Logical Framework for Investment Project

Strengthening Public Investment Management System Project
Programming Division
Bangladesh Planning Commission
Ministry of Planning
Government of the People's Republic of Bangladesh

April 2023

Logical Framework for Investment Project

(Mainly for the Local Government and Rural Development Sector, and the Power and Energy Sector)

Published by

Strengthening Public Investment Management System (SPIMS) Project
Programming Division
Bangladesh Planning Commission
Government of the People's Republic of Bangladesh
Sher-e-Bangla Nagar, Dhaka-1217, Bangladesh.

First Published: April 2023

A Note on this Edition:

This document will be available in the Bangladesh Planning Commission Website for general access: http://www.plancomm.gov.bd/

Cover Page Design

1. JICA Expert Team (JET), SPIMS Project
2. Wordclouds.com Website: https://www.wordclouds.com/

Preface

The Users of this document are the desk officers responsible for 1) preparation of project proposal at the Ministry/Division/Agency, 2) project assessment at the Ministry/Division, and 3) project appraisal at the Sector Division of the Planning Commission (hereafter called the “User”).

This document covers checking points and examples of Logical Framework that the User can refer to when preparing, assessing, and appraising the Logical Framework.

This note consists of the following four chapters and annexes.

Chapter 1: Concept of Logical Framework. This chapter will help the User understand the definition and relations of key elements in the Logical Framework with reference to the "results chain of the project". The scope of the Purpose/ Objective and Goal of the project in the Logical Framework are also explained in this chapter.

Chapter 2: Points to consider the vertical logic. This chapter will help the User understand the specific points to consider in preparing, assessing, and appraising the Logical Framework in Development Project Proposal (DPP), starting from Purpose/ Objective to Goal, Outputs, and Inputs. A list of points to consider is available to help the User identify the points to consider.

Chapter 3: Points to consider the horizontal logic. This chapter will help the User understand the specific points to consider in each element of the Logical Framework. The elements are Narrative Summary, Objectively Verifiable Indicators, Means of Verification, and Important Assumptions. A list of points to consider is available to help the User confirm the writing type of each element. This chapter also explains some of the most common Important Assumptions that need to be improved.

Chapter 4: Limitation of Logical Framework in the project planning stage. This chapter will help the User understand some limitations of the Logical Framework from a project management viewpoint.

Annexes: Logical Framework examples. The Annexes present examples of Logical Framework for the typical projects in the Local Government and Rural Development Sector, and the Power and Energy Sector. Using this example, the User can formulate, assess and appraise the Logical Framework of a proposed project more efficiently than drafting and examining the Logical Framework from scratch.

Limitations of this note

This paper **DOES NOT** give a comprehensive description of the Logical Framework. For example, the following contents are not included, 1) the history of Logical Framework, 2) how to prepare Logical Framework, 3) the relation between Ministry Assessment Format (MAF) / Sector Appraisal Format (SAF) and Logical Framework, and 3) the relation between Sector Policy, Strategy, and Plan, and Logical Framework. For those who want to study them, see Annex 1 “Special Topic 1: Log Frame” of Handbook for DPP preparation and the documents listed in the Chapter "Reference" of this note (P.19).

If any confusion arises, the clauses or relevant circular will prevail.*

* Planning Division's Circular for Instructions on Development Project Formulation, Processing, Approval, and Revision (Memo no: 20.00.0000.404.014.61.2020(Part- 1)/133, Date: 12 June 2022)

Acknowledgement

The Strengthening Public Investment Management System (SPIMS) Project of the Programming Division, Planning Commission developed and validated a set of new Public Investment Management (PIM) tools. These PIM tools include: i) Ministry Assessment Format (MAF); ii) Sector Appraisal Format (SAF); iii) Sector Strategy Paper (SSP); and iv) Multi-Year Public Investment Programme (MYPIP).

The MAF and SAF contribute to the overall PIM reform agenda of the Government by ensuring that the Development Project Proposal (DPP) is comprehensively assessed by Ministries/Divisions and appraised by Sector Divisions of the Planning Commission before any project is approved for implementation.

Using the MAF and SAF requires the desk officers of the Ministries, Divisions and Agencies (MDAs) and Sector Divisions of the Planning Commission to have sound knowledge of Logical Framework and Cost-Benefit Analysis (CBA), as these are the essential methodologies to formulate, assess, and appraise a project.

The SPIMS project has implemented several training courses on Logical Framework for the concerned officials of the MDAs and Sector Divisions of the Planning Commission in two pilot Sectors: i) Local Government and Rural Development; and ii) Power and Energy. Those training courses revealed the importance and necessity of a simple note and examples that explain and demonstrate the points to consider in preparing, assessing and appraising investment projects using Logical Framework.

To address this requirement, the SPIMS project has developed this Note on “Logical Framework for Investment Project” mainly for the two pilot sectors aforementioned. The SPIMS project consulted with the concerned MDAs and the Sector Divisions of the Planning Commission in formulating and finalizing the Note.

The terms used in the Logical Framework, and the relationships and the linkage of the elements in the vertical and horizontal relationship of the Logical Framework have been precisely defined and explained in the Note for the benefit of users.

I am grateful and profusely indebted to those who have provided useful feedback in the training courses in the two pilot sectors, and those who have reviewed and provided invaluable comments and suggestions to improve this Note. I also acknowledge all those associated with the preparation of this document, particularly JICA for financial and technical support in preparing this Note.

I hope that this Note will help the desk officers of the MDAs and Sector Divisions of the Planning Commission to formulate, assess, and appraise investment projects using the Logical Framework.

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and Project Director, SPIMS Project

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Abbreviation and Acronyms

BBS	Bangladesh Bureau of Statistics
DPP	Development Project Proforma/ Proposal
IA	Important Assumptions
MAF	Ministry Assessment Format
MOV	Means of Verification
NS	Narrative Summary
OECD-DAC	Organization for Economic Co-operation and Development's (OECD) -Development Assistance Committee (DAC)
OVI	Objectively Verifiable Indicators
QQTL	Quality, Quantity, Time, and Location
SAF	Sector Appraisal Format
SDGs	Sustainable Development Goals
SMART	Specific, Measurable, Achievable, Relevant, and Time-bound
SSP	Sector Strategy Paper

1. Concept of Logical Framework

(1) Structure of Logical Framework

The structure of the Logical Framework, in general, is as below.

- The Logical Framework shows a project design in the form of a **four-by-four matrix**.
- The **vertical logic of the Logical Framework** is the phases of expected situations, linked by the causality of the project: 1) Inputs; 2) Outputs; 3) Purpose/Objective, and 4) Goal.
- The **horizontal logic of the Logical Framework** explains the phases of expected situations: 1) Narrative Summary, 2) Objectively Verifiable Indicator (OVI), 3) Means of Verification (MOV), and 4) Important Assumptions (IA).

Figure 1 presents the structure of the Logical Framework set in item 10 of DPP. Table 1 explains the main terms used in the Logical Framework.

10. Logical Frame:

(i) Planned date of project commencement :

(ii) Planned date of project completion :

Narrative Summary	Objectively Verifiable Indicators (OVI)	Means of Verifications (MOV)	Important Assumptions (IA)
Goal			
Objective/ Purpose			
Output			
Input			

Figure 1 Structure of Logical Framework

Table 1 Short description of key terms in Logical Framework

Term	Short Description	Page*
Goal	Result of the project that is expected to be reached after 2 to 3 years of the achievement of the Purpose/Objective. Basically, the Impact of the project is shown as the Goal in the Logical Framework. The Impact means longer and broader development effects aligned with the Outcome.	P. 2 P. 8
Purpose/ Objective	Result of the project that is expected to be achieved at the time of project completion. Basically, the Outcome of the project is shown as the Purpose/ Objective in the Logical Framework. The Outcome is short-term and medium-term effects that the beneficiaries obtain by using the Outputs.	P. 2 P. 7
Outputs	Products and services generated by using the Inputs via Activities and delivered to the beneficiaries	P. 2 P. 9
Inputs	Resources required to materialise the Activities to produce the Outputs. The current format of the Logical Framework in the DPP does not have a designated cell to explain the Activities of the proposed project.	P. 2 P. 11
Narrative Summary	A concise statement of the achievement in each element of vertical logic of the Logical Framework	P. 13
Objectively Verifiable Indicators (OVI)	The indicator to measure the results of achievement	P. 14
Means of Verification (MOV)	A data source that specifies where the data for the proposed indicator comes from	P. 15
Important Assumptions (IA)	The critical factors uncontrollable by the project that could affect the achievement of the project's planned result	P. 16- P. 18

* Page denotes the page in this note, where the User can learn about each term more.

(2) Causal sequence in the Project (results chain)

The vertical logic of the Logical Framework shows the necessary causal sequence in the project to achieve the desired objective, beginning with **Inputs**, moving through **Activities** and **Outputs** and culminating in **Outcome** and **Impact**." (Hereafter named "results chain".)

Each phase of the sequence in the results chain is defined as follows:

- **Inputs**: The financial, human, and material resources required to materialise the Activities to produce the Outputs.
- **Activities**: The groups of tasks to be carried out by using the Inputs to produce the Outputs.
- **Outputs**: The products and services generated by using the Inputs via the Activities and delivered to the beneficiaries.
- **Outcome**: The short-term and medium-term effects that beneficiaries obtain by using the Outputs.
- **Impact**: The longer and broader development effects aligned with the Outcome.

Figure 2 illustrates the results chain as a causal sequence of the project.

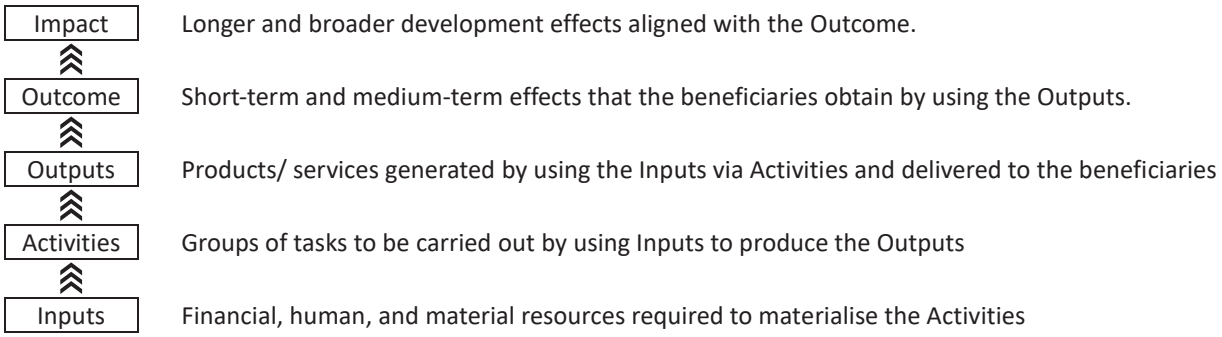


Figure 2 A causal sequence of a project (results chain)

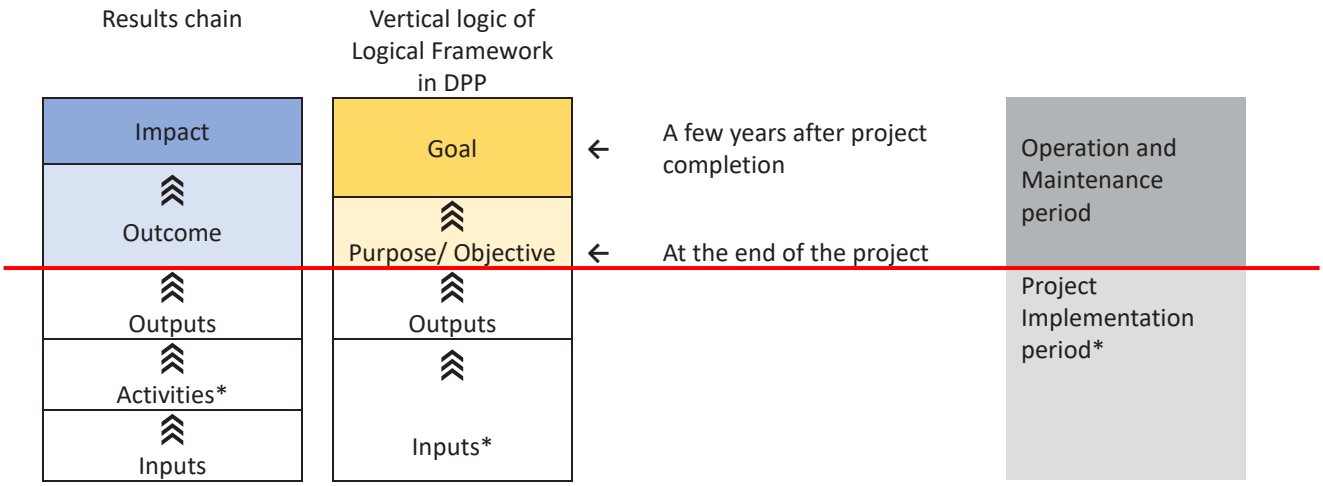
(3) Relationship between Outcome in results chain and Purpose/ Objective in Logical Framework

The Purpose/Objective of the project can be explained as "the result of the project that is expected to be achieved at the time of project completion." So, **the level of Purpose/Objective of the Logical Framework in the DPP is positioned generally at the "Outcome" level of the results chain**, expected to be reached at the time of project completion, in general.

The Goal of the project can be explained as "the result of the project that is expected to achieve after 2 to 3 years of achievements of the Purpose/Objective." **The level of Goal of the Logical Framework in the DPP is located generally at the "Impact" level of the results chain,** expected to achieve after 2 to 3 years of the achievement of the Purpose/Objective, in general.

It should be noted that the logic "Goal is at the Impact level" and "Purpose/Objective is at the Outcome level" is not always true. The achievement level of Outcome and Impact at the time of project completion, and after 2 to 3 years of the achievement of the Purpose/Objective, largely depends on the project's design and nature. For example, in some cases of infrastructure construction projects, the Outcome level in Purpose/Objective is very close to the "Outputs" level, because the effects that the beneficiaries obtain by using the outputs do not always start before the completion of the project.

Figure 3 illustrates the relations between each phase of the results chain and the vertical logic of the Logical Framework in the DPP.



* Activities are not shown in the template of Logical Framework (item 10 of DPP).
** Some parts of products/ services developed under the project start being operational even during the project implementation.

Figure 3 Relations between Results Chain and Logical Framework

Note: The current Logical Framework format in the DPP does not include the Activities. However, the User needs to prepare, assess and appraise the Activities as a part of the project design. For the detailed explanation of the Activities, see Section 1.2(3) below (page10).

(4) Accountability to achieve Purpose/ Objective

The Logical Framework is a tool for managing a project. To manage the project appropriately, it is important to identify and assign which organisation/group is accountable for achieving each phase in the results chain. The allocation of accountability for the project among the concerned parties is shown below.

- Outputs: Implementing Agency and contractors
- Outcome (immediate): Implementing Agency
- Outcome (medium-term): Implementing Agency (and Sponsoring Ministry/Division)
- Impact: Sponsoring Ministry/Division and Sector Division

Table 2 shows who has the responsibility for expected achievement at vertical logic of Logical Framework in DPP. The black and white circles represent the primary and secondary accountable organisations.

Table 2 Accountabilities for the achievement of each phase

Results chain	Vertical logic of Logical Framework in DPP	Sector Division	Sponsoring Ministry/Division	Implementing Agency	Contractor: Constructor/ Consultants	
Impact	Goal	●	○	○		Operation and maintenance
⩔		○	●*	●*		
Outcome	⩔ Purpose/Objective			●		Project Implemen-tation
⩔ Outputs	⩔ Outputs			●	○	

* Organisation/ group of Operation and Maintenance is also responsible.

The implementing agencies can only be accountable for delivering Outputs and Outcome within their jurisdiction and, therefore, are not accountable for the achievement of Impact.

(5) Meeting Beneficiaries' needs at Purpose/ Objective

The primary objective of a project is to achieve results that meet beneficiaries' needs. It is essential to figure out if the direction and degree of Outcome are adequate to meet the beneficiaries' needs at both the Purpose/Objective and Goal levels. The projected beneficiaries' demand should be met at the end of project completion by the immediate effect of the project.

Table 3 summarises the scope of the Purpose/Objective and Goal of the Logical Framework in the DPP in connection with the results chain, time frame, beneficiaries' demand, and accountability for the project.

Table 3 Scope of Purpose/Objective and Goal of Logical Framework in the DPP

<table>
<tr><th>Results chain</th><th colspan="2">Terminology in the results chain</th><th>Vertical logic Logical Framework in DPP</th><th>Time frame in the DPP</th><th>Demand of beneficiaries</th><th>Accountability</th><th>Stage of project management</th></tr>
<tr><td>Impact</td><td>The longer and broader development effect aligned with the Outcome</td><td>Medium (& long)</td><td rowspan="2">Goal</td><td rowspan="2">Achievement at 2 to 3 years after the project completion</td><td rowspan="2">Beneficiaries use and benefit from the Outputs.</td><td>Ministry/Division / Sector Division</td><td rowspan="2">Operation and Maintenance</td></tr>
<tr><td></td><td>The short-term and medium-term</td><td>Short & Medium</td><td>Implementing Agency/ Ministry *</td></tr>
<tr><td>Outcome</td><td>effects which the beneficiaries obtain by using the Outputs.</td><td>Immediate</td><td>Purpose/ Objective</td><td>Achievement at the time of project competition</td><td>Beneficiaries are beginning to use and benefit from the Outputs</td><td>Implementing Agency</td><td rowspan="2">Project Implementation**</td></tr>
<tr><td>Outputs</td><td></td><td></td><td>Outputs</td><td></td><td></td><td>Implementing Agency/ Contractor</td></tr>
</table>

* Organisation/ group of Operation and Maintenance is also partially responsible.

** Some parts of products/ services developed under the project start being operational even during the project implementation.

2 Points to consider in vertical logic

The vertical logic of the Logical Framework shows the causal sequence of a project. The following sections explain the specific points to consider in preparing, assessing, and appraising the Logical Framework in DPP, starting from Purpose/ Objective to Goal, Outputs, and Inputs. Figure 4 illustrates the vertical logic of the Logical Framework.

Note 1: The Purpose/ Objective of the project is the core of the project. Therefore, this note begins with a description of the Purpose/ Objective.
Note 2: It is crucial to remember that all components (cells) in the Logical Framework are interrelated. Once a component (cell) in the Logical Framework is modified, it affects the other components.

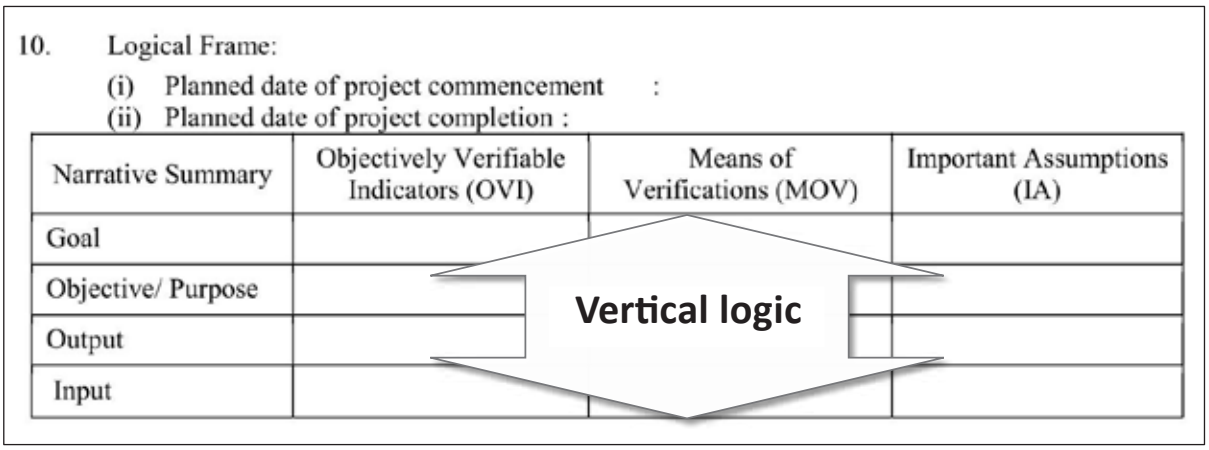


Figure 4 Vertical Logic of the Logical Framework

Note: A detailed explanation of the procedure, and how to formulate the Logical Framework is given in Annex 1, "Special Topic 1: Log Frame" of the Handbook for DPP preparation.

(1) Purpose/Objective

Purpose/Objective is defined as the "result of the project that is expected to be achieved at the time of project completion."

Box 1 explains the points to consider when the User prepares, assesses, and appraises the adequacy of the Purpose/Objective of the Logical Framework in the DPP.

Box 1 Points to consider for "Purpose/Objective"

☐	Purpose/Objective describes the situation at the end of project implementation as the immediate and direct benefits of using Output explained in section 1.1 (2)
☐	Logical Framework contains only a single Purpose/Objective statement as a narrative summary.
☐	A single narrative summary statement of Purpose/Objective may contain several dimensions of achievement. Several indicators of Purpose/Objective will be adopted to capture those dimensions.
☐	Indicators of Purpose/Objective show that the products or services developed by the project meet the beneficiaries' demands. (For further explanation of indicators, see Section 1.3(2) of this Note.)
☐	Purpose/Objective is linked to the development policies outlined in the sector planning and budgeting documents, such as Perspective Plan, Sustainable Development Goals (SDGs), Five Year Plan, and Sector Strategy Paper/ Sector Action Plan.
☐	Purpose/Objective will be achieved in time by combining the proposed Outputs. In other words, to achieve a certain Purpose/Objective, a group of individual Outputs should be delivered. If the Outputs are not sufficient or overlap each other to achieve the Purpose/Objective, either the Purpose/Objective or Outputs should be modified.
☐	Purpose/Objective is linked to Outputs, considering the Important Assumptions of Outputs to Purpose/Objective. (For further explanation of Important Assumptions, see Section 1.3(4) of this Note).
☐	Implementing Agency is accountable for the achievement of the Purpose/Objective. "What the Implementing Agency can and cannot manage to achieve the Purpose/ Objective by the end of project completion" is considered.
☐	The flow effect of the project, e.g., "employment during the construction", cannot be the Purpose/Objective of the Logical Framework in the DPP, unless the project's main objective is to create job opportunities rather than to construct facilities and infrastructure.

(2) Goal

The Goal is defined as the "result of the project that is expected to be reached after 2 to 3 years of the achievement of the Purpose/Objective." The Goal may consist of both the Outcome and Impact of the results chain.

Box 2 explains the points to consider when the User prepares, assesses, and appraises the adequacy of the Goal of the Logical Framework in the DPP.

Box 2 Points to consider for Goal

☐	The Goal describes the situation 2 to 3 years after project completion as the Outcome and Impact as explained in Section 1.2.
☐	The Logical Framework contains only a single statement as a narrative summary of the Goal.
☐	A single statement as a narrative summary of the Goal may contain several dimensions of achievement. Several indicators will be adopted to capture the dimensions of Outcome and Impact. (For further explanation of indicators, see Section 1.3(2) of this Note)
☐	As the Outcome of the project, indicators of the Goal show that the products or services developed by the project meet the beneficiaries' demands.
☐	As the Impact of the Project, indicators of Goal show the broader effects of the project.
☐	The Goal should be linked to the development policies outlined in the sector planning and budgeting documents, such as Perspective Plan, Five Year Plan, Sector Strategy Paper/Sector Action Plan.
☐	The Goal is linked to the Purpose/Objective, considering the Important Assumptions of the Purpose/Objective to the Goal. (For further explanation of Important Assumptions, see Section 1.3(4) of this Note).
☐	Implementing Agency is accountable for the Outcome, for instance, to what extent the demand forecasts it prepared at the planning stage have been met after project completion.
☐	Achievement of Impact is beyond the accountability of the Implementing Agency.

(3) Outputs

Outputs are the products and services generated by using the Inputs via Activities and delivered to the beneficiaries.

Box 3 explains the points to consider when the User prepares, assesses, and appraises the adequacy of Outputs of the Logical Framework in the DPP.

Box 3 Points to consider for "Outputs"

- ☐ The Outputs are the necessary components to achieve the Purpose/Objective of the project. Outputs are to be sufficient to achieve the Purpose/Objective, given Important Assumptions. In other words, the Purpose/Objective will only be achieved if all these Outputs are adequately completed.
- ☐ Outputs are delivered by using Inputs via project Activities. Thus, Outputs without Inputs cannot be listed in the Logical Framework.
- ☐ Project management activities should not be included as Output because they do not develop products or services as the Outputs of the project.
- ☐ Logical Framework contains several statements as a narrative summary of Outputs. The statements are grouped as major products and deliverables of the project.
- ☐ Indicators of Outputs are disaggregated by location and so on. (For further explanation of indicators, see Section 1.3(2) of this Note)
- ☐ Outputs are linked to Inputs, considering the Important Assumptions of Inputs to Outputs. (For further explanation of Important Assumptions, see Section 1.3(4) of this Note).
- ☐ Implementing Agencies and contractors (e.g., constructors, consultants) are accountable for achieving the Outputs.

Box 4 "Activities"

Activities are a group of tasks to produce Outputs by using Inputs. The current Logical Framework format in the DPP does not include Activities. However, the User needs to prepare, assess and appraise the activities as a part of the project design. So, Activities should be detailed in item 15.4 of the DPP.

It is recommended to prepare the Work Plan, Plan of Operation, or Gantt Chart of activities and attach it to the DPP. In the case of a project for which a feasibility study is being prepared, the work plan, operating plan, or Gantt Chart of activities will be formulated as part of the feasibility study. They will present the key activities to deliver respective Outputs in chronological order, the activities for project management, and the completion date and milestone of each activity.

In the Logical Framework adopted by some donors, the activities are described within the Logical Framework shown in the following figure, and inputs are explained in the cell of OVIs. However, **this note follows the existing format of DPP as set out in the Planning Division's Circular** for Instructions on Development Project Formulation, Processing, Approval, and Revision (Memo no: 20.00.0000.404.014.61.2020(Part- 1)/133, Date: 12 June 2022)

Narrative Summary	Objectively Verifiable Indicators (OVI)	Means of Verifications (MOV)	Important Assumptions (IA)
Goal			
Objective/ Purpose			
Output			
Activities	Inputs		

(4) Inputs

Inputs are the resources required to materialise the Activities to produce the Outputs.

Box 5 explains the points to consider when the User prepares, assesses, and appraises the adequacy of the Inputs of the Logical Framework in the DPP.

Box 5 Points to consider for "Inputs"

- ☐ Financial, human, and material resources required for the project are considered.
- ☐ Inputs are described with a comprehensive procurement plan for works, goods, and services.
- ☐ Inputs are described with the components and cost in a comprehensive financial plan.
- ☐ The manpower setup of project management is considered.
- ☐ Inputs to ensure technical standards and meet the required specifications of Outputs are considered.

3 Points to consider in horizontal logic

The **horizontal logic of the Logical Framework explains each phase in the results chain**: 1) Narrative Summary, 2) Objectively Verifiable Indicators (OVI), 3) Means of Verification (MOV), and 4) Important Assumptions (IA). Figure 5 illustrates the horizontal logic of the Logical Framework.

The information in the horizontal logic supports the understanding of vertical logic by providing their respective description, indicators, means to obtain the indicators, and possible key factors that may adversely affect the project.

The following section explains the general points and writing style to describe each element of horizontal logic.

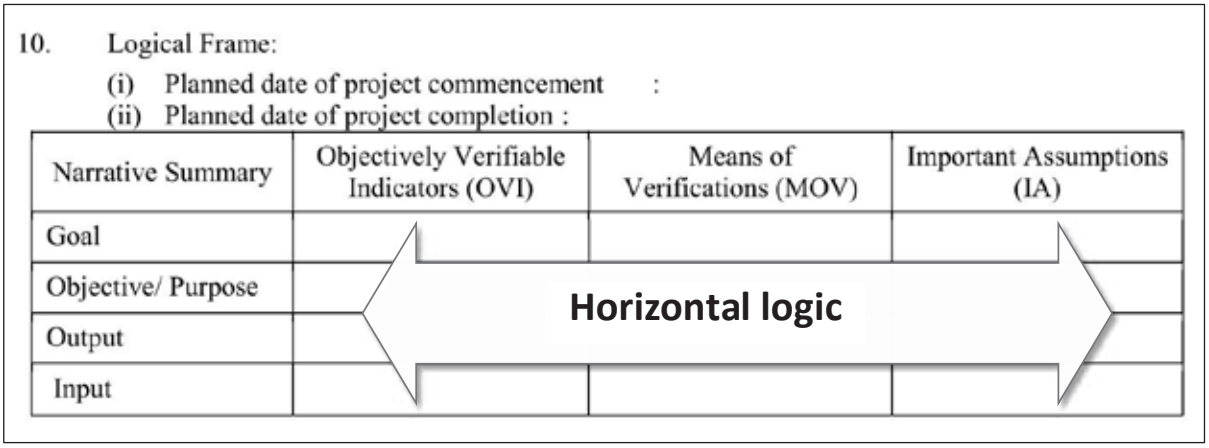


Figure 5 Horizontal Logic of the Logical Framework

(1) Narrative Summary

The Narrative Summary concisely states the achievement of each element of vertical logic of the Logical Framework. The User is suggested to follow the writing style explained in Box 6 when the User prepares, assesses, and appraises the narrative summary of the Logical Framework.

Box 6 Writing style in "Narrative Summary"

[For All]

- ☐ Write a simple sentence.

[For Goal and Purpose/Objective]

- ☐ The phrase in the past tense as already achieved (e.g., "Rural transportation network in the project area enhanced").
- ☐ The verb is put at the end of the sentence.
- ☐ Use the word to explain the "change" that the project brings to beneficiaries (e.g., enhanced, improved).
- ☐ Do not write "causality" within the text of the narrative summary. More concretely, do not use the words "through", "by", or "in order to" in the text (e.g., Economic activities in the project area improved "by" enhancing rural transportation network. Rural transportation network enhanced "to" improve the economic activities in the project area.)

[Output]

- ☐ The phrase in the past tense as already achieved (e.g., "Upazila Road constructed").
- ☐ The verb is put at the end of the sentence.
- ☐ Use the word to explain "completion" (e.g., constructed, rehabilitated, established, implemented, installed).
- ☐ Do not write "causality" in the text.

(2) Objectively Verifiable Indicator (OVI)

OVI is the indicator to measure the results of achievement. OVI includes the targets to define "success."

The User is suggested to follow the points to consider in Box 7, and the writing style explained in Box 8 when preparing, assessing, and appraising the OVI of the Logical Framework.

Box 7 Points to consider for "OVI"

- ☐ Meeting beneficiaries' needs are the primary objective of a project. It is essential to measure the beneficiaries' demand, set the expected achievement of the project, and describe them as the OVI.
- ☐ Some OVIs are adopted from development indicators in the sector planning and budgeting documents, such as Perspective Plan, Five Year Plan, Sector Strategy Paper/Sector Action Plan, Annual Performance Agreement, and Medium-Term Budgetary Framework.
- ☐ Some OVIs are linked to targets in SDGs.
- ☐ The OVI represents the corresponding narrative summary. Several OVIs are adopted to represent the corresponding narrative summary. Once the narrative summary is edited, the OVI should be revisited and revised accordingly.
- ☐ The OVIs fulfil the basic requirements of performance indicators, such as "SMART (Specific, Measurable, Achievable, Relevant, and Time-bound)" and "QQTL (Quantity, Quality, Time, and Location)." See the example below.
- ☐ Existing indicators are preferably selected and used for OVIs. This can reduce the time and cost required to collect the data. New indicators can be included if the achievement of the project can be measured only by the new indicators. In this case, the timing and cost of collecting the data should be carefully considered in the project design.
- ☐ The qualitative dimension of the achievement should be quantified as much as possible, for example, by using the rating scale.

Box 8 Writing style in "OVI"

- ☐ Write at least one indicator to align or match each statement in a narrative summary.
- ☐ Write the achievement of the indicators quantitatively.
- ☐ Write the time frame, i.e., when the target will be met.
- ☐ Write the target and the baseline of each indicator.
- ☐ Write the location of the target areas of the project.
- ☐ Write the disaggregated indicator by categories (an example of a good indicator is "YYY Km of Upazila road is constructed, ZZZ km of Union Road is constructed". A bad indicator is "XXX km of Upazila and Union Road is constructed").

Example of OVI with SMART information

Narrative Summary	OVI with SMART information
The quality of river water improved.	The level of concentration of heavy metals **(Specific)** in the project area is reduced by 25% **(Measurable**)* between 2022 and 2025 (**Timebound**) to meet the national health and pollution control standards (**Relevance** with government policy).

* This target figure should be **"Achievable"** by the end of the project.

(3) Means of Verification (MOV)

MOV is a data source that specifies where the data for the proposed indicator comes from. MOV ensures that the proposed OVIs can be collected and analysed in practice.

The User is suggested to follow the points to consider in Box 9, and the writing style in Box 10 when the User prepares, assesses, and appraises the MOV of the Logical Framework.

Box 9 Points to consider for "MOV"

- ☐ MOV is stated clearly to confirm the availability of required data and where the data can be collected from.
- ☐ The primary data source is the data to be collected by the project and Implementing Agency. Secondary data is the data collected by a third party, e.g., the Bangladesh Bureau of Statistics (BBS).
- ☐ For primary data, the schedule and cost of collecting the data should be included in the project management activities and budget.
- ☐ For secondary data, the timing of reporting by concerned authorities should be confirmed.

Box 10 Writing style in "MOV"

- ☐ Write the title of the report or document specifically (A good example is "BBS Report of Household Income and Expenditure Survey (HIES) 202X"; a bad example is "BBS report".)
- ☐ Clarify the relationship between the proposed MOV and the corresponding proposed OVI.

(4) Important Assumptions

Important Assumptions are the critical factors uncontrollable by the project that could affect the achievement of the project's planned result. In other words, important assumptions are the conditions required to step up each phase of the results chain: Inputs to Outputs, Outputs to Purpose/Objective, and Purpose/Objective to Goal.

The User should confirm the logic of the results chain in the Logical Framework in the following order, as described in Figure 6.

1. If Inputs are prepared and Activities are completed.
2. If Important Assumptions of Inputs to Outputs are met.
3. Then, Outputs are achieved.
4. If Important Assumptions of Outputs to Purpose/Objective are met.
5. Then, Purpose/Objective is achieved.
6. If Important Assumptions of Purpose/Objective to Goal (6) are met.
7. Goal is achieved.

Figure 6 illustrates the order of the results chain with important assumptions.

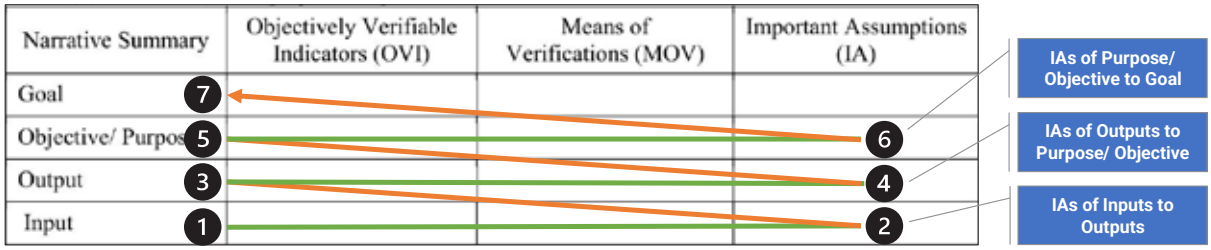


Figure 6 Order of results chain with important assumptions

Note: The current Logical Framework format in the DPP does not include “preconditions”, i.e., the external factors that may occur after the project proposal is approved and before the project is started. An example of a precondition is “Another project must have been completed before the proposed project can be started”. It is important to keep in mind that, in addition to Important Assumptions, preconditions may be needed depending on project design.

The User is suggested to follow the points to consider in Box 11 and the writing style in Box 12 when preparing, assessing, and appraising Important Assumptions of the Logical Framework.

Box 11 Points to consider for "Important Assumptions"

- ☐ The User should identify the risks which could affect the achievement of the project in the period of project implementation and that of operation and maintenance.
- ☐ For each identified risk, the User should consider the probability of occurrence and the effect if the risk occurs.
- ☐ The User should consider the measures to mitigate the risks and incorporate those measures in project design and an operation and maintenance plan. The mitigation measures the project adopted should be explained in items 15 and 32 of DPP.
- ☐ The User should explain the critical factors uncontrollable by the project.
- ☐ The User should re-design the project if the User finds the "killer assumptions", namely, the serious risks that are likely to occur in the project.

Box 12 Writing style in "Important Assumptions"

- ☐ Write the assumptions in the farthest right column in Figure 6 (page 16).
- ☐ Write the assumptions that Implementing Agency cannot control.
- ☐ Write the specific conditions that affect the achievement of the project. A good example is "Flooding does not reach above the designed capacity of xxx cm water level during operation (recorded once in every 30 years)." A bad example is "Disaster does not occur".

Table 4 illustrates the Important Assumptions, including the preconditions that are frequently observed in DPP and need to be improved.

Table 4 Frequently observed Important Assumptions that need improvements

	Frequently observed Important Assumptions	Guidelines	Suggestions
1	• The government policy will not change. • The political situation will remain stable. • There is no political unrest.	• By the time the project is formulated, *the project should be aligned to a specific development policy document (i.e., Sector Strategy Paper (SSP) or Sector Development Plan)*. Therefore, the project should be controllable in the sense that the government will back up the project once it is approved. • The Assumption of political situation and stability is too general because it applies not only to the concerned project but to all other projects.	• Advisable to avoid political factors as an Important Assumption
2	• Natural disasters do not occur.	• *A specific description of the type of disaster* (i.e., rainfall, flood, earthquake, temperature) and *to what extent* the infrastructure (or partially) can tolerate by design, and *how often it may occur by the record* during implementation and after its completion.	It can be described as follows. • Rainfall over xxx mm/hour (recorded 50 years ago) will not occur during the construction of the dam spillway. • Flooding does not reach above the designed

	Frequently observed Important Assumptions	Guidelines	Suggestions
			capacity of xxx cm water level during operation (recorded once every 30 years).
3	[Preconditions] • The DPP process is not delayed. • Government procedures are not delayed.	• The DPP process may be predictable in project formulation by checking the priority of the project. Also, the delay may become somewhat controllable by some measures, such as adjusting activity plans. • DPP procedure is not a precondition because, by definition, preconditions are the external factors that may occur in the period after project approval and before the project starts.	It can be described as follows. [Preconditions] • The government DPP procedures are completed and ready for implementation by (month/year).
4	[Preconditions] • The government provides *a sufficient budget* for the project. • The government continues to provide a sufficient budget for the project. • The government *secures operations costs* after completion.	• Budget liability can be uncontrollable but *may be predictable* at the ministry/division level by comparing the priorities within the budget framework. • Suppose the project is considered as a high priority within the sector. In that case, including it, as an Important Assumption may not be necessary. • *Operation costs are compiled by the project as part of sustainability assurance*. Therefore, it cannot be an Important Assumption until specific costs are identified.	• Advisable to avoid including budget liability as an Important Assumption.
5	• Less consideration on target groups, direct beneficiaries, indirect beneficiaries, negatively affected groups (or potentials), and silent groups.	• People's reception of the project is worth considering as an Important Assumption. Both direct/indirect, positively/ negatively affected groups may be analysed, and if considered important, as an assumption. • These assumptions need to consider both at the implementation level and after the completion level.	It can be described as follows. • Resettlement of the project site is conducted smoothly by (month/year).
6	• Less consideration of other projects that may affect the achievement of the project and/or its Outcomes	• Suppose *another project is* an important factor *(especially in terms of Purpose/Objective achievement). In that case,* it is worth including as an Important Assumption at the Output level. • However, they *need to be more specific* about the effect of another project on the concerned project.	It can be described as follows. • Completion and stable supply of electricity through the XXX power generation project is realised by (month/year) for the usage of the transmission network completed by the project.

4 Limitations of Logical Framework in the project planning stage

The Logical Framework is a useful tool to formulate, assess and appraise the design of projects. However, the User must understand their limitations.

For instance, the Logical Framework DOES NOT explain the following points:

- The proposed project design was selected by comparing the other possible project designs.
- Project management setup.
- The flow of activities.
- Any impacts other than those described in the Goal of Logical Framework.
- Operation and maintenance setup.

To address the limitations above, the User is recommended to further improve the project design by combining the Logical Framework with other planning tools, such as a Plan of Operation, a Gantt Chart, and an Operation and Maintenance Plan.

Reference

- Asian Development Bank (2020) Guidelines for Preparing a Design and Monitoring Framework
- General Economics Division, Planning Commission (2014) DPP Manual
- Japan International Cooperation Agency (2020) Project Evaluation Handbook (version 2) (in Japanese)
- OECD-DAC (2002) Glossary of Key Terms in Evaluation
- Programming Division, Bangladesh Planning Commission, (2023) Handbook for DPP Preparation.

Annexure 1: Logframe Example of Rural Infrastructure Development Project

Instructions

- Apply this example only to the "Rural Infrastructure Development Project". (Note 1)
- Read the footnote, where applicable, and follow the specific instructions.
- Read the box below, explaining the meaning of each indicator used in this Logical Framework example.
- Make any necessary modifications to this example based on the design of the proposed project.
  - Note that all components of the Logical Framework are interrelated. Suppose that one component, e.g., Outputs, is changed. In this case, the other components, i.e., Purpose/Objective, Goal and Inputs, should be reviewed and revised if necessary.
- Enter a specific number or explanation instead of "XXX". "Base: XXX" and "Target: XXX" denote a particular value in baseline and the target value by the defined timeline, respectively.

Note 1: This Logical Framework example is drafted based on the "Important Infrastructure Development Project for Greater Noakhali". The example was prepared in consultation with Local Government Engineering Department (LGED), Local Government Division (LGD) of Ministry of Local Government, Rural Development and Cooperatives, and Agriculture, Water Resources, and Rural Institutions Division (AWRRI) of Planning Commission.

Box: Explanation of indicators

- Annual Average Daily Traffic (AADT): Annual average daily traffic at a certain point, or at a representative point of the whole section, or distance-weighted mean annual traffic. The total number of full-size cars, compact cars, etc., or Passenger Car Unit (PCU) is used to count the traffic volume. The duration is represented basically by units of days (24 hours). Representing the duration by 12-hour units is also acceptable. This indicator is to assess if the road transport demand is increasing as predicted or if adequate traffic conversion is implemented.
- Time Saving/ year: According to the measurement survey on time required. Basically, time units are adopted, but adopting monetary terms is also acceptable. This indicator is to assess the degree of reduction in driving time, comparing the road after development with that before development.
- Operational Cost Saving/ year: According to the standards of the country. This indicator is to assess the degree of reduction in vehicle operation cost, comparing the road after development with that before development.

Reference: JICA (2012) Preparatory Survey on the Northern Region Rural Development and Local Governance Improvement Project, JICA (2014) JICA Operation Indicator and Effect Indicator Reference in ODA Loan Project, JICA (2016) JICA Standard Indicator Reference in Grant Aid Projects

	Narrative Summary (NS)	Objective Verifiable Indicators (OVI)	Mode of Verification (MOV)	Important Assumption (IA)
Goal[1]	Rural socio-economic activities in the project area accelerated.	After XXX years of the project completion[2], In the nation, • The proportion of the rural population who live within 2 km of an all-season road in the project areas is increased. [Base: XXX, Target: XXX] In the project area, • The number of agricultural products transported increased. (By the category of the vehicle) [Base: XXX, Target: XXX] • Total sales of Growth Center Markets and Bazars supported by the project are increased. [Base: XXX, Target: XXX] • Indicators of economic and social activities (e.g., XXX[3]) are improved. [Base: XXX; Target: XXX]	• LGED Annual Survey Report • BBS Economic Survey • DAE Annual Agriculture Production Report Note for IMED Impact/ Ex-post evaluation report[4]	

[1] Select the impact level statement and indicators close to the outcome statement and indicators. In principle, it is difficult to examine the solid causal relationship between one project's results and impacts of the same project, i.e., “economic and social benefits” in the project area. This is because one project's results are only a part of the factors, to bring economic and social benefits in the project area. Sector Outcome in Sector Strategy Paper (SSP), i.e., "service delivery in the project area ensured", can be used as the "goal" of the proposed project. Alternatively, " rural socio-economic activities in the project area accelerated" is the candidate for a narrative summary with the specific relevant indicators.

[2] Set the range between 2 and 5 years. This depends on the characteristics of the facilities to be developed by the proposed project.

[3] Write the specific indicators of economic and social benefit or living standards to be improved as the project effects.

[4] IMED Impact/ Ex-post evaluation report should not be included in MOV. Instead, IMED conducts Impact/ Ex-post evaluation to collect the data for the indicators. The study not only impact level indicators but also outcome level indicators in Impact/ Ex-post evaluation. The Impact/ Ex-post evaluation verifies whether not only impact but also the outcome indicators in a sustained manner via proper Operation and Maintenance. Purpose/ objective-level and goal-level outcomes have the same indicators but different 'target figures'. The target figure at the purpose/objective level is the figure at the completion of the project, and the target figure at the goal level is the figure after specific years of project completion.

	Narrative Summary (NS)	Objective Verifiable Indicators (OVI)	Mode of Verification (MOV)	Important Assumption (IA)
Purpose/ Objective[5]	Rural transport network with market and tourism facilities in the project area (Noakhali, Feni, and Lakshmipur Districts) enhanced.	By the end of the project[5] Operation Indicators[6] • Annual Average Daily Traffic (AADT) from XXX to XXX is increased. (By the category of the vehicle) [Base: XXX, Target: XXX] • The number of days of market operation is increased (including rainy season operation) [Base: XXX, Target: XXX] • The number of permanent and temporary shops and hat-day sellers is increased by XX%. • The number of visitors to Tourism space is increased. [Base: XXX, Target: XXX] Effect Indicators [11] • Travel time and operation cost is saved. [Base: XXX, Target: XXX] (by the category of the vehicle)	• Special Survey to measure time and cost reduction. (Note: budget required) • Annual survey report (LGED) • Project Completion Report • Parjatan Corporation Report Note for IMED Terminal evaluation report[7]	• Expected number of local farmers & traders utilize transport and trade facilities.
Outputs[8]	1. Union and Village roads developed (improved/ paved) 2. Bridges and Culverts on rural roads constructed 3. Growth Centre Markets (GCM), Bazars and relevant facilities constructed by	1. By XXX-year, • XXX km Upazila road improved • XXX km Union Road improved • XXX km Village Road improve 2. By XXX-year, • XXX (number) Bridge constructed	• Project Progress Report • Project Completion Report	• Flooding does not occur over the designed maximum water level after construction (designed maximum water level:

[5] Write the outcome of the project at the time of project completion. In other words, the purpose/ objective is the outcome that the beneficiaries obtain by using the outputs at the time of project completion.

[6] "Operational indicators" are indicators used to measure the operational status of a project and to measure whether the outputs are appropriately run and used. “Effect indicators” are indicators used to measure the effects of the project and to measure the effects which the outputs had on the beneficiaries in the project area". (Reference: JICA 2016 JICA Standard Indicator in Grant Aid Projects)

[7] IMED Terminal evaluation report should not be included in MOV. Instead, IMED conducts a terminal evaluation to collect the data for the indicators.

[8] To include "office building construction or/and residential building construction" in the narrative summary of outputs, explain the linkage of this output to the project purpose/objective and/or goal. For example, if the building is necessary to improve the physical capacity of the O&M organization, you can consider it including in the narrative summary of the outputs. On the other hand, if the construction is needed only for project implementation/ project management purposes, DO NOT include "office building construction or/and residential building construction" in the output.

	Narrative Summary (NS)	Objective Verifiable Indicators (OVI)	Mode of Verification (MOV)	Important Assumption (IA)
	Reinforced Cement Concrete (RCC) 4. Ghat constructed 5. Tourism space/ parking space developed 6. Upazila, Union and Village roads widened, strengthened, protected, and rehabilitated	• XXX (number) Culvert constructed 3. By XXX-year, • XXX (number) GCMs constructed • XXX (number) Bazar constructed • XXX km RCC road constructed • XXX km RCC drain constructed 4. By XXX-year, • XXX (number) RCC Ghat constructed 5. By XXX-year, • XXX (number) tourism space developed 6. By XXX-year, • XXX km Upazila road widen and strengthen • XXX km Union Road widen and strengthen • XXX km Village Road widen and strengthen • XXX km Upazila road rehabilitated • XXX km Union Road rehabilitated • XXX km Village Road rehabilitated • XXX km Upazila road's slop protection installed • XXX km Union road's slop protection installed • XXX km Village road's slop protection installed		XXX cm). [9] • The outputs will not be affected by river erosion/tidal surge/cyclone.
Inputs	• Equipment • Vehicle • Machinery • Civil works • Manpower (project management)	• Machinery & Equipment for XXX. XXX lots. BDT XXX Lac [Ref. XXX] • Transport vehicles (XXXX). XXX nos. BDT XXX Lac [Ref. XXX] • Civil Works for XXX. XXX lots. BDT XXX Lac [Ref. XXX] • Skilled persons for XXX. XXX Lots. BDT XXX Lac [Ref. XXX] • Training Programme for XXX. XXX nos. BDT XXX Lac [Ref. XXX]	• Project Progress Report • Project Office record • Project tender document	• Flooding does not reach above the XXX cm water level during the construction period (recorded every XXX years)[10] • Active support from existing Market Management Committees • Active support from local representatives

[9] Study the disaster impact on the proposed facilities after construction. Establish acceptable thresholds within which the facilities can be sustained. (Source: Disaster Impact Assessment)

[10] Study the disaster impact on the proposed facilities during construction. Establish acceptable thresholds within which the project can be managed. (Source: Disaster Impact Assessment)

Annexure 2: Logical Framework Example of Power Generation Project

Instructions

- Apply this example only to the "Power Generation Project". (Note 1)
- Read the footnote, where applicable, and follow the specific instructions.
- Read the box below, explaining the meaning of each indicator used in this Logical Framework example.
- Make any necessary modifications to this example based on the design of the proposed project.
  - Note that all components of the Logical Framework are interrelated. Suppose that one component, e.g., Outputs, is changed. In this case, the other components, i.e., Purpose/Objective, Goal and Inputs, should be reviewed and revised if necessary.
- Enter a specific number or explanation instead of "XXX". "Base: XXX" and "Target: XXX" denote a particular value in baseline and the target value by the defined timeline, respectively.

Note 1: This Logical Framework example is drafted based on the Construction of the Khulna 330 Dual-Fuel Combined Cycle Power Plant. This example was prepared in consultation with Bangladesh Power Development Board, Power Division of Ministry of Power, Energy. and Mineral Resources, and Industry and Energy Division of Planning Commission.

Box: Explanation of indicators

- Net Electric Energy Production (GWh): Maximum Output (MW) x (24 x 365) x Plant capacity factor x (1-Auxiliary power ratio). This indicator is to confirm whether the assumed electricity generated was produced.
- Plant capacity factor (%): Annual Amount of Gross Generated Output / (Rated Output x 24 x 365) x 100. This indicator is to confirm the adequacy of the original operation plan.
- Availability factor (%): Annual Operation Hours / (24 x 365) x 100 This indicator is to confirm the adequacy of the original operation plan.
- Auxiliary power ratio (%): (Auxiliary electricity consumption per year / gross electricity generated) × 100. This indicator is to confirm the conditions for maintaining performance.
- Gross thermal efficiency: (Annual Amount of Gross Generated Output x 860 (kcal/kWh)) / (Annual Amount of Fuel Consumption x Fuel Lower Heating Value) x 100. This indicator is to confirm the conditions for maintaining performance.
- Unplanned outage (hours, times): Accidental outage hours and times by mechanical and human errors. This indicator is to assess the improvement of reliability.

Source: JICA (2009) The Study on Bheramara Combined Cycle Power Station in Bangladesh, JICA (2014) JICA Operation Indicator and Effect Indicator Reference in ODA Loan Projects, JICA (2016) JICA Standard Indicator Reference in Grant Aid Projects,

	Narrative Summary (NS)	Objective Verifiable Indicators (OVI)	Mode of Verification (MOV)	Important Assumption (IA)
Goal[1]	Reliable, affordable, efficient, and quality power supply to the residential, commercial, and industrial consumers of the power in the project area enhanced.	After XXX years of the project completion[2], In the nation, • Per capita electricity consumption (kWh/year) is increased. [Base: XXX; Target: XXX] • Total installed power generation capacity is increased. [Base: XXX; Target: XXX] • Ratio of Primary Energy Mix [Target XXX] In the project area, • The number of residential, commercial, and industrial consumers is increased. [Base: XXX; Target: XXX] • Indicators of economic and social activities (e.g., XXX[3]) is improved. [Base: XXX; Target: XXX]	• Annual report of Power Division • Household Income and Expenditure Survey (HIES) of BBS Note for IMED Impact/ Ex-post evaluation report[4]	

[1] Select the impact level statement and indicators close to the outcome statement and indicators. In principle, it is difficult to examine the solid causal relationship between one project's results and impacts of the said project, i.e., “economic and social benefits” in the project area. This is because one project's results are only a part of the factors to improve economic and social standards in the project area. Sector Outcome in Sector Strategy Paper (SSP), i.e., "reliable, affordable, efficient and quality power supply achieved and sustained", can be used as the "goal" of the proposed project. Alternatively, "socio-economic activities of residential, commercial and industrial consumers of the power in the project areas improved" is the candidate for narrative summary with specific indicators.

[2] Set the range between 2 and 5 years. This depends on the characteristics of the facilities to be developed by the proposed project.

[3] Write the specific indicators of economic and social benefit or living standards to be improved as the project effects.

[4] IMED Impact/ Ex-post evaluation report should not be included in MOV. Instead, IMED conducts an Impact/ Ex-post evaluation to collect the data for the indicators. The study not only impact level indicators but also outcome level indicators in Impact/ Ex-post evaluation. The Impact/ Ex-post evaluation verifies whether not only impact but also the outcome indicators in a sustained manner via proper Operation and Maintenance. Purpose/ objective-level and goal-level outcomes have the same indicators but different 'target figures'. The target figure at the purpose/objective level is the figure at the completion of the project, and the target figure at the goal level is the figure after specific years of project completion.

	Narrative Summary (NS)	Objective Verifiable Indicators (OVI)	Mode of Verification (MOV)	Important Assumption (IA)
Purpose/ Objective[5]	Power supply capacity with efficient energy mix to the domestic grid at project area (XXXX Division) enhanced.	By the end of the project[5] Operation Indicators[6] • Maximum Output (MW) is achieved. [Target: XXX] • Net Electric Energy Production (GWh) is achieved. [Target: XXX] Effect Indicators [6] • Plant capacity factor (%) is as targeted. [Target: XXX] • Availability factor (%) is as targeted. [Target: XXX] • Auxiliary Power Ratio (%) is as targeted. [Target: XXX] • Gross Thermal Efficiency (%) is as targeted. [Target: XXX] • Unplanned Outage (Hours, times) is as targeted. [Target: XXX] • GHG CO_2 emission/unit generation is less than the Conventional Thermal Generation Power Plan. [Target: XXX]	• Annual report of Power Division • Directorate of program BPDB record • Daily generation report • Environmental monitoring report of the project • Project Completion report Note for IMED Terminal evaluation report[7]	• The supply chain of diesel and natural gas is not disrupted • Expected demand for power remains unchanged • The transmission and distribution system connected from this proposed power plant is functioning.

[5] Write the outcome of the project at the time of project completion. In other words, the purpose/ objective is the outcome that the beneficiaries obtain by using the outputs at the time of project completion.

[6] "Operational indicators" are indicators used to measure the operational status of a project and to measure whether the outputs are appropriately run and used. “Effect indicators” are indicators used to measure the effects of the project and to measure the effects which the outputs had on the beneficiaries in the project area". (Reference: JICA 2016 JICA Standard Indicator in Grant Aid Projects)

[7] IMED Terminal evaluation report should not be included in MOV. Instead, IMED conducts a terminal evaluation to collect the data for the indicators.

	Narrative Summary (NS)	Objective Verifiable Indicators (OVI)	Mode of Verification (MOV)	Important Assumption (IA)
Outputs[8]	1. Gas Turbine generating unit installed 2. Steam Turbine generating unit installed 3. Heat recovery steam generator installed 4. Water Treatment Plant constructed 5. Power Evacuation facility constructed 6. Technical and financial capacity for O&M of combined cycle power plant developed	1. By XXX-year, XXX unit (with XXX Capacity) - Gas Turbine generating unit installed 2. By XXX-year, XXX unit (with XXX Capacity)- Steam Turbine generating unit installed 3. By XXX-year, XXX unit (with XXX Capacity)- heat recovery steam generator installed 4. By XXX-year, XXX unit (with XXX capacity) -- Power Evacuation facility constructed 5. By XXX-year, XXX unit (with XXX capacity) - Water Treatment Plant constructed 6.1 By XXX-year, XXX persons in abroad, and XXX persons in home are trained. 6.2 By XXX-Year, O&M Plan and manual is prepared.	• Project Progress Report • Project Office record	• Pandemics like COVID-19 will not force to shut down the facility developed by this project. • Cyclone/Earthquake will not happen beyond XX in the Richter scale. [9]
Inputs	• Machinery & Equipment (Design and Engineer) • Vehicle • Civil Works • Consultancy Service • Manpower • Training	• Machinery & Equipment for XXX. XXX nos. BDT XXX Lac [Ref. XXX] • Transport vehicles (XXX), XXX nos. BDT XXX Lac [Ref. XXX] • Civil Works for XXX, XXX nos. BDT XXX Lac [Ref. XXX] • Consultancy Service for XXX, XXX nos. (Foreign - XXX PM, Local – XXX PM). BDT XXX Lac [Ref. XXX] • Skilled persons for XXX, XXX nos. BDT XXX Lac [Ref. XXX] • Training Programmes for XXX, XXX nos. BDT XXX Lac [Ref. XXX]	• Project Progress Report • Project Office record • Project tender document	• Flooding does not reach above the XXX cm water level during the construction period (recorded every XXX years)[10]

[8] To include "office building construction or/and residential building construction" in the narrative summary of outputs, explain the linkage of this output to the project purpose/objective and/or goal. For example, if the building is necessary to improve the physical capacity of the O&M of the organization, you can consider it including in the narrative of the outputs. On the other hand, if the construction is needed only for project implementation/ project management purposes, DO NOT include "office building construction or/and residential building construction" in the output.

[9] Study the disaster impact on the proposed facilities after construction. Establish acceptable thresholds within which the facilities can be sustained. (Source: Disaster Impact Assessment)

[10] Study the disaster impact on the proposed facilities during construction. Establish acceptable thresholds within which the project can be managed. (Source: Disaster Impact Assessment)

Annexure 3: Logical Framework Example of Power Transmission Project

Instructions

- Apply this example only to the "Power Transmission Project". (Note 1)
- Read the footnote, where applicable, and follow the specific instructions.
- Read the box below, explaining the meaning of each indicator used in this Logical Framework example.
- Make any necessary modifications to this example based on the design of the proposed project.
  - Note that all components of the Logical Framework are interrelated. Suppose that one component, e.g., Outputs, is changed. In this case, the other components, i.e., Purpose/Objective, Goal and Inputs, should be reviewed and revised if necessary.
- Enter a specific number or explanation instead of "XXX". "Base: XXX" and "Target: XXX" denote a particular value in baseline and the target value by the defined timeline, respectively.
- Replace the unique noun, where necessary.

Note 1: This Logical Framework example is drafted based on the Transmission Infrastructure Development Project for the Southern Area of Chattogram Division & Bangabandhu Hi-Tech City at Kaliakoir. This example was prepared in consultation with Power Division of Ministry of Power, Energy. and Mineral Resources, and Industry and Energy Division of Planning Commission.

Box: Explanation of indicators

- Availability factor (%): Maximum load (MW) / {rated capacity of the facility (MVA) × power factor}. This indicator is to assess whether the facility is properly operated by measuring whether the availability factor has improved to a fair value after the project.
- Electricity supply (GWh): Annual electric energy transmitted from the target electrical transformer. This indicator is to confirm whether the transmission lines and the substation are adequately utilized by measuring the increased electric energy.
- Transmission loss (%): {Electricity supply (kWh) - electricity consumption at the substation (kWh) - receiving electric energy (kWh)} / electricity supply (kWh). This indicator is to confirm whether the transmission lines and the substation are adequately utilized by measuring the loss in transmission.
- Voltage Drop (%): Maximum voltage drop (V)/ standard voltage (V). This indicator is to assess whether the quality is maintained at the end user by measuring whether the voltage drop at the end user is improved and an appropriate value is recovered after the project.
- Unplanned outage (hours, times): Accidental outage hours and times mechanical and human errors. This indicator is to assess the improvement of reliability by measuring the degree of improvement by comparing values before and after the project.

Reference: Reference: JICA (2014) JICA Operation Indicator and Effect Indicator Reference in ODA Loan Projects, JICA (2016) JICA Standard Indicator Reference in Grant Aid Projects, JICA (2017) Ex-post evaluation “Grid Substations and Associated Transmission Lines Development Project” in Bangladesh.

	Narrative Summary (NS)	Objective Verifiable Indicators (OVI)	Mode of Verification (MOV)	Important Assumption (IA)
Goal[1]	Reliable, affordable, efficient, and quality power supply to the residential, commercial, and industrial consumers of the power in the project area enhanced.	After XXX years of the project completion[2], In the nation, • Per capita electricity consumption (kWh/year) is increased. [Base: XXX; Target: XXX] In the project area, • The number of residential, commercial, and industrial consumers is increased. [Base: XXX; Target: XXX] • Indicators of economic and social activities (e.g., XXX[3]) is improved. [Base: XXX; Target: XXX]	• Annual report of Power Division • Household Income and Expenditure Survey (HIES) of BBS Note for IMED Impact/ Ex-post evaluation report[4]	

[1] Select the impact level statement and indicators close to the outcome statement and indicators. In principle, it is difficult to examine the solid causal relationship between one project's results and impacts of the said project, i.e., "economic and social benefits" in the project area. This is because one project's results are only a part of the factors to improve economic and social standards in the project area. Sector Outcome in Sector Strategy Paper (SSP), i.e., "reliable, affordable, efficient and quality power supply achieved and sustained", can be used as the "goal" of the proposed project. Alternatively, "socio-economic activities of residential, commercial and industrial consumers of the power in the project areas improved" is the candidate for narrative summary with specific indicators.

[2] Set the range between 2 and 5 years. This depends on the characteristics of the facilities to be developed by the proposed project.

[3] Write the specific indicators of economic and social benefit or living standards to be improved as the project effects.

[4] IMED Impact/ Ex-post evaluation report should not be included in MOV. Instead, IMED conducts an Impact/ Ex-post evaluation to collect the data for the indicators. The study not only impact level indicators but also outcome level indicators in Impact/ Ex-post evaluation. The Impact/ Ex-post evaluation verifies whether not only impact but also the outcome indicators in a sustained manner via proper Operation and Maintenance. Purpose/ Objective-level and goal-level outcomes have the same indicators but different 'target figures'. The target figure at the purpose/objective level is the figure at the completion of the project, and the target figure at the goal level is the figure after specific years of project completion.

	Narrative Summary (NS)	Objective Verifiable Indicators (OVI)	Mode of Verification (MOV)	Important Assumption (IA)
Purpose/ Objective[5]	Electricity transmission from XXX area to XXX area [Project Area A], and from XXX area to XXX area [Project Area B] with less transmission loss improved.	By the end of the project[5] In Gazipur Operation Indicators[6] • Availability factor is improved. [Base: XXX, Target: XXX] • Capacity of Electricity Supply (GWh) is increased. [Base: XXX, Target: XXX] • Transmission loss (%) is reduced. [Base: XXX, Target: XXX] • Voltage drop (%) is reduced. [Base: XXX, Target: XXX] Effect Indicators [6] • (new/ additional) Electricity (MW) started flowing to the high-tech city. [Target: XXX] • SAIDI (%) is reduced. [Base: XXX, Target: XXX] • SAIFI (%) reduced. [Base: XXX, Target: XXX] • Unplanned outage (hours) is reduced. [Base: XXX, Target: XXX] In Chattogram, Operation Indicators[6] • Availability factor is improved. [Base: XXX, Target: XXX] • Capacity of Electricity Supply (GWh) is increased. [Base: XXX, Target: XXX] • Transmission loss (%) is reduced. [Base: XXX, Target: XXX] • Voltage drop (%) is reduced. [Base: XXX, Target: XXX] Effect Indicators [6] • (new/ additional) XXX MW power is started flowing to the southern areas of Chattogram Division, namely Cox's Bazar, Teknaf & Anowara areas. [Target: XXX] • (new/ additional) XXX MW power is started flowing to the economic zone (A). [Target: XXX] • (new/ additional) XXX MW power is started flowing to the economic zone (B). [Target: XXX] • SAIDI (%) is reduced. [Base: XXX, Target: XXX] • SAIFI (%) reduced. [Base: XXX, Target: XXX] • Unplanned outage (hours) is reduced. [Base: XXX, Target: XXX]	• Monthly Operational Data (MOD) of PGCB. • Daily and Monthly reports prepared by National Load Dispatch Centre (NLDC), PGCB. • Project Completion Report Note for IMED Terminal evaluation report[7]	• Supply from power generation plant is stable as planned. • Demand for power in the project area is as projected. • Distribution of power is stable.

[5] Write the outcome of the project at the time of project completion. In other words, the purpose/ objective is the outcome that the beneficiaries obtain by using the outputs at the time of project completion.

[6] "Operational indicators" are indicators used to measure the operational status of a project and to measure whether the outputs are appropriately run and used. “Effect indicators” are indicators used to measure the effects of the project and to measure the effects which the outputs had on the beneficiaries in the project area". (Reference: JICA 2016 JICA Standard Indicator in Grant Aid Projects)

[7] IMED Terminal evaluation report should not be included in MOV. Instead, IMED conducts a terminal evaluation to collect the data for the indicators.

	Narrative Summary (NS)	Objective Verifiable Indicators (OVI)	Mode of Verification (MOV)	Important Assumption (IA)
Outputs[8]	1. 230 kV GIS Grid Substation constructed 2. 32 kV GIS Grid Substations constructed 3. 230 kV Transmission Lines constructed 4. 132 kV Transmission Lines constructed 5. 230 kV Bay extended	1. 230 kV GIS Grid Substations are constructed: XXX nos. by XXX-year • I. Anowara 230/132/33 kV Indoor GIS Substation: XXX Nos.×250/350 MVA & XXX Nos.×80/120 MVA • II. Bangabandhu Hi-Tech City 230/33 kV Indoor GIS Substation: XXX Nos.×125/140 MVA 2. 32 kV GIS Grid Substations are constructed: XXX nos. by XXX-year • I. Cox's Bazar (North) 132/33 kV Indoor GIS Substation: XXX Nos.×80/120 MVA • II. Teknaf 132/33 kV Indoor GIS Substations are constructed: XXX Nos.×80/120 MVA 3. 230 kV Transmission Lines are constructed: XXX km by XXX-year. • I. Anowara - Cox's Bazar (North) 230 kV double circuit transmission line (Twin ACSR Mallard conductor): XXX km • II. Kaliakoir - Bangabandhu Hi-Tech City 230 kV double circuit transmission line (Twin ACSR Mallard conductor): XXX km 4. 132 kV Transmission Lines are constructed: XXX km by XXX-year. • I. Cox's Bazar (North) – Teknaf double circuit line (Single ACSR Grosbeak conductor): 65.00 km • II. LILO at Cox's Bazar (North) substation (Single ACSR Grosbeak equivalent ACCC conductor) from Dohazari - Cox's Bazar double circuit line:1.55 km 5. 230 kV Bay are extended: XXX Nos. by XXX-year. I. 230 kV GIS Bay Extensions at existing Kaliakoir substation: XX nos.	• Project Progress Report • Project Office record	• Cyclone/Earthquake will not happen beyond XX in the Richter scale after construction.[9]

[8] To include "office building construction or/and residential building construction" in the narrative summary of outputs, explain the linkage of this output to the project purpose/objective and/or goal. For example, if the building is necessary to improve the physical capacity of the O&M of the organization, you can consider it including in the NS of the outputs. On the other hand, if the construction is needed only for project implementation/ project management purposes, DO NOT include "office building construction or/and residential building construction" in the output.

[9] Study the disaster impact on the proposed facilities after construction. Establish acceptable thresholds within which the facilities can be sustained. (Source: Disaster Impact Assessment)

	Narrative Summary (NS)	Objective Verifiable Indicators (OVI)	Mode of Verification (MOV)	Important Assumption (IA)
Inputs	• Land • Machinery & Equipment • Vehicle • Civil Works • Consultancy Service • Manpower (project management)	• Land -XXX Acres. XXX Taka [Ref. XXX] • Machinery and equipment [Ref. XXX] - Electrical Equipment: XXX Nos. XXX Taka - Motor Vehicle: XXX Nos. XXX Taka - Office equipment: XXX Nos. XXX Taka - Furniture: XXX Nos. XXX Taka • Civil Works for XXX: XXX Nos. XXX Taka [Ref. XXX] • Consultancy service for XXX.: XXX Nos. XXX Taka [Ref. XXX] • Manpower (officer/staff): XXX nos. XXX Taka [Ref. XXX]	• Project Progress Report • Project Office record • Project tender document	• The landowner will cooperate for land acquisition. • Working environment-friendly relations with the Host and Rohingya community during the project period for Cox's Bazar area. • Flooding does not reach above the XXX cm water level during the construction period (recorded every XXX years)[10]

[10] Study the disaster impact on the proposed facilities during construction. Establish acceptable thresholds within which the project can be managed. (Source: Disaster Impact Assessment)

[Blank on purpose]

Annexure 4: Logframe Example of Urban Electrification Project

Instructions

- Apply this example only to the "Urban Electrification Project " [(note 1)] during project formulation and appraisal.
- Read the footnote, where applicable, and follow the specific instructions.
- Read the box below, explaining the meaning of each indicator used in this Logical Framework example.
- Make any necessary modifications to this example based on the design of the proposed project.
  - Note that all components of the Logical Framework are interrelated. Suppose that one component, e.g., Outputs, is changed. In this case, the other components, i.e., Purpose/Objective, Goal and Inputs, should be reviewed and revised if necessary.
- Enter a specific number or explanation instead of "XXX". "Base: XXX" and "Target: XXX" denote a particular value in baseline and the target value by the defined timeline, respectively.

Note 1: This Logical Framework example is drafted based on the Dhaka Power System Expansion and Strengthening Project in DESCO Area. This example was prepared in consultation with Dhaka Electric Supply Company Limited (DESCO), Power Division of Ministry of Power, Energy. and Mineral Resources, and Industry and Energy Division of Planning Commission.

Box: Explanation of indicators

- Peak load (kW): Maximum electricity in a particular area. This indicator is to assess the degree of improvement in power supply capacity.
- Electrification Rate of Household (%): Number of households electrified × 100/ number of total households. This indicator is to assess the degree of increased demand.
- Distribution loss (%): Distribution loss (kWh) × 100 / electricity transmitted (kWh). This indicator is to assess the degree of distribution loss reduction.
- Unplanned outage (hours, times): Accidental outage hours and times by mechanical and human errors. This indicator is to assess the improvement of reliability by comparing values before and after the project.
- SAIDI (System Average Interruption Duration Index) = Sum of all customer outage hours / total number of customers served
- SAIFI (System Average Interruption Frequency Index) = Total number of customer outage / total number of customers served

Reference: JICA (2014) JICA Operation Indicator and Effect Indicator Reference in ODA Loan Projects, JICA (2016) JICA Standard Indicator Reference in Grant Aid Projects

	Narrative Summary (NS)	Objective Verifiable Indicators (OVI)	Mode of Verification (MOV)	Important Assumption (IA)
Goal[1]	Socio-economic activities of residential, commercial and industrial consumers in the project areas improved.	After XXX years of the project completion[2], In the nation, • Per capita, electricity consumption (kWh/year) is increased. [Base: XXX; Target: XXX] • The rate of rural electrification in the BRDB area has become XXX%. [Base: XXX; Target: XXX] In the project area, • Indicators of economic and social activities (e.g., XXX[3]) is improved. [Base: XXX; Target: XXX]	• Annual report of Power Division • Household Income and Expenditure Survey (HIES) of BBS Note for IMED Impact/ Ex-post evaluation report[4]	

[1] Select the impact level statement and indicators close to the outcome statement and indicators. In principle, it is difficult to examine the solid causal relationship between one project's results and impacts of the said project, i.e., “economic and social benefits” in the project area. This is because one project's results are only a part of the factors to improve economic and social standards in the project area. Sector Outcome in Sector Strategy Paper (SSP), i.e., "reliable, affordable, efficient and quality power supply achieved and sustained", can be used as the "goal" of the proposed project. Alternatively, "socio-economic activities of residential, commercial and industrial consumers in the project areas improved" is the candidate for narrative summary with the specific indicators.

[2] Set the range between 2 and 5 years. This depends on the characteristics of the facilities to be developed by the proposed project.

[3] Write the specific indicators of economic and social benefit or living standards to be improved as the project effects.

[4] IMED Impact/ Ex-post evaluation report should not be included in MOV. Instead, IMED conducts an Impact/ Ex-post evaluation to collect the data for the indicators. The study not only impact level indicators but also outcome level indicators in Impact/ Ex-post evaluation. The Impact/ Ex-post evaluation verifies whether not only impact but also the outcome indicators in a sustained manner via proper Operation and Maintenance. Purpose/ Objective-level and goal-level outcomes have the same indicators but different 'target figures'. The target figure at the purpose/objective level is the figure at the completion of the project, and the target figure at the goal level is the figure after specific years of project completion.

	Narrative Summary (NS)	Objective Verifiable Indicators (OVI)	Mode of Verification (MOV)	Important Assumption (IA)
Purpose/ Objective[5]	The capacity[6] For distributing reliable and efficient power supply in project area enhanced.	By the end of the project[5] Operation Indicators[7] • Peak load in the project area (kW) is enhanced. [Base: XXX, Target: XXX] • Capacity (MW) to the electricity supply facilities is installed. [Base: XXX, Target: XXX] • Capacity of XXX new consumer connections is achieved. (by category of consumers: e.g., households, industrial, commercial) [Base: XXX, Target: XXX] • Capacity to benefit XXX existing consumers is achieved (by category of consumers: e.g., households, industrial, commercial) [Base: XXX, Target: XXX] Effect Indicators [6] • The electrification rate of households in the project area (%) is increased. [Base: XXX, Target: XXX] • Sales Volume (MWh) is enhanced. [Base: XXX, Target: XXX] • Distribution loss (%) is reduced. [Base: XXX, Target: XXX] • SAIDI (%) is reduced. [Base: XXX, Target: XXX] • SAIFI (%) is reduced. [Base: XXX, Target: XXX] • Accidental outage (hours, times) is reduced. [Base: XXX, Target: XXX]	• Annual report of DESCO • Project Completion Report Note for IMED Terminal evaluation report[8]	• Demand trend is the same as projected. • Other projects of DESCO to meet the demand in 2030 is completed as planned. • The completion of planned energy generation projects and transmission projects may underutilize the transmission and distribution network. • Two townships are ready to accept electricity connections. • The airport expansion project is implemented on time.

[5] Write the outcome of the project at the time of project completion. In other words, the purpose/ objective is the outcome that the beneficiaries obtain by using the outputs at the time of project completion.

[6] Check whether or not the proposed project establishes the connection to the consumer within the project implementation period. In the case of project used for this example, the project aimed to develop the capacity to establish the new connections, not to make new connections themselves during the project implementation period.

[7] "Operational indicators" are indicators used to measure the operational status of a project and to measure whether the outputs are appropriately run and used. “Effect indicators” are indicators used to measure the effects of the project and to measure the effects which the outputs had on the beneficiaries in the project area". (Reference: JICA 2016 JICA Standard Indicator in Grant Aid Projects)

[8] IMED Terminal evaluation report should not be included in MOV. Instead, IMED conducts a terminal evaluation to collect the data for the indicators.

	Narrative Summary (NS)	Objective Verifiable Indicators (OVI)	Mode of Verification (MOV)	Important Assumption (IA)
Outputs[9]	1. Underground transmission (source) lines and ready for operation installed. 2. Substations and ready for operation constructed. 3. Distribution Line and ready for operation installed. 4. Distribution Transformer (DT) and Ring Main Unit (RMU) and ready for operation installed.	1. By XXX-year, XXX Km Double Circuit 132 KV underground transmission lines are installed from PGCB's neighboring substation. 2.1 By XXX-year, XXX nos. 132/33 kV Grid Substations in XXX (Location) are constructed. 2.2 By XXX-year, XXX nos. 33/11 kV substations in XXX (Location) are constructed. 3.1 By XXX-year, XXX circuit-Km (33 kV) and XXX Km (11 kV) underground cables are installed. 3.2. By XXX-year, XXX Km (11/0.4 kV) overhead distribution lines are constructed. 4.1 By XXX-year, XXX Nos. 11/0.4 kV Distribution Transformer is installed. 4.2 By XXX-year, XXX nos. RMU are installed.	• Project Progress Report • Reports of contractor/ Suppliers	• Natural disaster over the designed tolerance level will not occur in certain areas after construction. (Maximum Design capacity of level: XXX)[10] • The transmission capacity of PGCB will be available on time.
Inputs	• Land • Machinery & Equipment • Vehicle • Civil Works • Consultancy Service • Manpower (project management)	• Land -XXX Acres (DESCO has already leased the land.) XXX Taka [Ref. XXX] • Machinery and equipment [Ref. XXX] - Vehicle: XXX Nos. XXX Taka - Computer and Accessories: XXX Nos. XXX Taka - Office equipment: XXX Nos. XXX Taka - Furniture: XXX Nos. XXX Taka - Electrical Equipment: XXX Nos. XXX Taka • Consultancy service for XXX: XXX Nos. XXX Taka [Ref. XXX] • Civil Works for XXX.: XXX Nos. XXX Taka [Ref. XXX] - 11kV, 11/0.4kV, 0.4kV, O/H & U/G Lines and 11/0.4kV Distribution Transformers constructed - 11 kV and 33 kV Underground Cable installed/Constructed • Manpower (officer/staff): XXX nos. XXX Taka [Ref. XXX]	• Project Progress Report • Project tender document	• Dhaka North City Cooperation (DNCC), Gazipur City Cooperation (GCC), and Roads and Highway Department (RHD) do not provide road-cutting permission on time. • Disaster impact (if any)[11]

[9] To include "office building construction or/and residential building construction" in the narrative summary of outputs, explain the linkage of this output to the project purpose/objective and/or goal. For example, if the building is necessary to improve the physical capacity of the O&M of the organization, you can consider it including in the narrative summary of the outputs. On the other hand, if the construction is needed only for project implementation/ project management purposes, DO NOT include "office building construction or/and residential building construction" in the output.

[10] Study the disaster impact on the proposed facilities after construction. Establish acceptable thresholds within which the facilities can be sustained. (Source: Disaster Impact Assessment)

[11] Study the disaster impact on the proposed facilities during construction. Establish acceptable thresholds within which the project can be managed. (Source: Disaster Impact Assessment)

Annexure 5: Logframe Example of Rural Electrification Project

Instructions

- Apply this example only to the " Rural Electrification Project " [(note 1)] during project formulation and appraisal.
- Read the footnote, where applicable, and follow the specific instructions.
- Read the box below, explaining the meaning of each indicator used in this Logical Framework example.
- Make any necessary modifications to this example based on the design of the proposed project.
  - Note that all components of the Logical Framework are interrelated. Suppose that one component, e.g., Outputs, is changed. In this case, the other components, i.e., Purpose/Objective, Goal and Inputs, should be reviewed and revised if necessary.
- Enter a specific number or explanation instead of "XXX". "Base: XXX" and "Target: XXX" denote a particular value in baseline and the target value by the defined timeline, respectively.

Note 1: This Logical Framework example is drafted based on the 1.5 million Customer Connection Through Rural Electrification Expansion Project. This example was prepared in consultation with Bangladesh Rural Electrification Board (BREB), Power Division of Ministry of Power, Energy. and Mineral Resources, and Industry and Energy Division of Planning Commission.

Box: Explanation of indicators

- Peak load (kW): Maximum electricity in a certain area. This indicator is to assess the degree of improvement in power supply capacity.
- Electrification Rate of Household (%): Number of households electrified × 100/ number of total households. This indicator is to assess the degree of increased demand.
- Distribution loss (%): Distribution loss (kWh) × 100 / electricity transmitted (kWh). This indicator is to assess the degree of distribution loss reduction.
- Unplanned outage (hours, times): Accidental outage hours and times by mechanical and human errors. This indicator is to assess the improvement of reliability by measuring the degree of improvement by comparing values of before and after the project.
- SAIDI (System Average Interruption Duration Index) = Sum of all customer outage hours / total number of customers served
- SAIFI (System Average Interruption Frequency Index) = Total number of customer outage / total number of customers served

Reference: JICA (2014) JICA Operation Indicator and Effect Indicator Reference in ODA Loan Projects, JICA (2016) JICA Standard Indicator Reference in Grant Aid Projects

	Narrative Summary (NS)	Objective Verifiable Indicators (OVI)	Mode of Verification (MOV)	Important Assumption (IA)
Goal[1]	Socio-economic activities of residential, commercial and industrial consumers in the project areas improved.	After XXX years of the project completion[2], In the nation, • Per capita, electricity consumption (kWh/year) is increased. [Base: XXX; Target: XXX] • The rate of rural electrification in the BRDB area has become XXX%. [Base: XXX; Target: XXX] In the project area, • Indicators of economic and social activities (e.g., XXX[3]) is improved. [Base: XXX; Target: XXX]	• Annual report of Power Division • Household Income and Expenditure Survey (HIES) of BBS Note for IMED Impact/ Ex-post evaluation report[4]	

[1] Select the impact level statement and indicators close to the outcome statement and indicators. In principle, it is difficult to examine the solid causal relationship between one project's results and impacts of the said project, i.e., “economic and social benefits” in the project area. This is because one project's results are only a part of the factors in improving economic and social standards in the project area. Sector Outcome in Sector Strategy Paper (SSP), i.e., "reliable, affordable, efficient and quality power supply achieved and sustained", can be used as the "goal" of the proposed project. Alternatively, "socio-economic activities of residential, commercial and industrial consumers in the project areas improved" is the candidate for narrative summary with the specific indicators.

[2] Set the range between 2 and 5 years. This depends on the characteristics of the facilities to be developed by the proposed project.

[3] Write the specific indicators of economic and social benefit or living standards to be improved as the project effects.

[4] IMED Impact/ Ex-post evaluation report should not be included in MOV. Instead, IMED conducts an Impact/ Ex-post evaluation to collect the data for the indicators. The study not only impact level indicators but also outcome level indicators in Impact/ Ex-post evaluation. The Impact/ Ex-post evaluation verifies whether not only impact but also the outcome indicators in a sustained manner via proper Operation and Maintenance. Purpose/ objective-level and goal-level outcomes have the same indicators but different 'target figures'. The target figure at the purpose/objective level is the figure at the completion of the project, and the target figure at the goal level is the figure after specific years of project completion.

	Narrative Summary (NS)	Objective Verifiable Indicators (OVI)	Mode of Verification (MOV)	Important Assumption (IA)
Purpose/ Objective[5]	The coverage of access to the power supply in the project area by the grid improved.	By the end of the project[5] Operation Indicators[6] • Peak load in the project area (kW) is enhanced. [Base: XXX, Target: XXX] • Capacity (MW) to the electricity supply facilities is installed. [Base: XXX, Target: XXX] Effect Indicators [6] • The electrification rate of households in the project (%) area increased. [Base: XXX, Target: XXX] • Sales Volume (MWh) is enhanced. [Base: XXX, Target: XXX] • Distribution loss is reduced. (%) [Base: XXX, Target: XXX] • Unplanned outage (hours, times) is reduced. [Base: XXX, Target: XXX] • SAIDI (%) is reduced. [Base: XXX, Target: XXX] • SAIFI (%) is reduced. [Base: XXX, Target: XXX]	• Annual report of BREB • Project Completion Report Note for IMED Terminal evaluation report[7]	• The power supply from power generation companies is stable. • The regulation of Tariffs are the same. • The demand for beneficiaries in the project area is the same as planned. • The target of the national rural electrification plan under the BREB area is the same. • BREB's other projects are completed as planned.

[5] Write the outcome of the project at the time of project completion. In other words, the purpose/ objective is the outcome that the beneficiaries obtain by using the outputs at the time of project completion.

[6] "Operational indicators" are indicators used to measure the operational status of a project and to measure whether the outputs are appropriately run and used. "Effect indicators" are indicators used to measure the effects of the project and to measure the effects which the outputs had on the beneficiaries in the project area". (Reference: JICA 2016 JICA Standard Indicator in Grant Aid Projects)

[7] IMED Terminal evaluation report should not be included in MOV. Instead, IMED conducts a terminal evaluation to collect the data for the indicators.

	Narrative Summary (NS)	Objective Verifiable Indicators (OVI)	Mode of Verification (MOV)	Important Assumption (IA)
Outputs[8]	1. New distribution line constructed 2. New substations constructed 3. Existing substations augmented/ upgraded 4. New meters installed 5. PBSs' technical and financial capacity improved.	1. By XXX-year, XXX km of new distribution line (33 KV of below) constructed. 2. By XXX-year, XXX Nos. of new substation (33/11 KV and 830 MVA) constructed. 3. By XXX-year, XXX Nos. of existing substation (33/11 KV and 176.83 MVA) augmented. 4. By XXX-year, XXX million Nos. of meter 1 phase & 3 phase is installed. 5.1 By XXX-year, XXX Nos of PBSs staff in the project area trained. 5.2 By XXX-year, the revenue collection of PBSs in the project area increased. [Base: XXX, Target: XXX %] 5.3 By XXX-year, the rate of uncollected payment in the project area reduced. [Base: XXX, Target: XXX %]	• Project Progress Report • Reports of contractor/ Suppliers	• No cyclone above design capacity after construction occurs. (Maximum Design capacity of level: XXX)[9] • Enough and stable electricity to fulfil expected additional demand (700 to 800 MW) is provided as planned.
Inputs	• Land • Machinery & Equipment • Vehicle • Civil Works • Consultancy Service • Manpower (project management) • Training	• Land: XXX acres. BDT XXX Lac [Ref. XXX] • Equipment and materials for XXX. BDT XXX Lac [Ref. XXX] • Vehicle (XXX nos.) BDT XXX Lac [Ref. XXX] • Civil Works for XXX. XXX Nos. BDT XXX Lac [Ref. XXX] • Consultant Services for XXX. XXX Nos. BDT XXX Lac [Ref. XXX] • Skilled persons for XXX. XXX Nos. BDT XXX Lac [Ref. XXX] • Training programmes for XXX. XXX Nos. BDT XXX Lac [Ref. XXX]	• Project Progress Report • Project tender document	• Flooding does not reach above the XXX cm water level during the construction period (recorded every XXX years)[10] • The landowner will cooperate on land acquisition • Active Support from PBSs.

[8] To include "office building construction or/and residential building construction" in the narrative summary of outputs, explain the linkage of this output to the project purpose/objective and/or goal. For example, if the building is necessary to improve the physical capacity of the O&M of the organization, you can consider it including in the NS of the outputs. On the other hand, if the construction is needed only for project implementation/ project management purposes, DO NOT include "office building construction or/and residential building construction" in the output.

[9] Study the disaster impact on the proposed facilities after construction. Establish acceptable thresholds within which the facilities can be sustained. (Source: Disaster Impact Assessment)

[10] Study the disaster impact on the proposed facilities during construction. Establish acceptable thresholds within which the project can be managed. (Source: Disaster Impact Assessment)

Strengthening Public Investment Management System Project
Programming Division
Bangladesh Planning Commission
Ministry of Planning
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April 2023