THE PROJECT LOGICAL FRAMEWORK
(Methodology for Project Design and Evaluation – MPDE)

INTRODUCTION

1. The Project Logical Framework, also called Methodology for Project design and Evaluation (MPDE) is an approach which helps the design team focus on the various cause and effect relationships among objectives, outputs and activities for a better project formulation.

2. The MPDE matrix uses a 4 x 4 matrix to lay out a project design; this matrix results in a 16 box grid, each box containing specific information about the project.

Columns of the matrix:

1) Narrative Summary (NS)
2) Objectively Verifiable Indicators (OVIs)
3) Means of Verification (MOVs)
4) Important Assumptions/Risks (IARs)

Rows of the matrix:

(a) Sector Goal
(b) Project Objective
(c) Outputs
(d) Activities

<table>
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<th>(1) Narrative Summary (NS)</th>
<th>(2) Verifiable Indicators (OVI)</th>
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STEP BY STEP GUIDE FOR CONSTRUCTING A MPDE MATRIX

3. The following are the basic steps for developing a project design using the MPDE Matrix. The basic principle is to go from the general to the specific. That is, begin with the Narrative Summary and several key assumptions/risks, then identify verifiable indicators and means of verification for the Goal, the Project Objective, the Outputs and the Activities. The following steps will be described:

   A. Define the overall Goal;
   B. Define the Project Objective;
   C. Define the Outputs for achieving the Project Objective;
   D. Define the activity groups for achieving each output;
   E. Verify the vertical logic with the If/Then test;
   F. Define the assumptions/Risks at each level;
   G. Define the OVIs for the Goal, the Project Objective, and the Outputs;
   H. Define the MOVs;
   I. Consult the Checklist for the MPDE Matrix;

A. Define the Overall Goal (GREATER WHY)

4. The Overall Goal represents the “higher order objective” to which the project, combined with others, will contribute to achieve. This is usually a programme or sector objective. The project appraisal team must consult the CSP and other documents (sector reviews or studies) to familiarize themselves with the goals which the government has set for the sector concerned. The sector goal(s) and strategies to achieve these goals should have been discussed in Chapter 2 and 3 of the appraisal report. It should be noted that very often a portfolio of projects in the same sector or sub-sector may share a common goal statement.

Example:

Government stated goals for the EXPORT CROPS sub-sector are to:
1) Improve competitiveness and productivity;
2) Diversify agricultural production and improve position on export market;
3) Increase private sector involvement in production/marketing activities;
4) Develop processing and marketing channels.

A specific Palm industry rehabilitation project will contribute to one or several sub-sector objectives, depending on the specific objective(s) assigned to it. For example, the project will contribute to diversifying agricultural production and improving position on export market (sector goal #1); and it will contribute to developing processing and marketing
channels (sector goal #4).

B. **Define the Project Objective(s) (WHY)**

5. The Project Objective(s) describe WHY the project is being undertaken. They describe the desired impact the project is expected to have, or how a given situation will be changed as a result of producing the project’s outputs. The number of project objectives should be kept as low as possible, normally one, unless there is a compelling reason for having more than one objective. Multiple Project Objectives diffuse project efforts and weaken the design.

6. By definition project objectives are outside the control of the project team. Outputs are undertaken to (hopefully) achieve a given objective or a set of objectives, and the project team is held accountable for producing the outputs which will help to achieve the desired results.

Example:

If a project is designed to provide farmers with new skills and inputs (credit, seeds, tools, etc.), then the Project Objective defines what will be the outcome resulting from these outputs: **MORE FOOD IS PRODUCED!**

C. **Define the Outputs (WHAT)**

7. Outputs are WHAT the project is to accomplish. These are DELIVERABLES or TERMS OF REFERENCE for the project, the results for which the project team will be held directly accountable and for which it is given resources. If there are more than one objective, outputs should be listed by objective.

Example:

1) Training for farmers conducted;
2) Appropriate credit system established;
3) Farm inputs made readily available to farmers.

D. **Define the Activity Groups for achieving each Output (HOW)**

8. Activities define HOW a project will be implemented, the main action groups the project team must implement to achieve a set of outputs. How many activities should be included depends on the project design. The important thing to remember is to list all activities needed to achieve each output. Activities related to Project management should
also be included, especially if there is a cost attached to each of them (e.g., monitoring and evaluation, financial reports and audit etc.).

E. **Verify the Vertical Logic with the If/Then Test**

9. The main concept underlying the MPDE Matrix structure is “Cause and Effect Relationships”. The better the cause and effect linkages between objectives, outputs, and activities, the better the project design. By definition, each project has this If/Then or cause-and-effect logic embedded in it. If a project produces certain outcomes under certain conditions, then certain other outcomes will be expected to result. For example, **IF** we supply farmers with improved seeds and put a credit system in place, **THEN** food production will be increased. The MPDE Matrix forces the team to make this logic explicit.

F. **Define the Assumptions/Risks required at each level**

10. Assumptions/Risks are external conditions which, in principle, are outside the control of the project. They are conditions which the project team cannot or chooses not to control. They describe the risks and assumptions under which the project operates. The achievement of objectives and outputs, and the implementation of activities depend on whether or not Assumptions/Risks hold true. In working with projects we make assumptions about the degree of uncertainty between different levels of objectives. The lower the uncertainty that certain Assumptions/Risks will hold true, the stronger the project design.

11. The Assumptions/Risks may describe important natural conditions, such as “10 inches of rainfall between May and October”, or factors such as “no labor strikes during start up of project, timely release of budget, crop prices remain stable, farmers willing to try new methods, farmers willing to use new credit mechanism etc”. They may also describe other projects or actions that must be done in conjunction with the proposed one. Assumptions/Risks complete the If/Then logic (describing the necessary conditions between each level) by adding the If/AND/Then logic (describing the necessary and sufficient conditions between each level). Assumptions/Risks are determined by asking, “What conditions must exist in addition to my objective (Activity, Output, Project Objective, Goal) in order to achieve the next level?”

12. By definition, the project team is not responsible for assumptions/risks, which in principle are outside their control. There are, however, some risks which can substantially be mitigated through project management efforts; the section on “Assumptions/Risks in the appraisal report should clearly state what are the measures being undertaken to reduce or mitigate the effects of some identified risks.”
Example:

In a Fisheries Infrastructure Development Project, a few risks were identified and some measures proposed to mitigate their effect:

**Risk 1:**
Possible over-exploitation of the fish resource from intensive industrial trawler fishing activities will prevent the full attainment of project objective.

**Mitigating Measure:**
The risk will be mitigated (not completely removed) by appropriate fisheries management regulations and enforcement capabilities; Government was requested, through a loan condition, to revise the existing policy on industrial fishing.

**Risk 2:**
The identified water source at each site will be sustainable in quality and quantity (assumption).

**Mitigating Measure:**
Hydro-geological investigations will be conducted prior to detailed design of the water supply infrastructure.

**Risk 3:**
No unfavourable site conditions will be encountered for the construction of some of the infrastructure, including difficult soil conditions for foundations and poor drainage conditions.

**Mitigating Measure:**
Hydro-geological investigations will be conducted to allow a precise design of the infrastructure to be erected.

**Risk 4:**
For fish products to be adequately transported to export markets, the airport near the project site must be ready by a given date (note that project management is not responsible for airport construction).

**Mitigating Measure:**
If the airport is not ready by the given date, alternative marketing solutions will be put in place, including increasing use of refrigerated containers and shipping to alternative markets.

G. *Define the OVIs*
13. **Objectively Verifiable Indicators**. The basic principle of the OVI column is, “*If you can measure it, you can manage it*”. Indicators demonstrate results. As performance measures, they tell us how to recognize successful accomplishment of objectives and outputs. They are the conditions necessary to achieve those results. There is no cause and effect relationship; they define, however, in measurable detail the performance levels required by objectives in the Narrative column.

14. **The Necessary and Sufficient Test**. The OVIs tell us not only what accomplishment is necessary but also what will be sufficient performance to assure that we can reach the next level of objective. For this reason, it is best to begin at the end. That is, begin with the higher order objective and work backwards through the causal chain: Goal, then Project Objective, then Outputs, then Activities.

15. **Quantity, Quality and Time (QQT)**. Normally, OVIs are stated in terms of Quantity, Quality and Time. The act of putting numbers and dates on indicators is called targeting. Higher order objectives are also measurable.

16. **How many indicators?** The fewer the better. Use only the number of indicators required to clarify what must be accomplished to satisfy the objective stated in the Narrative Summary column.

17. **How to construct an OVI?** Begin with the basic indicator. Ensure it is numerically quantifiable and then add Quality and Time dimensions.

**Example:**

**Step 1:** **Basic Indicator**
Increased use of industrial sector capacity.

**Step 2:** **Add Quantity**
Utilization of industrial capacity increased from current 40% to 70%.

**Step 3:** **Add Quality**
Utilization of Tanzanian medium scale industrial capacity increased from 40 to 70%

**Step 4:** **Add Time**
Utilization of Tanzanian medium scale industrial capacity increased from 40% to 70% by December 1999.

18. **Goal Level Indicators**. The Goal level indicators often describe the programme or sector objectives to which the proposed project and several others will contribute. For
this reason, the Goal level indicators may include targets beyond the scope of the proposed project (e.g., small farmers’ incomes increased, food security improved, foreign exchange earned or saved through combined outcomes of several projects).

19. **Project Objective Level Indicators.** The project Objective is the primary reason why a project is undertaken and why outputs are produced. It is important to have OVIs as well defined as possible for obvious reasons: getting good clarity on Project Objective(s) level targets makes setting Output targets much easier.

20. **Output Level Indicators.** By definition these indicators establish the terms of reference for the project. If a project team is responsible for all the Outputs, then these indicators define the deliverables for which the project team is answerable.

21. **Activity Level Indicators.** The OVIs at the Activity level are usually the financial resources or the Budget. It is essential that costs be related directly to activities and that the total amount is equal to total project cost.

H. **Define the Means of Verification (MOV)**

22. The MOVs describe the sources of information that will demonstrate what has been accomplished. A clear identification of the necessary sources of information will help the project team redefine activities and related costs. For example, if it is found that a survey is needed to find out the situation about farmers’ income levels, then it may be necessary to add some action steps to the Activities list and eventually revise the costs. As a rule of thumb, the indicators chosen for measuring the objectives must be verifiable by some means (and preferably reliable ones!). If they are not, then find another indicator.

I. **Consult the MPDE Checklist**

1. The Project Objective(s) are stated clearly and concisely and in terms of geographic location and target group.

2. The Project Objectives are not a reformulation of the Outputs.

3. The Project Objectives are outside the management responsibility of the project team.

4. All the Outputs are necessary for accomplishing the Project Objective(s).

5. The Outputs are clearly stated.
6. The Outputs are stated as results.
7. The Activities describe the action strategy for accomplishing each Output.
8. The Sector Goal(s) are clearly stated.
9. The if/then relationship between the Project Objectives and Sector Goals is logical and does not skip important steps.
10. The Assumptions at the Activity level do not include any Loan Conditions or conditions precedent (these are listed separately).
11. The Outputs plus the Assumptions/Risks at that level produce the necessary and sufficient conditions for achieving the Project Objectives.
12. The Project Objectives plus Assumptions/Risks at that level describe the critical conditions for achieving the Sector Goal.
13. The relationship between the Outputs and Project Objectives is realistic.
14. The vertical logic among Activities, Outputs, Project Objectives and Sector Goal is realistic as a whole.
15. The indicators at the Project Objective level are independent from the Outputs. They are not a summary of the Outputs but a measure of the Project Objective.
16. The Project Objective indicators measure what is important.
17. The Goal, Project Objective and Outputs have indicators with quantity, quality and time measures (QQT).
18. The Project Objective indicators measure the impact to be sustained.
19. The activities are listed by output (i.e., there is a set of activities for each output.
20. The total amount of financial resources required for all activities corresponds to the total cost of the project.
21. The Means of Verification column identifies where the information for verifying each indicator will be found.
22. The Activities identify actions required (if any) for gathering Means of Verification.

23. The Outputs define the management responsibility of the project.

24. The Outputs include whether the proposed Project management system or Project Implementation Unit (PIU) is to be strengthened; activity levels include means and cost of PIU strengthening.