The Logical Framework Approach (LFA)

Fourth edition

Handbook for objectives-oriented planning

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PREFACE TO THE FOURTH EDITION

This handbook for objective-oriented planning ("the Logical Framework Approach") was developed by a NORAD working group supported by Samset & Stokkeland (Consulting) and published in 1990. It has achieved wide-spread international distribution, and as a result of great demand, it has been reprinted several times.

It should be underlined that the objective-oriented approach to development which is presented as a planning tool in this handbook, is used in all phases of a project/programme as explained in section four of the book.

Further, the planning tool as presented here is primarily relevant for those responsible for planning, implementation and management of projects and programmes, mainly institutions and organisations in Norway's partner countries.

To support our role as dialogue partner and financial contributor to projects and programmes in partner countries, the Norwegian Royal Ministry of Foreign Affairs and NORAD have developed and taken into use the following manuals/handbooks::

- Royal Ministry of Foreign Affairs 1994: Evaluation of Development Assistance. Handbook for Evaluators and Managers
- NORAD 1998: Programme and Project Cycle Management. Manual for Government-to-Government Cooperation.

The Logical Framework Approach described in this manual is based on the "Logical Framework " method, which is a way of structuring the main elements in a project, highlighting logical linkages between intended inputs, planned activities and expected results.

The first "Logical Framework" was developed for U.S.AID at the end of the 1960's, and has since been utilized by many of the larger donor organizations, both multilateral and bilateral. OECD's Development Assistance Committee is promoting use of the method among the member countries. The Nordic countries have also shown interest in the use of the "Logical Framework", and in Canada the approach is used not only in development aid but also in domestic public investment in general. Institutions in partner countries also use the LFA in their management of projects and programmes.

The approach to Logical Framework Analysis presented in the book is based to a large extent on the methodology developed by UN organisations and the German Agency for Technical Cooperation, GTZ.

Throughout this handbook the work "project" is used to signify all types of development, interventions, including projects, programmes, studies, etc.

Section one of this handbook is a general background description. Section two describes a planning procedure which can help the partner instituitons to design a programme or. project. Section three describes some tools which can help the partner and the donor assess the logic, consistency and completeness of a project/programme design. Finally, section four gives a brief general description of how the LFA methodology can be used at different stages of implementation.

NORAD
January 1999

SECTION 1
INTRODUCTION

LFA IS A TOOL FOR IMPROVING THE QUALITY OF PROJECTS

The Logical Framework Approach is an analytical tool for objectives-oriented project planning and management.

The key words are:

- Objectives oriented
- Target group oriented - Participatory

THE PROS AND CONS OF LFA

The advantages of using LFA are the following:

- It ensures that fundamental questions are asked and weaknesses are analyzed, in order to provide decision makers with better and more relevant information.
- It guides systematic and logical analysis of the inter-related key elements which constitute a well-designed project.
- It improves planning by highlighting linkages between project elements and external factors.
- It provides a better basis for systematic monitoring and analysis of the effects of projects.
- It facilitates common understanding and better communication between decision-makers, managers and other parties involved in the project.
- Management and administration benefit from standardized procedures for collecting and assessing information.
- The use of LFA and systematic monitoring ensures continuity of approach when original project staff are replaced.
- As more institutions adopt the LFA concept it may facilitate communication between governments and donor agencies. Widespread use of the LFA format makes it easier to undertake both sectoral studies and comparative studies in general.

The limitations of LFA are the following:

- Rigidity in project administration may arise when objectives and external factors specified at the outset are over-emphasised. This can be avoided by regular project reviews where the key elements can be re-evaluated and adjusted.
- LFA is a general analytic tool. It is policy-neutral on such questions as income distribution, employment opportunities, access to resources, local participation, cost and feasibility of strategies and technology, or effects on the environment. LFA is therefore only one of several tools to be used during project preparation, implementation and evaluation, and it does not replace target-group analysis, cost-benefit analysis, time planning, impact analysis, etc.
- The full benefits of utilizing LFA can be achieved only through systematic training of all parties involved and methodological follow-up.

LFA ENHANCES PLANNING, ANALYSIS AND COMMUNICATION.

Using LFA helps:

- clarify the **purpose** of, and the justification for, a project
- identify **information** requirements clearly define the **key elements of** a project
- analyze the project's **setting** at an early stage
- facilitate **communication between** all parties involved
- identify how the success or failure of the project should be **measured**

CONCEPTS USED IN LFA

The purpose of development projects is to induce change whose results are desired within the project environment and society at large. We assume that there is general agreement about the improved situation before project planning takes place. This will make it possible to agree upon the purpose and the (overall) goal of the project.

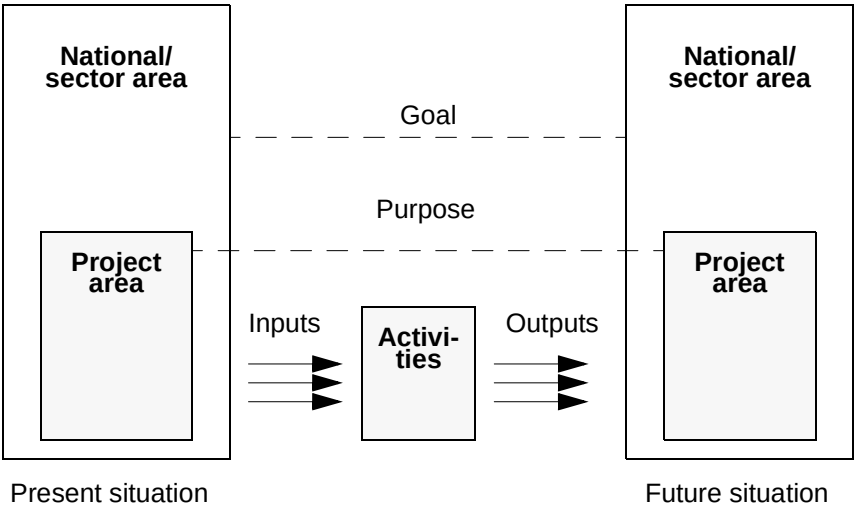
No development projects exist in a social vacuum. It is important that the desired future situation is described in such a way that it is possible to check at a later stage to what extent the project has been successful in relation to its objectives and the target groups.

A development project is based on its input of resources, the implementation of certain activities, and will result in a number of outputs which are expected to contribute to the desired objectives. Inputs, activities and outputs are elements of a project; they are not in themselves a measure of success or failure.

The success of a project depends upon a number of factors that can be controlled by the project management, as well as upon a number of external assumptions. During planning and implementation it is extremely important to identify, monitor and analyze external assump-tions, since they may cause the project to fail even if it is implemented as planned.

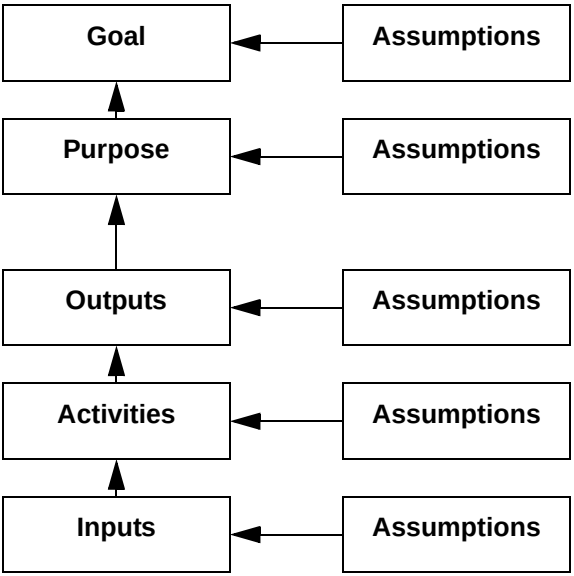
Definitions of the concepts used in LFA appear in Annex 2.

DEFINING THE CONCEPTS IN LFA



THE DEVELOPMENT PROCESS

In the Logical Framework Approach a development project is seen as a causally linked sequense of events. These are described at the levels mentioned above (p. 10): Inputs, activities, outputs, purpose and goal. Since it is not certain that these events will actually happen, the process is seen as a sequence of development hypotheses that can be analyzed and described.



We assume that:

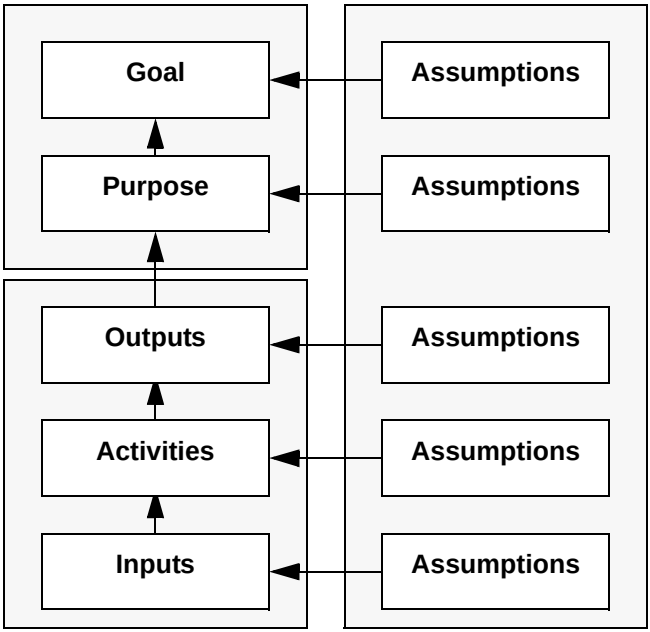
- if the inputs are available, then the activities will take place. if the activities take place, then the outputs will be produced.
- if the outputs are produced, then the purpose will be ach ieved.
- in the long run this will contribute to the fulfillment of the goal.

While the certainty of the ear-lier hypothesis may be high, since the results are largely under the management of the project team, it diminishes at the higher levels.

The uncertainties of the process are explained by assumptions at each level. These are outside the direct control of the project, but have to be fulfilled for the development process to succeed.

The development process is summarized in a matrix consisting of the above basic elements: the Project Matrix (PM).

THE BASIC ELEMENTS OF THE PROJECT MATRIX (PM)



THE PROJECT AND ITS CONTEXT

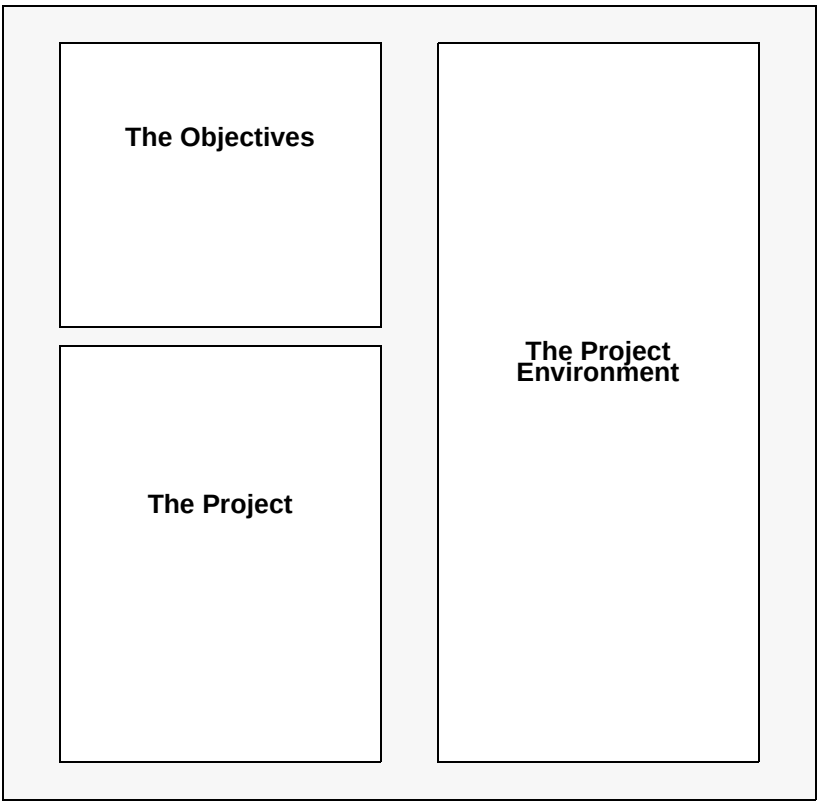
LFA analyzes the project in its wider context, as can be seen from the PM on the opposite page:

There is an important horizontal division between the project itself (bottom left box) - and its objectives (top left box). The project is what the project administration **should be able to guarantee**, while the objectives are **out of the immediate reach** of the project administration. It is anticipated, that the project will significantly contribute to the realization of the objectives.

There is also an important vertical division between elements **directly influenced** by the project (left boxes) , and external factors **outside the control** of the project administration (right box). The latter are factors which we expect will significantly influence the success or failure of the project.

Identifying key external factors at an early stage will help in the selection of an appropriate project strategy. Monitoring both the fulfillment of objectives and the external factors during the life of the project and acting on the information will increase the probability of success.

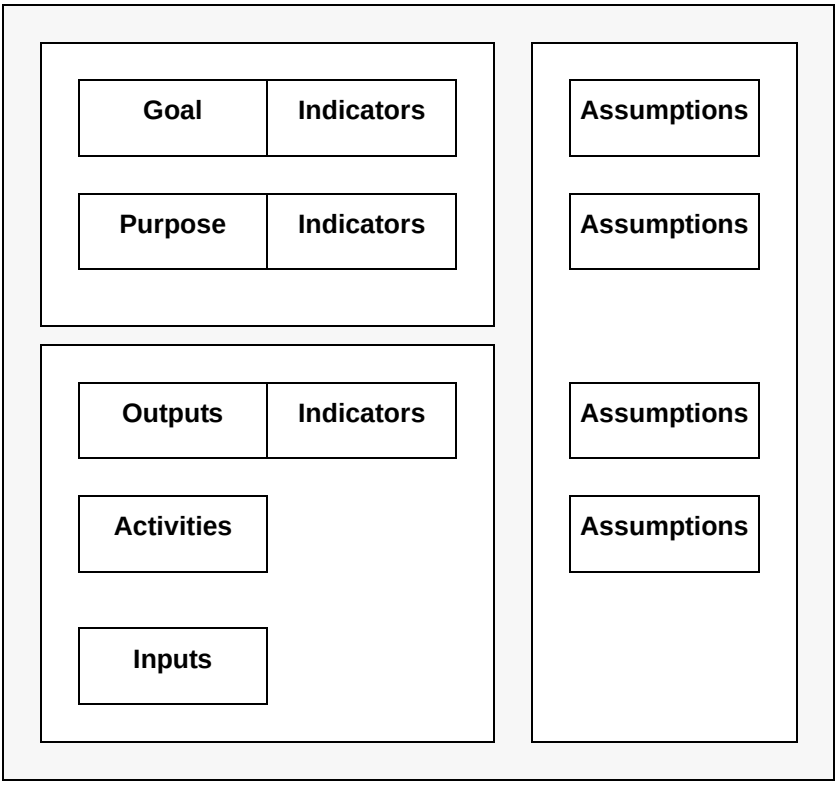
THE PM GIVES AN OVERVIEW OF THE PROJECT, ITS OBJECTIVES AND ENVIRONMENT



THE ELEMENTS OF THE PM

An actual PM may contain elements additional to those on page 10. Usually a column for indicators is added to the development objective, the immediate objective and the outputs. The indicators specify how the achievement of objectives should be measured.

The PM is reduced from a 3x5 to a 3x4 matrix by moving the inputs box to



the space under the indicators. Each element in the PM is described on the opposite page. A more detailed description appears in section 3 (on page 54)of this handbook.

1. GOAL	1. INDICATORS	1. ASSUMPTIONS
The higher-level objective towards which the project is expected to contribute (Mention target groups)	Measures (direct or indirect) to verify to what extent the goal is fulfilled (Means of verification should be specified)	Important events, conditions or decisions necessary for sustaining objectives in the long run
2. PURPOSE	2. INDICATORS	2. ASSUMPTIONS
The effect which is expected to be achieved as the result of the project (Mention targetgroups)	Measures (direct or indirect) to verify to what extent the purpose is fulfilled (Means of verification should be specified)	Important events, conditions or decisions outside the control of the pro-ject which must prevail for the development objective to be attained
3. OUTPUTS	3. INDICATORS	3. ASSUMPTIONS
The results that the project management should be able to guarantee (Mention target groups)	Measures (direct or indirect) which verify to what extent the outputs are prouced (Means of verification should be specified)	Important events conditions or decisions outside the control of the project management, necessary for the achievement of the immediate objective
4. ACTIVITIES	5. INPUTS	4. ASSUMPTIONS
The activities that have to be undertaken by the project in order to produce the outputs	Goods and services necessary to undertake the activities	Important events, conditions or decisions outside the control of the project management necessary for the production of the outputs

USING LFA

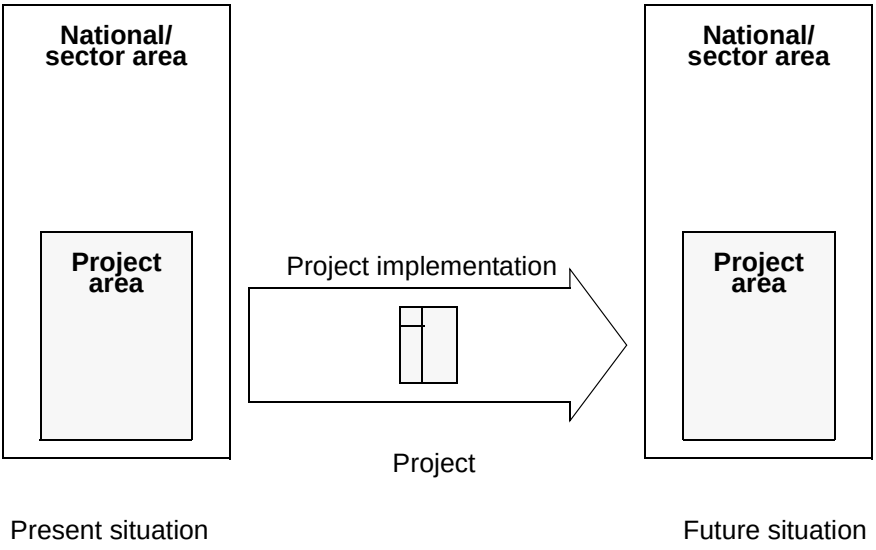
LFA can be used not only during initial planning, but also as a management tool during project implementation.

During the planning exercise the participants involved make a step-by-step analysis of the prevailing situation and what measures should be undertaken - as described in section 2 (on page 21) of this handbook. The PM is the end result of the LFA planning process.

The PM should then be used as a starting point for formulating the technical part of the formal project agreement as well as the detailed plan of operations. It will serve as a major point of reference throughout the life of the project, particularly for monitoring and evaluating the project.

In many projects LFA will also be used during implementation in connection with project reviews, planning of extensions, re-designs, etc. The utilization of LFA is discussed in some detail in section 4 (on page 75) of this handbook.

THE PM IS A MAJOR POINT OF REFERENCE THROUGHOUT THE LIFE OF THE PROJECT



THE LFA WORKSHOP

The LFA workshop is a major instrument for project planning and analysis. It can be organized in different ways.

In its simplest form it can be a brief, internal exercise carried out at an early stage in order to decide whether or not to continue planning the project. Or it can be more extensive, depending upon whether the project is new or ongoing; a simple, limited concept or a complex integrated one, etc.

The more extensive LFA workshop would typically last from 6 to 12 days, and be carried out in the project area with participants from all parties involved in order to prepare the actual project design.

An extensive LFA workshop would typically consist of representatives of the partner country at national, regional and local level, the donor agency, affected/involved organizations and institutions, and relevant specialists. This is because future cooperation is likely to be smoother and more productive if all those involved have developed the project design jointly and have agreed on the objectives.

Representatives of the intended beneficiaries should be involved, either directly in the workshop, or indirectly through simplified workshops using adapted communication means, where they can express their opinions and priorities.

Whenever feasible the venue for the LFA workshop should be the project area.

The workshop should be facilitated by an LFA specialist. The facilitator/ moderator should preferably be independent both of the donor agency and the partner government.

THE LFA WORKSHOP

Whenever feasible, the LFA workshop should:

- be undertaken in the **project area**
- include representatives of **all involved parties**
- be facilitated by an independent LFA facilitator/moderator

THE VISUALIZATION TECHNIQUE

Visualization is used in the LFA workshop to make thinking, discussion and work processes as efficient as possible. The visualisation technique makes extensive use of coloured cards to display and analyze opinions. The main principle is that all contributions made by the workshop participants should immediately be written down on cards and pinned to the wall for everybody to see. In this way discussions are rationalized and deepened, the results are gradually improved.

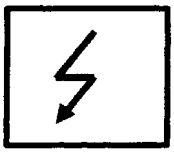
Ten practical rules concerning the visualization technique are:

1. Be **positive**: formulate all suggestions on the cards and avoid time-consuming arguments.
2. Only **one** statement per card, clearly written, and brief.
3. Word the message clearly and distinctly: Stick to facts, avoid speculation or stereotypes and unclear abbreviations.
4. The moderator helps the participants organize their suggestions - the cards, and chairs the discussions.
5. A moderator's involvement in discussions should be limited to aspects of LFA methodology. The moderator should refrain from getting involved in substantive discussion.
6. Cards with general statements should be replaced by several more **specific** cards.
7. Statements can be changed or moved temporarily, by the moderator, when requested by the participants
8. Statements can be changed or moved permanently only when **all** the participants agree (consensus).
9. If discussions become lengthy or unproductive, they should be (temporarily) discontinued by applying the "traffic signs" on the opposite page. The team should then proceed with other aspects of the problem.
10. Lines indicating causal relationships should not be drawn until the end of the session.

"TRAFFIC SIGNS" FOR LFA WORKSHOPS.

Need for further clarification at a later stage

More information is needed



Disagreement, conflict, contro-versial issue

Discussion discontinued

SECTION 2 PLANNING WITH LFA

LFA STEP BY STEP

An LFA workshop focuses on key aspects of a complex existing situation in the partner country.

The comprehensiveness of the planning exercise will be determined by the

amount of information available

- complexity of the problems to be handled
- number and capability of the participants

The point of departure for the LFA workshop should be a paper describing current problems in the project area, e.g. a pre-feasibility study or information compiled specifically for this purpose.

Such information should be available to the participants before the LFA workshop is organized.

Relevant information on the various interest groups, their needs, socio-cultural situation, etc., should also be available.

The analysis is conducted in four consecutive steps, identifying the most direct and essential causal relationships, followed by three planning steps where the project is designed.

The steps in the LFA workshop are summarized on the opposite page, and are described in detail on the following pages.

A brief example which explains how the analysis is done is included as Annex A.

ANALYZING THE SITUATION

1. Participation analysis
2. Problem analysis
3. 3.Objectives analysis
4. 4.Alternatives analysis

DESIGNING THE PROJECT

5. Project elements (PM)
6. External factors (PM)
7. Indicators (PM)

STEP 1: PARTICIPATION ANALYSIS

Lack of knowledge among development planners both on the donor and partner side about the people affected by development projects has proved to be a common cause of project problems, as evidenced in numerous evaluation reports and studies.

> As the first step, therefore, a comprehensive picture of the interest groups, the individuals and institutions involved has to be developed.

Organizations, authorities at different levels and interest groups have different motives and interests. It is of fundamental importance to analyze the interests and expectations of the various participants both early on in the planning process, and later during the implementation of the project.

A fundamental requirement of all development projects is that the objectives reflect the needs of the society and the interest groups, and not merely the internal needs of institutions.

All parties whose views it is necessary to investigate in order to understand the problem should be listed, as well as all groups which are likely to be affected by a possible development project in the area, positively or negatively, directly or indirectly.

In order to deepen the analysis, the individual participants in the workshop could be assigned to represent the positions of different groups during the working sessions.

IDENTIFY ALL PARTIES INVOLVED

1. **Write down** all persons, groups and institutions affected by the problem environment.
2. **Categorize** them,e.g. interest groups, individuals, organizations, authorities, etc.
3. Discuss whose interests and views are to be given priority when analyzing the problems. Specify gender.

LOOKING AT SOME OF THE GROUPS

Based on the information available and the insight and experience of the individual participants, a more detailed analysis can be made of a selection of the groups identified.

The participants in the LFA workshop should decide on the criteria to be used in this analysis. A suggestion is given on the opposite page.

Once the criteria are established, the main characteristics of the individual groups should be identified accordingly.

Where differences in opinion between the participants make it difficult to proceed, the discussions should be discontinued by applying the "traffic signs". These will serve as reminders to collect more information or seek clarification later in the process.

TAKE A CLOSER LOOK AT SOME OF THE GROUPS

4. Select the most important groups.
5. Make a more **detailed analysis** of these groups, e.g. in terms of
   a) **Problems:**
      The **main problems** affecting or facing the group (economic, ecological, cultural, etc.)
   b) **Interests:**
      The **main needs** and interests as seen from the group's point of view
   c) **Potential**:
      The **strengths** and **weaknesses** of the group
   d) **Linkages:**
      Main **conflicts** of interests, patterns of **cooperation** or **dependency** with other groups

ESTABLISHING A PLANNING PERSPECTIVE

It is of particular importance that the participants in the LFA workshop are able to agree on whose interests and views are to be given priority when the analysis of problems is carried out (step 2). Relevant issues to have in mind are:

- Which are the groups most in need of external assistance?
- Which interest groups should be supported in order to ensure positive development?
- What conflicts would occur by supporting given interest groups and what measures can be taken to avoid such conflicts?

SET PRIORITIES

6. Decide whose interests and views are to be given priority when the analysis of problems is carried out (step 2).

STEP 2: PROBLEM ANALYSIS

GENERAL

> On the basis of available information, the existing situation is analyzed: i.e. the major problems are identified and the main causal relationships between these are visualized in a problem tree.

The mandate of the LFA workshop may often be restricted to one specific sector, subsector, area, etc. In other cases the workshop is conducted in connection with one particular ongoing project.

It is important that all possible options remain open during the problem analysis. The aim at this early stage is to establish an overview of the situation; later in the process, the perspective will be narrowed and deepened in order to prepare for the design of a project.

FORMULATE PROBLEMS

1. Identify **existing** problems - not possible, imagined or future ones
2. A problem is not the absence of a solution - but an existing **negative state**

Example:

No pesticides are available	Crop is infested with pests
Wrong	Right

3. Only one problem per card.

IDENTIFYING A STARTING POINT

Each participant writes down a suggestion for a focal problem, i.e. describes what he/she considers the central point of the overall problem. The theme guiding discussion and selection of the focal problem is the interests and problems of the interest groups, persons and institutions involved.

The workshop should then discuss each proposal and try to agree on one focal problem.

If agreement cannot be reached, then:

- arrange the proposed problems in a problem tree, according to the causal relations between them,
- try again to agree on the focal problem on the basis of the overview achieved in this way.

If still no consensus is achieved, then:

- try brainstorming, role games, or other decision-making aids,
- select the best decision, e.g. by awarding points, or
- decide temporarily on one, continue work but return to discuss the alternative focal problems.

Whenever possible, avoid formal voting to obtain a majority decision.

SELECT A STARTING POINT

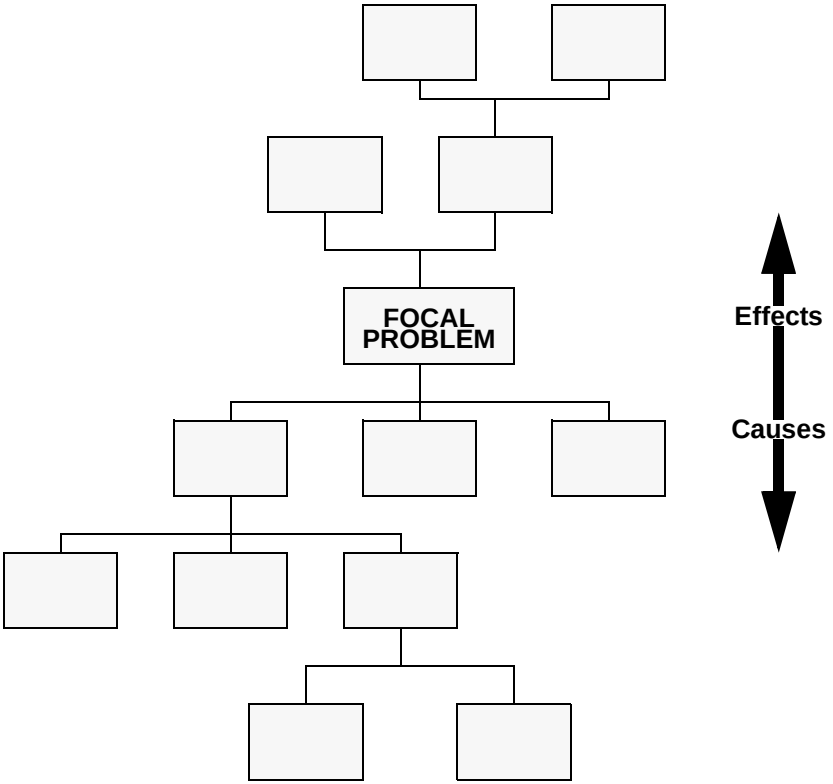
1. Identify major existing problems, based upon available information (brainstorming)
2. Select one focal problem for the analysis

DEVELOPING THE PROBLEM TREE

The **substantial** and **direct** causes of the focal problem are placed parallel underneath it.

The **substantial** and **direct effects of** the focal problem are placed parallel on the line above it.

Causes and effects are further developed along the same principle to form the **problem tree.**



The problem analysis can be concluded when the participants are convinced that all essential information has been included in the network in order to explain the main cause-effect relationships characterizing the problem.

DEVELOP THE PROBLEM TREE

3. Identify **substantial** and **direct causes** of the focal problem
4. Identify **substantial** and **direct effects** of the focal problem
5. Construct a problem tree showing the cause and effect relationships between the problems
6. Review the problem tree, verify its **validity** and **completeness**, and make necessary adjustments.

STEP 3: OBJECTIVES ANALYSIS

DEVELOPING THE OBJECTIVES TREE

> In the objectives analysis the problem tree is transformed into a tree of objectives (future solutions of the problems) and analysed.

Working from the top downwards, all problems are reworded, making them into objectives (positive statements).

- The focal problem is similarly transformed into an objective and is no longer highlighted.
- Difficulties in rewording may be solved by clarifying the original problem statement.

If the statements make no sense after being reworded from problems, write a replacement objective, or leave the problem unchanged.

Check that meeting objectives at one level are sufficient to achieve the objective at the next level.

Problems: "If cause A, then effect B"

Objectives: "Means X in order to achieve end Y"

Caution: Every cause-effect relationship does not automatically become a means-end relationship. This depends on the rewording.

Working from the bottom upwards, ensure that cause-effect relationships have become means-ends relationships.

Finally, draw lines to indicate the means-ends relationships in the objectives tree.

DEVELOP THE OBJECTIVES TREE

1. Reformulate all elements in the problem tree into **positive,** desirable conditions.

2. Review the resulting means-ends relationships to assure validity and completeness of the objective tree.

3. If necessary:

   Revise statements

   Delete objectives which appear unrealistic or unnecessary

   Add new objectives where necessary

4. Draw connecting **lines** to indicate the means-ends relationships.

STEP 4: ALTERNATIVES ANALYSIS

SELECTING THE ALTERNATIVES

> The purpose of the alternatives analysis is to identify possible alternative options, assess the feasibility of these and agree upon one project strategy.

Possible alternative means-end branches in the objectives tree which could become possible projects are identified and circled. These means-end branches constitute the alternative options.

Alternative options are numbered or labeled, e.g. "production approach", "income approach", "training approach", etc.

Referring to the results from the participation analysis (step 1), the participants should then discuss the alternative options in the light of which interest groups would be affected by them and in which ways.

IDENTIFY ALTERNATIVE OPTIONS

1. Identify differing "means-ends" ladders, as possible alternative options or project components.
2. Eliminate objectives which are obviously not desirable or achievable.
3. Eliminate objectives which are pursued by other projects in the area.
4. Discuss the implications for affected groups.

SELECTING THE MOST VIABLE ALTERNATIVE

The alternative options should be considered in relation to the following criteria:

Total cost
Benefits to priority groups
Probability of achieving objectives
Social risks

The workshop participants should also agree on any other criteria to use when assessing the viability of the alternative options.

Possible criteria could be:

Technical:	Appropriateness, use of local resources, market suitability, etc.
Financial:	Costs, financial sustainability, foreign ex-change needs, etc.
Economic:	Economic return, cost effectiveness, etc.
Institutional:	Capacity, capability, technical assistance
Social/distributional:	Distribution of costs and benefits, gender issues, socio-cultural constraints, local involvement and motivation, etc.
Environmental:	Environmental effects, environmental costs vs. benefits

The planning team should consider the different criteria in relation to the alternative options and make rough assessments, e.g. high/low; +/-; extensive/limited.

Based on these findings, the planning team should agree on one project strategy.

SELECT THE PROJECT STRATEGY

5. Make an assessment of the **feasibility** of the different alternatives.
6. Select one of the alternatives as the project strategy.
7. If agreement cannot be directly reached, then:

   Introduce additional criteria, or;

   Alter the most promising option by including or subtracting elements from the objectives tree.

STEP 5: IDENTIFY MAIN PROJECT ELEMENTS (PM)

Once the project strategy has been chosen, the main project elements are derived from the objectives tree and transferred into the first vertical column of the project matrix (PM) (see page 17).

Start at the top and work downwards

Decide on one development objective and one immediate objective

If necessary, reformulate the wording from the objectives tree to make them more accurate

The **goal** describes the anticipated long term objective towards which the project will contribute (project justification).

The **purpose** describes the intended effects of the project (project purpose) for the direct beneficiaries as a precisely stated future condition.

Note: There should be **only one** immediate objective.

The **outputs** are expressed as objectives which the project management must achieve and sustain within the life of the project. Their combined impact should be sufficient to achieve the immediate objective.

Note: While the project management should be able to guarantee the project outputs, the immediate objective is beyond their direct control.

Activities are expressed as processes. Avoid detailing activities; indicate the basic structure and strategy of the project.

All outputs should be numbered. Each activity should then be numbered relating it to the corresponding output.

Main **inputs** are expressed in terms of funds, personnel and goods.

DEFINE THE MAIN PROJECT ELEMENTS:

1. Goal
2. Purpose
3. Outputs
4. Activities
5. Inputs

STEP 6. ASSUMPTIONS (PM)

IDENTIFYING THE ASSUMPTIONS

> Assumptions describe conditions that must exist if the project is to succeed but which are outside the direct control of the project management.

Start from the bottom and work upwards.

Examine whether the inputs are sufficient to undertake the anticipated activities or whether additional events must also take place outside the project (assumptions).

Some assumptions can be derived from elements in the objectives tree which were not incorporated into the project.

Identify assumptions at each level in the PM up to the development objective level.

Starting from the bottom, verify at all levels that the proposals follow logically from each other and are complete. Each level must contain the necessary and sufficient conditions for the next level above (see page 50). Make sure that the assumptions are described in such operational detail (with indicators if possible) that they can be monitored.

Examples of assumptions:

- Fellowship recipients return to assigned positions
- Local institutions collaborate in planning activities
- Changes in world prices can be accomodated within given budget.

IDENTIFY IMPORTANT ASSUMPTIONS

Assumptions:

1. can be derived from the objectives tree
2. are worded as positive conditions (see objectives)
3. are linked to the different levels in the PM
4. are weighted according to importance and probability

CHECKING THE ASSUMPTIONS

The significance of the assumptions should be assessed in order to indicate the chances of project success.

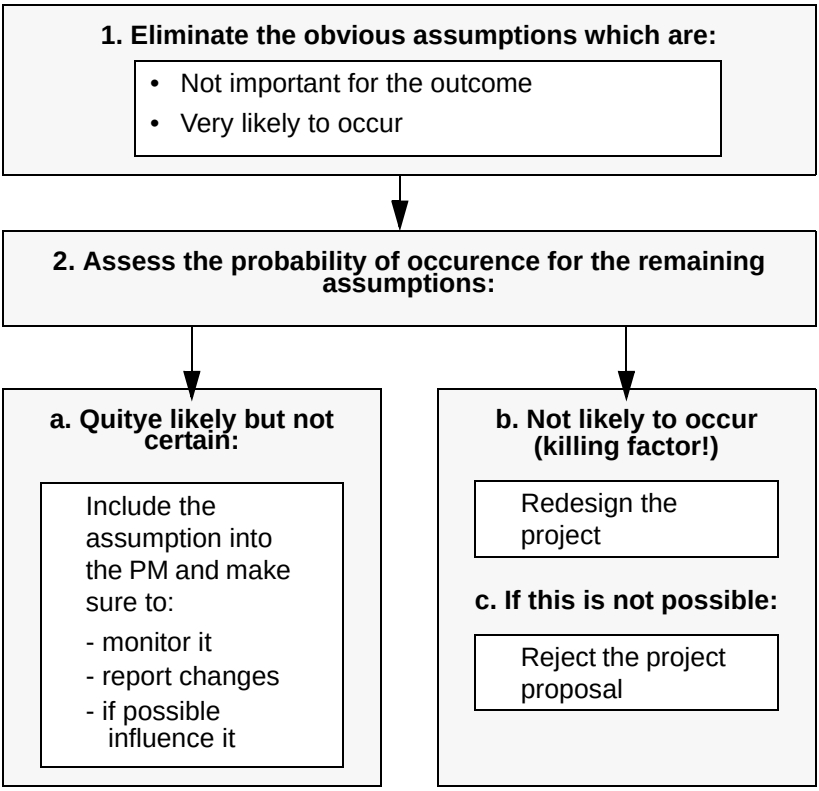
Go through the list of assumptions one by one at each level of the PM and check its importance and probability, as shown on the opposite page. Assumptions which are either very likely to occur or not very important for the outcome of the project should be deleted.

If the participants in the LFA workshop determine that an assumption is both very important for the outcome but not likely to occur, then it is a killing factor. If killing factors are found, the project must either be changed to avoid these factors, or the project must be abandoned.

Goal	←	Assumptions
Purpose	←	Assumptions
Outputs	←	Assumptions
Activities	←	Assumptions

Each level in the PM must contain the necessary and sufficient conditions for the next level above.

CHECK THE SIGNIFICANCE OF THE ASSUMPTIONS



STEP 7: INDICATORS (PM)

GENERAL

Indicators are specified in the second column in the PM.

The details of the indicators determine how we can measure to what extent the objectives have been achieved at different times. Measurements can be:

- Quantitative, e.g. kilometers of rehabilitated roads
- Qualitative, e.g. farmers' cooperative functioning effectively
- Behavioral, e.g. increased use of sanitary facilities

Qualitative indicators should be made measurable as far as possible.

Direct indicators may need to be supplemented by additional indirect (proxy) indicators.

Example of direct and indirect (proxy) indicators:

PURPOSE	DIRECT INDICATOR	INDIRECT INDICATOR
Increased income of small farmers	Crop sales	• Purchase of typical consumer items • Tin roofs on houses

Several indicators are better than one. Single indicators seldom convey a comprehensive picture of change.

DEFINE HOW TO VERIFY THE ATTAINMENT OF OBJECTIVES

In the context of LFA, indicators specify the performance standard to be reached in order to achieve the goal, the purpose and the outputs. Indicators should specify:

- Target group (for whom)
- Quantity (how much)
- Quality (how well)
- Time(by when)
- Location (where)
- Indicators provide a basis for monitoring and evaluation

FORMULATING THE INDICATOR

A good indicator is:

- **Substantial**, i. e. it reflects an essential aspect of an objective in precise terms.
- **Independent**, at the different levels. Since development and immediate objectives will be different, and each indicator is expected to reflect evidence of achievement, the same indicator cannot normally be used for more than one objective.
- **Factual**. Each indicator should reflect fact rather than subjective impression. It should have the same meaning for project supporters and to informed sceptics.
- **Plausible**, i. e. the changes recorded can be directly attributed to the project.
- Based on **obtainable** data. Indicators should draw upon data that is readily available or that can be collected with reasonable extra effort as part of the administration of the project.

The measures provided by indicators should ideally be accurate enough to make the indicator objectively verifiable. An indicator is "objectively verifiable" when different persons using the same measuring process independently of one another obtain the same measurements.

In the early planning stages, indicators are just guiding values with which to analyze the project concept. These guiding values must be reviewed again when the project becomes operational, and where necessary replaced by project-specific indicators.

FORMULATE THE INDICATOR

Objective: Increased agricultural production

1. **Identify indicator:**
   - e.g. increased rice yield
2. **Specify target group:**
   - male and female smallholders (cultivating 3 acres or less)
3. **Quantify:**
   - 500 smallholders increase production by 50%
4. **Set quality:**
   - maintaining same quality of harvest as 1989 crops
5. **Specify time frame:**
   - between October 1990 and October 1991
6. **Set location:**
   - Umbia district

Combine: 500 male and female smallholders in Umbia district (cultivating 3 acres or less) increase their rice yield by 50% between October 1990 and October 1991, maintaining the same quality of harvest as 1989 crops.

CHECKING THE MEANS OF VERIFICATION

When indicators are formulated, the sources of information necessary to use them should be specified, i.e.:

- what information is to be made available
- in what form; and
- who should provide the information

Sources **outside** the project should be assessed for accessibility, reliability and relevance.

The work and costs involved in any information to be produced by the project **itself** should also be assessed.

Indicators for which we cannot identify suitable means of verification must be replaced by other, verifiable indicators.

Indicators which, after consideration of costs and usefulness, are found to be too expensive, must be replaced by simpler, cheaper indicators. Formulating indicators should include specifying their means of verification. In many cases it may be useful to add a coloumn for "means of verification" to the PM.

CHECK THE USEFULNESS OF THE INDICATOR

1. Is the information **available** from existing sources (statistics, records, etc.)?
2. Is the information **reliable** and up-to-date?
3. Is **special data-gathering** required?
4. If so, do the **benefits** justify the **costs**?

Avoid **costly** and/or **unrealiable** indicators.

SECTION 3
CHECKING PROJECT DESIGN

CHECKING PROJECT DESIGN

Whether project design is the result of a step-by-step LFA workshop as described in section 2 (on page 21) in this handbook, or a less systematic process, it is useful to make a final overall check of the result.

The rules described in this section can be used when checking the design of an existing project, or when reformulating a project document into the LFA format.

The point of departure is once again the PM as described on page 14. The PM summarizes the elements of the project as described for instance in the project document.

There are several variations of PMs in common use today. One variant is that a "means of verification" column is added to the indicators column. This specifies the sources of information which enable us to verify the indicators. In other cases a "means of verification" column is added to the external factors column.

Such variations are acceptable. As our main concern is the content of the PM, the way it is organized is of less importance.

The PM

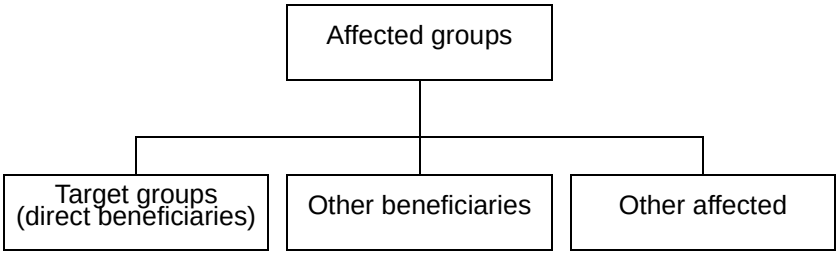
Goal	Indicators	Assumptions
Purpose	Indicators	Assumptions
Outputs	Indicators	Assumptions
Activities	Inputs	Assumptions

The PM is a one-page summary of the project design

Target groups

A basic principle in all development projects is that they should be designed to satisfy the needs of people, not the internal needs of institutions.

All projects, whether vaccination campaigns, agricultural projects, hydro-power plants or import-support programmes, have consequences for individuals or groups of people. It is therefore necessary in all projects to clarify which are the intended beneficiaries (target groups), and what other groups will be affected, positively or negatively.



The groups can be sub-divided, e.g. into participants/non-participants, potential proponents/potential opponents, etc.

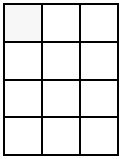
Other affected groups, organizations, political authorities at different levels, represent motives and interests which may not necessarily coincide with those of the target group. Identifying conflicting interests is an important part of the project design and they should be indicated under external factors where applicable.

If the project is only to reach its target beneficiaries indirectly through a local institution, then the project objective will normally best be defined in terms of the creation or upgrading of a capacity to satisfy the recurrent needs of the intended beneficiaries on a sustained basis.

A common problem in development projects is that the target groups are either not defined or not sufficiently specified. While descriptions such as "the rural poor" or "underemployed workers" may be appropriate for statements of policy, etc., they are inadequate for designing a project.

ONCE THE PROJECT IS DESIGNED, ENSURE THAT THE TARGET GROUPS ARE:

1. specified in the indicators coloumn at the level of development objective, immediate objective and output.
2. precisely defined. If this is not possible, the composition of the target group can be narrowed down e.g. according to one or more of the following criteria:
   a) **Geographical** area, where the majority of the population belongs to the target group
   b) Field of **activity** (e.g. farmers with a certain crop or income, landless labourers.)
   c) **Economic** situation, living conditions
   d) **Needs, access to social services** (health, education, etc.)
   e) **Gender** and **age**
   f) **Class, caste, ethnicity, social status**, etc.
3. specified at the right project level. There may be different target groups at different levels in the PM.



Goal

> The goal is the main overall objective that the project is meant to contribute to in the long run.

Normally, progress towards the goal will depend on a number of related projects or processes beyond the control of the project itself.

It is important that the goal is clearly defined and used as a main point of reference by all involved parties during project implementation. This will help clarify decisions and provide a point of reference against which the achievements of the project can be assessed.

A common problem in project design is that the goal is too ambitious or not clearly defined, e.g.:

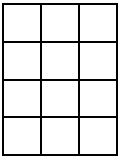
- Poverty in rural areas reduced
- Physical environment improved
- Overall standard of living improved
- Average duration of life increased

There is a tendency to use broad, very ambitious goals in order to provide a solid justification for the project. The need for guidance, motivation and verification, however, suggests that a narrow, specific goal should be chosen. This will increase the probability of success.

It is important that the goal is realistically defined, i.e. that the purpose will significantly contribute to achieving the goal.

ONCE THE GOAL HAS BEEN FORMU-LATED, ENSURE THAT:

1. It is consistent with the development policy of the **partner country**
2. It is consistent with the **donor's** policy guidelines for development aid
3. It represents a **sufficient justification** for the project
4. It is **not too ambitious.** (i.e. achieving the purpose will significantly contribute to the fulfilment of the goal)
5. The **target groups** are explicitly defined
6. It is expressed as a **desired end,** not as a means (a process)
7. It is expressed in **verifiable** terms
8. It does not contain two or more objectives which are causally linked (means-ends)



Purpose

The purpose sets out the operational purpose, i.e. the situation that is expected to prevail as a consequence of the project.

The purpose is the anticipated achievement of the project, outside the project's direct control.

In the end it is the purpose that will determine the magnitude of the project both in terms of resources, personnel and strategy.

A common problem in development aid is that the purpose is too ambitious, unclear or complex.

A project should have only one purpose. This will facilitate guidance, increase motivation and make it more manageable.

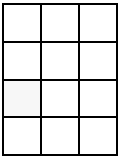
However, in larger programmes the outputs, and the activities and inputs associated with these could in some cases be seen as separate projects. This is explained on page 73.

The purpose or its indicators should specify the intended benefits for the target group, e.g.:

- Pond-farmed fish among smallholders (less than 5 acres) in district A is increased from an average annual production of X tons in 1990 to Y tons by year 1995.
- A self-sustaining credit institution is established by 1995, capable of providing 30% of the region's small farmers with their credit needs

ONCE THE PURPOSE HAS BEEN DEFINED, ENSURE THAT:

1. It consists of **one** single objective
2. The **target groups** of the project are specified
3. It can be expected to contribute **significantly** to the fulfillment of the goal
4. It is **realistic,** i.e. it is likely to occur once the project outputs have been produced
5. It is outside the **immediate** control of the project itself
6. It is formulated as a **desired state,** not a process
7. It is **precisely** and **verifiably** defined



Outputs

> The outputs are the results that can be guaranteed by the project as a consequence of its activities.

The achievement of the purpose presupposes that a number of outputs are produced by the project, at different stages throughout the implementation period.

As such, outputs differ substantially from the purpose, which is the effect we **hope** to achieve as a result of the project. As a rule of thumb, the difference between outputs and objectives is whether or not they are largely within the power of project management to achieve, provided the requested funds, personnel and facilities are available.

Difficulties in distinguishing between objectives and outputs cause a common type of mistake in project designs. Example:

- A project can guarantee that a number of smallholders are trained in the construction and operation of fish ponds, and provide them with an initial quantity of fingerlings.

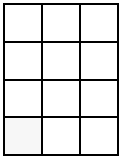
These are the concrete outputs of the project. However, the project cannot guarantee that:

- The smallholder's annual average production of fish is increased from X tons in 1990 to Y tons by 1995.

This must be seen as an objective since it is the direct result of the smallholder's work, and outside the direct control of the project itself.

ONCE THE OUTPUTS HAVE BEEN IDENTIFIED, ENSURE THAT:

1. All **essential** outputs necessary for achieving the purpose are included
2. Only the outputs which can be **guaranteed** by the project are included
3. Each output can be seen as a necessary **means** to achieve the purpose
4. All outputs are **feasible** within the resources available
5. The outputs are **precisely** and **verifiably** defined



Activities

> An activity is an action which is necessary to transform given inputs into planned outputs within a specified period of time.

The activities are the work, the investigations or the tasks to be carried out by the project staff and others involved in the project.

For each output there will be one or more activities.

The activities included in the project design should be target-oriented in that they are tasks to be performed in order to produce a specified project output. If the task is not geared to producing one of the outputs it should not be listed. Thus, routine administrative tasks should not be included.

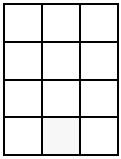
Only those tasks which are to be undertaken by the project should be listed, with care being taken to distinguish between the project's activities and those which are part of the broader on-going activities of partner country institutions or programmes to which the project is related.

A common problem in project design is aver-specification of project activities and inputs, combined with under-definition of objectives and outputs.

Note that the project design should provide an overview of the main elements of the project at decision-making level, while the detailed planning should usually be done as a separate exercise.

ONCE ACTIVITIES ARE DESCRIBED, ENSURE THAT:

1. All **essential** activities necessary to produce the anticipated outputs are included.
2. All activities contribute **directly to** the output level above
3. Only those activities to be performed by the **project** are included
4. Activities are stated in terms of **actions** being undertaken rather than completed outputs
5. The **time** available for each activity is realistic
6. The activities are **appropriate** to the situation in the partner country, in terms of institutions, ecology, technology, culture, etc.



Inputs

The inputs are the "raw materials" of a project necessary to produce the intended outputs.

The inputs are all the resources to be used in the project in terms of funds, personnel, materials, services, etc., as provided by the donor, the partner country, NGOs., etc.

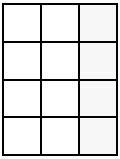
The total inputs must realistically reflect what is necessary in order to produce the intended outputs.

A common problem in project design is again over-specification of inputs while at the same time the description of objectives and outputs is not specific enough.

The description should provide sufficient basis for judging the appropriateness of the inputs to the project. More detailed descriptions of inputs should be done during the detailed planning of the project.

ONCE THE INPUTS ARE DESCRIBED, ENSURE THAT:

1. The inputs can be related **directly** to the specified activities
2. The inputs are **necessary** and **sufficient** conditions to undertake the planned activities
3. The level of detail is **adequate** but limited to comprehensibility
4. The inputs are **precisely** and **verifiably** defined (quantity, quality, cost)
5. The resources are **appropriate** for the situation in the partner country, in terms of organization, gender, culture, technology, environment, etc.



Assumptions

> Assumptions describe situations, events, conditions or decisions which are necessary for project success, but which are largely or completely beyond the control of the project management.

Most projects operate in difficult development environments in which factors outside the control of the project may seriously delay or prevent the achievement of the project's outputs and objectives.

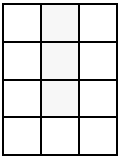
It is important to identify assumptions as early as possible and take these into consideration when the project is designed, in order to

1. determine the risks or probability of success
2. avoid serious risks by redesigning the project
3. clarify the area and limits of responsibility of the project management 4. indicate areas where there is a need for more information or further investigations

Like the objectives, the assumptions should be precisely and verifiably defined, as desired ends or conditions.

ONCE THE ASSUMPTIONS HAVE BEEN FORMULATED, ENSURE THAT:

1. They are formulated as desirable, **positive** conditions
2. They are linked to the **correct** project level
3. Assumptions which are not **important** are not included
4. Assumptions which are very likely to occur are not included
5. If there are assumptions which are both important and unlikely to occur **(killing factors)** the project should either be redesigned to avoid them - or abandoned
6. The remaining assumptions are **precisely** and **verifiably** defined



Indicators

In the context of LFA, an indicator defines the performance standard to be reached in order to achieve the objective.

How indicators are formulated is explained on page 51.

Direct indicators reflect changes sought by the project directly (tons produced, acres irrigated, candidates graduated, etc.).

Sometimes it is not possible or economical to measure change directly. In such cases indirect indicators must be used (sixth grade graduates as indicator of literacy; standard of housing, or purchase of bicycles as an indicator of farmer income).

Several indicators are better than one. Single indicators seldom convey a comprehensive picture of change.

In some cases the information necessary to measure the indicators (means of verification) is available from existing sources. In other cases the information must be generated by the project itself, e.g. through surveys, in-depth studies, etc. In either case the means of verification must be reviewed as to:

- relevance of the information
- accessability
- costs
- reliability

Indicators are useful only to the extent that the means of verification can be established

Expensive, time-consuming or unreliable indicators must be replaced by other verifiable indicators.

ONCE INDICATORS HAVE BEEN SPECIFIED, ENSURE THAT:

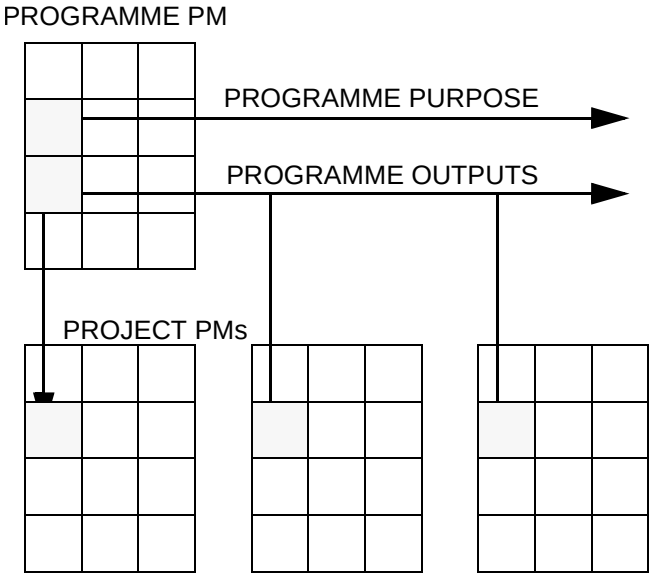
1. They are **specific** in terms of quantity, quality, time, location and target group
2. The means of verification is **available** (statistics, observation, records)
3. If not, check that the information can be generated at **reasonable cost**
4. It is **relevant** as a measurement of the achievement of objectives
5. The means of verification is **reliable** and **up-to-date**
6. The collection, preparation and storage of information is an activity **within** the project and the necessary inputs for it are specified in the PM

Larger Programmes

Programmes, as well as projects should only have one purpose. This will help clarify priorities and responsibilities and thereby improve management. Larger programmes which operate for instance in several different sectors, could be seen as a set of sub-projects. Each of the programme outputs would constitute the purpose of the different projects.

In such cases one should make sure that the programme outputs (or project purpose) are not conflicting. The trade-off between competing objectives should be spelled out and an order of priority established.

A larger programme can be seen as a set of separate projects where the programme outputs constitute the purpose of each project



SECTION 4
USING LFA

In the previous sections LFA has been discussed in the context of project design. In this section we shall look at how LFA is used as a means to improve management throughout the life of a project.

The idea behind LFA is that it helps to:

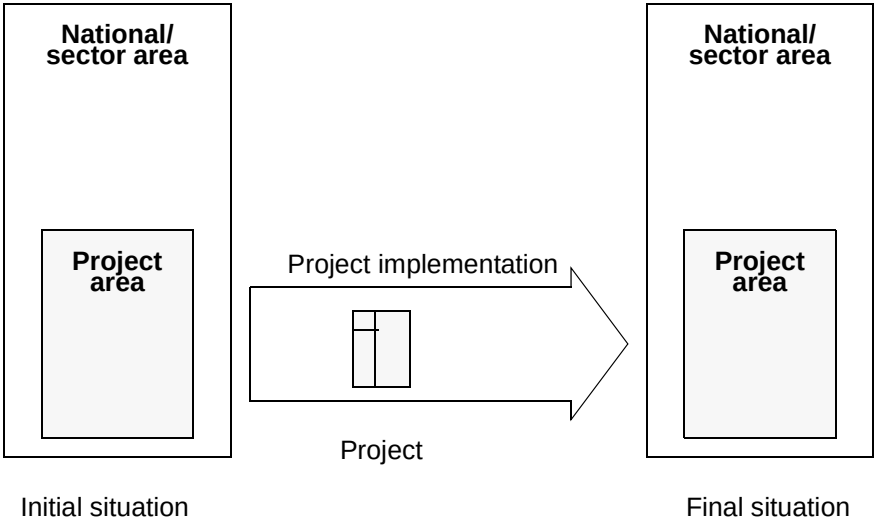
- Establish strategies and guidelines for the implementation of the project.
- Spell out the logic behind the project so that any changes that are necessary conform to overall project design.
- Monitor and verify both project progress and the impact of the project.

The development project is described by means of the PM (on page 15). On the opposite page seven main stages of project implementation are listed.

This general process does not apply rigorously to projects of all types and sizes. It may be relevant to distinguish between the following types of projects:

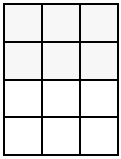
1. **Large** projects, where the use of considerable re-sources for planning and design is justified and the use of LFA is a must
2. **Experimental** projects where the use of LFA is necessary regardless of size
3. **Programmes** consisting of several projects, where LFA should be used both on the programme itself as well as the individual projects.
4. **Small** projects, where less resources are available for planning, design and the use of LFA
5. **Non-projects** (event-projects) e.g. financial support, seminars, etc., where it does not make sense to use LFA.

On the following pages we shall discuss the use of LFA in the different project stages.



MAIN STAGES IN THE DEVELOPMENT OF A PROJECT:

1. Identification
2. Feasibility study
3. Project design
4. Detailed planning
5. Monitoring
6. Project review
7. Evaluation



Identification

Project identification is the stage at which the initial project proposal is conceived and formulated.

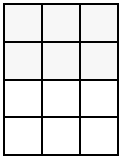
At this stage the perspective should be very wide. The information available is usually very limited.

The project idea is assessed in relation to:

- development policy and priorities of the partner country
- the donor's overall guidelines for development aid
- related on-going development activities in the partner country

In the identification phase, the main justification for the project, the description of potential target groups and assumptions which are likely to influence the project, are more important elements than questions of choice of technology and ways of organizing the project. What we are most interested in is the justification, the context and the anticipated effects of the project, and not the project itself, its outputs, activities and inputs.

Already at this stage it is an advantage to use LFA terminology. A mini-LFA workshop lasting 3-4 hours with 2-3 decision-makers may be a very useful exercise when assessing the feasibility of the project proposed and deciding on the main perspective for a feasibility study.



Feasability study

A feasibility study includes the data collection, analysis and assessment necessary in order to prepare for project design.

The feasibility study should not go into detail on anticipated activities and inputs in the project itself, but provide a thorough background, with information, for:

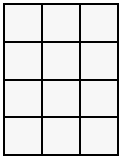
- the overall justification for the project (perspectives, purpose, goal)
- the potential target groups, their needs and anticipated positive/ negative effects of the project
- important assumptions which may be decisive for the success or failure of the project

The specific outputs necessary in order to achieve the objectives.

Usually there is already an understanding of the scope of activities to be undertaken and the resources available at this stage. The feasibility study should not be a detailed technical study, but a study relevant for a broad problem analysis and decision-making.

The study team should be inter-disciplinary covering sectoral expertise as well as socio-cultural questions, gender relations, environmental issues, financial/economic aspects, institutional aspects, technological aspects and policy support measures, etc., as appropriate.

It is an advantage if the Terms of Reference for the feasibility study is based on LFA, and the members of the study team are familiar with the method.



Project design

During project design (or re-design) the basic project structure, the main assumptions and some of the main elements of the monitoring system are identified.

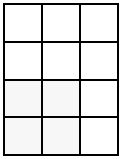
At this stage the perspective is the whole project and its context. The project design, however, should not go into details of the activities and necessary inputs, but merely define the main components.

When the project is designed, LFA should be used as a major planning tool as described in section 2 (on page 21) and 3 (on page 54) in this handbook.

Project design can be done as a 6-12 days exercise with a cross-cultural LFA workshop, but it can also be done internally by the donor in less than one day, depending on the scope and the type of the project.

A main advantage with the LFA workshop is that it brings together different parties that will be involved with the project at decision-making and management level. This will help create a common understanding which will strengthen motivation and cooperation during the implementation of the project.

The facilitator/moderator of the LFA workshop should have extensive training and experience in LFA, and have an independent position vis-a-vis the donor organisation and the responsible institution in the partner country.

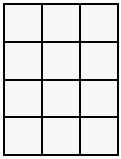


Detailed planning

Not until this stage, when the main characteristics of the project have been established, is it appropriate to make a detailed implementation plan for the project itself, its intended outputs, activities and inputs, as well as its monitoring system, time schedules and budget.

The detailed planning is in many cases done by the project management itself, with or without the use of external expertise.

The implementation plan should use LFA terminology and format, and the project management should be familiar with LFA. One should ensure that the monitoring system designed during the detailed planning will provide a basis for the monitoring not only of physical progress but also of the extent to which objectives are met, i.e. the effect of the project on the target groups and other affected groups.



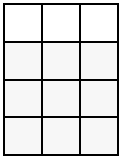
Monitoring

Monitoring is the continuous or periodic surveillance of the implementation of a project.

Not only should the physical progress of the project be monitored, but also the impact of the project, and developments in its environment (external factors).

There should be one format for monitoring and reporting throughout the life of the project. This will help provide a solid basis for analyzing trends and defining strategies, and will be particularly useful when there is a change of personnel, management and decision-makers.

The format of progress reports should be such that inputs, activities and outputs are monitored with a reference to the purpose and goal. Indicators should be used. Changes in assumptions which are relevant to the development of the project should also be registered in the progress report. The progress reports provide a major information input to the project reviews. These should use a format based on the elements in LFA.



Project review

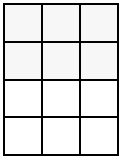
The project review is a major element in the follow-up of the project by the donor and the partner country.

The main perspective during the project review is the physical progress and the achievements of the project. The purpose is to provide guidance and make recommendations regarding the strategy and management of the project.

The project review is undertaken in the partner country and entails discussions with all parties involved, a review of the information available through regular monitoring, and special studies, as appropriate.

A common weakness in many project reviews has been the overemphasis on the technical and operational aspects at the expense of the analysis of the impact and usefulness of the project.

It is of vital importance, therefore, that the use of technical/economic expertise is balanced with expertise in general development questions, and the Terms Of Reference for the project review are based on LFA. The participants in project reviews should be familiar with LFA.



Evaluation

Evaluations are independent assessments of the impact, relevance and sustainability of the project, undertaken by external collaborators.

The purpose of evaluations is a combination of learning, guidance and control based on an assessment of what has been achieved by the project. The evaluation is based on a review of existing information, discussions with all parties involved, and impact studies.

Previously evaluations have often been based on very broad mandates requesting detailed analysis of the developments throughout the life of the project. The result has been a much too detailed analysis at the expense of a more decision-oriented analysis at a higher level.

With an appropriate monitoring system and sufficiently frequent and comprehensive project reviews, there should be no need for detailed historical investigations when the project is evaluated. Rather, the evaluation team should be able to concentrate on the evaluation itself, i.e. to assess the impact and relevance of the project in relation to its objectives, target groups and other affected parties, and in relation to its inputs.

At this stage, it is an added advantage if the Terms of Reference for evaluation are based on LFA, and the team members, in particular the team leader, have extensive knowledge of the method. Comprehensive guidelines on how to plan and conduct evaluations are provided in *Evaluation of Development Assistance. Handbook for Evaluatiors and Managers*, Ministry of Foreign Affairs, Norway, 1994.

ANNEX 1
USING THE LFA AS A PLANNING TOOL

AN EXAMPLE

THE PROBLEM

The starting-point for the LFA workshop is a description of the situation to be analyzed, for instance a feasibility study, a pre-appraisal report, or a compilation of information done for the workshop.

In order to illustrate the use of the method described in section 2 of this handbook (on page 22), we shall use the following very simple example:

> The city of Mango has several bus companies. During the last years the frequency of bus accidents has gone up significantly. This has caused much delay and inconvenience for the passengers. There have also been several serious accidents in which passengers have been killed.
>
> The newspapers have taken a particular interest in the problem, and some of the companies that have had more than their share of bad publicity have registered a reduction in the number of passengers. Much of the problem is technical: the buses are old, and are in bad condition because of a persistent lack of spare parts.
>
> But the human factor is also important: many accidents have been caused by high-speed driving on bad roads.
>
> One of the companies is now organizing an LFA workshop in order to decide what to do about the problem.

1. PARTICIPATION ANALYSIS

On the basis of the available information, the following groups can be identified

INSTITUTIONS	INTEREST GROUPS	OTHERS
Bus company	**Passengers**	**General public**
Mass media	**Drivers**	
	Owners	

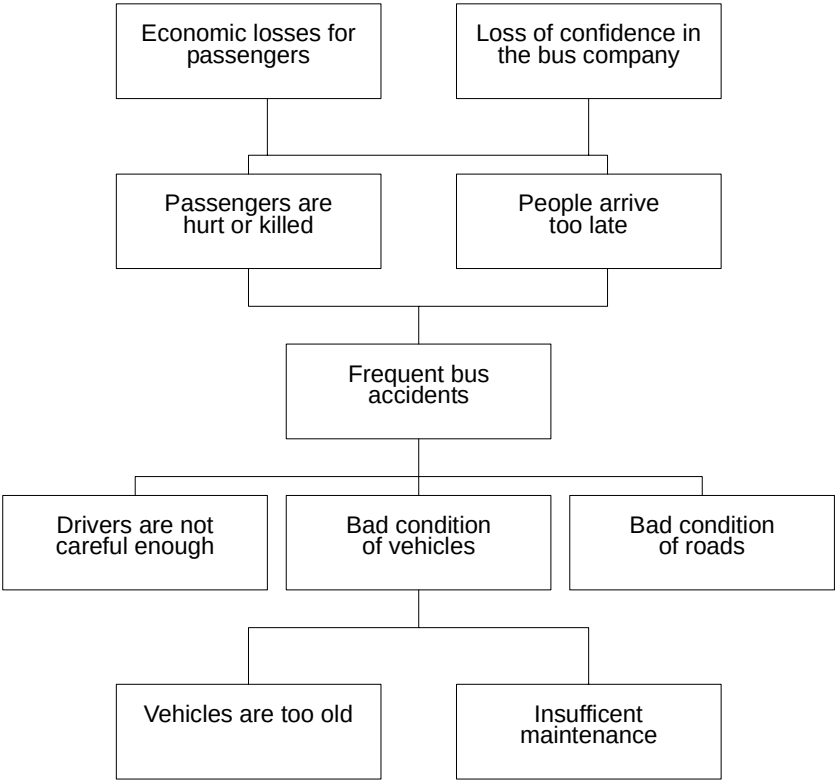
The workshop decides to take a closer look at two of the groups: the passengers and the bus company.

	BUS COMPANIES	PASSENGERS
PROBLEMS	Economic losses caused by busses out of service	Delays caused by accidens
	Economic losses caused by payments to victims	Sufferings for victims and their families
	Reduced number of passengers	
INTERESTS:	Economically viable operations	Safe, expedient and cheap transport
POTENTIALS:	Able to directly influence the problem	Boycott the only means to influence the problem
LINKAGES:	Dependent upon the passenger's cooperation	Can choose other bus companies if necessary

The workshop decides to give priority to the passengers' interests in the following analysis.

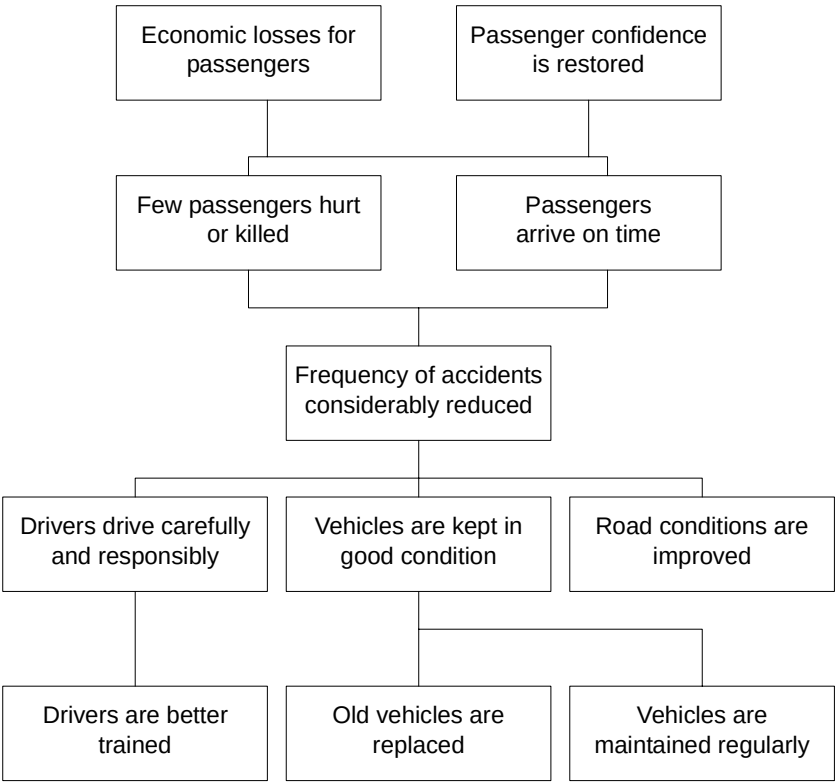
2. PROBLEM ANALYSIS

The workshop decides that the high number of accidents should be considered the focal problem. The following problem tree of substantive and direct causes and effects can be established



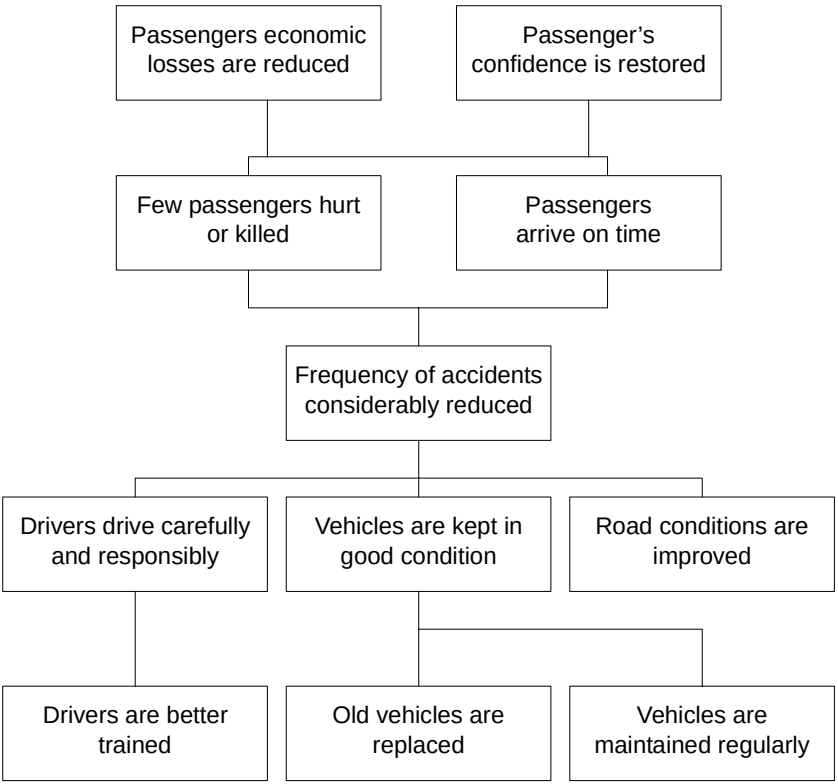
3. OBJECTIVES ANALYSIS

The problems are reformulated as positive statements. The workshop decides to add "training of drivers" as a means to make drivers more responsible.



4. ALTERNATIVES ANALYSIS

First objectives which cannot be achieved should be eliminated. The workshop decides that improved road conditions are entirely outside the reach of any of the bus companies.



OPTION 1 **OPTION 2**

Bearing in mind the results of the participation analysis, alternative options are identified from the objectives tree. In this case there are two obvious alternatives:

Option 1: Better drivers

Option 2: Better buses

ALTERNATIVES ANALYSIS CONTINUED

The workshop participants must agree upon which criteria should be used to assess the viability of the different options. The result is shown below in the left coloumn. The three alternatives are then analyzed with the following result:

	OPTION 1 BETTER DRIVERS	OPTION 2 BETTER BUSES	OPTION 3 1+2 COMBINED
COST	Low	High	High
CHANCE OF SUCCESS	Low	Low	High
COST/BENEFIT	High	Low	High
TIME HORIZON	Short	Long	Long
SOCIAL RISK	Small	Small	Small

Option 1 is limited to a training programme. The chance of success is low if the buses are still in bad condition.

Option 2 is more expensive, and there is no guarantee that the result will be positive unless the drivers also improve.

A third option would be to combine option 1 and option 2. It would be the most expensive alternative, but has a higher probability of success.

The result is that one of the options are chosen as the project strategy, in this case option 3.

5. DEFINING THE MAIN PROJECT ELEMENTS (PM)

The main project elements are listed in the left column of the PM. Some of the elements can be derived from the objectives tree.

Please note that the outputs are the results that can be guaranteed by the project, while the purpose is outside the direct reach of the project.

1. GOAL 1. High service level for bus passengers		
2. PURPOSE 1. Frequency of bus accidents reduced		
3. OUTPUTS 1. Drivers trained 2. X new buses operational 3. Maintenance workshop equipped 4. Maintenance routines established		
4. ACTIVITIES 1. Undertake trainingprogramme 2. Procure buses 3. Procure tools and spareparts 4. Develop maintenance routines	**5. INPUTS** 1. Bus instructorx months 2. Funds for buses 3. Funds for tools and spareparts 4. Maintenance instructor y months	

6. DETERMINING THE ASSUMPTIONS (PM)

Some of the assumptions can also be derived from the objectives tree. In this limited example there is only one such factor listed, namely "improved roads" which we assume is necessary in order to reduce the frequency of bus accidents.

1. GOAL 1. High service level for bus passengers		**ASSUMPTIONS** Passengers continues using the company buses
2. PURPOSE 1. Frequency of bus accidents reduced		**ASSUMPTIONS** Road conditions are improved
3. OUTPUTS 1. Drivers trained 2. X new buses operational 3. Maintenance workshop equipped 4. Maintenance routines established		**ASSUMPTIONS** Trained drivers remain with the bus company
4. ACTIVITIES 1. Undertake trainingprogramme 2. Procure buses 3. Procure tools and spareparts 4. Develop maintenance routines	**5. INPUTS** 1. Bus instructorx months 2. Funds for buses 3. Funds for tools and spareparts 4. Maintenance instructor y months	**ASSUMPTIONS** Tools and spares supplied and cleared in time

7. ESTABLISHING THE INDICATORS

The indicators specify how to verify the attainment of objectives and outputs. Some indicators can be derived from the objectives tree.

An indicator of the purpose specifies exactly how much the frequency of bus accidents should be reduced and by which date. It will then be possible to verify whether the purpose have been achieved or not.

1. GOAL 1. High service level for bus passengers	**INDICATORS** 90 % of departures with less than 5 minutes dellay Company's market share on the increase	**ASSUMPTIONS** Passengers continues using the company buses
2. PURPOSE 1. Frequency of bus accidents reduced	**INDICATORS** Less than x accidents annually after 12 months Less than y serious injuries after 12 months	**ASSUMPTIONS** Road conditions are improved
3. OUTPUTS 1. Drivers trained 2. X new buses operational 3. Maintenance workshop equipped 4. Maintenance routines established	**INDICATORS** See next page	**ASSUMPTIONS** Trained drivers remain with the bus company
4. ACTIVITIES 1. Undertake trainingprogramme 2. Procure buses 3. Procure tools and spareparts 4. Develop maintenance routines	**5. INPUTS** 1. Bus instructorx months 2. Funds for buses 3. Funds for tools and spareparts 4. Maintenance instructor y months	**ASSUMPTIONS** Tools and spares supplied and cleared in time

More detailed indicators should be identified as part of the monitoring system. For instance (taking output no. 1 as example):

Indicator 1

From the existing 120 drivers at least 60% are trained in year 1 and 40% in year 2; of the trained drivers all register a qualitative improvement in driving abilities, style and adherence to traffic rules, verified according to criteria set and agreed upon with Mango Traffic Dept. and surveyed sporadically through checks and road controls.

Indicator 2

Complaints against trained bus drivers concerning driving ability, style and observation of traffic rules is less than 20% of present levels (30 compiaintslday) by middle of year 2. Means of verification:

- Traffic Control Reports, Traffic Dept.
- Independent Bus Traffic Surveys
- Bus company Complaint Book
- Traffic Rules Violation and Fines Register, Mango Police Dept.

ANNEX 2

DEFINITIONS

LOGICAL FRAMEWORK APPROACH DEFINITIONS*

ACTIVITY (AKTIVITET)

Action taken or work performed within a project in order to transform inputs (funds, materials) into outputs (organizations, buildings).

APPRAISAL (FORHÅNDSVURDERING)

Overall assessment of the relevance, feasibility and sustainability of a project prior to making a decision on whether to undertake it.

ASSUMPTION (ANTAKELSE)

Event, condition or decision which is necessary for project success, but which are largely or completely beyond the control of project management

BENEFICIARIES

The direct (or intended) beneficiaries (target group) plus the indirect beneficiaries of a project

GOAL (UTVIKLINGSMÅL)

The main overall objective that the project is meant to contribute to in the long run, and which explains the reason why it is implemented

EFFECTIVENESS (MÅLOPPNÅELSE)

A measure of the extent to which a project or programme is successful in achieving its objectives.

EFFICIENCY (PRODUKTIVITET)

A measure of the "productivity" of the implementation process - how economically inputs are converted into outputs

EVALUATION (EVALUERING)

A systematic and independent examination of a project in order to determine its efficiency, effectiveness, impact, sustainability and the relevance of its objectives.

* Norwegian concepts in brackets

PURPOSE (TILTAKSMÅL)

The immediate reason for a project. The effect which the project is expected to achieve if completed successfully and on time.

IMPACT (VIRKNING)

The positive and negative changes produced, direct or indirect, as the result of a programme or project.

INDICATOR (INDIKATOR)

In the context of LFA, an indicator defines the performance standard to be reached in order to achieve an objective.

INPUT (RESSURSINNSATS)

The funds, personnel, materials, etc. of a project which are necessary to produce the intended output

LOGICAL FRAMEWORK APPROACH (LFA)

Management tool which facilitates planning, execution and evaluation of a project.

In this context, LFA also means:

- a format for presentation to donor and partner authorities: project ideas, pre-appraisal reports, project documents, progress reports, etc.
- a summary of the project in the form of a matrix that remains valid during project implementation but can be modified
- a sequence of analytical tools which is used in an external/internal woorkshop situation

MONITORING (MONITORING)

Continuous or periodic surveillance of the physical implementation of a project to ensure that inputs, activities, outputs and external factors are proceeding according to plan.

OUTPUT (RESULTAT)

The results that can be guaranteed by the project as a consequence of its activities

PROGRAMME (PROGRAM)

A group of related projects or services directed toward the attainment of specific (usually similar or related) objectives.

PROJECT (PROSJEKT)

A planned undertaking designed to achieve certain specific objectives within a given budget and within a specified period of time.

PROJECT MATRIX (PM)

A summary of project design which identifies the key elements, external factors and expected consequences of completing the project successfully.

RELEVANCE (RELEVANS)

The degree to which the rationale and objectives of a project are, or remain, pertinent, significant and worthwhile, in relation to the identified priority needs and concerns.

SUSTAINABILITY (BÆREEVNE)

The extent to which partner country institutions will continue to pursue the objective after project assistance is over.

TARGET GROUP (MÅLGRUPPE)

(Direct beneficiaries). The specific group for whose benefit the project or programme is undertaken; closely related to impact and relevance.

The main goal of Norwegian south policy is to contribute towards improving economic, social and political conditions in the developing countries within the limits of sustainable development. The Norwegian Agency for Development Cooperation (NORAD) is responsible for the the bilateral part

of Norwegian development cooperation. Norwegian institutions, organisations and industrial companies are important partners in this broad-spectered cultural, economic and technical cooperation.

According to the Norwegian policy, the responsibility for planning and implementing all development efforts rests with the authorities and institutions

in recipient countries. This book is a tool to ensure adequate planning - and meet with NORADs requirements for appraisal and quality assurance.

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