

## 4. PROJECT PREPARATION – THE LOGICAL FRAMEWORK APPROACH AND LOGICAL FRAMEWORK MATRIX

### 4.1 Introduction

The Logical Framework Approach (LFA) is a specific strategic planning methodology that can be used to prepare many different types of projects, including environmental investment projects. The output of LFA is the Logical Framework Matrix (LogFrame). The use of LFA is required by many international financing institutions (such as the World Bank) and is obligatory for projects funded by EU financial assistance programmes. In other words, each project proposal for EU financial assistance must be presented in the form of a LogFrame. The reason for this is that LFA is a very useful methodology for project design and preparation. A properly prepared LogFrame is an easy-to-read summary of the project proposal, describing the key logical links and project parameters.

The use of LFA to prepare a LogFrame is a group exercise, which:

- Includes representatives of all stakeholders related to the given project proposal.
- Is facilitated by a person familiar with the process.

Participants in an LFA process need not necessarily be familiar with LFA and the LogFrame. The key thing is that the facilitator must be able to introduce the key concepts of LFA to them. Very often, external consultants are hired as facilitators.

Logical Framework Approach is often confused with the Logical Framework Matrix. LFA is a project preparation methodology, whereas the LogFrame is a document with a special structure, produced at the end of the LFA process.

One common misuse of LFA is to design the project first and to "fill in" the Logical Framework Matrix at the end. This is not recommended, as it defeats the whole purpose of the logical framework and the design methodology.

LFA fulfils several functions:

- It develops a structured set of project ideas by clarifying objectives and outputs.
- It provides a clear, brief and logical description of the proposed project.
- It helps to identify possible risks to project implementation.
- It provides a useful basis for project appraisal.

LFA as a methodology can be applied to a variety of projects, from plans for compliance with the Air Quality Framework Directive (for example) to classical investment projects.

### 4.2 Logical Framework Approach in Steps

The LFA process can be divided into the following five steps:

1. Situation analysis;
2. Stakeholder analysis;
3. Problem and objective analysis;
4. Analysis of alternatives;
5. Activity planning.

The five steps given above are usually an integral part of the strategic planning process as discussed in Section 3.1 of this Guidebook.

Once the six steps are completed, the project designers can prepare the LogFrame.

#### 4.2.1 Situation Analysis

This is a document that describes the problem or situation to be addressed by the LFA process. The information source is basically a status quo report from the strategic planning process. It could also be a status quo report from a feasibility study, a pre-appraisal report, or a compilation intended specifically for the LFA.

The situation analysis is a task for an expert, often an external consultant.

#### 4.2.2 Stakeholder Analysis

Stakeholder analysis is a document which comprises a more detailed analysis of the people, groups, or organizations that may influence or be influenced by the problem or a potential solution to the problem. The objectives of this step are to identify and discuss the interest and expectations of persons and groups that are important to the success of the project.

The Stakeholder analysis is a task for an expert, often an external consultant.

#### 4.2.3 Problem and Objective Analysis

Once identified, the stakeholder group should meet and conduct a facilitated discussion to further identify and clearly state the primary or “focal” problem that needs to be resolved. The group will then create a “problem tree”, which lists the so-called “sub-problems” that are related to or causes of the “focal problem.”

The next step is to reformulate all elements in the problem tree into positive, desirable conditions – these are the objectives. It may then be necessary to revise the objective statements and the relationships between objectives to ensure validity and completeness, and to delete objectives which appear unrealistic or unnecessary and create new objectives where necessary.

The Problem and Objective analysis is typically a facilitated workshop. The participants shall represent all the stakeholders identified in the stakeholder analysis. The reports on situation analysis shall be distributed to the participants beforehand as a basis for the discussion.

#### 4.2.5 Alternatives Analysis

The objective tree usually depicts several possible strategies that can comprise a solution to each sub-problem and to the focal problem. Since there is usually a limit to the resources that can be applied to the project, it is necessary to examine these alternatives and select the best one. To do this, decision-makers will first need to select criteria upon which they can base the analysis. (This process will be similar to the one described in Section 3.2, Priority Setting Mechanisms.).

This step is usually conducted by experts, based upon the set of criteria suggested by the decision-makers (and consulted with the stakeholders).

#### 4.2.6 Activity Planning

After defining the objectives and selecting a solution from a set of alternatives, the detailed planning phase starts. The activities that are required to achieve each objective are determined.

Activity Planning is generally done by a team of experts or external consultants.

#### 4.3 Logical Framework Matrix (LogFrame)

The final step in the LFA is to create the LogFrame. As pointed out earlier, the LogFrame is a document, which summarizes the results of the LFA process.

The Logframe has four columns and four rows. Its main purpose is to link the project goals and objectives to the inputs, processes and outputs required to implement the project. The general structure of the LogFrame is given in the following table:

<b>Narrative Summary</b>	<b>Objectively Verifiable Indicators</b>	<b>Information Sources</b>	<b>Risks and Assumptions</b>
<b>Wider Objective</b>	How to measure wider objective	How to check the measurement	What assumptions are you making
<b>Project Purpose</b>	How to measure immediate objective	How to check the measurement	What assumptions are you making
<b>Outputs</b>	How to measure outputs produced	How to check the measurement	What assumptions are you making
<b>Inputs/Activities</b>	How to measure inputs	How to check the measurement	What assumptions are you making

##### 4.3.1 Column Headings

***Narrative Summary*** The text that "narrates" or describes the objectives.

***Objectively Verifiable Indicators*** The indicators, which demonstrate the ways in which the goals, project purpose, outputs and input shall be achieved. The indicators answer the following questions:

- In what quality?

- In which quantity?
- By what time?

Indicators should be quantifiable wherever possible, but qualitative indicators may also be used if necessary. In general, ideal indicators are:

- Independent;
- Verifiable;
- Specific;
- Accessible.

**Sources of information** These specify the source of the information used to measure or verify the indicators. For example:

- Data from the air quality monitoring
- Record on the issuing construction permit
- Expert assessment

**Risks and assumptions** These are important events, conditions, or decisions which are necessarily outside the control of the project, but which are critical for the project objective to be attained. For example:

- Willingness of the households to connect to natural gas distribution system
- Inflation rate

#### 4.3.2 Row Headings

**Wider Objective** - The higher-level objective that the project is expected to contribute to; this is the objective based upon the “focal problem” identified during the LFA. The addition of the word 'contribute' implies that this project alone is not expected to achieve the wider objective.

**Project Purpose** – The anticipated effect that the project will achieve by delivering the planned outputs. This should correspond to one of the objectives based upon the “sub-problems” from the LFA. There is a tendency for this to be expressed in terms of a "change in behaviour" of a group or institution; the project outputs are expected to facilitate this change.

**Outputs** - The tangible results that the project management team should be able to guarantee. Outputs are generally delivered within specified time frame.

**Inputs/Activities** – Inputs are the resources that the project "consumes" in the course of undertaking the activities. Typically they will be human resources, money, materials, equipment and time. The activities must be undertaken by the project to produce the outputs. The activities take time to perform.

#### 4.3.3 Vertical Logic

The vertical logic connects the three levels of objectives in the LogFrame - the outputs, the purpose, and the goal. This means that:

- Completion of the activities should lead to delivery of the outputs
- Delivery of the outputs should lead to achievement of the project purpose
- Achievement of the project purpose should contribute to the wider objective

#### 4.3.4 Horizontal Logic

The horizontal logic is based upon the items in the risks and assumptions column. If the risks can be mitigated and the assumptions hold true, then it can be expected that the objectives, project purpose, outputs, and activities will be achieved and/or successfully conducted.

#### 4.3.5 Completion of the Logical Framework Matrix

The LogFrame Matrix is typically completed by a group of project designers – expert consultants and the project promoters – who work in coordination with the stakeholder groups. The process of placing the appropriate text in the boxes requires the group to address many issues that may seem self-evident on the surface. However, in many cases the process of developing these very specific answers exposes previously un-stated assumptions and hypotheses, and forces the project designers to think in a new and more careful way about what they are planning to do and why they are planning to do it. The overall result is that the projects that are developed are more clearly thought out and truly address the problems affecting an entire community in a manner that is feasible and acceptable to community members.

The completion of the Logframe is time demanding exercise which should never be underestimated. It is recommended that representatives of all stakeholders involved in the project take part in it. It is also highly recommended that an experienced facilitator/expert is used for leading the work on it.

There are several basic rules to keep in mind when completing the LogFrame:

- Begin with left column and work towards the right (narrative summary to risks and assumptions)
- Work from the top to the bottom - never the other way.
- Leave the “risks and assumptions” column for last
- If difficult, leave the “risk and assumptions” cell for the “wider objective” blank

#### 4.4 Logframe Matrix Example

Below you will find an example of a LFA process and resulting LogFrame Matrix, based upon a fictional project in a fictional city.

The town “Black Hollow” is located in the middle of the “Black Valley” region in CEE, an area with a bad air ambient quality, by EU standards. As the town is large enough to be considered as an agglomeration (within the framework of the Air Quality Framework Directive), it must adopt and implement a compliance plan.

An air quality analysis report within the plan shows that ozone and nitrogen oxides are the pollutants with the highest concentration above the limits, followed by particulate matter. The report also reveals that there are two main sources of the air pollution in the region.

- Low-stack emission sources (households)
- Transportation

Households burn low quality brown coal in the suburban parts of the town, where there is no natural gas distribution system.

Transportation presents a problem in the downtown, where air quality is the worst.

The stakeholders group identified consisted of representatives of:

- Experts
- City hall
- NGOs
- Households that burn coal
- “Black Hollow Public Transportation” authority

The stakeholder group first held a facilitated workshop to create a problem and objective tree and then discussed the alternatives to meet the objectives.

The group agreed to focus on transportation, since the household representatives indicated low willingness of the people to connect to natural gas distribution system. The group then suggested that public transportation was the primary cause of poor air quality in the downtown. The experts and representatives of the public transportation authority then suggested the replacement of the old buses with trolleybuses.

The stakeholder group requested more information in order to select an alternative to the meet its objectives. In response, a feasibility study was conducted to determine the basic technical and economic parameters for the trolley bus project. The feasibility study suggested key trolley routes to be built and demonstrated the economic benefits of the project if the trolley buses could capture a 65% share of all public transportation riders.

Based on this information, the stakeholder group was prepared to create the following LogFrame Matrix:

**IMPROVING THE AIR QUALITY IN “BLACK HOLLOW” BY INTRODUCTION OF TROLLEY BUSES**

<b>WIDER OBJECTIVE</b>	<b>OBJECTIVELY VERIFIABLE INDICATORS</b>	<b>SOURCES OF INFORMATION</b>	<b>RISKS AND ASSUMPTIONS</b>
To improve air ambient quality in Black Hollow	Full compliance with the <b>Directive No. 1999/30/EC</b> for the Black Hollow region	<b>Mandatory measurement</b> of ambient air quality in “ <b>Black Hollow agglomeration</b> ” as required by the Air Quality Framework Directive No. 96/62/EC and <b>performed by the competent authority</b> required by the same Directive	
<b>PROJECT PURPOSE</b>	<b>OBJECTIVELY VERIFIABLE INDICATORS</b>	<b>SOURCES OF INFORMATION</b>	<b>RISKS AND ASSUMPTIONS</b>
To replace buses with trolley buses in the downtown area of Black Hollow	Share of passengers carried by trolley-buses will achieve 65% after the project is completed	Annual survey made and published by the Black Hollow Public Transportation authority	Co-financing assured
<b>OUTPUTS</b>	<b>OBJECTIVELY VERIFIABLE INDICATORS</b>	<b>SOURCES OF INFORMATION</b>	<b>RISKS AND ASSUMPTIONS</b>
<ol style="list-style-type: none"> <li>1. Completed, ready-to-operate, trolley bus route A</li> <li>2. Completed, ready-to-operate, trolley bus route B</li> </ol>	<ol style="list-style-type: none"> <li>1. The route complies with all the requirements necessary for obtaining the official permit by the Rail Authority to operate trolley buses.</li> <li>2. The route complies with all the requirements necessary for obtaining the official permit by the Rail Authority to operate trolley buses.</li> </ol>	<ol style="list-style-type: none"> <li>1. Checklist with the requirements verified by the city hall.</li> <li>2. Checklist with the requirements verified by the city hall.</li> </ol>	Construction permits issued in time
<b>INPUTS/ACTIVITIES</b>	<b>OBJECTIVELY VERIFIABLE INDICATORS</b>	<b>SOURCES OF INFORMATION</b>	<b>RISKS AND ASSUMPTIONS</b>
<ol style="list-style-type: none"> <li>1.1. Construction of the trolley route</li> <li>1.2. Construction of the power subsystem</li> <li>1.3. Construction of the ground electric transmission line</li> <li>1.4. Necessary adjustments of the roads on the route</li> <li>1.5. Purchase of the trolley buses</li> <li>2.1. Construction of the trolley route</li> <li>2.2. Construction of the power subsystem</li> </ol>	<ol style="list-style-type: none"> <li>1.1. 4 350 m of two track trolley laid</li> <li>1.2. 1 converter station 2 x 660 V at A</li> <li>1.3. Trolley route supplied by electricity in all the length</li> <li>1.4. All the roads on the route capable of carrying trolley buses in compliance with the respective state standard</li> <li>1.5. 5 trolley buses with the carrying capacity of 140 people</li> <li>2.1. 3 500 m of two track trolley laid</li> <li>2.2. 1 converter station 2 x 660 V at B</li> </ol>	<ol style="list-style-type: none"> <li>1.1. Operational permit issued</li> <li>1.2. Operational permit issued</li> <li>1.3. Operational permit issued</li> <li>1.4. Operational permit issued</li> <li>1.5. City Hall book-keeping records</li> <li>2.1. Operational permit issued</li> <li>2.2. Operational permit issued</li> </ol>	All funds available and on time

2.3. Construction of the ground electric transmission line 2.4. Necessary adjustments of the roads on the route	2.3. Trolley route supplied by electricity in all the length 2.4. All the roads on the route capable of carrying trolley buses in compliance with the respective state standard	2.3. Operational permit issued 2.4. Operational permit issued	
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