THE LOGICAL FRAMEWORK

MODIFICATIONS BASED ON EXPERIENCE

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INTRODUCTION

This document displays several modifications to the logical framework matrix format which have grown out of the past two years of operational experience. These modifications do not alter the basic logical framework concepts; they are intended only as convenient means to clarify or elaborate one or another aspect of project design.

Use of any or all of the modifications is not required. The modifications may be used informally as worksheets, singly or in combinations as appropriate. If the Mission finds that a modified logical framework is more effective than the standard matrix format for communicating with AID/W, this is acceptable.

USAIDs are encouraged to give copies of this document to any cooperating group, (i.e., contractors, PASAs, host country officials, other donors) now using the logical framework. The modifications have been given to participants in the AID Program Evaluation Seminar (PDM II) starting with the March 1973 session. This document is an informal adjunct to M.O. 1026.1, Supplement I, the Program Evaluation Guidelines, Second Edition.

Readers are invited to contribute to the continuing development of the logical framework methodology. Comments on these eight modifications and the related explanatory material are welcome. Suggestions for other modifications will be appreciated. These comments should be sent to your Regional Evaluation. If enough useful suggestions are received, a second, expanded edition of this compendium will be prepared.

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Part I

Description of the Logical Framework Methodology

Logical Framework

_____y element in project planning and evaluation is the working out of a logical framework which:

(a) defines project inputs, outputs, purpose, and higher sector/program goal in measurable or objectively verifiable terms;

(b) hypothesizes the causative (means-end) linkage between inputs, outputs, purpose, and goal;

(c) articulates the assumptions (external influences and factors) which will affect the causative linkages;

(d) establishes the indicators which will permit subsequent measurement or verification of achievement of the defined outputs, purpose, and goal.

____ logical framework is primarily a project planning device. It also is used for re-examination of the original design of ongoing projects as a necessary prelude to evaluation, i.e., it sets the standards against which the project will be evaluated. Evaluation consists of determining and validating whether or not the project outputs are being produced, whether these outputs in fact are going to achieve the project purpose; and finally whether this achievement is making a significant contribution, as planned, to the _____ order goal.

As shown in a matrix, the logical framework has both a vertical and a horizontal logic. Its vertical logic defines the series of _____ative linkages which is intended to transform project inputs into development changes at the sector or program level and permits planner/evaluator to judge whether these linkages are viable. Its horizontal logic encourages the evaluator to measure progress verify planning assumptions at each level (output, purpose and goal) separately and independently from other levels.

Characteristics and Limitations of the Logical Framework

- All aspects of project planning (i.e., the formulation of targets, causative linkages, indicators, and assumptions) are defined by the project planner and the sector manager and are project-specific. Similarly, the degree of rigor and the level of effort in collecting and analyzing data for both planning and evaluation are determined by management and are project-specific.

- The logical framework is ethically neutral. It gives no guidance on questions of socio-economic equity or benefit incidence such as equitable income distribution, employment opportunities, access to resources, popular participation in decision-making and in the fruits of development projects, unless such aspects have been explicitly included in the statements of goal or purpose.

- The logical framework is programmatically and technically neutral. It gives no guidance on proven strategies and techniques, cost and feasibility of replication, effects on ecology, concentration on key problem areas, reliance on the private sector, etc. It does not assure that the project is optimal, i.e., that the project directly addresses the most critical constraint to goal achievement or that it is the most effective means for overcoming that critical constraint unless the planners/ evaluators choose to explore alternative approaches.

- The methodology permits, but does not require, cost/benefit and cost/effectiveness analysis.

- A clear distinction should be made between the logical framework concept and the logical framework matrix format. The concept is a unified structuring of a set of project design elements. It introduces order and discipline into the intellectual processes of the planner.

- The matrix format is merely a convenient planner's tool which simulates and visually displays the project design elements so that they can be manipulated, assayed and communicated.

- The logical framework concept, as applied to any given project, is analagous to a game of chess, the matrix format is the chessboard.

- A distinction should be made between the logical framework-matrix format and the Project Paper (PROP). The former contains succinct summary statements of targets, assumptions, etc. The latter should spell out these statements in a more specific and comprehensive way.

- The logical framework is objective-oriented, it does not describe the actions, activities or processes which transform means into ends. Other instruments fill this need, i.e., Project Paper (PROP), Joint Project Implementation Plan (PIP), network analyses such as PERT, CPM, etc.

The logical framework shown on the following page is the standard format used by A.I.D. for planning and evaluating all noncapital projects.

Project Design Summary
Logical Framework

Life of Project:
From FY____ to FY____
Total U.S. Funding _____
Data Prepared:_____

Project Title & Number: _____

NARRATIVE SUMMARY	OBJECTIVELY VERIFIABLE INDICATORS	MEANS OF VERIFICATION	IMPORTANT ASSUMPTIONS
Program or Sector Goal: The broader objective to which this project contributes	**Measures of Goal Achievement:**		**Assumptions for achieving goal targets:**
Project Purpose:	**Conditions that will indicate purpose has been achieved: End of project status.**		**Assumptions for achieving purpose:**
Outputs:	**Magnitude of Outputs:**		**Assumptions for achieving outputs:**
Inputs:	**Implementation Target (Type and Quantity)**		**Assumptions for providing inputs:**

Part II

Modifications to the Logical Framework

The following pages display a number of modifications of the basic logical framework matrix which have grown out of two years of experience in the field and AID/W. Project planners and evaluators are not required to use these modifications; nor are the modifications intended to replace the standard matrix format (p. 3). They are displayed here for two reasons:

- they may have learning value for program and project staff by clarifying one or another aspect of the logical framework concept.
- they may be useful to planners and/or evaluators as informal worksheets to be used in analyzing project design.

The modifications may be used singly or in combination; for instance, if the project planner/ valuator is concerned with the assumptions (external factors) affecting his project, he may want to combine modification #1 and modification #4.

Modification #1 - Verification of Assumptions

Modification # 1 of the logical framework, shown on the following page, provides an added column for clarifying and elaborating the assumptions (external factors and circumstances) which affect the causative linkages. Entries in this column can be used to:

(a) verify the validity of the assumption,

(b) weigh the importance or criticality of the assumption,

(c) assess changes in the status of the assumption,

(d) suggest actions which could increase the probability that the assumption would be realized, and/or

(e) specify the need for further study of the assumption.

Assumptions should be made as explicit as possible and should be stated in operational terms. This may permit the planner to take steps calculated to reduce uncertainty, increase control and, where possible, move the assumption within the scope of the project design.

Modification # 1 may be usefully be combined with Modification # 4.

Project Design Summary
Logical Framework

Life of Project:
From FY____ to FY____
Total U.S. Funding _____
Data Prepared:_____

Modification No. 1

Project Title & Number: _____

NARRATIVE SUMMARY	OBJECTIVELY VERIFIABLE INDICATORS	IMPORTANT ASSUMPTIONS	MEANS OF VERIFYING ASSUMPTIONS
Program or Sector Goal: The broader objective to which this project contributes	**Measures of Goal Achievement:**	**Assumptions for achieving goal targets:**	
Project Purpose:	**Conditions that will indicate purpose has been achieved: End of project status.**	**Assumptions for achieving purpose:**	
Outputs:	**Magnitude of Outputs:**	**Assumptions for achieving outputs:**	
Inputs:	**Implementation Target (Type and Quantity)**	**Assumptions for providing inputs:**	

Modification #2 – Insertion of an Additional Row(s) in the Vertical Hierarchy of Objectives

Modification # 2, on the following page, is intended to accommodate one or more intermediate levels in the vertical hierarchy of objectives. Such an intermediate or sublevel might be:

- intermediate output between input and final output levels,
- subsector goal between project purpose and sector goal (see example).

Note that the setting of goals (subsector, sector, program) is not normally the responsibility of project management, but rather of those to whom the project personnel report (this applies to both the host country and the donor agency).

Project Design Summary
Logical Framework

Life of Project:
From FY____ to FY____
Total U.S. Funding _____
Data Prepared:_____

Modification No. 2

Project Title & Number: _____

NARRATIVE SUMMARY	OBJECTIVELY VERIFIABLE INDICATORS	MEANS OF VERIFICATION	IMPORTANT ASSUMPTIONS
Program or Sector Goal: The broader objective to which this project contributes	**Measures of Goal Achievement:**		**Assumptions for achieving goal targets:**
Project Purpose:	**Conditions that will indicate purpose has been achieved: End of project status.**		**Assumptions for achieving purpose:**
Outputs:	**Magnitude of Outputs:**		**Assumptions for achieving outputs:**
Inputs:	**Implementation Target (Type and Quantity)**		**Assumptions for providing inputs:**

Modification #3 - Insertion of an Additional Column for Specific Targets

Modification #3, shown on page 13, spells out in explicit detail, (new column 3) the actual targets measured by each objectively verifiable indicator. It thus simultaneously elaborates the narrative statement of target contained in column 1 and states the final result as reflected by each indicator.

It is important to understand and preserve the distinction between a scheduling device and a listing of interim planned targets. Scheduling of project inputs, actions, events and outputs s accomplished in the Project Implementation Plans (PIP) and in network devices such as PERT. Modification #3 permits a statement of interim planned targets and their estimated dates of completion. Modification #3 should tie in with any scheduling device used by the project management team.

The grid shown in Modification. #5 on pages 16 and 17, can be usefully applied in Modification #3, column 3. An example of this usage is shown on the following page.

Example:

1. Narrative Statement	2. Objectively Verifiable Indicators;	3. Specific Targets				
			FY73	**FY74**	**FY75**	**FY76**
Improve the food consumption habits and nutritional intake of low-income population.	a. Mothers enrolled in MCH program conform to nutritional requirements.	a.	All women receiving food are either pregnant or lactating mothers with demonstrable nutritional need.			
	b. Percentage of children receiving food.	b.	25	50	75	100
	c. Percentage of MCH foods produced locally.	c.	0	0 (to reach 60% by 1980)	15	25
	d. Number of farmers using production packages (in 000s)	d.				
	(1) Cuy	(1)	0	1	5	10
	(2) Quinoa	(2)	0	0	2	7
	(3) Legumes	(3)	0	0	0	5

Project Design Summary
Logical Framework

Life of Project:
From FY____ to FY____
Total U.S. Funding _____
Data Prepared:_____

Modification No. 3

Project Title & Number: _____

NARRATIVE SUMMARY	OBJECTIVELY VERIFIABLE INDICATORS	SPECIFIC TARGETS	MEANS OF VERIFICATION
Program or Sector Goal: The broader objective to which this project contributes	**Measures of Goal Achievement:**	**Goal Targets:**	
Project Purpose:	**Conditions that will indicate purpose has been achieved: End of project status.**	**Performance Targets:**	
Outputs:	**Magnitude of Outputs:**	**Output Targets:**	
Inputs:	**Implementation Target (Type and Quantity)**	**Budget and Implementation Schedule:**	

Modification #4 – Relation of Assumptions to Causative Linkages

Modification # 4, on the following page, recognizes that planning assumptions directly influence the viability of a causative linkage rather than the target itself. The split-level arrangement of columns 3 and 4 accommodates this relationship.

Modification # 4 may be usefully combined with Modification # 1.

Project Design Summary
Logical Framework

Life of Project:
From FY____ to FY____
Total U.S. Funding _____
Data Prepared:_____

Modification No. 4

Project Title & Number: _____

NARRATIVE SUMMARY	OBJECTIVELY VERIFIABLE INDICATORS	MEANS OF VERIFICATION	IMPORTANT ASSUMPTIONS
Program or Sector Goal: The broader objective to which this project contributes	**Measures of Goal Achievement:**		**Assumptions About Linkage Between Project Purpose and Program-Sector Goal**
Project Purpose:	**Conditions that will indicate purpose has been achieved: End of project status.**		**Assumptions About Linkage Between Outputs and Project Purpose**
Outputs:	**Magnitude of Outputs:**		**Assumptions About Linkage Between Inputs and Outputs**
Inputs:	**Implementation Target (Type and Quantity)**		

Modification #5 – Input-Output or Cost-Benefit Comparisons

Modification #5 facilitates the comparison of inputs/costs during any period with corresponding indicators of outputs/ benefits. It also permits comparison upwards to the purpose level if such a comparison is considered meaningful and desirable. This grid can also be used in Modification #3.

EXAMPLE:

Project Purpose:	**Conditions that will indicate purpose has been achieved: End of project status.**				
		72*	73	74	75
Create a viable agricultural college which can effectively contribute to agriculture development goals.	Qualified grads/year	20	70	100	150
	Number of farm visits	2,000	3,000	3,500	3,500
	Research Reports	20	25	30	35
	% Operating Budget Covered	20	50	70	100
Ouptuts:	**Magnitude of Outputs:**				
Professors and Research Fellows		22	25	30	30
Buildings		3	5	7	7
Laboratories		1	5	7	7
Library Services (000 Vols.)		10	12	16	17
Extension Technicians		10	15	15	15
Inputs:	**Implementation Target (Type and Quantity**				
Participant Training	No/($000)	7/70	7/70	5/50	2/20
Technical Advisors	No/($000)	2/80	2/80	1/40	1/40
Other (Commodities, etc.)	($000)	50	30	20	10
Total Aid	($000)	200	180	110	70
Total IDB	($000)			500	
Total Host Country	($000)	450	500	580	500
Grand Total	**($000)**	**650**	**680**	**1,110**	**570**

*Baseline

Project Design Summary
Logical Framework

Life of Project:
From FY____ to FY____
Total U.S. Funding _____
Data Prepared:_____

Modification No. 5

Project Title & Number: _____

NARRATIVE SUMMARY	OBJECTIVELY VERIFIABLE INDICATORS					MEANS OF VERIFICATION	IMPORTANT ASSUMPTIONS
Program or Sector Goal: The broader objective to which this project contributes	**Measures of Goal Achievement:**						**Assumptions for achieving goal targets:**
Project Purpose:	**Conditions that will indicate purpose has been achieved: End of project status.**						**Assumptions for achieving purpose:**
		72	**73**	**74**	**75**		
Outputs:	**Magnitude of Outputs:**						**Assumptions for achieving outputs:**
Inputs:	**Implementation Target (Type and Quantity)**						**Assumptions for providing inputs:**

Modifications #6 and #7 – Evaluation of Benefit Incidence

Modifications #6 and 7, on the following pages, are designed to distinguish between the nature of the benefits created by the project (i.e., increased output of goods and services and the benefit incidence (i.e., those people who participate in the production and/or consumption of those benefits). The groups to wham the benefits are intended to accrue (target groups) should be identified by income, geographic, or other relevant socio-economic descriptors. Two classes of benefits and beneficiencies should be considered: (1) benefits generated by the construction/maintenance/operation of a facility or service, usually occurring to people employed for these purposes; and (2) benefits accruing to those who obtain access to the facility or services created (school children, clinic patients, owners of land brought under irrigation or connected to market by a feeder road).

Examples:

Indicators of Progress/Performance (Benefit)	**Indicators of Benefit Incidence (Beneficiaries)**
Increase in wheat production of ___ metric tons/year since 1970.	___% of lower income persons (under ____ pesos year) able to purchase _____ kilo of wheat products (bread, flour, etc.) per week as compared to ___% in 1970.
Annual increase in hospital beds of _____ since 1970.	Annual increase of hospital admissions of target low income persons of _____ since 1970.
Increased revenues in agricultural production sector of _____ pesos/year from 1970 to 1975.	___% of low income farm families in north-west province receive no less than ____% annual increase in real income from cash crow from 1970 to 1975.

Life of Project:
From FY____ to FY____
Total U.S. Funding _____
Data Prepared:_____

Project Title & Number: _____

Project Design Summary Logical Framework	**OBJECTIVELY VERIFIABLE INDICATORS**			
	a. Indicators of Progress Toward Planned Targets – Benefits	b. Indicators of Benefit Incidences – Target Groups Which Participate in the Production of Consumption of Benefits.		
NARRATIVE SUMMARY			**MEANS OF VERIFICATION**	**IMPORTANT ASSUMPTIONS**
Program or Sector Goal: The broader objective to which this project contributes	**Measures of Goal Achievement:**	**Measures of Benefit Incidence or Goal Level**		**Assumptions for achieving goal targets:**
Project Purpose:	**Conditions Expected at End of Project**	**Indicators of Benefit Incidence Expected at End of Project**		**Assumptions for achieving purpose:**
Outputs:	**Magnitude of Outputs:**	**Indicators of Benefit Incidence Expected at Output Level**		**Assumptions for achieving Outputs**
Inputs	**Implementation Target (Type and Quantity)**			**Assumptions for providing inputs**

Project Design Summary
Logical Framework

Life of Project:
From FY____ to FY____
Total U.S. Funding _____
Data Prepared:_____

Modification No. 7

Project Title & Number: _____

NARRATIVE SUMMARY	OBJECTIVELY VERIFIABLE INDICATORS	MEANS OF VERIFICATION	IMPORTANT ASSUMPTIONS
Program or Sector Goal: The broader objective to which this project contributes	**Measures of Goal Achievement:** **a. Progress/Benefit** **b. Benefit Incidence/Beneficiary**		**Assumptions for achieving goal targets:**
Project Purpose:	**Conditions expected at End of Project** **a. Progress/Benefit** **b. Benefit Incidence/Beneficiary**		**Assumptions for achieving purpose:**
Outputs:	**Magnitude of Outputs:** **a. Progress/Benefit** **b. Benefit Incidence/Beneficiary**		**Assumptions for achieving outputs:**
Inputs:	**Implementation Target (Type and Quantity)**		**Assumptions for providing inputs:**

Modification #8 – Logical Framework Showing both Project Design (Original Plan) and Evaluation (Current Status)

Modification #8, on the following page, represents more than a minor modification of the basic format. It differs basically in that it permits the evaluator to display and measure change by recording the original objectives, indicators and planning assumptions and comparing these against the assumptions and actual status existing at the time of the evaluation.

This modification was developed for use in evaluating capital projects either during their implementation stage or after completion. It can also be used on noncapital projects.

Note that this matrix also embodies modification #I and #6.

EVALUATION SUMMARY – CAPITAL PROJECTS

ORIGINAL PLAN				CURRENT STATUS		
	2. Objectively Verifiable Indicators				5. Actual Progress in Terms of Objectively Verifiable Indicators	
Summary of Original Objectives	**a. Indicators of Progress Toward Planned Targets**	**b. Indicators of Benefit Incidences – Employment, Income Distribution, Social Equity, etc.**	**3. Planning Assumptions**	**4. Changes in Assumptions and Circumstances**	**c. Indicators of Progress Toward Planned Targets**	**d. Indicators of Benefit Incidences – Employment, Income Distribution, Social Equity, etc.**
Program Goal	Measures of Goal Achievement	Measures of Benefit Incidence at Goal Level	Original Assumptions Affecting Linkage between Project Purpose and Sector Program Goal	Changes Affecting the Linkage between Project Purpose and Sector Program Goal	Contribution of Project to Sector Program Goal	Benefit Incidence of Goal Level
Inputs	Conditions Expected at End of Project	Indicators of Benefit Incidence Expected at End of Project			Progress Toward Project Purpose	Benefit Incidence at Project Purpose Level
			Original Assumptions Affecting Linkage between Project Outputs and Project Purpose	Changes Affecting the Linkage between Project Outputs and Project Purpose		
Ouptuts	Magnitudes of Outputs	Indicators of Benefit Incidence Expected at Output Level			Progress Toward Output Targets	Benefit Incidence at Output Level

PART III

GLOSSARY OF TERMS

PROJECT OUTPUTS:

The specifically intended kind of results (as opposed to their magnitude) that can be expected from good management of the inputs provided.

Example:

Manpower, training, machinery and building materials (inputs) can be managed to produce an irrigation network, trained operational staff, a water utilization schedule and a user rate scale (outputs).

PROJECT PURPOSE:

The primary reason for the project, i.e., the development which is expected to be achieved or the problem which is to be solved if the project is completed successfully and on time.

Example:

An irrigation network and associated facilities and services (outputs) are intended to produce increased per hectare yield (project purpose).

_____, SECTOR/PROGRAM GOAL:

The programming level beyond the project purpose, i.e., the next higher objective to which the project is intended to contribute. Example: Increased per hectare yield (project purpose) is intended to result in expanded exports of agricultural crops (sector goal).

ASSUMPTION:

A situation or a condition which must be assumed to exist if and when the project is to succeed, but over which the project management team may have little or no control.

Example:

Increased crop yield (project purpose) will contribute to expanded export of agricultural crops (sector goal) only if price and market conditions are favorable (assumption).

OBJECTIVELY VERIFIABLE INDICATORS:

Pre-established criteria or measures of an explicit and specific nature designed to provide objective assessment of project progress. Progress indicators should be objectively stated so that both a proponent of a project and an informed skeptic amid agree that progress has or has not been as planned. Pre-establishing objectively verifiable indicators and targets helps focus discussion on evidence rather than opinions.

TARGETS:

An explicit an objectively verifiable statement of the kind and magnitude of final result to be realized at a specified date. The term target is used at the output, purpose and goal levels.

PROJECT LINKAGES:

a. There is a causative linkage between project outputs (irrigation network) and the ultimate project purpose (improved crop yields). The outputs must exist before the purpose can be achieved. The existence of the outputs does not however guarantee that the purpose will be achieved. Factors outside the project design (farmer attitudes and access to credit) may prevent achievement of project purpose. Thus the causative relationship between project outputs and purpose must be explicitly stated as a hypothesis, the external factors (assumptions) identified; and evaluation must then verify whether or not the hypothesis was realized.

b. Similarly, there is a causative linkage between project purpose (improved crop yields) and progress toward a higher sectoral or program goal (expanded export of agricultural crops). The achievement of project purpose does not guarantee that the goal will be reached. Factors outside the project design (price and market conditions, spoilage and other losses) may prevent planned progress toward the higher goal. Thus the causative relationship between project purpose and higher goal must be stated as a hypothesis, the external factors (assumptions) identified, and the hypothesis validated.

c. These linkages should also be proportional as well as causative. Thus, the improved crop yields will mean little for export earnings if they occur in a relatively small area. Analyzing a project in terms of means-ends linkages may highlight a lack of realism in the original plans, i.e., a disbalance between modest means and grandiose targets. It is important to determine if the means are sufficient in quality and quantity to produce the desired end product.

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Pre-established criteria or measures of an explicit and specific nature designed to provide objective assessment of project progress. Progress indicators should be objectively stated so that both a proponent of a project and an informed skeptic would agree that progress has or has not been as planned. Pre-establishing objectively verifiable indicators and targets helps focus discussion on evidence rather than opinions.

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