



Project Performance
Management System

Guidelines for Preparing a Design and Monitoring Framework

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Second Edition

Asian Development Bank

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FOREWORD

The international development community is committed to improving aid effectiveness. Managing for development results (MfDR) is a cornerstone of this commitment. The Asian Development Bank (ADB) fully subscribes to MfDR, applies the principles in its own operations, and is actively promoting MfDR within its developing member countries (DMCs). At the country level, MfDR is being operationalized through the introduction of results-based country strategies and programs. At the project level, MfDR is based on a participatory approach to project design and adapting the logical framework.

The logical framework or logframe approach has been used by ADB since the early 1990s. Known then as the project or technical assistance framework, it became a mandatory attachment to all project documents in 1996. It was also adopted by most development agencies, DMCs, and nongovernment organizations. It has since evolved and is now widely appreciated as a powerful design and management tool that helps development practitioners identify clear objectives, build consensus among stakeholders, and implement result-based development interventions. It is renamed design and monitoring framework to reflect its application in all stages of the project cycle. It is the core link between project design, implementation, and evaluation and the basis for ADB's project performance management system (PPMS).

Involving stakeholders in the design process of development assistance projects is critical to making aid more effective. It ensures that the principles of MfDR are fully implemented. The design and monitoring framework is a powerful tool that brings structure and logic to any project. It makes development interventions focus on achievable and measurable results through performance targets and indicators and it draws attention to the risks that projects may face during implementation. However, achieving results is, to a large extent, dependent on stakeholder involvement, cooperation, and consensus. The participatory approach in developing the design and monitoring framework builds country ownership and helps to achieve results.

These guidelines on preparing a design and monitoring framework are primarily for design teams—DMC government and nongovernment stakeholders, ADB staff, and consultants. The guidelines are a hands-on tool kit that describes—step-by-step—the participatory process to develop the design and monitoring framework and explains how to apply participatory design tools.

These guidelines supersede (i) Staff Instruction: Use of the Logical Framework for Bank-assisted Loan and Technical Assistance Projects (10 September 1999); Guidelines for Staff - Project Performance Management System (PPMS), 3rd version September 1999; any reference to the format of DMF in: Business Processes for the Reorganized ADB, December 2001; ADB. 1998. *Using the Logical Framework – Sector Analysis and Project Design*. Manila; and any other previous documents contradicting these guidelines.

I hope that these guidelines will be useful to ADB personnel and other development practitioners involved in preparing results-based projects in the DMCs.

Philip Daltrop
Principal Director
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ABBREVIATIONS

ADB	–	Asian Development Bank
ADTA	–	advisory technical assistance
DFID	–	Department for International Development
DMC	–	developing member country
DMF	–	design and monitoring framework
EA	–	executing agency
EAL	–	emergency assistance loan
IA	–	implementing agency
NGO	–	nongovernment organization
PCR	–	project completion report
PM	–	person-month
PPMS	–	project performance management system
PPTA	–	project/program preparatory technical assistance
RRP	–	report and recommendation of the President
SDP	–	sector development program
SBC	–	Safari Bus Company
TA	–	technical assistance
TCR	–	technical assistance completion report

NOTE

In this report, “\$” refers to US dollars.

I. INTRODUCTION

A. Purpose

Development interventions, irrespective of their sectoral focus, level of interventions, or sources of funding, affect the lives of people in a multitude of ways. Systematic information gathering, conceptual analysis, and the involvement of stakeholders in this process are imperative for achieving desired results. These Guidelines for the application of the Asian Development Bank (ADB) design and monitoring framework (DMF) approach facilitate this analytical and planning process.

Did you know that inadequate planning is one of the main reasons that projects fail?

These Guidelines draw on emerging experiences and best practices as well as practical tips from development practitioners in ADB and other multilateral and bilateral partners. The Guidelines replace all previous guidelines and staff instructions. They provide program and project team leaders, team members, consultants, and executing and implementing agencies in developing member countries (DMCs) with a range of analytical tools for better design and subsequent monitoring and evaluation. These tools can help practitioners understand better the complexity of issues, determine appropriate objectives, and select the most suitable strategy to address the development problem. The Guidelines describe techniques to engage effectively with the borrower, beneficiaries, and other stakeholders, and offer suggestions on when, with whom, and how to apply these tools and techniques. The aim of this process is to analyze, conceptualize, and design a development intervention that builds on beneficiary participation and country ownership and delivers desired results.

The Guidelines present the DMF approach adopted by ADB.¹ The DMF approach is based on a contemporary application of the logical framework—logframe—also referred to as project cycle management (PCM) used by bilateral and multilateral development agencies. The Guidelines clarify the concept of the results chain, comprised of inputs, activities, outputs,

¹ These guidelines supersede (i) Staff Instruction: Use of the Logical Framework for Bank-assisted Loan and Technical Assistance Projects (10 September 1999); Guidelines for Staff – Project Performance Management System (PPMS) (3rd version September 1999); any reference to the format of DMF in: Business Processes for the Reorganized ADB (December 2001); ADB. 1998. *Using the Logical Framework – Sector Analysis and Project Design*. Manila; and any other previous documents contradicting these guidelines.

outcome, and impacts. This terminology is adapted from the Organisation for Economic Co-operation and Development (OECD) Development Assistance Committee (DAC)² as part of a harmonization effort. It replaces goal with impact and replaces purpose with outcome. Specifying targets and indicators—fundamental to managing for development results (MfDR)—and determining the appropriate sources of information are addressed. The Guidelines explain how to identify the assumptions and risks inherent in development interventions and incorporate them into the project design.

B. Structure

The Guidelines follow the sequence of the analytical and planning process. Chapter I provides an overview of the DMF approach and its place in and relevance to the project performance management system (PPMS). Chapter II describes the DMF approach, including (i) situation analysis, comprising two diagnostic tools—stakeholder analysis and problem analysis; and (ii) the project identification phase, which consists of the analysis of objectives and the analysis of alternatives. Each of these tools is introduced with step-by-step explanation and practical tips. To illustrate the application of the tools, the Guidelines use a simplified example from the transport sector. Chapter III provides guidance on translating the results of the analytical and planning process into the DMF matrix.

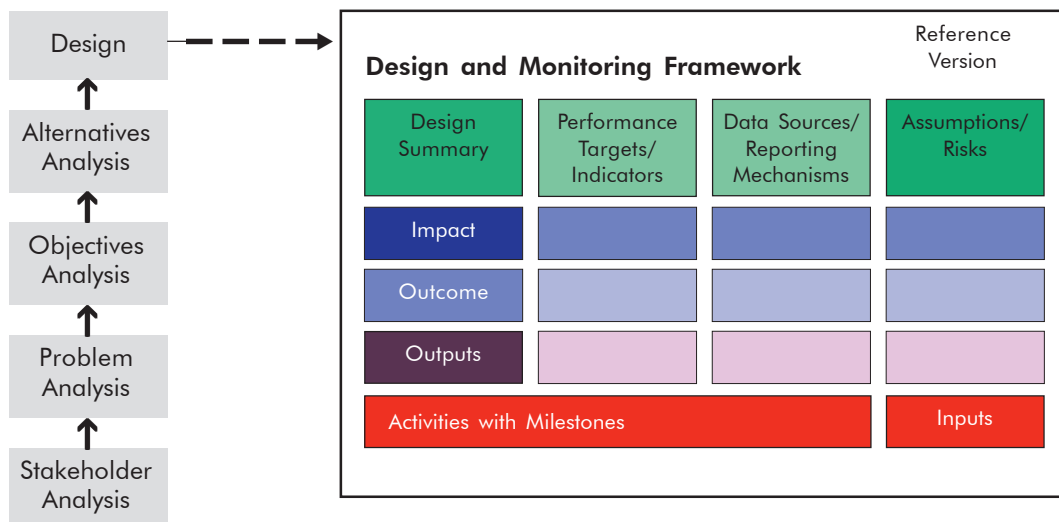
² OECD-DAC. 2002. *Evaluation and Aid Effectiveness. Glossary of Key Terms in Evaluation and Results Based Management*. Paris.

II. DESIGN AND MONITORING FRAMEWORK APPROACH

A. Overview

PPMS outlines a systematic way of designing and implementing projects. The DMF, the key element of PPMS, is a results-based tool for analyzing, conceptualizing, designing, implementing, monitoring, and evaluating projects. It structures the project planning process and helps communicate essential information about the project to stakeholders in an efficient, easy-to-read format. The DMF approach distinguishes between the DMF design process and the DMF itself. The process refers to the steps involved in designing a project—stakeholder analysis, problem and objectives analysis, and analysis of alternatives. The results of the DMF process are then summarized and presented in a matrix format, referred to as the design and monitoring framework or DMF (see figure 1). In ADB, the DMF, previously called project or technical assistance (TA) framework, has been mandatory since 1996 and is included in TA papers and the report and recommendation of the President (RRP) as appendix 1. The DMF approach can be applied to analysis and planning of country programs, sector strategies, and program, project, and technical assistance interventions. These Guidelines focus on its application at the project and TA level.

Figure 1: Design and Monitoring Framework Approach



The DMF approach has two key elements: (i) the analytical and planning process, and (ii) the DMF matrix. The analytical and planning process comprises the following steps:

- (i) situation analysis:
 - a. stakeholder analysis
 - b. problem analysis
- (ii) project identification:
 - a. objectives analysis
 - b. alternatives analysis

The DMF approach is founded on a participatory approach for two reasons:

- (i) groups can make better decisions than any one individual; and
- (ii) people are more committed to implementing an idea they helped to create.

The end product of the analytical and planning process, based on participatory techniques, is the DMF, a 14-box matrix (figure 1) that answers the following questions:

- (i) Why do we do this project in the first place (**impact**)?
- (ii) What is the project going to accomplish (**outcome**)?
- (iii) What is the scope of the project (**outputs**) and what key **activities** need to be carried out?
- (iv) What resources (**inputs**) are required?
- (v) What are the potential problems (**risks**) that could affect the success of the project?
- (vi) What are the fundamental **assumptions** underlying the project design?
- (vii) How do we measure (**performance indicators**) and verify (**data sources**) that we have been successful?

The DMF establishes the basis for performance monitoring and evaluation during and after implementation. It is not a static planning document. The DMF is revised and updated regularly to reflect the necessary changes in project scope during implementation. Key stakeholders are involved in all phases, from analysis and conceptualization through feasibility to final design and implementation. This participatory process involves the borrower, executing agency (EA) and implementing agencies (IAs), other government organizations and nongovernment organizations (NGOs), the private sector, beneficiaries, and the ADB project team and consultants.

The DMF communicates

- (i) how the project will achieve results by converting a series of inputs into a defined set of outputs that are expected to achieve a desired development result or outcome, and contribute to a broader sector or subsector impact;
- (ii) time-bound and quantifiable indicators and targets that allow the project to be monitored throughout implementation and evaluated subsequently;
- (iii) identified project risks that may adversely affect achievement of desired results and appropriate mitigation measures; and
- (iv) specific assumptions that must remain valid for the project to succeed.

The basic steps of the DMF approach are as follows:

- (i) Identify and delineate the role of stakeholders who can significantly influence or are important in a particular context, e.g., a development problem or a sector (stakeholder analysis).
- (ii) Identify the development problem or issue to be addressed (problem analysis).
- (iii) Define the nature and underlying causes of the core problem (problem analysis).
- (iv) Clarify the effects of the problem (problem analysis).
- (v) Identify improvements that may be made within a given timeframe (objectives analysis).
- (vi) Specify alternative courses of action (alternatives analysis).
- (vii) Choose the preferred alternative (results chains).
- (viii) Determine what is required to deliver the selected alternative effectively (feasibility study of selected alternative).
- (ix) Prepare and test the logic of the DMF (DMF matrix).

The DMF is the primary source for documents used during implementation and is embedded in the

- (i) project administration memorandum (PAM),
- (ii) project performance report (PPR)³ and technical assistance performance report (TPR),
- (iii) project completion report (PCR) and technical assistance completion report (TCR), and
- (iv) project performance evaluation report (PPER) and technical assistance evaluation report (TPER).

B. Situation Analysis

Projects are generally designed to address a development problem or to alleviate a constraint. In most cases, the problems relate to inadequate or lack of access to public services and the ramification of these deficiencies. Before proceeding with project identification and subsequent project preparation, there has to be a general consensus that the situation is not satisfactory and needs to be changed.

There are two analytical tools used to conduct the situation analysis: (i) stakeholder analysis and (ii) problem analysis.

1. Stakeholder Analysis

a. Introduction

Stakeholder analysis is the first diagnostic tool and the first step in the DMF approach. It helps clarify which people and organizations are directly or indirectly involved in or affected by a specific development problem. It helps identify which groups are supportive and which groups may oppose the project strategy and subsequently obstruct project implementation. This provides a sound basis for taking appropriate actions to gain the support of opponents and to

³ PPR, PCR, and PPER are not only applicable to projects. They are also prepared for program and sector development and sector loans.

get key supporters more involved. Stakeholder analysis plays an important role in identifying the development problem.

The benefits of a stakeholder analysis best unfold in workshop settings or brainstorming sessions and include representatives of stakeholder groups identified by the borrower, the resident mission, and the project team. Workshops should be facilitated by a consultant,⁴ a member of the project team, or one of the participants. The composition of stakeholder groups depends on the nature of the project, and may include the borrower, EA, other government agencies, NGOs, private sector representatives, religious organizations, beneficiaries, and donor agencies. This tool increases the consensus by considering a broad range of different viewpoints and builds ownership on the part of the borrower, the beneficiaries, and other stakeholders. It is particularly important to involve those who might have negative or opposing views to the development problem and to ensure all views are incorporated into the analysis. This will minimize disruption to implementation and ensures ownership of the project.

Stakeholder analysis is a dynamic process and overlaps with the problem analysis. Stakeholder analysis should be updated and refined throughout the project cycle as it fulfills different functions at different stages.

- (i) During **problem identification**, it serves as a preliminary mechanism to identify important and influential stakeholders and draws attention on how to involve them in the analytical and planning process. It can be used in preparing a results-based country strategy and program (RBCPS) and during country programming missions (CPMs), and can be shaped as brief brainstorming sessions with the borrower and/or the resident mission staff, as appropriate.
- (ii) A detailed stakeholder analysis carried out during **project formulation** supports design decisions and risk analysis.
- (iii) Continuing stakeholder analysis during **project implementation** serves to confirm the involvement of each stakeholder, keep track of changing circumstances and interests of stakeholders, and plan stakeholder involvement in the evaluation process.

The scope and focus of stakeholder analysis vary between agencies. The Department for International Development (DFID) and the World Bank examine the interests and the degree of importance and influence of stakeholders, while the Japan International Cooperation Agency (JICA) applies a partial SWOT⁵ analysis to examine strengths and weaknesses of each key stakeholder. ADB has developed its own approach, described in these Guidelines, based on global best practices and tailored to suit the unique aspects of DMCs in the Asia and Pacific region. The Inter-American Development Bank follows a similar structure and process (see the appendix for further reading). The ADB approach, outlined below, describes the minimum requirements and can be expanded as appropriate.

⁴ A roster of local and international facilitators knowledgeable about the DMF approach is maintained by the Central Operations Services Office (COSO).

⁵ SWOT = strengths, weaknesses, opportunities, and threats.

b. Process

Stakeholder analysis is carried out in a facilitated workshop or brainstorming session with a first selection of stakeholders following these steps:

Step 1: Confirm the initial development problems, possible target area and/or sector, and the beneficiaries.

Step 2: Prepare a blank stakeholder table (figure 2).

Step 3: List all the stakeholders on cards and sort them⁶ by categories of stakeholders, e.g., population groups, public sector organizations, civil society, private sector, donor agencies. Place each group on a separate row (column 1).

Step 4: Discuss the interests of each group with reference to the development problem—how and why they are involved. Complete one card for each group reflecting their dominant interests (column 2).

Step 5: Clarify how each group perceives the development problems (column 3). Use one card per group and state the perceived problem as clearly as possible. The phrase should be a negative statement and not an implication of a solution, e.g., roads are poorly maintained (correct), no road maintenance system (incorrect).

Step 6: State the resources a group puts forth in support or in opposition⁷ to the development problems. Resources are financial and nonfinancial. While formal organizations have both financial and nonfinancial resources, population and civil society groups have predominantly nonfinancial resources. These can include labor, political influence, votes, strikes, and public pressure (column 4).

Step 7: List the mandates or formal authority that stakeholders have to carry out a particular function. Generally, population groups, such as low-income groups, farmers, and women do not have mandates (column 5).

Figure 2: Stakeholder Table

Stakeholder	Stakeholder's Interests	Perception of Problems	Resources	Mandate



Stakeholder Analysis, Sri Lanka

⁶ Use Post-It Notes™, metaplan cards, or index cards for this exercise. It helps to visualize the results, it facilitates group discussions, and makes changes to the presentation easy. A sample tool kit is available in COSO.

⁷ If a stakeholder group has interests contrary to a proposed project, it is reasonable to expect that it would use resources at its disposal to counter the execution of such a project. To identify such possible obstacles and work out ways of avoiding them is part of the strategizing and institutional diagnostics that stakeholder analysis can facilitate.

c. Tips

- Stakeholder analysis may comprise a series of focus-group meetings and workshops.
- Define group categories narrowly or broadly, depending on the situation.
- Make sure to have all fundamental information of the key stakeholders.
- Perform detailed analysis of the key stakeholders.
- Keep stakeholder analyses updated during project implementation because this is a vital source of information. This process can be integrated into regular project review missions.

d. Case Study

The following public transport case study demonstrates a typical stakeholder analysis, including completing the stakeholder table (table 1).

Public Transport

Arusha, a city in the highlands of the Usambara Mountains, has grown rapidly in recent years. The number of private motor vehicles has also increased rapidly, leading to traffic congestion. In parallel, the Safari Bus Company (SBC)—the only public transportation system in Arusha, owning 90% of the buses in the city—is confronted with a declining number of passengers, despite the fact that SBC has not increased the fares since 1995. They only cover 70% of SBC's operating expenses.

Over the past few years, the number of accidents caused by SBC involving passenger injuries has drastically increased. Customers complain about frequent delays and bus breakdowns. Even though the number of passengers is still high, the service continues to deteriorate. As a result, people are looking for other means of transportation.

SBC management believes that the causes of many of the accidents are of a technical nature. The buses are old, maintenance is irregular, mechanics are poorly trained, and repairs are held back due to

lack of spare parts. Accidents are also caused sometimes by bus drivers ignoring traffic laws or speeding, and by poorly maintained roads—the responsibility of the Public Works Department.

The municipal Public Works Department says its annual budget is insufficient to provide adequate maintenance and build new roads to distant neighborhoods. Arusha City Council wants to cut the subsidies of SBC to free resources for the Public Works Department. This is to be achieved by increasing the bus fares. However, the Mayor of Arusha is opposed to this suggestion and will veto the proposal.

The Union of Bus Drivers is threatening to go on strike for higher salaries and reduced working shifts. They complain about the poor condition of the vehicles and the roads.

Passengers complain that drivers do not drive carefully and they are rude. In short, the status and prospects for public transport in Arusha are bleak and something needs to be done about it.

Table 1: Stakeholder Analysis—Public Transport

Stakeholder	Stakeholder's Interest	Perceived Problem	Resource	Mandate
Passengers	Safe, reliable, and reasonable public transport	<ul style="list-style-type: none"> • Many delays • Frequent bus breakdowns • Frequent accidents with passenger injuries • Impolite drivers • Dangerous driving 	Willingness to pay for improved services	Not applicable
Private car owners	No traffic jams and safe roads	<ul style="list-style-type: none"> • Too many accidents caused by buses • Bus drivers drive dangerously 	May consider use of public transport if reliable and safe	Not applicable
Union of bus drivers	Improved working conditions for bus drivers	<ul style="list-style-type: none"> • Low salaries • Unreasonable working hours • Poor road maintenance • Old and poorly maintained buses 	Can mobilize bus drivers to strike (100% membership) Strong collective bargaining power	To represent the interests of its members
Motor mechanics	Reliable supply of spare parts	<ul style="list-style-type: none"> • Poor stock management 	Technical skills	Not applicable
Safari Bus Company management	Provide cost-effective, safe, and reliable transport services	<ul style="list-style-type: none"> • Old fleet of buses • Irregular bus maintenance • Unreliable supply of spare parts • Poorly skilled mechanics • Fares cover only 70% of operating budget 	Near monopolist Fleet of buses Operating budget Government subsidies	To provide essential public transport services
Private bus operators	Increased market share in public transportation to make profit	<ul style="list-style-type: none"> • Poorly maintained roads 	Ability to undercut fares of SBC	Not applicable
Public Works Department	Improved roads in the Usambara Mountains	<ul style="list-style-type: none"> • Insufficient budget • Poor roads • Too many cars 	Annual operating budget	To maintain, upgrade, and expand road system
Arusha City Council	Reliable public transport system	<ul style="list-style-type: none"> • Poor management of Safari Bus Company 	Approves Safari Bus Company's annual budget Allocates resources to all departments	To serve the interests of the residents of Arusha To determine resource allocation of Council budget
Mayor of Arusha	Reliable, low-cost public transport system	<ul style="list-style-type: none"> • Citizen complaints about public transport system • Increased traffic jams 	Veto power in Council Commands popular support	To manage City of Arusha

2. Problem Analysis

a. Introduction

Problem analysis, through the development of a problem tree, is the second diagnostic tool applied in the situation analysis. The analysis is derived from system analysis. This tool is used to (i) analyze the existing situation surrounding a given development problem context, (ii) identify the major related problems and constraints associated with the development problem, and (iii) visualize the cause-effect relationship in a diagram—a problem tree (see figure 3).

The correctly identified causal chain of problems improves the project design and it depicts the underlying logic for a results-focused project.

Initial problem formulation occurs during the preparation of the country partnership strategy (CPS) results framework, country portfolio review, as part of sector analysis or thematic assessments (e.g., poverty, gender, governance and environmental assessments) when performance is assessed, and when specific performance problems are identified. Many DMCs may already have identified clearly observable problems in a geographic area, a particular sector problem, or institution and proposed a solution to ADB for funding. Nevertheless, problem tree analysis adds significant value. The participatory development of the problem tree builds on the initial diagnosis and helps clarify the problem. Depending on the situation, it

should be undertaken as part of the CPS preparation in conjunction with the sector road map, and further refined during TA (PPTA, ADTA) fact-finding.

b. Process

The problem analysis is performed with participation of the key stakeholder groups that were identified during the stakeholder analysis. It can be carried out in a half-day to 2-day workshop, depending on the nature and complexity of the development problem, e.g., national, sectoral, and cross-sectoral. The problem analysis can also be performed in a series of smaller stakeholder workshops and the results of each merged into a comprehensive problem tree. Generally, the problem analysis is performed through the following steps:

Step 1 : Discuss the general situation and issues and identify the development problem with stakeholders, stating it as a negative situation—not the absence of a solution. Write the development problem on a card and pin it in the center of the board.⁸ This step is neither simple nor



Stakeholders Determine Core Problem, Kyrgyz Republic

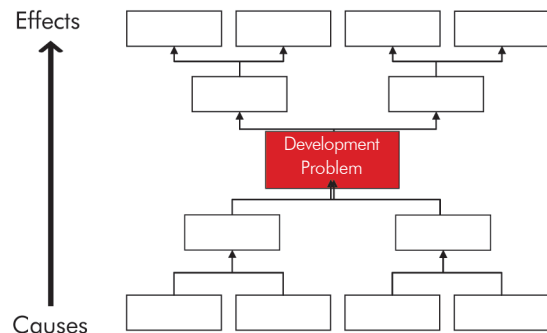
⁸ Use Post-It Notes™, metaplan cards, or index cards. Write one problem statement per slip/card, place them on the board and move them around as you debate the cause-effect relationships.

obvious. It may take several sessions to agree on what is the development problem. Everyone has his/her own bias in analyzing problems. This is why it is important that the group has broad stakeholder representation and that a consensus is reached.

Step 2 : Write the problems that are the *direct causes* of the development problem on cards and place them in a horizontal line under the development problem. The group should restrict itself to existing problems and not anticipate future problems.

Step 3 : Repeat step 2: determine the direct causes for each of these problems (*direct causes*) and place them as a horizontal line under each card. Broaden the problem tree as you work downwards until you reach very specific root causes. The number of problems at each level is not restricted, and is determined by the nature and complexity of the sector and development problem identified.

Figure 3: Problem Tree



Step 4 : The space above the development problem is for the *direct effects* of the development problem. Write them on cards and place them in a horizontal line above the development problem.

Step 5 : Continue to work upward by placing the perceived effects of each problem in a horizontal line above.

Step 6 : Review the problem tree and analyze the interrelationship of problems at different levels and move cards around accordingly.

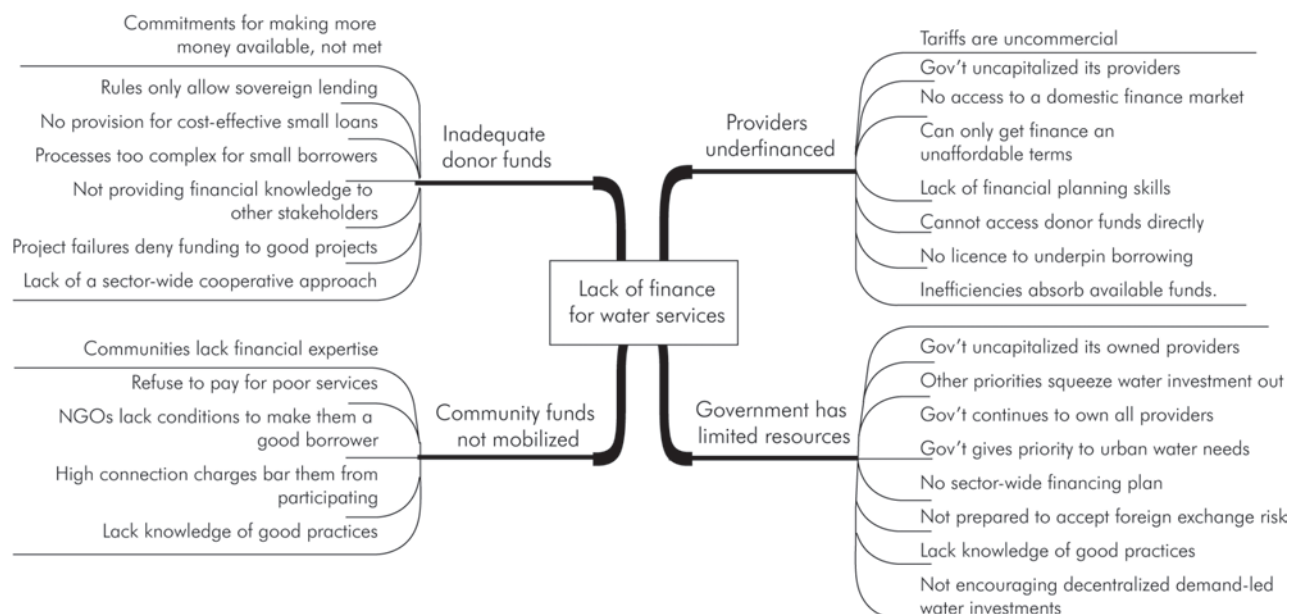
Step 7 : Draw lines with arrows pointing from each problem that is a cause to the problem that represents an effect.

c. Tips

- **Mind Mapping.** Mind mapping, a semi-structured form of brainstorming, can be a powerful tool during this stage (figure 4). While the software for recording mind maps is available, it is best to hand-draw your drafts to stimulate thinking and maximize group participation. Other brainstorming methods and tools to identify problems, such as SWOT analysis, may also be used.
- **Thinkature®** is a virtual pin board ideal for creating problem trees. <http://thinkature.com>
- **Specificity and Clarity.** The usefulness of problem analysis is enhanced by clear and specific problem statements; for example: *agricultural productivity is low* is more clearly stated as *agricultural production is dependent on manual labor*.⁹

⁹ This example assumes that the reliance on manual labor is the dominant factor for low agricultural productivity.

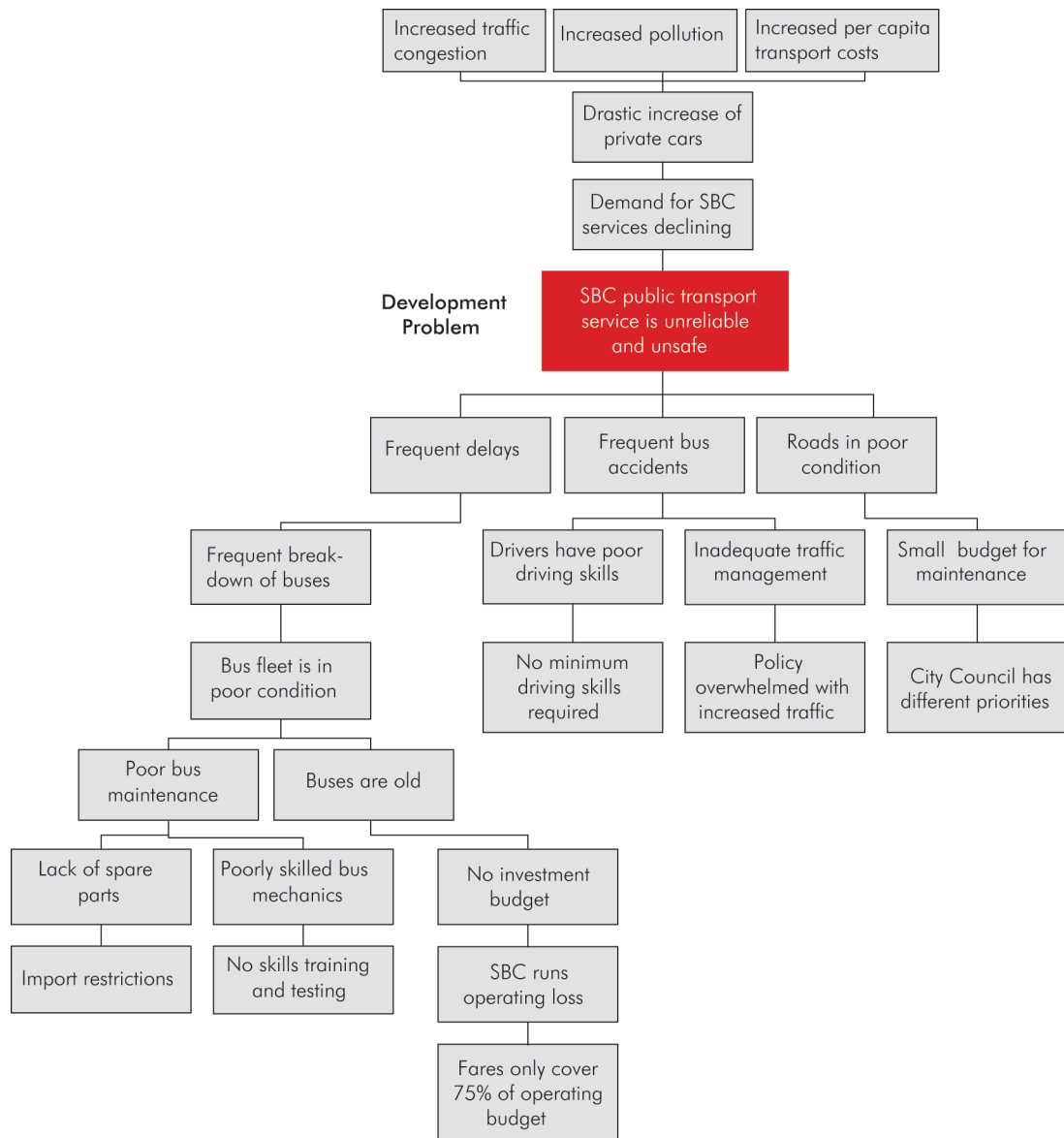
Figure 4: Mind Map



- **Short-circuit Analysis.** Most problems have multiple causes. Make sure that preconceived problems or solutions of some stakeholders, including the ADB team, do not dominate the problem analysis.
- **Cause-effect Loops.** There are occasions when the same problem is stated twice within the problem hierarchy. This results in a cause-effect loop; for example, high incidence of poverty may be the cause of malnutrition. It is also the effect of few income-earning opportunities. Apart from some exceptions, this should be seen as an indication that the problem analysis needs to be further refined. This is particularly the case when the statements have some similarity.
- **Review.** The problem tree, the product of stakeholder consensus, is likely to undergo various revisions for the following reasons: (i) problem statements may need factual verification (e.g., Are the problem statements true? Do they reflect what is actually happening now?); (ii) cause-effect links may need verification through research or further consultation with stakeholders or technical experts; (iii) a second or third key problem may need to be addressed in the analysis to give a full picture; or (iv) other stakeholders may need to be consulted as new issues are uncovered during the analysis.

d. Case Study

The problem tree shown in figure 5 is based on the Arusha public transport case and the earlier stakeholder analysis feeds into this problem tree.

Figure 5: Problem Tree: Public Transport

SBC = Safari Bus Company.

C. Project Identification

The analysis of the current situation identified the development problem using stakeholder analysis and problem analysis to develop a problem tree. The next step is to specify the desired future situation. This is also referred to as the project identification phase. It relies on two analytical tools: objectives analysis and alternatives analysis.

1. Objectives Analysis

The objectives tree is used to generate the desired outcome and required outputs as well as the intended impact.

a. Introduction

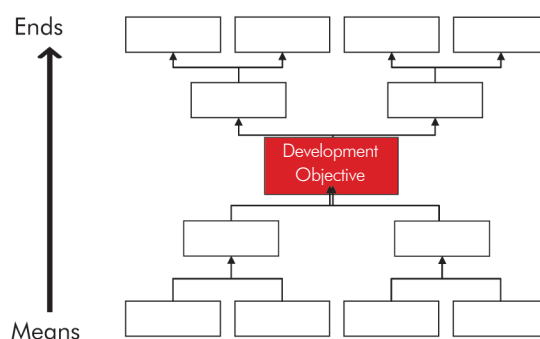
Within the analysis of objectives, the problems identified in the problem tree are transformed into objectives—future solutions for the problem. Objectives analysis (i) describes a situation after the problems have been resolved, (ii) identifies the means-end relationship, and (iii) visualizes the means-end relationship¹⁰ in a diagram referred to as an “objectives tree” (figure 6).

b. Process

The objectives analysis and the formulation of the objectives tree involve the following steps:

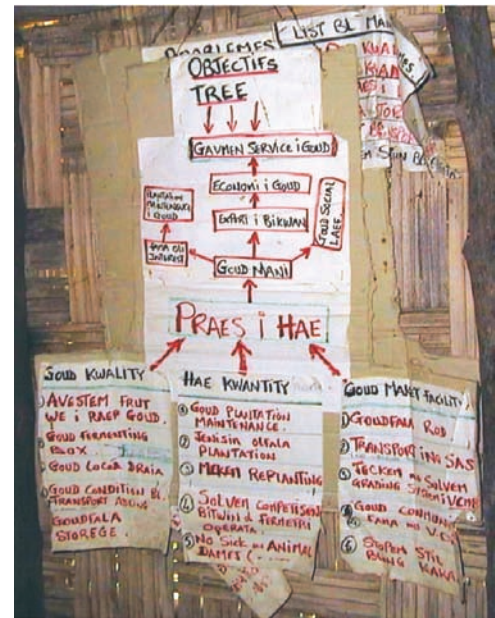
- Step 1** : Reformulate the development problem at the highest level of the problem tree into a positive desirable condition or objective. Objective statements should be realistically achievable. Do not simply rewrite a negative expression into a positive one; framing a solution mechanically is not likely to lead to a strategically sound intervention. For example: *Bus drivers drive poorly* (problem); *bus drivers obey traffic and safety regulations* (objective) instead of *bus drivers drive well*.
- Step 2** : Write the potential direct means for achieving the development objective on cards and place them in a horizontal line under the development objective. Start by analyzing the problem statements, convert them into objectives, omit them, or add additional objectives, as appropriate.
- Step 3** : Revise the objectives statements if necessary. Add new objectives statements if these appear relevant and necessary to achieve the stated objective at the next higher level.

Figure 6: Objectives Tree



¹⁰ The problem tree is based on the cause-effect relationship of the problems at different levels of the problem tree. Converting the problems into objectives produces the means-end relationship between the objectives.

- Step 4** : Repeat step 2: determine the means for achieving each of the objectives above (direct means) and place them in a horizontal line under each card. The number of objectives is not restricted to the number of problems identified in the problem tree.
- Step 5** : The space above the development objective is for objectives that flow directly from the development objective. Examine each statement and convert it into a positive, desirable statement.
- Step 6** : Repeat step 5: determine the direct objective for the objective statements below.
- Step 7** : Review the objectives, checking that all means-ends relationships are valid and that there are no means-ends relationships missing. Complete the objectives tree by connecting the cards with lines.

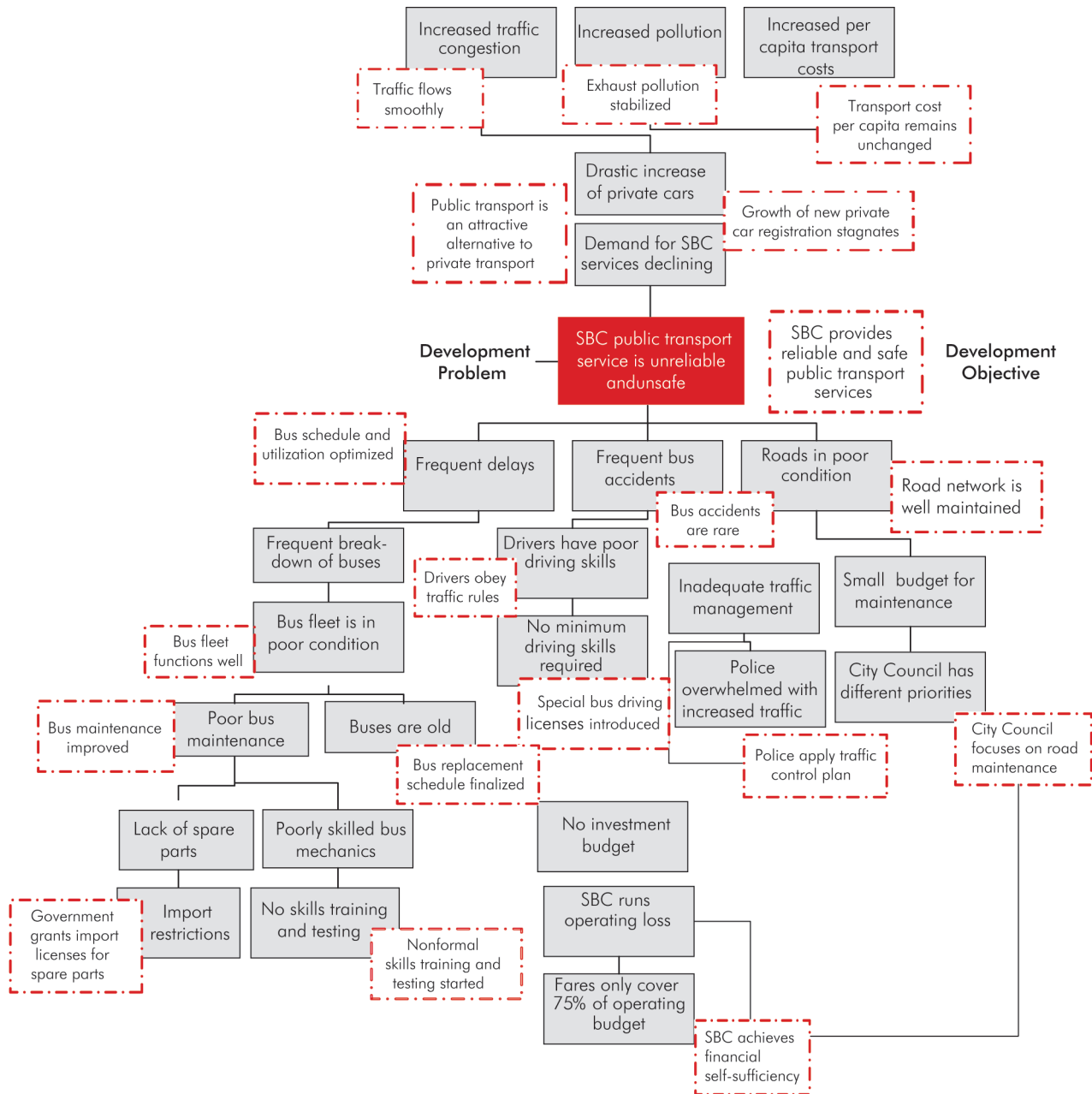


Objectives Tree Prepared in a Rural Area of Vanuatu

The objectives tree shown in the adjacent photograph was developed by an agricultural cooperative in Vanuatu. It demonstrates how practical the analysis can be. It remains in use by the cooperative and continues to guide development. It is particularly useful in that all the participants share a clear understanding of what has to be done, in what sequence, and to achieve what ends—results.

c. Tips

- The quality of the objectives tree depends largely on the quality of the original problem tree. Bear in mind that the original problem tree was the product of a consensus of opinions, and that the problem statements and cause-effect links should have been verified prior to its finalization.
- If the logic of the first draft of the objectives tree is patchy, return to the problem tree, reexamine the cause-effect links, and test the validity of the problem statements before returning to the objectives tree analysis.
- When reviewing the objectives tree, check if the means will have any negative effects, e.g., a new hydropower dam will result in a large number of people being resettled. Consider other options to achieve the objective.
- Consider the feasibility of each objective by using the information generated during the stakeholder analysis.
- During this project identification stage, a range of open-ended questions may arise about the political, socioeconomic, environmental, or technical feasibility of the various objectives. These need to be clarified and resolved to the extent possible prior to finalizing the design.

Figure 7: Problems and Objectives Tree: Public Transport

SBC = Safari Bus Company.

Notes: Instead of converting the immediate cause, *frequent delays*, into *infrequent* or *no delays*, another objective has been added: *bus schedule and utilization optimized*. While not identical to the stated problem, this objective is necessary to achieve the objective at the next higher level. The problem *drivers have poor driving skills* has been converted to *drivers obey traffic rules*. This serves as a proxy for *drivers drive well*. Given that the objectives need to be realistically achievable, the problem *bus fleet is old* cannot realistically be converted into *bus fleet is new*. A more realistic objective has been included: *bus fleet replacement schedule finalized*.

d. Case Study

Figure 7 shows the output of the objectives analysis stage. Note that the diagram now combines the problem tree with the objectives tree of the SBC public transport case.

2. Alternatives Analysis

a. Introduction

The alternatives analysis, also referred to as result chain analysis, is the second analytical tool applied in the project identification phase. The tool is used to (i) identify alternative means of achieving the desired situation or development objective, (ii) assess the feasibility of each, and (iii) agree on a project strategy. The initial alternatives analysis should be carried out as early as possible and can be combined with the objectives analysis. If the project team has sufficient knowledge about the sector and the problems, this can be part of the country programming mission, the preparation of the CPS results framework, or the sector road map. Alternatively, it could be carried out during TA fact-finding, or at least be included in the PPTA midterm report.

b. Process

The alternatives analysis is performed following the steps below:

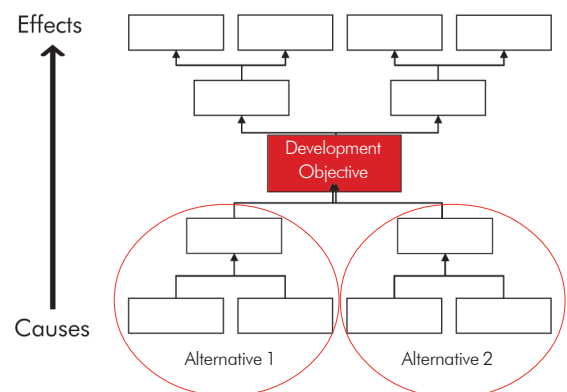
Step 1 : Select the desired or development objective. **Note that this does not have to be the original development problem-turned-objective. It might be seen as too ambitious and an objective at a lower level in the objectives tree may be selected instead. This will be the outcome of the proposed project. Only one outcome should be identified for each project.**

Step 2 : Identify sets (result chains) of lower-level objectives from the objectives tree. The major means-ends branches of the objectives tree may be alternatives or complements to one another (figure 8).

Step 3 : Each results chain should be discussed with the appropriate stakeholders. Each stakeholder group, the EA, and the project team need to clearly understand how moving forward with a particular results chain will affect them—positively or negatively. During this analysis, it is essential to take into account whether the results chain is likely to lead to the project outcome, taking into account the available resources, capacities of the EA, interests of the beneficiaries, and political feasibility. Examine each means-end branch critically to identify potential project outputs and activities.

Step 4 : Confirm the selection criteria, e.g., economic, financial, socioeconomic, environmental, technical, and institutional, including ADB's safeguards and other applicable ADB policies, and add or omit criteria as necessary.

Figure 8: Selecting Alternative Solutions



Step 5 : Based on the decision taken during step 4, carry out necessary assessments, analysis, and feasibility studies. These will be carried out during the PPTA implementation, with findings documented at various stages of the PPTA inception, midterm, and final report.

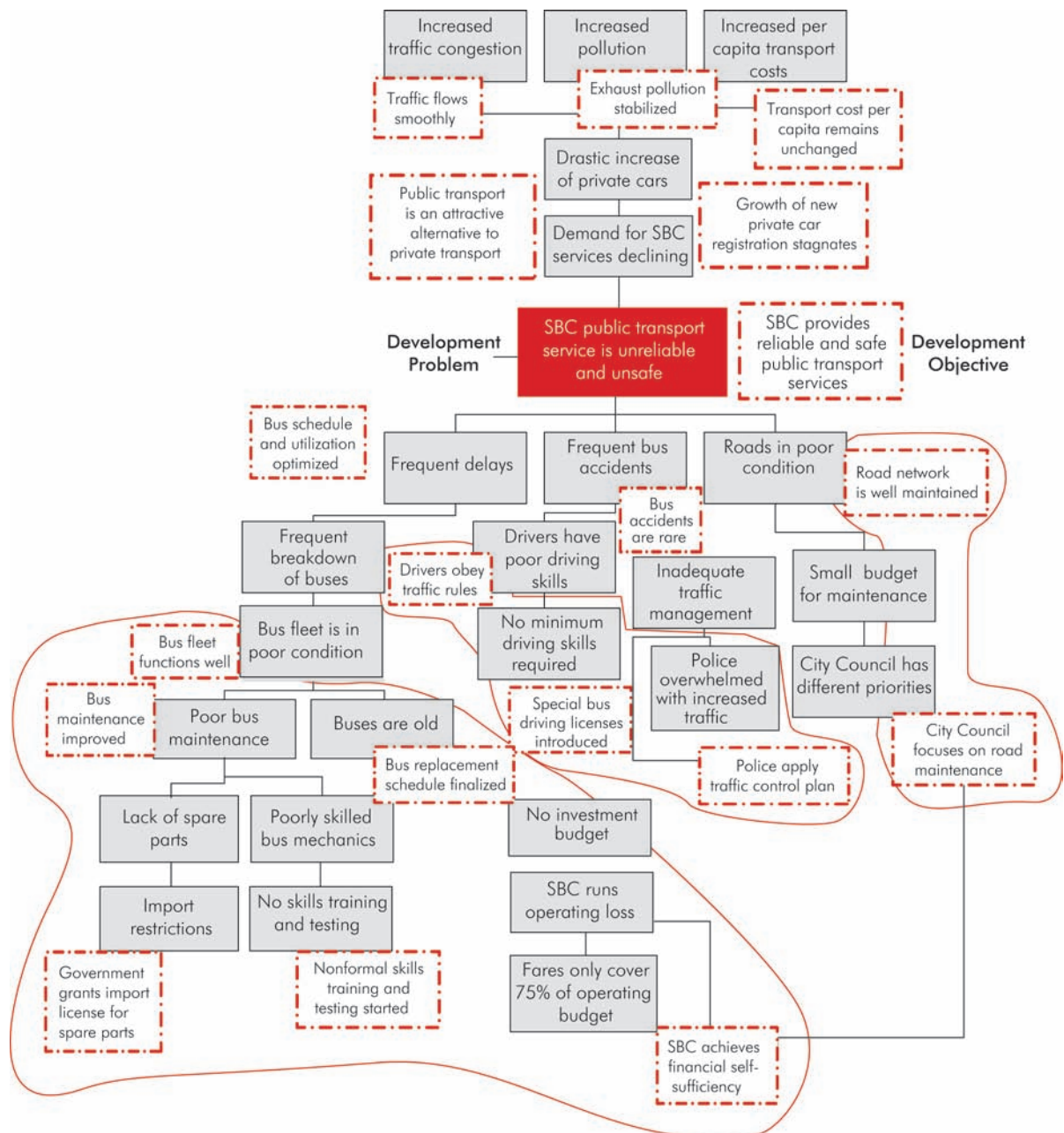
Step 6 : Following the review of the respective assessment, decide on the most appropriate strategies or alternatives to be pursued under the proposed project. This last step is, in most cases, taken during the latter part of PPTA implementation and prior to the PPTA draft final report. The collective involvement of the borrower, the EA, other key stakeholders (as appropriate), and ADB is critical at this stage. The final decision should be based on a consensus to ensure ownership of the proposed project and maximize the probability of achieving desired results.

There are always several ways to solve a problem or achieve an objective. The key is to choose the one that best matches desired criteria.

c. Tips

- In critically assessing the alternative selected, the following questions should be answered:
 - (i) Does it conform to local laws, policies, and procedures?
 - (ii) Are the requisite expertise and capacity available to carry it out?
 - (iii) Is it affordable and cost effective, and is the necessary financing available?
 - (iv) Is it socially acceptable by the target beneficiaries?
 - (v) Is it likely to result in any negative externalities that will require mitigation?
 - (vi) How dependent is it on any of the other alternatives also being implemented?
 - (vii) What are the major risks, and how can they be mitigated?
 - (viii) What other investments and projects are ongoing or planned by the government, ADB, or another organization?
- Be mindful of situations in which consultants may propose solutions they prefer or are familiar with, but which may neither be relevant to the local circumstances nor validated against desirable stakeholder criteria.
- The decision to pursue just one or a combination of results chains through a single project or program will depend on how closely they are dependent on each other for achieving the desired outcome.
- If agreement cannot be reached on how the project proposal should be formulated, then it may be necessary to return to the objectives tree, and perhaps even the problems tree, and rethink them.
- For every objective there will be a number of alternative approaches (figure 9). For example, *raise awareness of farmers in modern techniques* could be achieved in a number of ways, such as (i) organize a study tour for farmers, (ii) train farmers in a classroom, (iii) provide farmers with handbooks and manuals, (iv) conduct field trials with participating farmers, or (v) a combination of these.

Figure 9: Selection of Alternatives and Results Chains: Public Transport



SBC = Safari Bus Company.

Notes: In the example of Arusha public transport system, there are essentially three main alternatives that would address the identified core problem and assist in achieving the objective *SBC provides safe and reliable public transport services*: bus fleet, bus drivers, and road infrastructure.

The core objective—project outcome—determines the choice of EA.

d. Case Study

If the EA is the SBC, it can only address issues relating to bus drivers and the bus fleet. The provision and maintenance of road infrastructure is not within SBC's mandate. However, if the intention is to combine all three alternatives, then Arusha City Council would be the appropriate

EA as the Public Works Department is part of the City Council.

Next Step: Once agreement has been reached on the problems and objectives trees, and a choice has been made regarding the alternatives and the results chains to be pursued through a project, the next step is to complete the DMF.

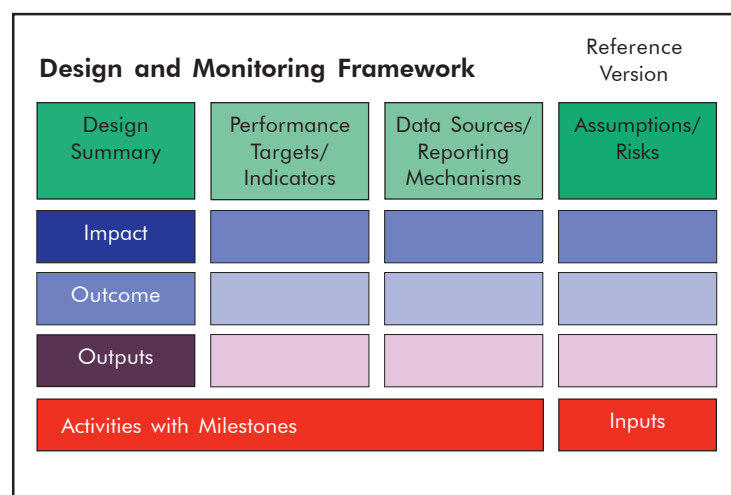
III. DESIGN AND MONITORING FRAMEWORK

A. Introduction

The DMF is a simple but powerful design and management tool. It helps build consensus with stakeholders and create ownership of the proposed project. It organizes thinking and relates activities to expected results. It provides a structure for monitoring and evaluation where planned and actual results can be compared.

The process of consensus building refers to the steps involved in designing a project—stakeholder analysis, problems and objectives analysis, and analysis of alternatives—and is described in the preceding chapter. The results of this process are then summarized and presented in a matrix format, the DMF (figure 10). In ADB, the DMF, previously called project or TA framework, has been mandatory since 1996 and included in TA papers and RRP as appendix 1.

Figure 10: Design and Monitoring Framework

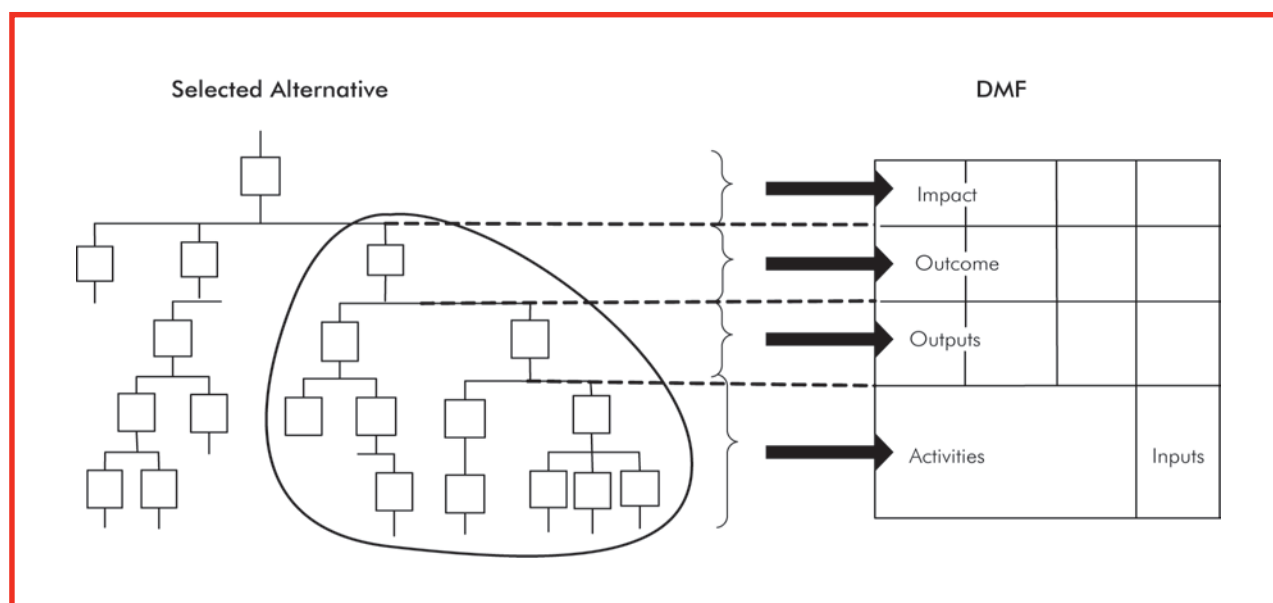


B. Design Summary

The DMF matrix comprises 14 frames with 4 major headings/columns and is similar to the logical framework employed by other multilateral and bilateral aid agencies. The **design summary** outlines the main elements of the project and shows the **vertical logic** of the DMF—explaining the means-ends relationship, also referred to as the results chain. The vertical logic tests the soundness of the results chain by checking if the inputs are sufficient to carry out the activities, which have to be sufficient to produce the outputs. In turn, outputs, also referred to as deliverables or project scope, are expected to achieve the desired outcome at the completion of the project. The outcome contributes to achieving the impact.

The results chain is derived from the objectives tree and the alternatives analysis (figure 11).

Figure 11: Linkages between the Objectives Tree and the DMF



1. Impact

The impact, also termed *goal* or *longer-term objective*, refers to the sectoral, subsectoral, or in some cases national objectives. The impact is wide in scope, will accrue at a date—medium to long-term¹¹—following project completion, and is influenced by many factors other than the project itself. The impact statement provides the link between the project and the CPS. Specifically, the project impact represents one of the CPS outcomes. When determining the impact statement:

- (i) Ensure that there is a direct means-end relationship between the outcome and the impact.

¹¹ The time frame can range from 3 to 10 years or longer, as in forestry projects.

- (ii) Clearly state a desired result and do not phrase an action such as “to develop”, “to contribute to”, etc.
- (iii) Do not summarize the logic of the project by using connecting words such as “through” or “by” or “for.”
- (iv) Express the expected beneficial consequences or impact on a defined group of people, reflecting that development is about conferring benefits on people.
- (v) Describe results that can be measured.
- (vi) Note that poverty reduction should not generally be treated as the “impact” of a project because there are many steps between a project and the ultimate goal of poverty reduction.¹²

2. Project Outcome

The project outcome is the key anchor of the project design. It describes what the project intends to accomplish by the end of project implementation and by doing so makes it clear what development problem the project will address. The decision on and phrasing of the outcome statement determine the nature and scope of the outputs that will be necessary to achieve the outcome. Hence, the starting point for preparing the DMF must be the outcome statement. Specifically, the outcome should be

- (i) limited to one succinct statement to ensure clarity and focus. More than one outcome implies that there are a number of subprojects/components under the umbrella of a more generalized project. These need to be either rephrased into outputs or summarized into a single statement associated with several indicators outlining the dimensions of the outcome;
- (ii) expressed in **change** language instead of **action** language to reflect accomplishments;
- (iii) phrased as an improvement over a baseline situation, which is described in the performance targets and indicators column;
- (iv) reasonably achievable—subject to assumptions and risks—by the end of the project implementation to be reported on in the project or TA completion report (PCR/TCR); and
- (v) necessary but not sufficient to achieve the impact.

Outcome statements typically describe the change of behavior of the beneficiaries using the outputs of the project (see box lower right). Outcome statements can also describe performance changes of systems, organizations, and institutions, e.g., financial services are more accessible to small enterprises; public service is more accountable. *Capacity plans financed, implemented, and sustained* is an example of an outcome statement for projects with a focus on organizational capacity building.

Inclusive Health Services Improvement in Transilvania Impact Statement:

The health, nutrition, and psychosocial development of the rural population in the 12 poorest provinces have improved.

Commentary:

This is an excellent statement of expected impact. It is succinct, specifies the nature of the impact expected, and very precisely, the target group of beneficiaries.

Impact

Improved health, nutrition, and psychosocial development of the rural population of age in the 12 poorest provinces.

Outcome

The rural populations in target provinces use improved secondary health care services.

¹² An exception might be where a project outcome directly increases household income. The impact would then be of a macroeconomic nature.

Outcome

The rural population in provinces xx use improved secondary health care services.

Outputs

1. Improved health care infrastructure is operational.
2. Health services provided reflect community health care needs.
3. Hospital staff applies newly acquired health care skills.

Output

3. Hospital staff applies newly acquired health care skills.

Activities

- 1.1 Assess health care skills level of hospital staff (by 4/2006).
- 1.2 Design tailor-made skills upgrading program (by 6/2006).
- 1.3 Conduct a series of in-house skills training programs covering at least five competencies reaching at least 50% of nurses (8/2006-4/2007).
- 1.4 Provide external training on specific competencies (e.g., intensive care, post-trauma) for at least 50 nurses (by 6/2007).
- 1.5 Conduct post-training skills assessment (by 8/2007).

3. Outputs

Outputs are the physical and/or tangible goods and/or services delivered by the project and describe the scope of the project. These outputs must be necessary to achieve the outcome and the means-end relationship has to be clearly identified.

- (i) Each output has to be necessary to achieve the stated outcome.
- (ii) Include only outputs that can be delivered by the project and are feasible with the resources available.
- (iii) Do not use the infinitive tense (e.g., To assess, To prepare) at the beginning of output statements; these imply activities.
- (iv) *Components* are not outputs; components are a collection of outputs conveniently grouped for finance or administrative purposes.
- (v) For complex projects and programs, include an output for project management, e.g., *project management system operational*. This output summarizes routine events and activities of the project implementation team or unit, including planning, monitoring and evaluation, procurement, and reporting. Tasks can also include communicating with stakeholders, providing input on strategic and policy issues, and instigating mitigation measures in the event that a risk hinders project implementation.
- (vi) Examples of outputs for capacity-building projects include
 - *government policy on capacity development approved,*
 - *capacity development plans finalized,*
 - *agency leadership in place, and*
 - *agency staff skills upgraded.*

4. Activities

Activities are the groups of tasks carried out using project inputs to produce the desired outputs. Points to note are:

- (i) List only those activities that represent the main steps in the transformation process, turning inputs into outputs. They should not be a restatement of an output as an action.
- (ii) Activities should be possible with the available inputs.
- (iii) Include completion dates and/or important milestones for each activity.

This list of core activities forms the basis for preparing the implementation schedule. Discussions with the EA—during PPTA implementation and at latest during loan processing—will provide the necessary information on the time frame for implementing each activity. This information is essential not only for preparing the implementation schedule, but also as the basis for a critical path analysis, which gives a more realistic view of the necessary project implementation period.

5. Inputs

Inputs are the main resources required to undertake the activities and to produce the outputs. These include consulting services, personnel, civil works, equipment, materials, and operational funds, which are provided by ADB, government, cofinanciers, and others, including beneficiaries if applicable.¹³ Inputs to be listed should include, as a minimum, the following:

- (i) Inputs by financier and main cost categories in financial and/or physical terms.
- (ii) In-kind contributions from other stakeholders.

6. Transport Case Study

Table 2 illustrates, for the public transport case study, how the results of the situation analysis, the analysis of objectives, and the section on an alternative project strategy feed into the DMF.

Table 2: Design Summary of the Public Transport Project

Design Summary	
Impact The transport system of Arusha is functioning well.	
Outcome SBC provides safe and reliable public transport services.	
Outputs 1. Bus fleet is well maintained. 2. Drivers observe safety and traffic regulations.	
Activities	Inputs
1.1 Establish and follow the bus maintenance schedule.	ADB – \$15 million <ul style="list-style-type: none"> Consulting services 50 PMs – \$1.25 million Civil works – \$2 million Equipment – \$8 million Training – \$2.75 million Contingencies – \$1 million
1.2 Establish and operate an inventory control system.	
1.3 Obtain preferential import license for spare parts.	
1.4 Procure spare parts.	
1.5 Upgrade mechanical workshop.	
1.6 Upgrade skills of bus mechanics.	
2.1 Introduce a national bus driver license and examination system.	Government – \$5 million <ul style="list-style-type: none"> Personnel 150 PMs – \$2 million Transport and logistics – \$1.5 million Operating expenses – \$1.5 million
2.2 Establish bus safety and operating regulations.	
2.3 Train and test bus drivers.	
2.4 Introduce incentives for safe driving.	

ADB = Asian Development Bank; PM = person-month; SBC = Safari Bus Company.

ADB – \$15 million

- Consulting services 50 PMs – \$1.25 million
- Civil works – \$2 million
- Equipment – \$8 million
- Training, study tours – \$2.75 million
- Contingencies – \$1 million

Government – \$5 million

- Personnel 150 PMs – \$2 million
- Transport and logistics – \$1.5 million
- Operating expenses – \$1.5 million

Beneficiaries

- Personnel 200 PMs – participation in planning, monitoring, and evaluation

PM = person-month

¹³ ADB staff time and administrative budget are not listed under inputs.

C. Performance Targets and Indicators

1. Introduction

Performance targets and indicators include both qualitative and quantitative specifications for the desired project results. As performance measures, they indicate how to recognize the successful accomplishment of objectives. An indicator outlines **what** will be measured. A performance target specifies quantity and time—how much and when. Listed in the second column of the DMF (figure 12), they specify precisely each result at the output level, at the outcome level, and at the impact level. The key concepts related to indicators are:

- (i) If we can measure it, we can manage it.
- (ii) All indicators have to be measurable and therefore expressible in numeric terms, in terms of quality, time, access, cost/price or customer satisfaction.

Figure 12: Performance Targets/Indicators

Design and Monitoring Framework			Reference Version
Design Summary	Performance Targets/Indicators	Data Sources/Reporting Mechanisms	Assumptions/Risks
Impact			
Outcome			
Outputs			
Activities with Milestones			Inputs

There are various ways to present the critical attributes of well-defined indicators:

- (i) **SMART:** **s**pecific – relate to the results the project seeks to achieve, **m**easurable – stated in quantifiable terms, **a**chievable – realistic in what is to be achieved, **r**elevant – useful for management information purposes, and **t**ime-bound – stated with target dates.
- (ii) **CREAM:** **c**lear – precise and unambiguous, **r**elevant – appropriate and timely, **e**conomic – available at reasonable cost, **a**dequate – sufficient to assess performance, and **m**onitorable – can be independently verified.

In addition, indicators have to be practical. Measure only what is important; limit the number of indicators to the minimum necessary to measure the respective results level; and ensure their means of measuring is cost efficient.

2. Process

The involvement of stakeholders in the selection and formulation of indicators and setting targets is essential. Reaching agreement on the targets among those who design, those who will implement, and those who are to benefit, increases transparency and ownership. Objectively verifiable performance targets/indicators enable project supporters and opponents to agree on what the evidence implies. Perceptions and attitudes of the EA toward the intended results of the project are critical for achieving them. If the impacts and outcome are perceived to be merely those of ADB, then ownership and hence, motivation and accountability by the DMC will be limited, with predictable results. It is particularly important for projects to be subjected to inspection. Table 3 illustrates this process with reference to an education project and an agriculture project.

Table 3: Steps in Determining Performance Indicators

Process	Education	Agriculture
	Outcome – The education system in the southeastern province provides higher-quality and equitable education.	Outcome – The rural, agrarian population in province X has improved their income-earning potential.
Step 1: Determine the basic indicator—what is to be measured?	More and better-educated students graduate.	Rice yields of small farmers increased.
Step 2: Decide on the quantity—how much (increase/decrease)?	The number of graduates increased from 10,000 to 25,000.	Rice yields of at least 1,000 small farmers (owning 3 hectares or less) increased by at least 30% from 5 tons to 6.5 tons.
Step 3: Describe the quality—what kind of change?	The number of graduates (55% female and 45% male) passing national standard examination from lower-income families (\$5,000 per annum) in the southeastern province increased from 10,000 to 25,000.	Rice yields of at least 1,000 small farmers (owning 3 hectares or less) increased by 30% from 5 tons to 6.5 tons while maintaining the same quality (average weight of grain) as in 2004.
Step 4: Add the time frame—by when?	The number of graduates (55% female and 45% male) passing national standard examination from lower-income families (\$5,000 per annum) in the southeastern province increased from 10,000 to 25,000 per annum starting in year 4 of project implementation.	Rice yields of at least 1,000 small farmers (owning 3 hectares or less) increased by 30% from 5 tons to 6.5 tons annually, starting 2007, while maintaining the same quality (average weight of grain) as in 2004.

Sources of Indicators. When selecting indicators, consider the following sources:

- (i) Indicators used by the DMC for its major macro and sector policy management, which should be found in its published national statistics or in the CPS.
- (ii) Indicators already applied by the EAs as part of their management information system.
- (iii) Indicators for similar outputs, outcomes, and impacts used by other projects and/or other aid agencies.
- (iv) indicators used by global entities, such as World Economic Forum and Transparency International, that typically focus on some aspect of the country's performance.
- (v) Indicators that are commonly used by entities in a specific sector, such as in power, water, and telecommunications, and often contained in industry publications or are available from sector or thematic specialists in the Regional and Sustainable Development Department (RSDD).

However, the preferred indicators are those for which data are collected by government agencies, private institutions, or NGOs or can be obtained from other in-country sources.

Consider using international benchmarks where available and appropriate, for both measurement and target setting.

Using these indicators is practical, cost efficient, and consistent. Comparability may also be a factor in making a choice of indicator. Considerable attention is being paid to this because comparisons can help in setting targets and stimulate behavior to strive for better results than those in other countries. International agencies have recognized this and have initiated their own surveys to obtain indicators for many factors across a large number of countries, e.g., the World Bank has defined 14 indicators at country level, referred to as "IDA 14."¹⁴

Impact-level Indicator. Performance indicators at the impact level specify the expected medium- to long-term impact at program, subsector, or sector level to which the present project, several other projects, and initiatives described in the CPS will contribute. Hence, the impact level indicator includes targets beyond the scope of the project. It is essential that the responsibility for monitoring and measuring the impact indicators is clearly defined during project processing.¹⁵

Outcome-level Indicator. The outcome or end-of-project indicator defines the project's immediate effect on or the behavioral change of beneficiaries, and improvements to systems or institutions. They are the performance targets that the project takes full accountability to deliver and they are the basis by which the project will be judged a success or a failure. The responsibility for monitoring and measuring the outcome indicators lies with the EA.

Output-level Indicator. Output indicators are the easiest to define. They specify the key tangible goods and services the project will deliver. They define the project management's terms of accountability that have to be achieved by the end of project implementation. It is the project management's responsibility to monitor the performance indicators at output level.

¹⁴ IDA = International Development Association. The World Bank developed a measurement and monitoring system under IDA 14, which is set at the country level. The primary purpose of IDA 14 is to underpin the World Bank country assistance strategy and refers to the 13th replenishment of IDA.

¹⁵ It is unlikely that the project management unit will still be functioning after project completion and cannot, therefore, carry out impact assessments.

Lagging Indicators. These indicators are most commonly used. They are defined exactly in terms of the result to be achieved and hence, they report history. If we miss the target, there is not much we can do to correct the failure. For example, increased youth employment by $x\%$ in year y ; decreased pollution by $x\%$ in year y .

Leading Indicators. A well-designed project will not be limited to performance targets at the end of project implementation (lagging indicators), but will also specify intermediate targets to monitor progress. These so-called *leading* or *process* indicators enable the EA and ADB to determine whether the chosen implementation strategy—reflected in the selected outputs—is effective and progress is being made toward achieving the desired outcome. As an example, increased higher educational attainment will not be achieved in the short run; possible lead indicators are reduced drop-out rate and increased enrollment rate. In the case of a forestry development program, the outcome—sustainable timber production—will not be evident for 15–20 years; a suitable lead indicator would be the survival rate of seedlings at various stages of project implementation.

Proxy Indicators. Indicators are not always practical and can require extensive and expensive data gathering. Measuring the increases in rural incomes would require a household income and expenditure survey. Proxy indicators may be used instead, such as number of tin roofs or number of bicycles. Other examples include using newspaper employment advertisements as a signal for trends in employment, and monitoring greater consumption of fertilizer as an early signal of greater agricultural production. Generally, proxy indicators may be used if (i) the result is not directly observable, e.g., quality of life or organization development; (ii) the cost of direct measurement is too high; and (iii) the result is achieved after a long time (see also leading indicators).

Baseline Data. Baseline and target values should not be determined after approval of the project, because they provide the basis for any investment decision. No major private sector investment would take place without this information and neither should public sector development projects. Consequently, the baseline information needs to be collected and target values agreed on during project design. The task of collecting baseline data has to be reflected in the PPTA design and monitoring framework and included in the terms of reference of the PPTA consultants.

Performance Targets. When setting target values for selected performance indicators keep the following points in mind:

- (i) Use ranges rather than one value, because this not only acknowledges the difficulty in setting targets, it also provides information on the expected minimum result and the possible result, e.g., between $x\%$ and $y\%$ is better than quoting $y\%$ alone. Achievements anywhere within the upper and lower boundaries ought to be considered “meeting predetermined results.” As an alternative, use the lower level range and state “at least $x\%$.”
- (ii) Refer to results achieved elsewhere. If comparable indicator

A leading indicator used in a road project is the roughness index. Research has proven a link between roughness of the road surface and transport costs. Hence, regular monitoring of the roughness can provide advance information that expected transport cost reductions should occur. This does not obviate the need to find a suitable measure to judge transport costs but such a measure will often be after the event.

Progress toward achieving the project outcome needs to be monitored during project implementation. This requires intermediate targets, which can either be determined during the design phase or at the beginning of project implementation.

information is available for benchmarking, this should guide what is achievable in your project.

- (iii) Set intermediate targets, if possible, that can be reached during the life of the project and immediately after. This helps check on the feasibility of an end target as well as providing a better basis for assessing the likelihood of success during project implementation.

It may be thought that the outcome is only checked on project completion and the impact some time afterward. This may not be true for projects where benefits arise progressively. For example, a rural roads infrastructure project taking place over several years could be expected to release benefits as parts of the network are completed. If one of the impacts expected is a reduction in transport costs, then monitoring the costs to users for the earlier constructed roads could provide a useful and timely indicator that expectations are emerging as anticipated.

Indicators may change over time and, although the methodology might be the same, the indicator is really not the same. A survey of satisfaction is an example of such change. There may be little movement in satisfaction, even if services are better, as expectations of service performance have risen over time and so “average” then—even with an improvement—can still be considered “average” now. If the indicator is expressed in money terms, then it may vary due to inflation or foreign exchange movements. A project output of *upgraded rural roads* could be expected to have an immediate effect on transport costs (they are expected to fall as vehicles are not delayed, there is less wear and tear, and unit costs of operators also decline as volume increases) and traffic volumes. It is important to measure these expected results because if they do not occur the later desired effects, such as greater economic activity and growth, will surely not emerge. However, the same project may envisage directing some funds toward market improvements. While this project outcome may be admirable and will certainly give rise to benefits, it may not warrant being measured. There is no simple rule one can apply to decide whether to measure an expected result, but if the answer in the above situations is “yes,” there is a strong case for not measuring the result.

3. Tips


There are a number of issues to keep in mind.

- Performance indicators help clarify the design summary and can, at times, make it necessary to revise the design summary statements.
- If necessary and appropriate, indicators may be changed during project implementation. Indicators are linked to their respective level of the design summary. When changing an indicator, check if the respective results statement is still adequate.
- Confirm what has to be measured—impact, outcome, and outputs. Specify milestones for key activities because these are essential for preparing the implementation schedule and determining the critical path.
- Outputs, outcome, and impact are linked through a “cause-effect” relationship. Hence, their respective indicators cannot logically be the same.

- Indicators describe the results in the first column of the DMF; they do not cause them; e.g., improved performance of the inland revenue department (outcome) is not measured by (i) improved work plans, (ii) completed staff training, or (iii) revised tax collection policy. These merely measure attributes of improved performance and are borrowed from the output level.
- Temper optimism with realism. Do not assume that everything will go right or set high targets because you consider this might favorably influence project approval. Past experience in the area, if available, should be tapped to provide some guide in setting targets.
- Do not be influenced by the fact that evaluators will use the target values in assessing project success. Hence, avoid setting targets very low so they are easily achievable.
- Use the indicator worksheet (table 4) during project preparation to select and refine the final indicators.

Table 4: Indicator Worksheet

Possible Indicators <i>(Brainstorm possible indicators.)</i>				
Quantity	Quality	Cost	Time	Customer or Community Satisfaction



Chosen Indicators <i>(Transfer one or more chosen indicators from the above list and fill out the definition, source, baseline, and target for each.)</i>				
Indicator Name	Definition	Data Source(s) and Frequency of Measurement	Baseline Measurement	Target

4. Transport Case Study

After completing the design summary shown in table 2, performance targets and indicators are determined for each level of the results chain (table 5).

Table 5: Performance Targets/Indicators of the Public Transport Project

Design Summary	Performance Targets/Indicators
Impact The transport system of Arusha is functioning well.	The time to cross Arusha by public and private transport is reduced by 25% by the year 2008.
Outcome SBC provides safe and reliable public transport services.	The number of accidents involving SBC buses declines by 50% from x in the base year to y at the end of project implementation. The use of SBC buses stabilizes at 500,000 passengers annually during project implementation and increases by x% annually thereafter. Delays (5 minutes later than scheduled) drop from 1,000 per year in 2005 to 200 per year by the end of the project implementation.
Outputs <ol style="list-style-type: none"> 1. Bus fleet is well maintained. 2. Drivers observe safety and traffic regulations. 	The breakdown of buses drops from x in year 1, to y in year 2, and falls below z thereafter. The number of infractions on traffic regulations falls from x in year 1, to y in year 2, and stabilizes at z thereafter.
Activities <ol style="list-style-type: none"> 1.1 Establish the bus maintenance schedule (completed by 6/2006). 1.2 Establish and operate an inventory control system (commence operation 8/2006). 1.3 Obtain preferential import license for spare parts (completed 4/2006). 1.4 Procure spare parts (quarterly, commencing 4/2006). 1.5 Upgrade mechanical workshop (completed 10/2006). 1.6 Upgrade skills of bus mechanics (completed by 3/2007 and repeated annually). 2.1 Introduce a national bus driver license and examination system (completed 7/2007). 2.2 Establish bus safety and operating regulations (drafted by 5/2006; effective 9/2006). 2.3 Train and test bus drivers (commence 2/2006; completed 8/2007). 2.4 Introduce incentives for safe driving (by 6/2006). 	Inputs ADB – \$15 million <ul style="list-style-type: none"> • Consulting services 50 PMs – \$1.25 million • Civil works – \$2 million • Equipment – \$8 million • Training – \$2.75 million • Contingencies – \$1 million Government – \$5 million <ul style="list-style-type: none"> • Personnel 150 PM – \$2 million • Transport and logistics – \$1.5 million • Operating expenses – \$1.5 million

ADB = Asian Development Bank; PM = person-month; SBC = Safari Bus Company.

D. Data Sources and Reporting Mechanisms

1. Introduction

The data sources and reporting mechanisms, previously called monitoring mechanisms, are recorded in the third column of the DMF (figure 13). Data sources show **where** information on the status of each indicator can be obtained, **who** provides the information, and **how** the information is collected, e.g., surveys. Reporting mechanisms state where the information is documented.

In line with the Paris Declaration and the move toward using country systems, existing data sources in DMCs should be used to monitor project progress. This helps to institutionalize good information management practices. It strengthens the DMCs' capacity to monitor and manage projects and ensures that information flows on project outcomes and impacts continue after project funding ceases.

Figure 13: Data Sources and Reporting Mechanisms

Design and Monitoring Framework			Reference Version
Design Summary	Performance Targets/ Indicators	Data Sources/ Reporting Mechanisms	Assumptions/ Risks
Impact			
Outcome			
Outputs			
Activities with Milestones			Inputs

2. Process

The following steps need to be performed during PPTA implementation and should be integrated into the consultant's TOR.

Step 1: Review the DMC's information systems relevant for the project and assess credibility and timely availability of the data. Start by contacting the national monitoring unit and the monitoring units of the relevant line ministries, which most DMCs have institutionalized.

Step 2: Do an inventory of **secondary sources**—data collected and published regularly, such as consumer price index, export statistics, national account information, and school enrollment figures. These will be the least costly sources of information.

Step 3: If no secondary data sources for the indicators exist, consider gathering the data—**primary sources**.

Step 4 : If it is necessary to collect primary data, the following questions need to be answered:

- (i) How can the information be collected, e.g., sample or full surveys, project records, participatory or rapid rural appraisal methods, focus-group discussions, or field observations?
- (ii) Who will collect the data, e.g., project staff, other government agencies, beneficiary communities, contracted agencies, NGOs, or consultants?
- (iii) Who will pay for it? If the project finances data collection, this needs to be recorded as an activity and included in the budget.
- (iv) When and how often is the information necessary? This will determine the frequency of data collection.
- (v) How much data gathering is sensible and worthwhile? If data collection is not feasible due to cost constraints or complexity, it may be necessary to identify proxy indicators instead.

Step 5 : Items (ii) and (iii) above raise additional issues. If the EA is required and willing to collect primary data, an assessment has to be made as to whether the EA has the capacity to develop and apply the methodology and the system, and will maintain them after project completion.

3. Tips

- In general, many DMFs contain inadequate or vague statements about information sources and refer—incorrectly—to consultant reports, EA quarterly progress reports, or ADB back-to-office reports. This is inappropriate because these are, in most cases, secondary reporting mechanisms.
- Place monitoring and reporting accountability with an agency that has a genuine and sustained interest in the project results and has an information system that is functioning or has the potential for capacity enhancement.
- Determine data sources and performance indicators together to ensure that the indicators are practical and data collection is cost effective.
- If feasible, integrate project reporting into the EA's management information system.
- Only as a last resort, consider establishing a stand-alone management information system and conducting one-off surveys.
- Consider the involvement of stakeholders in monitoring project performance. This is often an efficient and effective way of monitoring performance, e.g., NGOs can apply urban scorecards on the performance of basic service delivery and user satisfaction.

4. Transport Case Study

Data sources and reporting mechanisms are determined for each performance indicator and are illustrated for the public transport case in table 6.

Table 6: Data Sources/Reporting Mechanisms of the Public Transport Project

Design Summary	Performance Targets/Indicators	Data Sources/Reporting Mechanisms
Impact The transport system of Arusha is functioning well.	The time to cross Arusha by public and private transport is reduced by 25% by the year 2008.	Annual traffic investigation reports of the City Council Traffic Control Center.
Outcome SBC provides safe and reliable public transport services.	The number of accidents involving SBC buses declines by 50% from x in the base year to y at the end of project implementation. The use of SBC buses stabilizes at 500,000 passengers annually during project implementation and increases by x% annually thereafter. Delays (5 minute later than scheduled) drop from 1,000 incidences in 2005 to 200 per year by the end of project implementation.	Annual traffic accident reports of the Police Department. Audited annual statistics and accounts of SBC submitted to the City Council. Bus drivers log books, collated in SBC's monthly statistics on bus operation.
Outputs 1. Bus fleet is well maintained. 2. Drivers observe safety and traffic regulations.	The breakdown of buses drops from x in year 1, to y in year 2, and falls below z thereafter. The number of infractions on traffic regulations falls from x in year 1, to y in year 2, and stabilizes at z thereafter.	Records of the mechanical workshop collated and published in SBC's audited annual report. Monthly police reports on traffic infractions disaggregated by type of vehicle.
Activities 1.1 Establish the bus maintenance schedule (completed by 6/2006). 1.2 Establish and operate an inventory control system (commence operation 8/2006). 1.3 Obtain preferential import license for spare parts (completed 4/2006). 1.4 Upgrade mechanical workshop (completed 10/2006). 1.5 Upgrade skills of bus mechanics (completed by 3/2007 and repeated annually). 2.1 Introduce a national bus driver license and examination system (completed 7/2007). 2.2 Establish bus safety and operating regulations (drafted by 5/2006; effective 9/2006). 2.3 Train and test bus drivers (commence 2/2006; completed 8/2007). 2.4 Introduce incentives for safe driving (by 6/2006).		Inputs ADB – \$15 million <ul style="list-style-type: none"> Consulting services 50 PMs – \$1.25 million Civil works – \$2 million Equipment – \$8 million Training – \$2.75 million Contingencies – \$1 million Government – \$5 million <ul style="list-style-type: none"> Personnel 150 PMs – \$2 million Transport and logistics – \$1.5 million Operating expenses – \$1.5 million

ADB = Asian Development Bank; PM = person-month; SBC = Safari Bus Company.

E. Assumptions and Risks

1. Introduction

Projects are not isolated from external events and are influenced by factors outside the direct control of the project management. These include political, social, financial, environmental, institutional, and climatic factors. Termed assumptions and risks, they are highlighted in the fourth column of the DMF (figure 14). **Assumptions** are **positive statements** of conditions, events, or actions that are necessary to achieve the results at each level of the DMF. **Risks** are **negative statements** of conditions, events, or actions that would adversely affect or make it impossible to achieve the intended results. While some aid agencies refer to either assumptions or risks, others, like ADB, include both.

Figure 14: Assumptions and Risks

Design and Monitoring Framework			Reference Version
Design Summary	Performance Targets/ Indicators	Data Sources/ Reporting Mechanisms	Assumptions/ Risks
Impact			
Outcome			
Outputs			
Activities with Milestones			Inputs

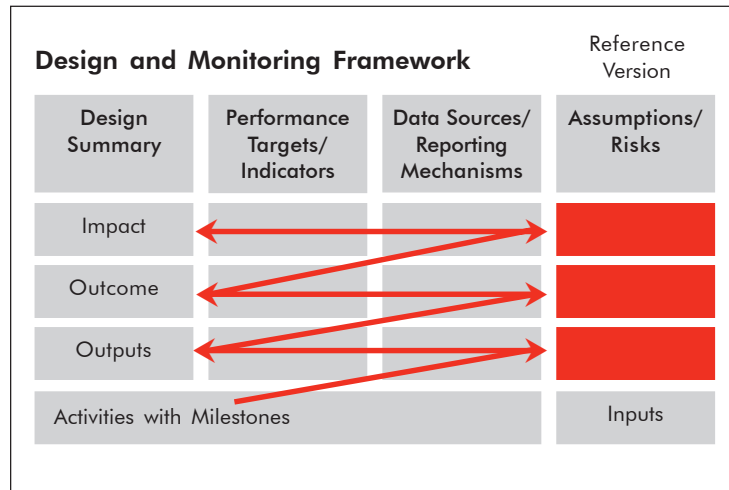
Types of Assumptions and Risks. Three types of risks and assumptions can be distinguished:

- (i) those that are or can be brought under the control of the project;
- (ii) those that concern factors in the wider policy and institutional environment and that are dependent on decision makers elsewhere (e.g., policy environment, institutional capability, and political will); and
- (iii) those associated with uncontrollable events or conditions (e.g., political stability, world prices, interest rates, and natural disasters).

Assumptions and risks **not within the control** of the project are explicitly listed in the DMF. Assumptions falling within the control of the project should be taken into account in the project design and are the responsibility of project management. Loan covenants very often have the nature of assumptions—they are outside the scope of the project, but are necessary for its success and hence, should be reflected in the DMF.

Vertical Logic. The concept of assumptions and risks applies at all levels of the design summary. Assumptions and risks complete the cause-effect logic of the DMF (figure 15). The completion of the activities will result in the outputs only if certain assumptions hold true and the risks do not eventuate. This applies in the same way to the project outcome and the intended impact, which will only be achieved if assumptions hold true and the risks do not eventuate.

Figure 15: Vertical Logic of the DMF



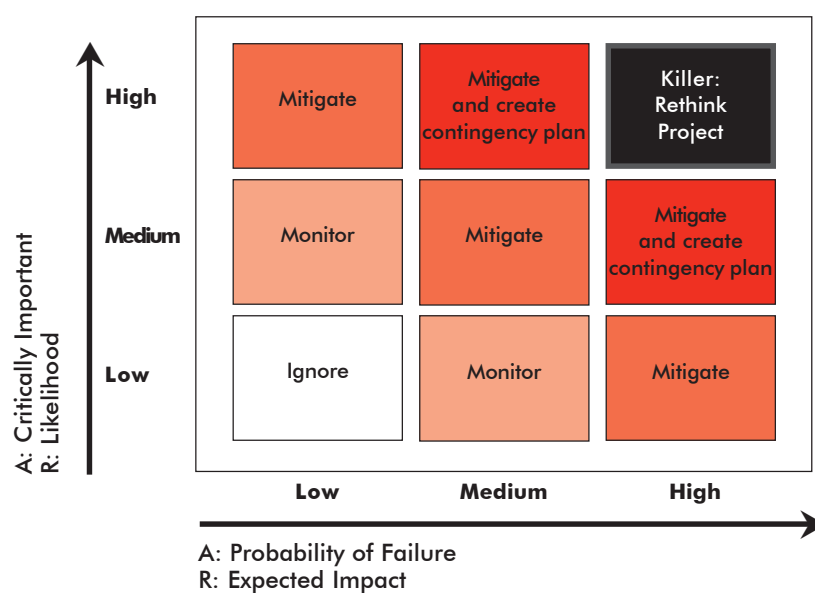
2. Process

- Step 1** : Assumptions and risks are best considered during the objectives tree analysis. For each statement of the objectives tree, consider the assumptions and the risks of achieving the level above (the cause-effect relationship).
- Step 2** : The alternatives analysis provides a good lead to assumptions and risks. Formulate assumptions and risks for those alternatives that are not addressed by the project. In the transport case study, the proposed project addresses the bus fleet and the bus drivers. It does not address the quality of the roads. Include the assumption that the city council continuously maintains the road network.
- Step 3** : Assess each assumption by its necessity and sufficiency—if/then—to the logic of the project design.
- Step 4** : Refine the statements on assumptions and risks. If they are stated too vaguely, they cannot be monitored and, if need be, mitigated by the project. For example, *the government remains supportive of the reform program* is too general and cannot be measured; restate the assumption as follows: *the parliament approves the legislative changes as per agreed schedule*.
- Step 5** : Rate the importance and probability of each assumption and risk. Focus on assumptions and risks that are critical (positive/negative) to the success of the project and determine their likelihood of occurrence (figure 16).

Step 6 : Assumptions and risks, once specified, provide important insights and may guide decisions on the proposed project design and management. The following management options are available to deal with assumptions and risks:

- (i) **Do Nothing.** This is certainly the best option if none of the assumptions and risks are critical enough to endanger the achievement of the results—these fall into the low/low category.
- (ii) **Change the Project Design.** If a risk is high and/or an assumption is critical for the success of the project, consider adding an output, activities, or inputs to mitigate the risk/ensure the assumption materializes. For example, improving the quality of education in rural areas depends, in part, on teachers' willingness to move to rural areas. This should not be ignored. Instead, consider integrating incentives payments, promotion schemes, and free housing in the project design.
- (iii) **Add a New Project.** If the possibility of addressing the risks and assumptions is beyond the scope of the project, consider an additional project, either in the next country operation business plan or in cooperation with another aid agency (parallel cofinancing). For example, increased rice production is based on the assumption that rainfall is sufficient. If the seasonal fluctuation seems too high, it may be necessary to initiate an irrigation project to secure the necessary water resources.
- (iv) **Abandon the Project.** If a risk is high and likely to occur or an assumption is absolutely necessary (**killer**), and there are no outputs or activities that can reduce the risk or increase the probability of the assumption to hold true, the management should conclude that the project is too risky and abandon it.
- (v) **Monitor and Mitigate the Assumptions and Risks.** There are various scenarios where close monitoring is appropriate (figure 16). In such cases, it is essential to have clearly specified indicators. Make provisions for mitigation measures by including activities and adding resources.

Figure 16: Assumptions and Risks Matrix



Certain kinds of assumptions and risks, exemplified in table 7, should not be included in the design and monitoring framework, for the reasons shown.

Table 7: Examples of Unsuitable Assumptions and Risks

Reason for Exclusion	Assumptions	Risks
Under the control of the project	<ul style="list-style-type: none"> Selected contractor will be competent Procurement completed on time No delay in project implementation Design and construction in accordance with specifications Appropriate safety in civil works designs 	<ul style="list-style-type: none"> Slow progress Inadequate funds and shortage of construction equipment for road upgrading, rehabilitation, and safety improvements Overestimating requirements Selection of unnecessary subprojects
Beyond project control, but can be anticipated and should be taken into account in the project design	<ul style="list-style-type: none"> Periodic maintenance of the rural infrastructure PMU functioning effectively, and consultant(s), PMU, NGOs, and local communities working cohesively Involvement of various government ministries and offices in the planning and implementation of the program activities IAs have experience with ADB-financed projects Government and contractors can work together Consumers will be able to pay for connections to the grid New government organization, personnel, and procedures Political commitment 	<ul style="list-style-type: none"> Lack of availability of counterpart funding Multiplicity of aid agencies and NGOs involved Security and law-and-order situation Difficult terrain Improper maintenance that will lead to choking of drains Implementation delays due to inclement weather conditions

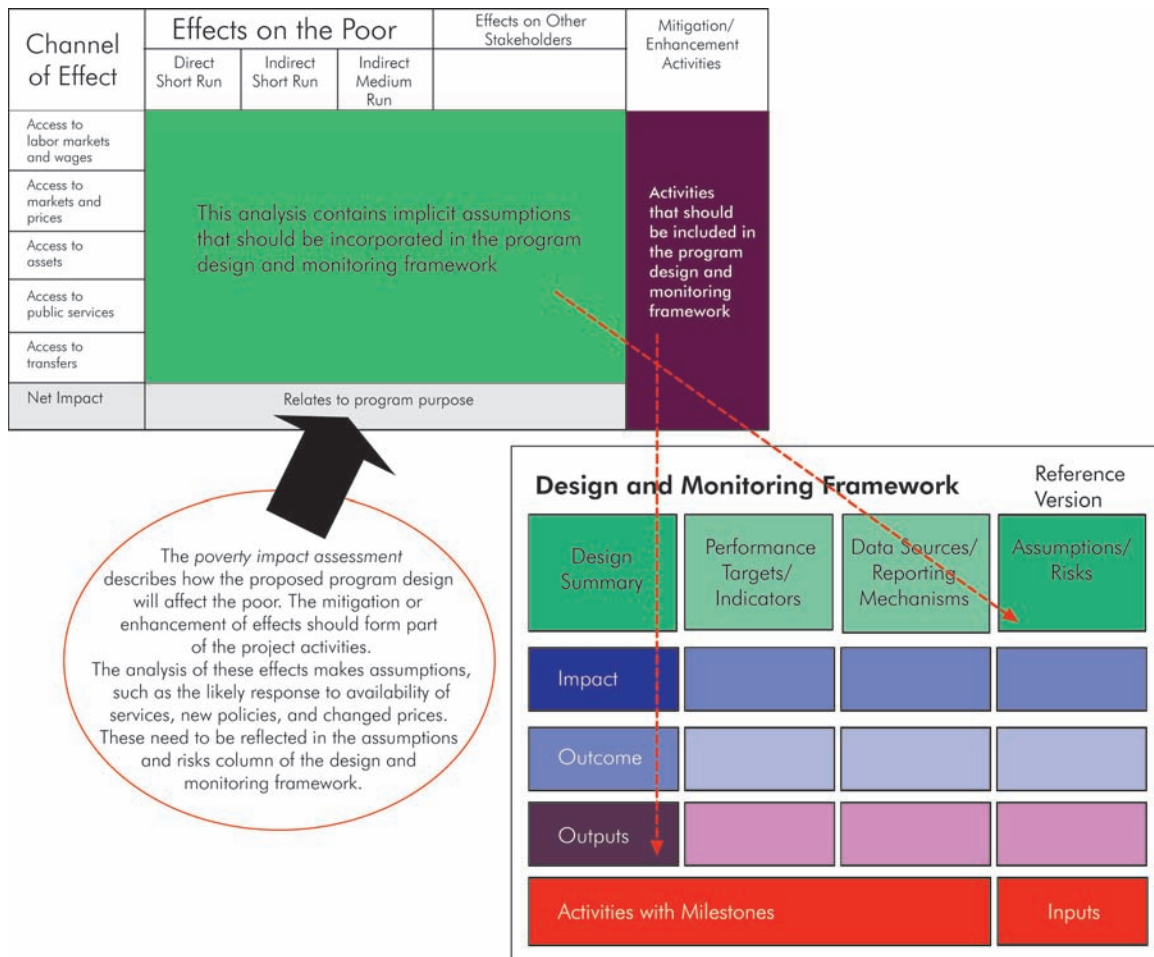
ADB = Asian Development Bank; IA = implementing agency; NGO = nongovernment organization; PMU = project management unit.

3. Tips

- A well-designed project is one whose risks are manageable.
- Avoid assumptions that are unrealistic, such as “no inflation,” or that are not critical to the cause-effect logic; for example, the assumption that no natural disaster will occur is a critical assumption, but does not help the design. If there is a typhoon or a tsunami, there will be no project.
- Expect the project to monitor and report on assumptions and risks. To make this a meaningful and easy task, specify quality, quantity, and time frame for each assumption.
- Do not state the obvious, e.g., *better nutrition leads to good health, adequate rural road infrastructure is key to economic and socioeconomic development in the rural areas, technical and vocational education provides supply of skilled workforce.*

- The poverty impact assessment matrix used in policy-based lending shows how the proposed program design will affect the poor and is an important source of assumptions and risks. The analysis of the effects on the poor is based on assumptions. The assessment also specifies mitigation measures for negative effects on the poor. Figure 17 illustrates the linkage between the poverty impact matrix and the DMF.

Figure 17: Poverty Impact Matrix and the DMF



4. Public Transport Case Study

Assumptions and risks are assessed for each level of the results chain. This is illustrated in the public transport case shown in table 8.

Table 8: Assumptions and Risks of the Public Transport Project

Design Summary	Performance Targets/Indicators	Data Sources/ Reporting Mechanisms	Assumptions (A) and Risks (R)
Impact The transport system of Arusha is functioning well.	The time to cross Arusha by public and private transport is reduced by 25% by the year 2008.	Annual traffic investigation reports of the City Council Traffic Control Center	A: The City Council's policy regarding the provision of public transport services by SBC remains unchanged.
Outcome SBC provides safe and reliable public transport services.	<p>The number of accidents involving SBC buses declines by 50% from x in the base year to y at the end of project implementation.</p> <p>The use of SBC buses stabilizes at 500,000 passengers annually during project implementation and increases by x% annually thereafter.</p> <p>Delays (5 minutes later than scheduled) drops from 1,000 incidences in 2005 to 200 per year by the end of the project implementation.</p>	<p>Annual traffic accident reports of the Police Department</p> <p>Audited annual statistics and accounts of SBC submitted to the City Council</p> <p>Bus drivers log books, collated in SBC's monthly statistics on bus operation</p>	<p>A: The Public Works Department ensures that the road network is well maintained, following a maintenance standard.</p> <p>A: Operating expenses, e.g., oil, remain stable.</p>
Outputs 1. Bus fleet is well maintained. 2. Drivers observe safety and traffic regulations.	<p>The breakdown of buses drops from xX in year 1, to y in year 2, and falls below z thereafter.</p> <p>The number of infractions on traffic regulations falls from x in year 1, to y in year 2, and stabilizes at z thereafter.</p>	<p>Records of the mechanical workshop collated, and published in SBC's audited annual report</p> <p>Monthly police reports on traffic infractions disaggregated by type of vehicle</p>	<p>R: Customs clearance of spare parts continues to be delayed by more than 2 weeks after arrival of shipment.</p> <p>A: The bus drivers' union incorporates the safety regulations and driving license policy in the bus drivers' code of conduct.</p> <p>R: Trained bus drivers leave SBC within 1 year of gaining their bus driving license to join private bus operators.</p>

Activities

- 1.1 Establish the bus maintenance schedule (completed by 6/2006).
- 1.2 Establish and operate an inventory control system (commence operation 8/2006).
- 1.3 Obtain preferential import license for spare parts (completed 4/2006).
- 1.4 Upgrade mechanical workshop (completed 10/2006).
- 1.5 Upgrade skills of bus mechanics (completed by 3/2007 and repeated annually).
- 2.1 Introduce a national bus driver license and examination system (completed 7/2007).
- 2.2 Establish bus safety and operating regulations (drafted by 5/2006; effective 9/2006).
- 2.3 Train and test bus drivers (commence 2/2006; completed 8/2007).
- 2.4 I Introduce incentives for safe driving (by 6/2006).

Inputs

- ADB – \$15 million**
- Consulting services
 - 50 PMs – \$1.25 million
 - Civil works – \$2 million
 - Equipment – \$8 million
 - Training – \$2.75 million
 - Contingencies – \$1 million

Government – \$5 million

- Personnel 150 PMs – \$2 million
- Transport and logistics – \$1.5 million
- Operating expenses – \$1.5 million

F. Process of Completing the Design and Monitoring Framework

A DMF is best constructed in the context of a participatory team approach involving the borrower, EA, other government and nongovernment organizations, beneficiary representatives, consultants, the project team, and other stakeholders as appropriate. In most instances, a workshop approach, supported by a facilitator, works best. This process should be an integral part of PPTA implementation and is not limited to a single planning session because a DMF evolves and is refined during the PPTA. During this process, constraints and limitations are taken into account and are incorporated in the DMF. These include, e.g., financial and human resources, technical feasibility, environmental and social safeguards, political will, and economic viability. However, at a minimum, a workshop toward the end of the PPTA should be conducted. The workshop serves as a forum to present the findings and recommendations of the PPTA team and to build consensus and ownership of the final project design, resulting in a jointly formulated DMF. Planning workshops require a minimum of 3 days but are best conducted over a period of 5 days. It should be part of the final PPTA review, but at the latest conducted at the start of loan fact-finding.

Step 1 : The starting point for preparing the DMF is the outcome statement, which reflects what the project intends to accomplish by the end of project implementation. The related frames under the performance targets/indicators and the data sources/monitoring mechanisms are completed in parallel.

Step 2 : Clarify the intended impact to which the project will contribute. The statement usually describes a sector or subsector goal and is derived from the outcome statements of the CPS results framework. The means-end relationship between the outcome and the impact must be realistic. Determine the performance targets and the data sources thereafter.

Step 3 : Decide which outputs are necessary and sufficient to achieve the project outcome and identify the appropriate performance targets and their respective means of verification.

Step 4 : Determine the key activities necessary to produce the output. Do this in a sequential order for each output and number them accordingly. Agree on selected milestones for each activity and include them in brackets behind the activities.



Preparing a DMF, Papua New Guinea

Step 5 : List the inputs required to carry out the activities by source (e.g., ADB, government, and beneficiaries) and in broad categories (consultants, equipment, civil works, staff, and project management). Do not repeat the details provided in the cost and financing plans.

Step 6 : Determine underlying assumptions and risks for all levels of the design summary, starting with activities to outputs. Note that all frames of the DMF have to be filled.



Completed DMF from a Participatory Planning Workshop, Papua New Guinea

G. Special Design and Monitoring Frameworks

1. PPTA

PPTAs are required to include a complete DMF. As a design tool, the DMF brings structure to the PPTA and specifies the requirements and processes (outputs and activities) that need to be completed to arrive at a project design agreed on by the borrower and ADB—the outcome of the PPTA. In turn, an agreed project design contributes to achieving the impact—for a PPTA this is the outcome statement of the ensuing project. This linkage is reflected in figure 18.

The outputs of the PPTA include the various sector, subsector, and institutional assessments specific to the project, and those analyses that are generic to all PPTAs, e.g., socioeconomic, financial, gender, and environment. Activities specify what must be done to generate the assessments and what steps are to be taken to generate consensus on the project design. The latter refers to various forms of stakeholder consultation, participatory planning workshops, and brainstorming sessions.

Figure 18: Relationship between the DMF for a Project and its PPTA

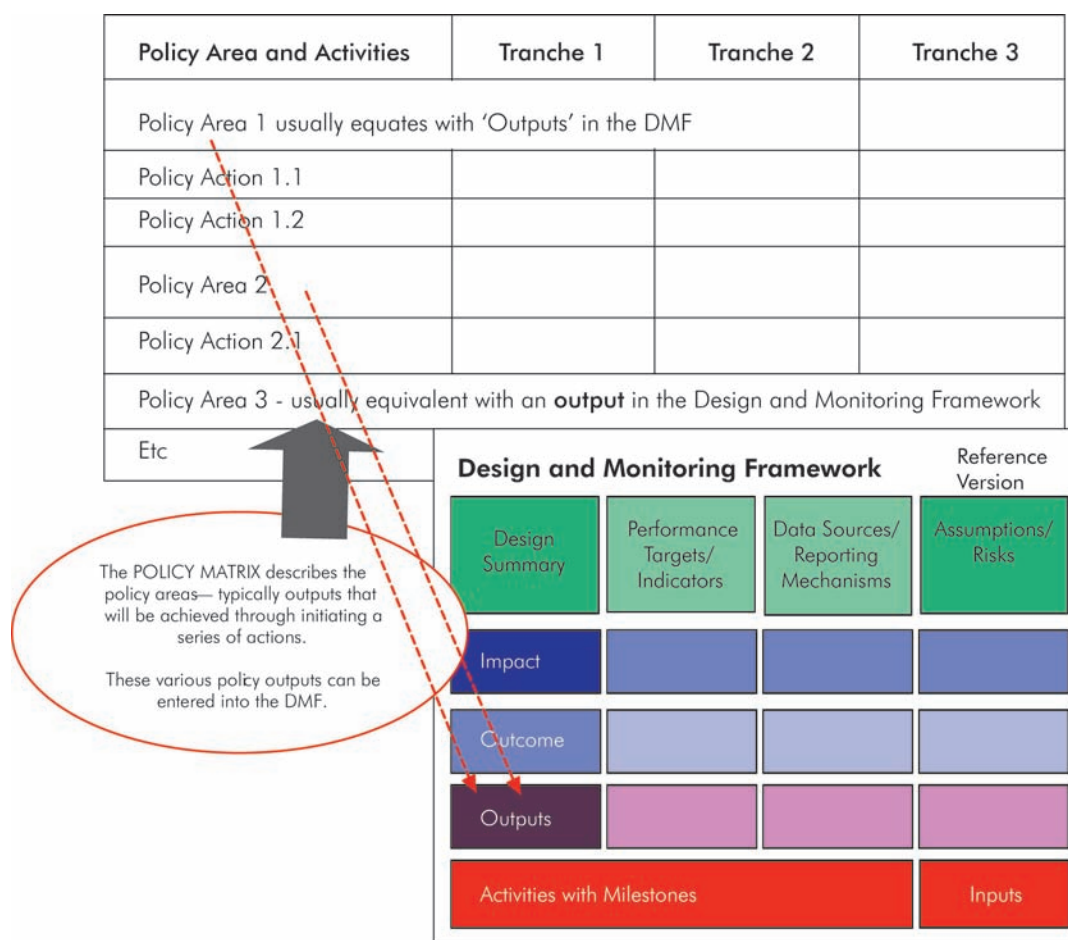
2. Program Loans

Program lending focuses on developing a sector¹⁶ or subsector, or relates to broad cross-sectoral themes of a macroeconomic nature. Program loans aim at performance improvement of a (sub)sector through appropriate policy changes and institutional enhancements over the medium to long term. The general characteristics of policy-based program loans and guarantees are (i) that they are not linked to specific project activities, and (ii) that they aim at a sector-wide and economy-wide impact. The RRP of a program and sector development loan includes a policy matrix that specifies the policy areas to be addressed, measures to be taken, milestones for the release of tranches, and the agency responsible for each measure. In addition, the RRP includes a DMF. Figure 19 illustrates the linkage between the DMF and the policy matrix.¹⁷

¹⁶ The term "sector" in the context of program lending is to be understood in the broad sense of the word.

¹⁷ It can justifiably be argued that there is no value in having both matrixes and that the DMF can be expanded to include references to the agency responsible for carrying out measures—the only column not provided for in the DMF.

Figure 19: Relationship between DMF and Policy Matrix



Policy matrixes do not follow a standard format. However, in most cases, the *policy area* describes an output, which should be transferred as such to the DMF. This leaves the outcome of the program loan to be determined, e.g., what is the intended institutional or structural change or benefit to a particular group or the population at large? *Measures* in the policy matrix are equivalent to activities in the DMF, while *tranche release conditions* are the equivalent of indicators, either at outcome or output level, or milestones for key activities. Loan covenants provide a source of assumptions and risks and should be checked when completing the DMF. The poverty impact matrix included in the RRP of a program loan (figure 17) is a useful source for assumptions and risks. The mitigation measures provide additional activities, which should be reflected in the DMF.

3. Sector Loans

The objective of a sector loan is to assist in the development of a specific sector or subsector. Sector lending integrates sector policy reforms, institutional development, and investments. A sector loan is expected to improve sector policies and strengthen institutional capacity. This definition of a sector loan guides the formulation of the outcome statement. Sector loans are used to finance a large number of subprojects in the sector or subsector and the processing stages for project loans apply. In the context of the DMF, a subproject represents an output. Sector loans may include conditionalities, which mainly focus on critical policy reforms necessary to achieve the outcome. However, these are not tranche conditions characteristic

of policy-based lending (program loans). Conditionalities are stipulated in the loan covenants. In the DMF, these covenants should be reflected as indicators and performance targets, either at outcome or at output level. The RRP of a sector loan includes a DMF but no policy matrix.

4. Sector Development Loans

A sector development program (SDP) is a combination of an investment (project or sector) component and a policy-based (program) component. A SDP is considered when a sector requires both an investment component and a policy reform component, and where the former is unlikely to be accomplished in full and on time without the support of a policy-based lending component. The program-lending component of a SDP may be divided into tranches. The RRP includes a policy matrix and a DMF. In the context of the DMF, the policy reform and investment components are outputs. The tranche conditions of the policy component/output should be reflected as output indicators. Depending on the timeframe for their achievement, they have the nature of process indicators.

5. Emergency Assistance Loans

Emergency assistance loans (EALs) are generally treated like project loans, but emphasize rapid approval of short-term and small loans. EALs require a DMF. The intended outcome ranges from rebuilding of high-priority physical assets to restoring economic, social, and governance activities after emergencies. The outputs (scope) of EALs generally include mitigation of immediate losses to priority assets, capacity, or productivity. EALs are not designed to provide relief or comprehensive reconstruction.

6. Multitranche Facility

Under the Multitranche Facility (MFF) ADB offers financial resources to clients with an agreed investment program or specific set of interrelated investments over a maximum period of 10 years. These investments could be physical and nonphysical projects financed by loans or guarantees provided under the MFF.

The primary MFF document is the Framework Financing Agreement (FFA) with a DMF in Schedule 2 covering the overall MFF. A Periodic Financing Request (PFR) is a formal request from the Counterparties to finance a project under the MFF. A DMF will be prepared for each PFR. This will show the details of the investment and the linkage to the overall MFF, i.e. the outputs in the overall DMF are the respective projects. Each output statement becomes the outcome of the respective project to be funded by a PFR.

APPENDIX

FURTHER READING

Design and Monitoring Framework (Logframe)

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