranking or vulnerability analysis, a technique for the rapid collection and analysis of relative data on social stratification at the community level. This visual tool minimizes literacy and language differences of participants as they consider factors such as ownership of or use rights to productive assets, lifecycle stage of members of the productive unit, relationship of the productive unit to locally powerful people, availability of labor, and indebtedness.

Ω *Workshops.* Structured group meetings at which a variety of key stakeholder groups, whose activities or influence affect a development issue or project, share knowledge and work toward a common vision. With the help of a workshop facilitator, participants undertake a series of activities designed to help them progress toward the development objective (consensus building, information sharing, prioritization of objectives, team building,

and so on). In project as well as policy work, from preplanning to evaluation stages, stakeholder workshops are used to initiate, establish, and sustain collaboration.

For more information on these and similar M&E tools and methodologies, see the bibliography at the end of this handbook.

Annex 3.1: Causal Analysis Practice Exercises

Differentiating among problems, causes and consequences[33]

For each of the following three exercises, review each of the categories and mark what you believe to be the problem (P), causes of the problem (CA), and consequences of the problem (CO). Note that a project should focus on only one problem.

Practice Exercise #1

1. Most people in the village have a very low income. ___
2. Men and older children have access to more nutritious food than women and young children. ___
3. Most children in the village are malnourished. ___
4. There is no nutrition education program in the village. ___
5. Young children become susceptible to infectious disease, especially diarrhea. ___
6. Many of the men spend their income on alcohol instead of food for the family. ___
7. Children do not develop normal cognitive skills. ___

Practice Exercise #2:

1. Diet is poor and income is low in households headed by single women. ___
2. Children in these households are less likely to attend school. ___
3. Women are excluded from community decision-making. ___
4. Widows do not inherit the lands of their husbands. ___
5. Schools are overcrowded, and girls are usually the last to be enrolled. ___
6. Culture and tradition dictate a male-dominated society. ___
7. Infant mortality is high in women-headed households. ___

[33] Note: These exercises are good training tools for use in project design workshops. It is even more useful to put each of the category statements on a separate card so that the trainees can physically re-arrange them in logical hierarchical order.

Practice Exercise #3

Repeat the exercise with this list. Mark the problem, its causes and consequences with P, CA, and CO.

1. Community farming is conducted on distant lands, even though water sources are nearby. ___
2. Plagues and diseases are affecting crops. ___
3. Agricultural work is performed with rudimentary tools. ___
4. Farming plots are small. ___
5. The farming soils are poor. ___
6. Family income is low. ___
7. Young men migrate to the provincial capital. ___
8. Consumption of foods high in protein is deficient. ___
9. Male farmers drink too much. ___
10. The seeds used for planting are of low quality. ___
11. Traders buy the products directly from the farmers at lower than market prices. ___
12. Farmers are not familiar with improved cropping practices. ___
13. Land productivity is low. ___
14. Adequate agricultural credit is not available for these farmers. ___
15. Farmers grow only for household consumption. Little surplus remains for marketing. ___

Practice Exercise #4: Causal Analysis Card Game

This is one of the most successful games for introducing hierarchical causal analysis. Each team will receive a set of identical cards. On each card is a statement that reflects a problem, cause or consequence. There is only one problem in the set of cards.[34]

Step 1. Lay out all of the cards and try to determine which card reflects the problem. (To give a hint, the correct problem card could be written in a slightly different style.)

Step 2. Next, try to separate the cards into conditions, behaviors, knowledge/attitude, systemic conditions, general factors, and consequences.

Step 3. Determine which cards are consequences of the problem and place them above the problem.

Step 4. To simplify things for trainees, there should only be three primary causes for the problem. Ask yourself "What are the most immediate causes (conditions) that would lead to the problem?" Avoid choosing statements that leave too much of a logic gap between the condition and the problem.

Step 5. For each primary cause there will be two secondary causes. Keep asking yourself what is the most immediate cause that would lead to the next highest level.

Step 6. Repeat this process until you have placed all of the cards on the hierarchy model. Now check your logic by doing the "If: Then" technique. E.g., If X were improved and Y assumption held true, then Z (effect) would be achieved.

[34] The categories statements from exercises #1, #2 and #3 could also be used for this group exercise. Or make up your own exercise, using categories that are typical of those in the kinds of projects the trainees are likely to be involved in designing.

Practice Exercise #5: Creating a Causal Tree

Create a causal tree using the following list of problems, causes and consequences. The tree can be drawn on a surface such as poster paper or assembled by writing the statements on index cards and organizing them as appropriate.

1. Most children in the village have diarrhea.
2. The drinking water source is contaminated.
3. Children are not eating properly.
4. Houses do not have screens to keep out flies.
5. There are no latrines in the village.
6. Men and adult women have the first choice of limited food.
7. Insects frequently contaminate food supplies.
8. Excessive family expenses dedicated to hospitals and funerals.
9. Young children lose large amounts of body fluid and become dehydrated.
10. High chronic child mortality.
11. There are no vegetables available in the market for half the year.
12. Villagers do not understand connection between poor hygiene and illness.

Practice Exercise #6: Analyzing Problem Trees

In this handbook and in the above exercises you can find sample problem trees from different sectors. The information included in these analyses has been adapted from materials produced during actual causal analyses for projects. These should be similar in appearance to the problem tree you created in the practical exercise #3. As you peruse each sample and the problem tree you created ask yourself the following questions.

1. Is each cause-effect link logical?

2. Can causes be identified at each level in the causal analysis hierarchy (i.e., condition, behavior, knowledge/attitude/belief, and external factors)?

3. Are there causal streams that seem more significant with respect to their contributions to the problem (Pareto principle)?

4. Do some factors appear as causes in more than one causal stream? Which ones are they, and what is the significance of this?

Annex 3.2: Applying Appreciative Inquiry

Using Appreciative Analysis for Visioning

Visioning is about moving into the world of what is possible, instead of what chains us down. We look into the future and see the world as it might be, then step into the future to look back at the present to see what has to be changed to get there. It is about both revealing the potential for change, as well as creating the belief that it is achievable.

The purpose of visioning is to encourage communities to recognize their own capacities and the value of their own resources. The approach differs from standard problem solving in that it changes the focus from problems to opportunities and validates what is already available at the community level. It thus reduces the tendency for communities to look to external help. It changes the tone from one that is negative and paralyzing – one that focuses on what people don't have and are unable to achieve – to one that is positive and creative. This leaves both the programming team and the community feeling more empowered and energized.

The Appreciative Inquiry process includes four steps:

1) **Appreciative**: Value the best of what is: what is already there that the community can build on. This step generates a list of opportunities at the community level.

2) **Visioning**: Imagine what the community might look like in five years (not a wish list). This step should develop both individual/household level visions, and community level visions. The process uses both visual (mapping and diagramming) tools and brainstorming tools to develop lists of the elements of each vision. Focus on the five-year time frame and make the transition from individual to community visions help keep the process realistic.

3) **Contrasting**: Compare the visions with the present reality. What do we need to do to get to our vision state? This step helps groups assess the key difference between the vision and the present situation and guides groups into a phase of looking more concretely at what needs to change in order to attain the vision. Through discussion, groups can develop tables that compare key elements of the vision to the status of these elements in the present time. Then move to look at what needs to happen to get from the present to the state depicted in the vision. Strategies that are developed should be based on initiatives the community members can take, with specific and targeted outside support.

4) **Constructing**: Identify first practical steps to attaining the vision. This step involves developing more detailed action steps on what needs to happen to get from the present to the state depicted in the vision.
It may be helpful for this exercise to be conducted by sub-groups within a community (e.g. women, women, young people, older people, different socio-economic groups, etc.) to allow each to identify visions and strategies that are meaningful to each. At the end of the exercise, all groups should present their findings and discuss their respective visions.

Annex 4.1: Project Hypothesis

Converting the Problem and its Key Causes to Anticipated Outcomes

Environmental Degradation Example

Problem: High rates of deforestation in Monterrico Province

Primary Causes: Illicit felling of commercially-valued trees
Use of slash and burn agricultural practices

Anticipated outcomes of project:

(1) Deforestation rates will decrease (Problem solved)
(2) Farmers' will change their agricultural practices (Cause #1)
(3) Illicit felling of trees will decline (Cause #2)

Project Hypothesis Diagram *(read from bottom up)*

	Hypothesis Outcomes	**Assumptions/Key Questions**
THEN	Deforestation rates in Monterrico Province will decline by 2001.	
IF	Illicit felling of commercially valued trees decreases.	AND no additional causes of deforestation appear (*assumption*)
	AND	
IF	Slash and burn cropping decreases.	
Cause 1:		
THEN	Land area reforested with fuel wood species will increase.	
IF	New forestry policies are enacted against illegal felling of trees	AND policies are enforced (*assumption*)
Cause 2:		
THEN	Slash and burn cropping will decrease.	
IF	Sustainable agricultural practices adopted.	AND there is a sustainable source of seeds and planting materials (*key question*)

Annex 5.1: Goals and Indicators for an Agricultural Project

Impact Goal:
By the end of 2007, 800 small farm families in the Rio Blanco community will have increased their incomes by 20%.

Impact Indicator: average income in target households

Effect objective #1:
800 small farmers in the Rio Blanco community will use improved seeds and proper cropping techniques on potato, and wheat fields by the end of the project.

Indicator #1: % of the farmers that use improved seed and used recommended cropping techniques for their potato crops.

Indicator #2: % of the farmers that use improved seeds and used recommended cropping techniques for their wheat crops.

Effect objective #2:
Each community participating in the project organizes and efficiently manages a communal seed fund by the end of the first year of project intervention.

Indicator #1: # of communities with communal seed funds.

Indicator #2: % of communal fund groups that have prepared and approved rules

Indicator #3: % of communal fund groups that enforce the rules for communal fund management.

Indicator #4: % of participating farmers with enough seed to plant at least the same number of hectares in the following campaign through the communal fund.

Effect objective #3:
75% of farmers from 9 communities in Rio Blanco Province will have established agroforestry systems on their lands by December 2004.

Indicator #1: % of farmers who have planted two or more varieties of trees in their fields.

Indicator #2: % of the trees planted as part of agroforestry systems practices that are surviving two years after planting

Note: These are aggregate effect indicators. More specific variables (objectively verifiable indicators) will be needed to know how to measure these with more precision, including clarity on what the denominator is for each rate (%) indicator.

Annex 5.2: Goals and Indicators for a Small Business Development Project

Impact Goal:

To increase by 20% the income of 9,000 women members of the Dominica communal kitchens of the urban marginal zones, by September 2007.

Impact Indicator: % increase in income of the 9,000 project beneficiaries.

Effect objective #1:
Effective Revolving Credit Funds (RCF) are established in selected communes by 2004 in order to develop small economic initiatives for income generation.

Indicator #1:	# of women's organizations, members of the Dominica community kitchens, who receive loans through the RCF.
Indicator #2:	# of Credit Committees (CC) established to manage the RCFs.
Indicator #3:	% of the established CCs that keep a registry of the RCFs showing clearly recorded and controlled operations.
Indicator #4:	% of the participant women who receive approval or denial of loans 8 days after submitting an application.
Indicator #5	loan repayment rate: % of borrowers who reimburse their loans on schedule

Effect objective #2:
By September 2003, 9,720 women borrowers in enterprise management are effectively managing their small enterprises.

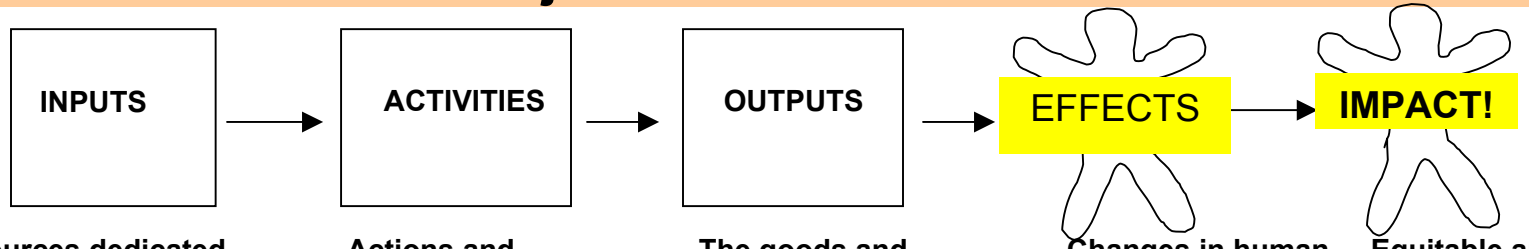
Indicator #1:	% of women borrowers actively engaged in small enterprise.
Indicator #2:	% of women able to sell their products in the market.
Indicator #3:	Success rate of small enterprises (# of enterprises at end of project divided by # of enterprises established during project).
Indicator #4:	% of enterprises that maintain income and expense records as part of an adequate enterprise management system.
Indicator #5	% of enterprises reporting profit

Annex 5.3: Indicators at Different Levels in the Project Hierarchy

Sector	Reproductive Health	Agriculture and Natural Resources	Small Economic Activities	Water
IMPACT (fundamental change in human condition)	% change in fertility rate	% households producing enough food to cover lean periods % children <5 malnourished	% change in net household income value of new assets purchased	% of households reporting diarrheal incidence # of visits/child/year to clinic
EFFECT (changes in systems or behaviors)	# new FP acceptors # couple-years of protection	% households adopting new crop technology # of trees planted by farmers	# household IGAs with increased working capital # clients participating in savings program	% of households using clean water # of committees conducting routine inspections
OUTPUT (goods and services produced by the project)	# of methods distributed # of FP practitioners trained # of IEC materials distributed	# of farmer groups formed # of extension workers trained lbs of seed distributed	# clients receiving credit # of credit institutions established # of loan guidelines distributed	# of new water systems installed # of water management committees established
ACTIVITIES (convert inputs to output)	# talks given # home visits conducted # counseling sessions held # IEC campaigns conducted	# staff visits to farm communities # training sessions held	# staff visits to organize communities # village bank training sessions held	# of communities needing water identified # organized to undertake water system installation
INPUTS (resources used)	grants, contracts, donations, time, materials, in-kind contributions, labor, commodities			

From CARE USA API Framework 1997.

Annex 5.4: CARE's Project Outcome Model



Resources dedicated to or consumed by the project

e.g.,
- money
- staff and staff time
- resources
- facilities
- equipment and supplies

Actions and processes that convert inputs into outputs

e.g.,
- training
- organizing
- advocating
- construction
- counselling
- communications

The goods and services resulting from project activities

e.g.,
- latrines constructed
- partner staff trained
- seedlings planted
- CBOs created
- number of pamphlets distributed
- policy advocacy statements issued

Changes in human behavior or in the existence and quality of systems

e.g.,
- empowered CBOs and individuals
- use of acquired knowledge
- changed attitudes or values
- modified behaviors
- improved quality of health care system
- new policies adopted and enforced
- duty barers' fulfillment of their responsibilities

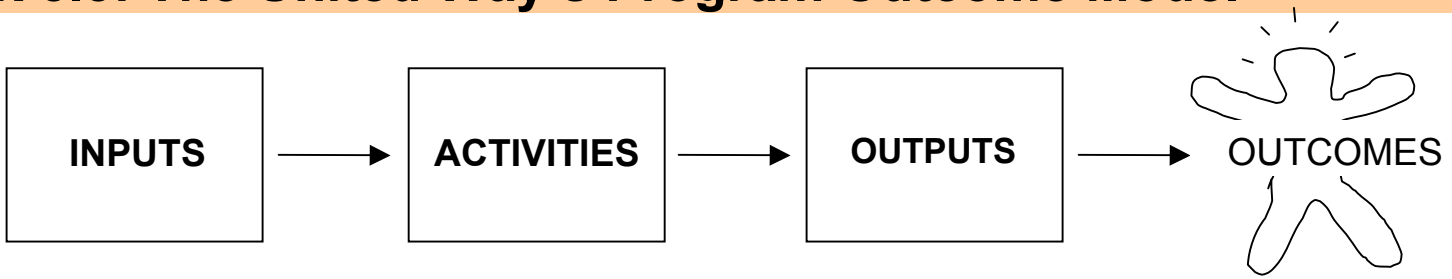
Equitable and durable improvements in human wellbeing and social justice

e.g.,
- improved HLS
- improved health status
- increased income
- improved condition
- altered status
- empowered community
- rights fulfilled

External factors (assumptions)
e.g.,
- law, regulations, donor requirements
- interventions of other agencies

Layout After United Way, 1996

Annex 5.5: The United Way's Program Outcome Model



Resources dedicated to or consumed by the program

e.g.,

- money
- staff and staff time
- volunteers and volunteer time
- facilities
- equipment and supplies

Constraints on the program

e.g.,

- laws
- regulations
- funders' requirements

What the program does with the inputs to fulfill its mission

e.g.,

- feed and shelter homeless families
- provide job training
- educate the public about signs of child abuse
- counsel pregnant women
- create mentoring relationships for youth

The direct products of program activities

e.g.,

- number of classes taught
- number of counselling sessions conducted
- number of educational materials distributed
- number of hours of service delivered
- number of participants served

Benefits for participants during and after program activities

e.g.,

- new knowledge
- increased skills
- changed attitudes or values
- modified behavior
- improved condition
- altered status

United Way, 1996

Annex 5.6: Canadian Performance Framework

Mission Statement: Who does what to whom and why				
HOW? (Resources)		**WHO? WHERE?** (Reach)	**WHAT do we want? WHY?** (Results)	
Activities	**Outputs**	**Reach**	**Direct Outcomes**	**Ultimate Impacts**
• Program/service management • Client management • Policy & issue management • Financial management • Human resource management • Asset management	Communications – plans/directives/regulations – internal communications – promotion – info transfer – consultations – meetings – *'events'* Service outputs	• Primary target (clients) • Co-delivery agents • Other 'stakeholders' Influencing factors	Client service: – addresses needs – meets/exceeds expectations – services satisfaction Behavioral influence – awareness – understanding – knowledge gain – attitude/ perception – decision – action	Target group outcomes Supplier/ industry Regional outcomes Economic/ societal outcomes

Montague, 1997

Annex 5.7: Classical 4X4 LogFrame

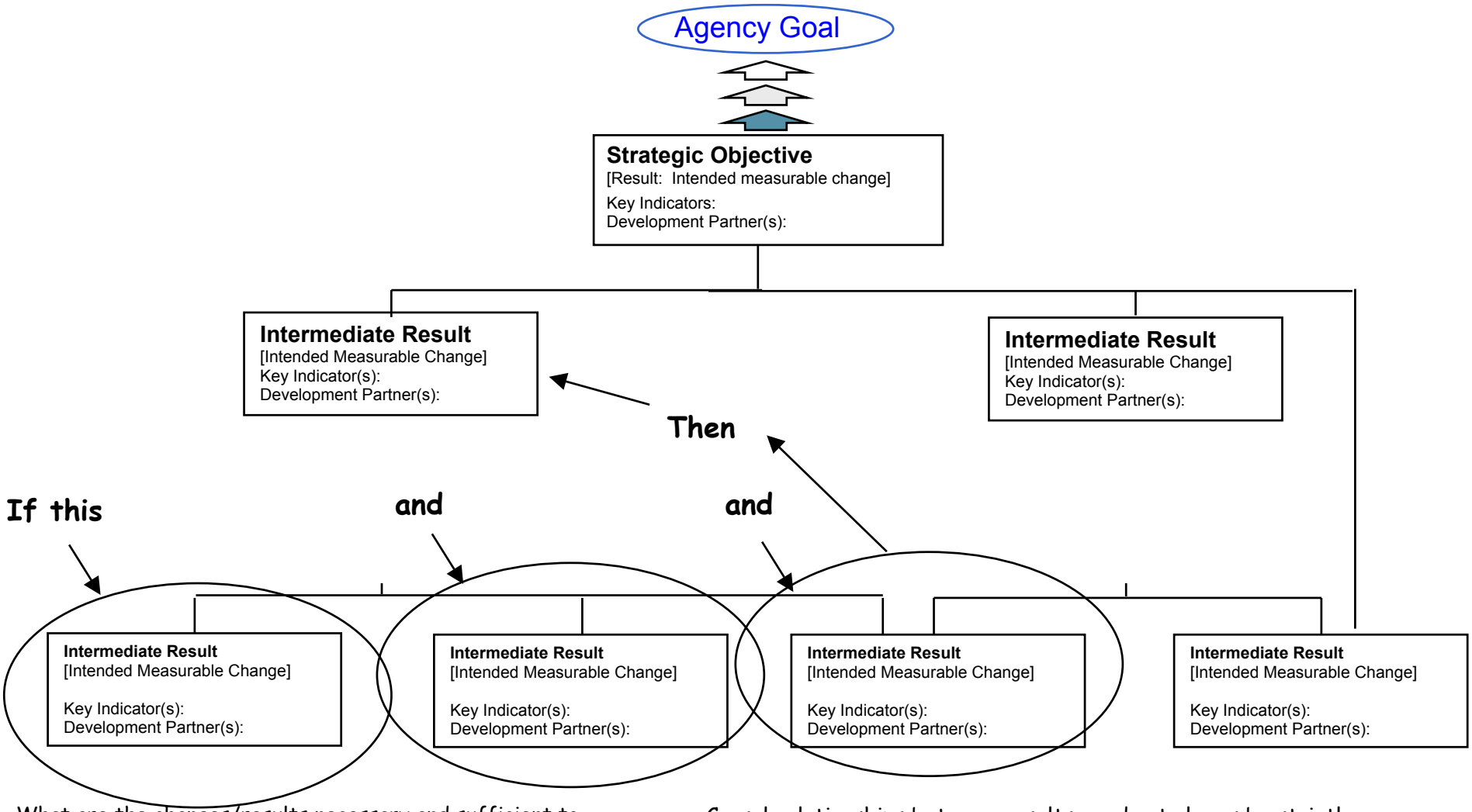
DFID LogFrame Guide[35]

Objectives	Measurable indicators	Means of verification	Important assumptions
GOAL: Wider problem the project will help to resolve	Quantitative ways of measuring or qualitative ways of judging claimed achievement of goal	Cost-effective methods and sources to quantity or assess indicators	(Goal to supergoal) External factors necessary to sustain objectives in the long run
PURPOSE: The immediate impact on the project area or target group, i.e., the change or benefit to be achieved by the project	Quantitative ways of measuring or qualitative ways of judging claimed achievement of purpose	Cost-effective methods and sources to quantity or assess indicators	(Purpose to Goal) External conditions necessary if achieved project purpose is to contribute to reaching project goal
OUTPUTS: These are the specifically deliverable results expected from the project to attain the purpose	Quantitative ways of measuring or qualitative ways of judging timed production of outputs	Cost-effective methods and sources to quantity or assess indicators	(Outputs to Purpose) Factors out of project control which, if present, could restrict progress from outputs to achieving project purpose
ACTIVITIES: These are the tasks to be done to produce the outputs	INPUTS: This is a summary of the project budget (sub-budgets and total)	Financial outturn report as agreed in grant agreement	(Activity to Output) Factors out of project control which, if present, could restrict progress from activities to achieving outputs

Source: DfID

[35] As received via CARE UK 12/97.

Annex 5.8: USAID Results Framework



What are the changes/results necessary and sufficient to get to the next "higher" level?

How do you achieve the "higher" level of results?

Causal relationships between results need not always be strictly hierarchical, i.e., an intermediate result on one "level" can contribute to the achievement of intermediate result on two or more "levels."

Source: USAID, 1999

Annex 5.9: Information for Monitoring Project Process

CATEGORIES OF INFORMATION	WHAT TO MONITOR	WHAT RECORDS TO KEEP	WHO COLLECTS DATA	WHO USES DATA	HOW TO USE INFORMATION	WHAT DECISIONS CAN BE MADE
Workplan Activities	Timing of activities Availability of personnel, resources	Monthly/Quarterly workplans Work schedules	Project Manager Supervisors	Project Manager Donor agency	Ensure staff and other resources are available Ensure proper sequencing	Reschedule activities and deployment of resources as needed
Costs and Expenditures	Budgeted amounts, funds on hand and expenditures accounted for Balance in budget by approved cost category	Ledger of expen-ditures by budget category Receipts Bank transactions Reports to donors	Financial officer/accountant Project Manager	Project Manager Financial Officer Auditor Donor agency	Ensure funds are available to execute activities Ensure compliance with funding regs If fee for service, determine fee structure	Authorize expenditures Make budget and project revisions Determine need for other funding sources
Staff and Supervision	Knowledge, attitudes and skills of staff Educational level of staff Salaries and benefits Job performance	Performance reviews Job descriptions Resumes of staff Feedback from training attended	Supervisors HR (Personnel) Director Trainers	Supervisors Project Manager HR Director	Motivate staff and resolve employment problems Advise staff on career	Placement Training needs Promotions Disciplinary actions
Commodities	Stock Ordering and shipment status Procurement regs	Stock registers Invoices Field reports	Logistics Manager Project Manager	Project Manager Donor agency	Ensure availability of commodities in stock and distribution in field Ensure condition	Quantity to order When to order Amount to keep in stock
Results (Outputs)	No. and type of services provided Characteristics of persons served/trained	Client cards/forms Clinic registers Field reports Training reports	CBD workers Clinic nurse Field supervisors	Field supervisor Project Manager Donor agency Community representatives	Ensure goals are realistic Assess quality of services provided Assess appropriateness	Revise objectives Retrain staff Revise IEC strategy Revise project strategy and approach

Adopted from CEDPA, 1994

Annex 5.10: Practical Exercise: *Writing Clear and Precise Goals*

INSTRUCTIONS–Identify the statements below that do not meet the criteria of SMART (clear) goals. How could they be corrected? Which statements are impact goals? Effect objectives? Planned outputs?

1. To increase the income of 1,000 rural farmers by 10% by August 2005.
2. To decrease the infant mortality rate by June 2003.
3. To increase the knowledge of 6,000 school children by April 2001.
4. To help 8,000 rural farmers produce more food.
5. To improve the living conditions of the urban population by 2001.
6. To strengthen the support system of 800 rural mothers by 2002.
7. To reduce the incidence of pertussis in the department of San Marcos from 70/1000 to 40/1000 by May 2004.
8. To establish 30 self-sustaining fishery cooperatives in the departments of Chimaltenango, Escuintla, and Livingston by January 2010.
9. To build 30 fish ponds to increase the income of 60 rural farmers by 10% by May 2004.
10. To decrease the incidence of measles in children under 5 in the department of Santa Rosa from 36/1000 to 15/1000 so as to decrease the infant mortality rate by 15% by 2006.
11. To teach 86 rural health promoters to prepare and give oral rehydration salts to dehydrated children by May 2001.
12. To teach 86 rural health promoters in the district of Jalpatagua to prepare and administer oral rehydration solution to dehydrated children under 6 years of age, following to standards set by the WHO, by September 2002.
13. To build 6 paved roads in the department of Santa Rosa.
14. To increase the number of farmers in the Department of Zacapa who use fertilizer on their corn from 300 to 10,000 by December 2001.

Annex 5.11: Goal Statements and Operational Definitions

Example from a water project

Goal Statements

PROGRAM IMPACT: Improved health status of inhabitants of Central Province

PROJECT IMPACT: Water-related diseases among 5,000 rural inhabitants of Central Province will be reduced from X% to Y% by 2010.

EFFECT: Community-managed hygiene education programs are established and functioning in seven villages in Central Province by 2006.

Operational Definitions

Improved Health Status - A decrease in infection rates for significant endemic diseases. In this context, water related diseases are known to be most significant.

Water-related diseases - Infectious diseases that are caused by water quality and supply. They are classified into the following categories:

a) Waterborne - Infections spread through water supplies.

b) Water-washed - Diseases caused by the lack of water for personal hygiene.

c) Water-based - Infections transmitted through aquatic invertebrates.

d) Water-related - Infections transmitted by insects dependent on water for a part of their life cycle.

Community-managed - Designated community members have control over the resources and processes necessary to sustain the system.

Hygiene education program - A planned group of integrated activities designed to address individual, household, and community-level behaviors to improve health status.

Established and Functioning - Programs are said to be established and functioning when they are conducted following a set plan and according to a schedule, when they have a sustainable source of inputs, and when they are effectively producing outputs that lead to desired outcomes.

Annex: Glossary of Definitions & Acronyms

Definitions given in this Project Design Handbook

Assumption	Circumstances or conditions important for the success of the project but beyond direct control by the project. This may include beliefs, essentially improvable, held by the design team about the environment in which the project takes place. It can also include assumptions that other agencies will do their part to address related causes. (Note that such assumptions should be monitored during the life of a project.)
Benchmarks	Expected values or levels of achievement at specified periods of time.
Causal Analysis	Causal Analysis is a systematic process used to determine causes and consequences of a problem and to link them based on cause effect relationships.
Causal Streams	A sequence of conditions or factors, linked by cause-effect logic, that contributes to a pre-defined problem. Can also be referred to as cause-effect linkages.
Comparative Advantage	Capacity of an organization in terms of skills, experience and other resources.
Conditions	Factors that exist in the household, community, or external environment which contribute to a problem.
Consequences	Social, political, or economic conditions that result from a problem. A cause-effect linkage where the consequence is the effect and the problem is the cause.
Diagnostics	A systematic set of procedures undertaken for the purpose of gathering and analyzing information needed for setting priorities and making decisions about project or program direction and allocation of resources.
Differentiation / Disaggregation	Techniques used to identify different socio-economic groups within a community based on a set of criteria; a means by which to identify a specific target population or audience.
Evaluation	An assessment of the extent to which a project is achieving or has achieved its stated outcome goals.
Force field analysis	Force field analysis is used in change management to help understand most change processes in organizations. In force field analysis, change is characterized as a state of imbalance between driving forces (e.g., new personnel, changing markets, new technology) and restraining forces (e.g., individuals' fear of failure, organizational inertia).
Household Livelihood Security (HLS)	HLS is a multi-sectoral design framework employed by CARE and other development organizations. It can be defined as "adequate and sustainable access to assets and resources necessary to satisfy basic human needs." HLS emphasizes households as the focus of analysis because they are the social and economic units within which resources are organized and allocated to meet the basic needs of the household members.

Hypothesis	Presumed correlations between outputs and effect objectives, or between effect objectives and impact goal. The hypothesis is either accepted (from, for example, a secondary literature review) or tested during project implementation.
Indicators / Aggregate	Indicators that broadly describe progress toward a goal. They are useful as an intermediate step to defining and summarizing more specific and measurable indicators or variables.
Indicators / Operational	Variables that reflect a sub-set of the aggregate indicator. They are more specific in terms of what to measure and are based on the criteria developed for the aggregate indicator.
Institutional Assessment	A group activity to look at the organizational capacities of CARE and other institutional stakeholders; processes used to make key choices on with whom we are likely to seek collaboration, and how we make decisions about the respective roles of other organizations and CARE.
Intervention	A discrete package of actions and procedures that are developed and implemented. They are designed to directly (or less often indirectly) address a cause of an identified problem.
Key Question	All questions you can and should answer during the design of a project. Differs from an assumption in that it can lead to action. Key questions are also used to guide evaluations.
Monitoring	The process of routinely gathering information on the process of project implementation.
Monitoring and Evaluation Plan	Describes what steps will be taken to monitor its process and evaluate the progress towards achieving effect and impact goals.
Needs (categories)	Normative Needs Professional, expert, or policy judgment regarding "desirable" conditions based on national or international standards. Felt Needs Needs based on people's perceptions and attitudes. Relative Needs Need in one area in comparison to the same need in other communities, locations, or even points in time.
Needs Assessment	A specific data collection activity that focuses on identifying unmet needs of the project participants. Needs are often categorized according to felt, relative and normative. Needs assessment helps identify the problems and causes the project will address, the existing local resources and opportunities for action, and constraints that have prevented the target population from solving their problem.
Operating Environment	The operating environment consists of the characteristics of a setting in which livelihoods are conducted. It includes the elements that define the context for a project and which can have a positive or negative effect on its success. The key elements that make up the operating environment include: People, Environment, Public/private Infrastructure, Beliefs and Practices, Economics, Institutions
Operational Definition	Describes specifically the terms used in goal statements and indicators to simplify and shorten those statements and provide practice in selecting appropriate indicators.
Participant Group	A population of individuals or institutions directly affected by a problem and which might benefit from a proposed intervention.

Partnership	Partnerships are relationships that result from putting into practice a set of principles that create trust and mutual accountability. Partnerships are based on shared vision, values, objectives, risk, benefit, control and learning, as well as joint contribution of resources. The degree of interdependence is unique to each relationship, depends on context, and evolves over time.
Problem	A condition or set of conditions that affect people in a negative way (e.g., death, infectious diseases, poverty, low income, low agricultural production, inadequate housing).
Programming Principles	Frameworks that can be used to define appropriate problems to address. These frameworks also help clarify a project's context and how a project links to larger program goals.
Project Design	The collaborative and systematic identification and prioritization of problems and opportunities and the planning of solutions and ways of assessing project outcomes, which together will promote fundamental and sustainable change in target populations and institutions.
Reflective practice	The art of continual self-reflection, which enables us to routinely assess whether we are on course to achieve our goals.
Rights-Based Approach (RBA)	Rights-based approaches deliberately and explicitly focus on people achieving the minimum conditions for living with dignity (i.e., achieving their human rights). They do so by exposing the roots of vulnerability and marginalization and expanding the range of responses. They empower people to claim and exercise their rights and fulfil their responsibilities. A rights-based approach recognizes poor, displaced, and war-affected people as having inherent rights essential to livelihood security – rights that are validated by international law.
Stakeholder Analysis	An analysis of individuals and/or organizations that are involved in or may be affected by project activities.
Strategy	Based on the cause-effect logic of problem analysis, the strategy is the approach through which project inputs and resulting outputs bring about the desired changes leading to sustainable impact on human wellbeing.
Underlying Causes	Major causes of problems that are often the effects of other causes and must be defined during the synthesis stage of design.

Acronyms used in this handbook

CBO	Community-Based Organization
CI	CARE International
DME	Design, Monitoring and Evaluation
HLS	Household Livelihood Security
IEC	Information, Education, Communication
NGO	Non-Governmental Organization
RBA	Rights-Based Approach(es)

Annex: Bibliography and Suggested Reading

Chapter 1: Overall Design Issues

CARE International (2001) CARE International Design, Monitoring and Evaluation Basic Standards. *Draft*. Wood Norton Conference.

Carney, Diane (ed.) (1998) *Sustainable Rural Livelihoods: What contribution can we make?,* DFID, London

Chambers, Robert and Gordon Conway (1992) Sustainable Rural Livelihoods: Practical Concepts for the 21st Century. IDS Discussion Paper 296. Brighton, Institute for Development Studies.

Frankenberger, Timothy and Michael Drinkwater (1999) Household Livelihood Security: A holistic approach for addressing poverty and vulnerability, CARE.

Frankenberger, Timothy R., Michael Drinkwater and Daniel Maxwell (2000) Operationalizing Household Livelihood Security. A Holistic Approach for Addressing Poverty and Vulnerability. CARE/FAO Publication.

Frankenberger, T.R. and M. Katherine McCaston (1988) From Food Security to Livelihood Security: The Evolution of Concepts. CARE USA.

Jones, Andrew (2001) Incorporation of a Rights-Based Approach into CARE's Program Cycle: A Discussion Paper for CARE's Program Staff. CARE, Atlanta, GA.

Kirkpatrick, Colin and Weiss, John (1996) Benefit-Cost Analysis and Project Appraisal in Developing Countries. Cheltenham, UK: Edward Elgar.

Valadez, Joseph and Bamberger, Michael (eds.) (1994) Monitoring and Evaluating Social Programs in Developing Countries. The World Bank. Washington, DC

Chapter 2: Appraisal

AusAID (2000) The Logical Framework Approach: Stakeholder Analysis. in AusGuidelines. 2000. AusAID-Commonwealth of Australia.

Blohm, Judee (1996) PACA: Participatory Analysis for Community Action. U.S. Peace Corps, Washington, DC.

CARE Malawi (1998) Malawi Participatory Livelihood Assessment Exercise. Synthesis Report. Lilongwe.

Caldwell, Richard (1999) Project Design Training Guidelines. CARE-USA.

Caldwell, Richard; Ronald V. Curtis, Timothy Frankenberger, and Todd Lofgren (2001) A Sustainable Livelihood Approach for Natural Resource Management. Prepared for UN-WFP. TANGO International, Inc.

Drinkwater, Michael and Tamara Rusinow (1999) Application of CARE's Livelihoods Approach. Presentation for NRAC '99. CARE.

Frankenberger, Timothy R. (2000) A Brief Overview of Sustainable Livelihood Approaches. CARE-USA. Atlanta, GA

Frankenberger, T. and K. McCaston (1999) Rapid Food and Livelihood Security Assessments: A comprehensive approach for diagnosing nutritional security. In: T. Marchione (Ed.) *Scaling Up Scaling Down: Overcoming Malnutrition in Developing Countries*. Amsterdam: Overseas Publishers Association.

IDRC (1998) Social Science Resource Kit, Volume 7: Stakeholder Analysis. IDRC.

IIDS (1996) Participatory Research for Sustainable Livelihoods: A guide for field projects on adaptive strategies. IIDS.

McCaston, K. (1998) Tips for Collecting, Reviewing, and Analyzing Secondary Data. CARE-USA. Atlanta, GA

Maxwell, D. and R. Rutahakana (1997) Dar es Salaam Urban Livelihood Security Assessment: design, background, strategy data collection and analysis methodology. Dar es Salaam: CARE-Tanzania.

Pareja, M. (1997) Preparing for a Rapid Livelihood Security Assessment. Nairobi: CARE-East Africa.

Gillespie, Stuart (2001) Strengthening capacity to improve nutrition. FCND Discussion Paper No. 106. International Food Policy Research Institute. Washington, D.C.

Reitbergen-McCracken, J. and D. Narayan (1997) "Stakeholder Analysis, Module II", in: Participatory Tools and Techniques: A resource kit for participation and social assessment. The World Bank: Social Policy and Resettlement Division, Environment Department.

Stuckey, Joseph D., Barbara Durr and Gwen M. Thomas (2000) Promising Practices: A Case Study Review of Partnership. Lessons and Issues: What we are learning in CARE. CARE USA. Partnership and Household Livelihood Security Unit. Working Draft.

Witkin, B.R. and J.W. Altschuld (1995) Planning and Conducting Needs Assessments. London: Sage Publications.

World Bank (1996) World Bank Participation Sourcebook. Washington, DC

Chapter 3: Analysis and Synthesis

Baker, Sunny and Kim Baker (1998) The Complete Idiot's Guide to Project Management. Alpha Books, New York.

Blohm, Judee (1996) PACA: Participatory Analysis for Community Action. U.S. Peace Corps, Washington, DC.

Bro, Enrique (1995) Design, Monitoring and Evaluation of Technical Cooperation Programmes and Projects. International Labour Office, Geneva.

Dale, Reidar (1998) Evaluation Frameworks for Development Programmes and Projects. Sage Publications, New Delhi, India.

Davis-Case, D'Arcy (1990) The Idea, Methods and Tools for Participatory Assessment, Monitoring and Evaluation in Community Forestry. Community Forestry Field Manual #2. Food and Agricultural Organization of the United Nations, Rome.

Juran, J.M. and F.M. Gyrna (eds.) (1988) Juran's Quality Control Handbook (4th ed.). New York: McGraw Hill.

Witkin, B.R. and J.W. Altschuld (1995) Planning and Conducting Needs Assessments. London: Sage Publications.

Chapter 4: Focused Strategy

AusAID (1998) The Logical Framework Approach (LFA). Handbook for Objectives-oriented Project Planning.

CDIE (1987) The Logical Framework Approach to Portfolio Design, Review and Evaluation in A.I.D.

CIDA (1989) Guide for the use of the Logical Framework Approach in the Management and Evaluation of CIDA's International Projects. Evaluation Division.

Corbeil, R. (1986) Logic on Logic Models. Evaluation Newsletter. Ottawa, Canada: Office of the Comptroller General of Canada.

Jones, Andrew (2001) Incorporation of a Rights-Based Approach into CARE's Program Cycle: A Discussion Paper for CARE's Program Staff. CARE, Atlanta, GA.

Meadows, Donella (1999) Leverage Points: Places to intervene in a system. The Sustainability Institute. Hartland 4 Corners, VT

TEAM Technologies, Inc. (1998) PC/LogFrame (tm) 1988-1992. Results Oriented Assistance Sourcebook, USAID.

USAID (1999) Results Framework. (see following URLs)

- Introduction/context for planning system, http://www.info.usaid.gov/pubs/sourcebook/usgov/mfr.html ;
- Material developed by MSI for training in the new strategic planning system, http://www.afrsd.org:8000/reson/Training/RF%20materials/RF%20contents.htm;
- Excerpt from "Reaching 4 Results" training program, http://www.info.usaid.gov/pubs/r4workshop/STRATEG6/ .

Chapter 5: Coherent Information Systems

Barton, Tom (1997) How Are We Doing? M&E Guidelines for CARE Uganda. CARE-USA. Atlanta, GA

CARE International (1999) CARE Impact Guidelines.

CEDPA (1994) Project Design for Program Managers: conducting a workshop on planning community-based approaches.

ODA [now DfID] (1995) A Guide to Appraisal, Design, Monitoring, Management and Impact Assessment of Health & Population Projects.

Montague, S. (1997) Evaluators and performance measurement: bringing the logic model to the manager. Canadian Evaluation Society Newsletter, Vol. 17, No. 2.

Montague, S. (1997) The Three R's of Performance: Core Concepts for Planning, Measurement, and Management. Ottawa, Canada: Performance Management Network, Inc.

United Way of America (1996) Measuring Program Outcomes: A Practical Approach. Arlington, VA: United Way of America.

Chapter 6: Reflective Practice

Peters, J. (1991) "Strategies for Reflective Practice." In Professional Development for Educators of Adults. New Directions for Adult and Continuing Education, No. 51, edited by R. Brockett. San Francisco: Jossey-Bass.

Ross, D.D. (1990) Programmatic structures for the preparation of reflective teachers. In R.T. Clift, Houston, W.R., & Pugach, M.C. (Ed.), Encouraging Reflective Practice in Education (pp. 97-118). New York: Teachers College Press.

Roth, R.A. (1989) Preparing the Reflective Practitioner: Transforming the Apprentice through the Dialectic. Journal of Teacher Education 40, No. 2.

Schon, D. (1983) The Reflective Practitioner. New York: Basic Books.

Schon, D. (1985) The Design Studio. London: RIBA Publications Limited.

Schon, D. (1987) Educating the reflective practitioner: Toward a new design for teaching and learning in the professions. San Francisco: Jossey-Bass.

Schon, D. (1988) Educating the Reflective Practitioner. San Francisco: Jossey-Bass.

Additional Highly Recommended References and links to many more:

CARE (Paul O'Brien) (2001) *Benefits-Harms Handbook*. For copies contact Paul O'Brien pobrien@care.org.

CARE (Sofia Sprechmann and Emily Pelton) (2001) *Advocacy Tools and Guidelines: Promoting Policy Change – A Resource Manual for CARE Program Managers.*

Web pages with useful resources for Project Design:

Earl, Sarah, Fred Carden and Terry Smutylo (2001) *Outcome Mapping: Building Learning and Reflection into Development Programs.* Sterling, VA: IDRC / Stylus Publishing Inc. http://www.idrc.ca/booktique or http://www.idrc.ca/evaluation

den Heyer, Molly (2001) Literature Review from: The Development of a Temporal Logic Model Ottawa: IDRC. http://www.idrc.ca/evaluation

Appreciative Inquiry: http://appreciativeinquiry.cwru.edu/

USAID has many resources. See especially Performance Monitoring & Evaluation TIPS: http://www.dec.org/usaid_eval/#004

Main web page for finding CARE and other DME resources:
http://www.kcenter.com/care/dme/