ESCAP
Economic and Social Commission for Asia and the Pacific

# Public Investment and Project Planning

## A Guidance Note for Pacific Island Countries

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For further comments and enquiries please contact:

ESCAP Subregional Office for the Pacific
Private Mail Bag
Suva, Fiji
Email: escap-pacific@un.org
Website: http://www.unescap.org/subregional-office/pacific

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## 1. Introduction

Quality infrastructure and investments in priority sectors drive sustainable development[1] by reducing inequalities, and improving access to health, education, public services and income opportunities.

This guidance note underscores the importance of effective public investment planning and management. It recognizes the challenges governments of many Pacific Island Countries (PICs) face when designing and implementing investment projects. It draws on the experience of PICs over the decades to help improve investment outcomes through well designed project cycles that:

- ensure well formulated projects aligned to national strategies and stakeholders' interests;
- use limited domestic funds wisely and leverages development partner support; and
- produce results that make tangible improvements.

This guidance note assumes a degree of prior knowledge of government systems and processes such as national planning, the annual budget cycle and aid management within which an effective project cycle can be placed. It provides an overview of investment planning within the public sector, and indicates issues and references which can be further researched and sourced for detailed learning and application. In this regard, this guidance is not intended to provide exhaustive coverage of the detailed aspects of public investment planning.

The guidance note recognizes the key technical stages for applying an effective investment and project cycle. However, as each PIC has a unique contextual situation, how the project planning cycle is applied will thus depend on the organizational, decision-making, and administrative arrangements that are in place. Based on common technical issues and shared experiences in PICs, this document sets out a general guidance for practitioners aiming to improve the application of the investment and project cycle for better investment outcomes.

This guidance note is set out in specific sections which build on each step of the investment and project cycle. Section 2 sets the wider national planning and budget framework within which investment projects are a key component. The Section includes the role of the budget for guiding project choice and mobilizing funding.

Section 3 outlines the generic project cycle, in particular, the characteristics and important decision-making requirements at each stage of the cycle. The Section also highlights technical issues that can be applied to make each stage more effective, including: understanding the roles of different stakeholders; designing a logical result-based project approach; costing the inputs; measuring progress; identifying assumptions and risks; and assessing options for funding.

[1] Recognized in global and regional documents, including: the 2030 Development Agenda on Sustainable Development; Regional Roadmap for Implementing the 2030 Agenda for Sustainable Development in Asia and the Pacific; the Pacific Roadmap for Sustainable Development; and 2050 Strategy for the Blue Pacific Continent.



## 2. Public Investment and Project Planning in the Context of the National Planning and Budgeting Framework

### 2.1. Policy and planning framework as source of projects

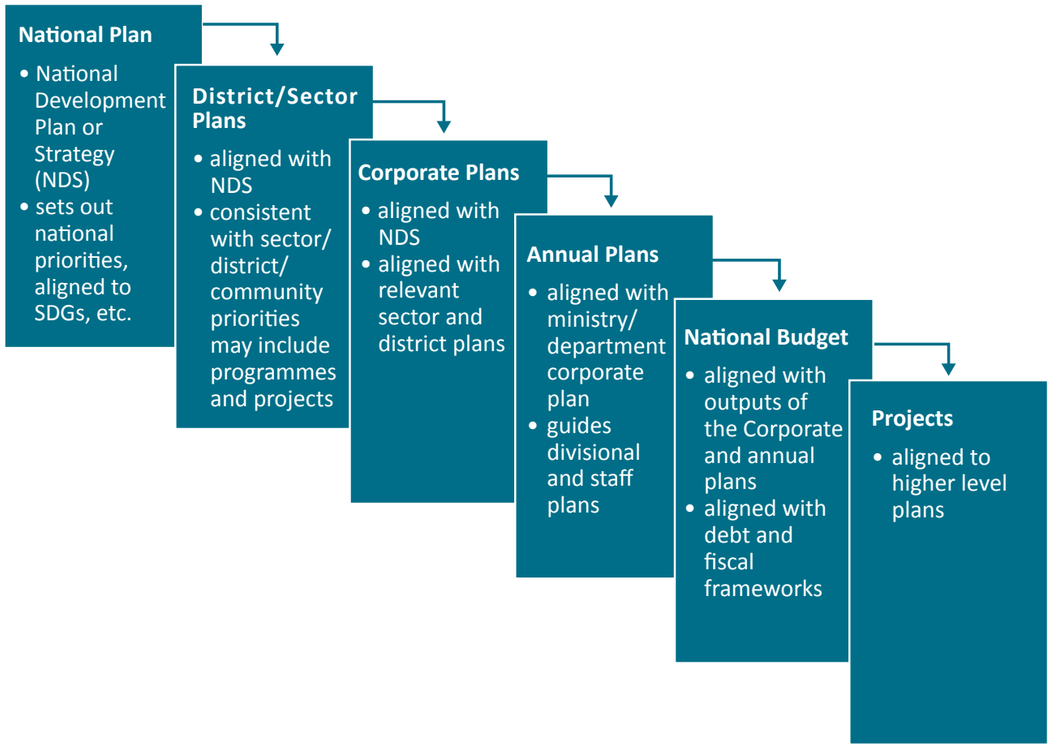
All public investments and projects need to be guided by a wider policy and planning framework. Such a framework can be designed in several ways depending on the development priorities, local conditions and the associated administrative arrangements. Development priorities are typically established by the government, in consultation with national stakeholders, civil society and development partners.

National priorities are often documented, for example, as captured in national development plans or strategies. These documents set out the overall strategic framework within which to guide the national development over a specific time period. Such documents are linked to international commitments such as the Sustainable Development Goals (SDGs) and regional frameworks agreed to by policymakers in the Pacific.

The national plans and strategies guide lower-level policies, plans, programmes, and projects and the formulation of related laws and regulations. Lower-level plans may be based on sectors, issues, regions/districts, communities and other groupings. Ministries, departments, agencies and public enterprises often undertake multi-annual corporate plans, supported by annual business plans, cascading down into divisional and staff plans. These plans guide the formulation of projects. Figure 1 summarizes these cascading arrangements.

By working together, the alignment of policies/plans and projects helps to ensure that project logic aligns with the higher-level results and the outcomes which the project outputs seek to support.

Figure 1: A typical cascading planning system






### 2.2. Aligning the investment/project plan to the budget process

Effective national budget preparation is important for funding projects which are aligned to national development plans and strategies.

In most PICs, a circular issued by the responsible ministry/department details the budget timetable for that financial year and is usually distributed early in the budget cycle. This circular determines the timetable for the submission of project proposals for funding.

For more details on public investment planning in the context of the budget process, refer to *Improving the Links between National Plans and Budgets for Sustainable Development in Pacific Island Countries* – A Practical Guidance Note, published by the United Nations ESCAP.[2]

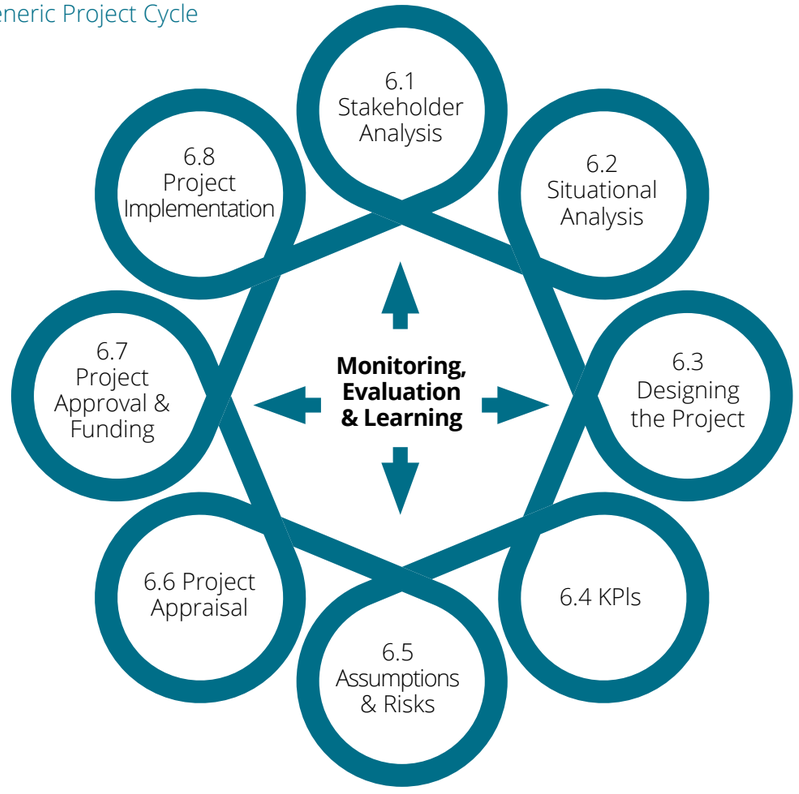
[2] Publication can be found at https://repository.unescap.org/handle/20.500.12870/307

## 3. The Project Cycle

### 3.1. Generic project cycle

A project is typically managed through a set of processes which form a cycle. Figure 2 shows the generic project cycle[3] moving from step to step. In practice, the cycle is an interactive process. It is common to move backward and forward between steps, especially during the design, appraisal, and approval steps.

Figure 2: Generic Project Cycle




To institutionalize the generic cycle within a government administration, key templates and decision-making steps need to be added. These include:

- Templates for the summary and detailed proposal, project appraisal and M&E;
- Decisions by the lead ministry to initiate the project;
- Decisions by the lead ministry responsible for the project cycle and funding, for example, on whether the documentation is adequate, the result of appraisal, identification of funding (domestic and external); and
- Formal decision making by cross cutting committees for investment/project approval, aid allocation and associated processes.

[3] The precise breakdown and numbering of steps may vary. However, all well designed project cycles need to cover the details set out in this section.



The sections below aim to discuss each step of the project cycle, and point to key question (summarized in Table 1 below) which need to be resolved for effective public investment and project planning.

Table 1: Summary of each step in the project cycle

| Steps in Project Cycle | | Key Questions Asked |
|---|---|---|
| 1. | Stakeholder analysis and consultation | Who is involved? What are their opinions? What are their needs? |
| 2. | Situational analysis performance gaps, problems and solutions | What are the current, compared to the preferred conditions? What is wrong with them? Why? What can be done to improve the situation? |
| 3. | Designing the choice of solutions and project logic | How to make the changes? What are the options? |
| 4. | Key performance indicators (KPIs) | How to measure the current situation and progress to the planned one? |
| 5. | Assumptions and risk analysis | What might go wrong? |
| 6. | Documenting and appraising the project | How to combine the information from steps 1 to 5? How to choose whether to go ahead with the project? Which option is best? |
| 7. | Approval and funding | Who needs to give approval for the project to go ahead? How will it be funded? |
| 8. | Project implementation | How will the project proceed? How is it managed? How are the inputs used in activities to produce the outputs? |
| 9. | Monitoring, evaluating and learning | How will progress be tracked? How will the information be used to learn lessons and adjust accordingly as the project progresses? |

### 3.2. Step One: Stakeholder Analysis

Stakeholder analysis helps to identify who may have an interest in the project and could influence its design and implementation. Stakeholder consultation is critical for an effective project cycle.

#### 3.2.1. Knowing the stakeholders

Stakeholders may be identified in various (sometimes overlapping) categories, including:

- **Customers/clients:** those who use or are directly affected by the outputs of the project. These include beneficiaries (also called target groups) who benefit/gain from the project. They also include those who may lose out from the project;
- **Owners:** those who own the project once it is implemented and continue to operate it afterwards;
- **Suppliers:** those who provide inputs to the project, for example, contractors who provide goods and services to implement the project;
- **Partners/competitors:** those who may fund/support or negatively impact the project; and
- **Regulators/decision-makers:** those with a statutory and regulatory responsibility for setting standards and conditions in relation to the project.

#### 3.2.2. Communicating with stakeholders

Communicating with stakeholders requires knowing your audience. This implies understanding the language, styles and approaches used in the context where the project will be implemented. Know when to use non-technical language, and when technical terms and concepts are appropriate.

Consultation with stakeholders during formulation is critical and only the start of the ongoing discussion. Stakeholders should be seen as partners throughout the project cycle with varying roles as the project progresses. For example, they should be involved with the initial situation analysis and developing solutions, both initially, and later in validating the project choice.



### 3.3. Step Two: Situational Analysis – Defining the Problem to be Solved

Before initiating a project, it is necessary to understand the current situation and why it may not meet all the requirements of stakeholders (the performance gap); why it exists (the problem) and what needs to be done to create a different situation (the solution).

This is often an iterative stage. Gaps may exist at various levels along the results chain. When looking at outputs, consider what are the problems with inputs and activities. When looking at outcomes, start by considering the problems with outputs, which may identify problems with activities and inputs. Three typical steps to a situational analysis are listed below.

#### 3.3.1. Performance gap analysis – between planned and actual

Performance gap analysis describes the current situation compared to the planned situation. If there is a gap – the reason/problem needs to be understood and solution identified. The analysis determines the focus of the project output. For example, if the issue is the quality of education, the Ministry might reform the national curriculum. If issues are at school level, the focus may be within the school, for example, the quality of teaching.

#### 3.3.2. Diagnosis analysis – why the gap?

Diagnosis Analysis (also called Problem Analysis) seeks to diagnose or explain why there is a performance gap and what consequences it might have.

The analysis raises questions about what is wrong with the:

- activities and inputs that are failing to deliver the required outputs; and
- outcomes and impacts due to the under performance of the output.[4]

A Problem Tree[5] is a useful tool to put these causes and consequences into a structure.

#### 3.3.3. Solution analysis – how to close the gap

The solution lays the foundation for the proposed project. Like layers to the problem, layers of solutions can be identified. A Solution Tree turns the problem tree around and starts to identify viable solutions at each level of the tree. This begins to lay the basis for the project.

For a simple situation, problem and solution analysis can be determined through consultations. For more complex situations, using tools such as the Problem and Solution Trees helps to better organize and cover all the critical issues, making it easier to design a strong results chain for the project.

Once solutions are identified, and the practicality and feasibility of each solution assessed, the design of the project can start.

[4] When designing the project, the focus is largely centred on the output. Looking at an outcome, the problem would focus first on what is wrong with the various outputs that support that outcome. There may be problems with activities or coordination/communication between outputs and the outcome, etc. As such, this analysis can be used in flexible ways to view causes and consequences from different points in a results chain.

[5] For an example, refer to https://odi.org/en/publications/planning-tools-problem-tree-analysis

## 3.4. Step Three: Designing the project logic and delivery plan

### 3.4.1. Using the results chain

Once the desired solution has been identified, how will the project implement the required solution? The application of the results chain helps to answer this question. Refer to Annex 4.1 for more detail on results chain.

The situational analysis and identification of solutions lays the foundations for the project logic and results chain. If a solution tree has been designed, much of the design work for the chain will have been undertaken. The steps required are as follows:

- start with the centre of the results chain to determine the output(s) which should be clearly described;
- looking down at the results chain indicates how the outputs will be delivered and the cost. In particular, the:
  - activities needed to produce the output;
  - inputs needed to allow the activities to take place; and
  - budget needed to fund the inputs and activities.
- looking up the results chain indicates why the outputs are delivered, and the justifications. In particular, the:
  - outcomes being supported, to help clients have better outputs; and
  - impacts being contributed to help clients to have better outcomes.

At each step, check if:

- there is agreement from all the key stakeholders in terms of the logic of the approach;
- the outputs are what is really required;
- the activities have been broken down into clear and consistent steps;
- all the inputs have been identified, including further design and implementation;
- the inputs are available and of the appropriate quality;
- there is capacity to undertake the activities and if they follow accepted standards; and
- the chain makes logical sense. This is usually an iterative process moving up and down the chain to get a clear logic and agreement.

### 3.4.2. Phasing the project

Projects take time to progress through planning, designing, approving, and funding stages of a project cycle. This makes it difficult to determine a viable start date. Allow for adequate time for the various stages of work to meet the desired project start and completion dates.

A detailed project results chain with clearly set out steps for delivering the outputs helps in determining its duration.

For small-scale projects, a basic workplan with phased activities and key milestones could be used. For larger projects, the delivery of the final output should be broken down into sub-outputs with detailed activities. The workplan can be recorded as a simple Excel or Gantt chart, or with the use of more complex management software for larger projects.

Response time, supply chains and other mobilization issues must be considered in phasing a project. This all helps with planning and managing project implementation.

Unrealistic phasing can easily result in project delays, cost overruns, requiring it to be cut back, or even failure.



### 3.4.3. Organizational arrangements for the project

The project results chain will need to be managed. The more complex the project the more complex the organizational and management arrangements. Usually, it is not sufficient to assume that existing (often overstretched) administrative and/or community structures can handle the project implementation. The project design must make clear the organizational and management arrangements, with inputs and budget requirements.

Even with a well-designed project, poor management and implementation is a frequent source of project delay, and even failure.

### 3.4.4. Costing the project

Costing the project may be straightforward in theory but challenging in practice, even with a well-designed results chain with clear inputs and activities. Sources of supply and possible costs need to be identified. Good understanding of the procurement procedures[6], under which the project will operate, can avoid delays and improve delivery performance.

For common outputs (e.g., buildings, roads), the construction industry has developed standard measures like cost per square metre, or cost per kilometre of road. For more specialized projects, costs will depend on the procurement process – the process of tendering and negotiating the supply of inputs.

If supplies are imported from overseas, transport/freight costs need to be included and possible delays anticipated.

Recurrent operations and maintenance costs need to be considered. The project duration may include a period of operations after the capital investment. In this case the operations and maintenance costs would be part of the project cost for a fixed period. However, most projects, especially with large infrastructure investments, will need to have a budget set aside for operations and maintenance costs once the projects are completed.

6 Procurement procedures seek to ensure cost-effective supplies and limit misuse of funds.

## 3.5. Step Four: Indicators and Key Performance Indicators (KPIs)

### 3.5.1. Role of indicators

When planning a project, it is necessary to be able to measure the starting situation, end situation and progress between the two. Each level in the results chain requires indicators. The correct design and placement of indicators within the results framework is crucial for its effective use. For example, indicators may measure rate of use of inputs, progress with activities, or level of output produced, or changes in outcomes due to the influence of the outputs.

### 3.5.2. Types of indicators

There are two key types of indicators:

- Qualitative – measures the quality/status of the situation in terms of conditions or stages e.g., high, medium, low, or stages in a process; or
- Quantitative – measures the situation in terms of numbers, percentages, ratios, e.g., number of hours, number of people, etc.

Indicators may be grouped in other ways, for example:

- Flow – measure value over a period, e.g., water flowing in and out of a tank; revenue and expenditure; births, deaths and migration; or
- Stock (or level) – measures the value at a point in time, e.g., water in the tank; balance in account; size of population.

Flow and stock are clearly linked - flow contributes to stock and stock is determined by flow.

### 3.5.3. Key Performance Indicators

Poorly defined indicators are of little value. Indicators that are relevant and help measure important aspects of progress are called Key Performance Indicators (KPIs).[7] To be effective, KPIs need several key qualities, which also reflect on what is being measured, known by the acronym SMART:

- Specific: clearly stated and easy to understand;
- Measurable: can be measured and objectively verified, it uses clearly defined units of measure, or description of status;
- Achievable/Acceptable: can be achieved within the result chain designed and the wider conditions, and is acceptable to the stakeholders;
- Realistic/Relevant: is realistic in terms of the available supply chains, the broader operating environment; and it also needs to be relevant to the project objectives; and
- Time-bound: covers a given period.

Poorly defined KPIs will not serve as a guide to project implementation. Reliable data is needed to measure the KPIs. In this regard, several considerations are needed at the time of selection of appropriate indicators, including: where to source the data from; how accurate is the data; and how often is it collected.

[7] These are sometimes referred to as verifiable indicators. Other resources are available on the internet on this topic.



### 3.5.4. Different statuses that data can measure

KPI data can be used to describe and measure several different statuses, for example:

- actual is the measured value/status of the KPI at various points in time;
- baseline is the initial situation or the actual value/status at the start of the project;
- target is the planned value/status of the KPI at a particular time in the future; and
- variance is a number or a percent, which measures the difference between:
  - the actual and baseline which can measures progress from the start; and
  - actual progress in relation to the planned target.

### 3.5.5. Setting targets

Defining targets appropriately can assist with project management. Need to consider if the target is:

- consistent with the baseline - does it measure a meaningful improvement from the baseline?
- aligned to stakeholder needs and acceptable?
- compliant with the project design, including the activities and inputs?
- achievable and realistic in the available time?

## 3.6. Step Five: Assumptions and Risks Analysis

### 3.6.1. Assumptions and risks

Assumptions need to be made when designing each level of the results chain. Assumptions are conditions required for the project to be successful. The risks to the project are the negative of the assumption - relating to the failure of the assumptions to happen.

Stakeholder knowledge is important to help identify assumptions and associated risks. Risks are faced even if assumptions are not explicit. Sometimes, there will be risks from the project at various stages of implementation which need to be considered. Careful risk assessment helps to set the outputs at the right level, as well as ensuring the project design seeks to mitigate the risks that may be faced.

Badly determined assumptions and risks can easily contribute to project delays, cost overruns and failure.

### 3.6.2. The likelihood of the risk and its consequences

Each risk can be assessed based on its likelihood of happening, and then the size of the impact it could have on the success of the project. It is important to explain the risks associated with project and without project so that the relevant decision makers can then make their decisions accordingly.

There are many ways to describe the probability of risk, but one relatively common guide is to use standard terms, for example:

- Very Likely = 70-100%;
- Probable = 40-70%; and
- Unlikely = 0-40%.

The same is true of impact, one way is to use the following terms:

- Catastrophic (high impact);
- Critical (medium impact); and
- Marginal (low impact).

The overall risk can then be shown by coloring the cells, e.g., red, amber, green to depict different levels of risk. The overall risk is a combination of the probability and the impact, as depicted in the Table 2 below:

Table 2: Risk Rating Table

| | | Impact | | |
|---|---|---|---|---|
| | | **Marginal (Low)** | **Critical (medium)** | **Catastrophic (high)** |
| **Probability** | **Unlikely (low)** | **Low risk** | **Low risk** | **Medium risk** |
| | **Probable (medium)** | **Low risk** | **Medium risk** | **High risk** |
| | **Likely (high)** | **Medium risk** | **High risk** | **High risk** |



### 3.6.3. What to do about the risk?

For each risk identified there should be a brief description of the mitigation strategy associated with the risk. Mitigation strategies are usually grouped into four key ways, namely:

- Accept – means accepting the risk as described and this usually applies to risks that are shown as green in Table 1. When the impact is low or medium and the probability is low;
- Avoid – avoid this activity as it is potentially too risky, and this usually applies to risks that are shown as red in Table 1. Where the impact is high/catastrophic and the probability medium or high;
- Limit – used for medium risk activities and involves describing ways to limit the impact by perhaps changing the activity in some way, i.e., reducing its size or scope, etc; and
- Transfer – used for medium or low risk activities and involves mechanisms to transfer the risk to another entity, i.e., by taking out insurance, etc.

## 3.7. Step Six: Documenting and Appraising the Project

### 3.7.1. Documenting the project

A large amount of analysis and information is collected during Steps 1 to 5. If not organized and clearly documented, it is difficult to share with others, to appraise the document, and subsequently for decision makers to decide whether to approve and fund the project. The documentation should follow the logic of the five steps.

#### *Logframe*

The logframe provides a useful starting point and helps to ensure:

- Relevance to stakeholders and their needs, and to addressing the problems identified;
- Feasibility in terms of viable solutions, and available resources and conditions; and
- Sustainability by seeking realistic assumptions and addressing potential risks.

It is not necessary to produce a logframe matrix (see Table 3) for every project, however, it may be used:

- to guide the consultation among the stakeholders through the development of the results-based logic so the project document can be written up more clearly;
- as a concise summary to share with others; and
- as part of a larger document, often as an annex.

Table 3: Simple Logframe

| | A | B | C | D |
|---|---|---|---|---|
| | **Results Chain** | **SMART KPIs (+ Targets)** | **Means of Verification** | **Assumptions** |
| 1 | Impacts | KPI | MoV | Assumption |
| 2 | Outcomes | KPI | MoV | Assumption |
| 3 | Outputs | KPI | MoV | Assumption |
| 4 | Activities | KPI | MoV | Assumption |
| 5 | Inputs | KPI | MoV | Assumption |

The matrix summarizes the issues discussed earlier:

- Column A: lists each step of the results chain (Step 3 of the project cycle);
- Column B: adds their KPIs (include the target in brackets) (Step 4);
- Column C: adds the Means of Verification of the KPIs in each step in the chain (Step 4); and
- Column D: adds the assumptions against each step in the chain (Step 5).



The logframe can help to test the logic of the overall project structure both for design (Steps 1 to 5), appraisal (Step 6), and MEL (Step 9), for instance:

- inputs (measured by verifiable KPIs) plus assumptions will enable activities;
- activities (measured by verifiable KPIs) plus assumptions will deliver outputs;
- outputs (measured by verifiable KPIs) plus assumptions will support outcomes; and
- outcomes (measured by verifiable KPIs) plus assumptions will contribute to impacts.

During implementation (Step 8), if poor progress is identified, potential problems can be found by following the logic and assumptions.

#### *Project documents*

Project documents come in many forms and styles. The ministry responsible for the project cycle should establish a format, with guidance. Three possible project documents should be considered:

- a simple project document such as a Project Concept Note (PCN) or Project Information Brief (PIB). This should normally be prepared by the staff in the ministry with the line responsibility for the sector/topic related to the project. This can be used:
  - at an early stage to identify a project concept to help decide whether it is suitable for further development either domestically, or with the assistance of a development partner;
  - as part of early prioritization, such as the National Infrastructure Investment Plan process; and
  - for smaller and simpler projects, which do not need a lot of detail.
- a detailed or Full Project Proposal (FPP). The sector/line ministry should lead. In this case they may need more formal and structured technical support. This should follow the same structure as the PCN/PIB; ideally it should build on the same document. This may be used for larger, more complex documents that are funded locally, or through development partner assistance.
- the Detailed Project Documentation (DPD) covering design, appraisal (environmental, financial/economic, technical), detailed specifications/TORs, tendering documents and more:
  - for large development partner-funded projects, these are usually produced by the staff and consultants provided by the development partner. Ministry staff, however, should still engage in the process to ensure needs are met; and
  - if development partner support is not available for larger and complex projects, the PIC may have to contract specialists to help with the development of the documentation and specifications required.

For all documents being prepared, the necessary level of stakeholder consultation is important, and stakeholder inputs need to be validated and correctly reflected.

### 3.7.2. Appraising the project document

Even with careful project design, assessment is needed to check if the project will deliver the required change in a reliable, sustainable, feasible and cost-effective manner. Appraisal seeks to answer these questions by taking place before the project starts. It uses the starting/baseline data and forecast data based on the results chain logic and assumptions, to determine likely results. It then considers the likely benefits against the likely costs using a variety of techniques and criteria. This may help further improve the project design, decide between possible alternative projects, and whether to go ahead with the chosen project.

These types of assessment draw on different techniques and skills from a range of professions, such as environmental, social, and cost effectiveness.

The level of detail in the appraisal will depend on whether it is a PCN/PIB or an FPP. The detailed appraisal will be part of the DPD.

The first stages of appraisal should follow the same thinking that goes into the preparation through the pre-project and first five stages of the project cycle.

Appraisal is best performed by someone with project skills, but without involvement in the project design. This is particularly the case for appraising the project design. The precise order of the design appraisal will depend on the format of the project documentation. Box 1 below captures points which need to be considered as part of an appraisal process.




## Box 1: A Checklist for Appraisal

**Project Title** – is it clear, informative, are acronyms defined (unless internationally recognized ones)? Not too long? Not too complicated?

**Location** – is it clear and easy to locate?

**Organizational arrangements** – are all relevant roles clearly defined and are the correct ones identified? Are specialized organizations included for technically more complex projects?

**National strategy** – are all the relevant parts of the strategy included? Is it clear why they are included?

**Links to other Plans** – is the project linked to other relevant planning and policy documents (sector, region, spatial, environmental, social, etc.)? Have all these links and consultations been made?

**Stakeholders** – have they been clearly identified? Have they been consulted? Is it clear who will benefit or suffer and how? Does it explain their roles and how they might influence the project?

**Justification** – is it based on a clear situational analysis, describing the issue to address, and thus the need for the project? Does the project document clearly:

- set out the planned and current situations, and the resulting gap between the two?
- identify (diagnose) the problems/reasons/causes for the gaps, and the problems that are the consequences of the gap? Has a problem tree been designed?
- identify viable and feasible solutions to fix the problems? Has a solution tree been designed? If so, is it consistent with the problem tree?
- turn the solutions into a clear and logical results chain in the following sub-parts of the proposal?

**Outcomes and impacts,** are:

- relevant to the stakeholders?
- clearly covering results beyond the control of the project but which the project (with others) can support/contribute to?
- consistent with policies and plans at sector and national/strategic level?
- linked to the consequences of the gaps?
- identifying positive and negative results?

**Outputs,** are:

- within the capacity of the project to deliver (if the assumptions are met)?
- relevant and acceptable to the stakeholders?

**Activities** – cover all major steps (e.g., work plans) to produce the output?

**Phasing and timeline** is this consistent with:

- the time to obtain project approval and funding?
- other decision-making requirements?
- the required activities and available flow of inputs – including procurement procedures?

**Inputs and budget:**

- have the inputs for the activities been clearly identified and their cost accurately appraised?
- are the inputs available in the required quantities and qualities and times? Or do special arrangements need to be made?
- have any special procurement arrangements been identified?

**Operations and maintenance:**

- are these clearly established as being incremental to the project?
- are the estimates realistic, e.g., is there adequate provision for maintenance?
- does it make clear which operations and maintenance costs will be part of the project cost and which will have to be funded after the project is completed?
- if operations and maintenance costs are greater than revenue, have options been identified to fund these ongoing costs, and are the options viable? Will the operations be financially sustainable?

**Assumptions and risks:**

- has the logic chain clearly considered the assumptions at each stage and the risks of them not being met?
- are the assessments of risks' likelihood and impact realistic?
- have environmental issues been addressed? Is an EIA required?
- does the project support greater resilience, especially to extreme events and climate change?
- have possible future changes, e.g., from increased population concentration in a residential area, to possible impacts of climate change, been taken into account?
- does the project provide clear mitigation of those risks that can be addressed?
- is it clear that no risks are extreme enough that they may undermine the viability of the project?

**KPIs**:

- have they been identified to measure the use of inputs, progress with activities, delivery of outputs, and possible outcomes that will occur within the project time frame or after its completion?
- are they SMART?
- have adequate data collection and reporting arrangements been put in place?
- are the targets for the KPIs established, and are they realistic and consistent with the conditions and needs of stakeholders?
- have clear procedures been established for reporting progress and feeding it back into future decision-making and learning?

**Logframe** – has one been produced, and if so, do the steps read logically to help with the logic of the overall design?



### 3.7.3. Cost-Benefit Analysis (CBA) – is the project worth doing?

Even a well-designed project still needs to be worth doing. Are its benefits greater than its costs? This is the basic question that CBA seeks to answer before government, stakeholders and development partners consider funding a project. Given competing priorities of government and limited funding, such considerations help to effectively allocate and use scarce resources.

If the project output is a commercial operation, it is necessary to forecast the costs of the project, the costs of operating it once in place, and the likely income from the operation and sale of the output.

CBA helps to compare the future flow of income to find out if it is at least sufficient to cover the initial investment (the project cost) and the subsequent operating and maintenance costs. It takes account of how people discount the future compared to today and applies a Rate of Discount on these future flows. This generates net flow of costs and benefits, to calculate the Net Present Value (NPV), at a given rate of discount, or Internal Rates of Return (IRR), the rate of discount which makes the NPV zero.

The CBA can thus help to:

- determine whether the project is viable and worth proceeding with it (i.e., NPV is at least positive, or the IRR is greater than a threshold rate); and
- choose between different viable projects (i.e., which has the greater NPV or IRR).

CBA is simple to calculate if a list of costs and benefits in monetary terms are available. Where this is not possible, there are more sophisticated options to consider the price/cost of an item, including non-market values and shadow pricing. This can inform non-commercial projects but given the range of assumptions and judgments that it requires, is much more complex and demanding than a simple CBA. There are many detailed examples of how to do a complex CBA.[8]

A simplified process flow for how to do a CBA is shown in Annex 2.

### 3.7.4. Alternatives appraisal techniques

Given the challenges of applying a full CBA to many government projects, some alternative techniques can be considered, including:

**Payback period**: this compares the number of years it will take for the net income to add up to the investment cost. This can be used to rank different projects or investments, but does not discount net benefits, nor take account of what happens after the payback period ends.

**Cost per unit:** if it is possible to value cost, but not benefits, the cost in terms of some unit can be considered. For example, cost per student, per patient, per km of road built. This can give a better magnitude of the relative cost compared to other measures and help rank alternative options.

**Macro-fiscal analysis:** most projects have some impact on the public finances. In some cases, this is sufficiently large that it should be considered during project appraisal. This may consider the direct revenue and expenditure (including debt sustainability) of the project on the budget.

**Commercial viability analysis and risk analysis:** can be used for commercial activities, more often managed, and operated by public enterprises or private businesses.

[8] Benefit Analysis for Development: A Practical Guide (adb.org) provides details of the approach used by ADB. CBAx Model- Illustrative Example Lurgi (treasury.govt.nz) shows a detailed model used by the NZ government. Other examples are also available on the internet.

### 3.8. Step Seven: Approval and Funding

Once a project has been appraised and found to be well designed, with appropriate net benefits, it is eligible for final approval and consideration for funding. Given the resource constrained nature of PICs and their heavy reliance on development assistance, the process for approving and funding of projects can be complex.

#### 3.8.1. Project approval

Regardless of the source of funding, all projects should be approved using the established national systems. Key decision makers include:

- the Ministry responsible for the project cycle (these may be Finance, Development, Planning or similar);
- cross cutting 'development committee(s)' at technical and/or policy level; and
- often Cabinet, even the legislative.

Various arrangements are possible. TORs for decision makers should be clear, including thresholds and types of decisions they are authorized to make. Appropriate Secretariats (usually the ministry responsible for the project cycle) need to be resourced to provide clear advice and recommendations to decision makers based on the appraisal and other important considerations. Decisions and approval should be formal and documented in clear decisions, and made publicly available to encourage transparency and accountability.

Ad-hoc and undocumented processes should be discouraged as they undermine an effective project cycle and easily lead to poor choices, misuse of funds, and failed projects.

#### 3.8.2. Approval of project funding

Decisions related to the funding of a project depend on many factors:

- who is preparing the project?
- the sector/area it is in?
- who will implement the area?
- what is the status of the fiscal framework and budget?
- what sources of external funding are available – grant aid, loans (soft and commercial)? what are the geo-political conditions?

Once approved, the project is available for funding during the next budget[9] round, or from domestic funding that may already have been allocated for projects. Ideally, some degree of prioritization should be applied to choosing between the available projects. This should draw on the results of the project appraisal.

At a minimum, decisions to use domestic funds should be clearly based on the project appraisal and go through clear approval procedures consistent with the Public Finance Act and other laws and regulations. This should be recorded in the development/capital budget and enter the project implementation phase.

[9] For more details on how to improve links between national plans and budget you can refer to "Improving the Links between National Plans and Budgets for Sustainable Development in Pacific Island Countries – A Practical Guidance Note" published by the UNESCAP – https://www.unescap.org/resources/improving-links-between-national-and-sector- plans-and-budgets-sustainable-development



Development partner funding can provide important access to additional resources and technical skills. It can also be challenging to manage. It depends on the priorities and focus of development partners who follow different financial years and funding cycles/procedures[10] to that of the domestic budget. Having well designed projects is an important starting point for dealing with these challenges.

This Guidance does not cover management of development cooperation and donor partnerships.[11] However, given funding is a key part of the project cycle, it is critical that capacity is built to improve the effectiveness of external funding, including for:

- promoting domestic ownership and managing donor engagement;
- aligning external funding with domestic priorities, policies, and plans;
- harmonizing different development partner support to improve consistency; and
- ensuring appropriate, sustainable processes and technology that are suitable to domestic conditions.

For project funding to operate effectively, no matter what the source, the development/capital budget must operate with sufficient flexibility and transparency to ensure that funds are allocated to prioritized projects. Once the project has started, funding should continue over the life of the project.

[10] A key challenge is when development partners directly manage the funds, for example, procurement of inputs, as opposed to cash ones that go through the domestic government system.

[11] Aid policy, management of development partners and related issues need to be well established, and integrated with the project planning cycle in cases where public investments are externally funded.

### 3.9. Step Eight: Project implementation

Effective project management and implementation is critical for success. Procedures/regulations must be followed, inputs procured, budgets and funds managed, activities undertaken, outputs produced, progress monitored, and stakeholders engaged.

#### 3.9.1. Project management arrangements

Organizational arrangements depend on the size and complexity of the project set out in the results chain design:

- small, simple projects may be implemented along with the regular operations work of the ministry or agency responsible for the project;
- medium sized projects may require some existing staff to join an internal Project Team; and
- larger, more complex projects may require a dedicated Project Management Unit.

#### 3.9.2. Requirements for a Project Management Unit (PMU)

Large projects funded by development partners often include a PMU. Its role and operations should be documented and agreed. The procedures the Unit follows must balance the requirements of both the development partner and government administration. Ideally, PMUs should be located within the Ministry which focuses on the project. Poorly resourced and skill-lacking PMUs are a source of poor project progress and failure.

Typical PMU capacities include:

- **Management** - managing HR, office operations, setting work plans and budgets, communicating with stakeholders;
- **Finance** - accounting for and reporting on funds under the direct control of the PMU;
- **Procurement** - for recruiting the appropriate consultants, contractors and purchasing the appropriate supplies for the project;
- **Specialist skills** - including, but not limited to engineering designs, environmental and social safeguards, and other technical skills; and
- **Monitoring, evaluation, learning and communications.**



### 3.10. Step Nine: Monitoring, evaluation, and learning

Monitoring, evaluation, and learning (MEL) are all important aspects of the project cycle and can be described as follows:

- Monitoring: entails tracking progress, collecting, and recording data to feed into evaluation;
- Evaluation: is a backward-looking form of assessment, explaining the progress made, and the reasons for divergence from what was planned; and
- Learning: seeks to apply lessons from the evaluation to improve current and future performance.

MEL is only possible if there is a clearly established results chain with a workplan and budget, and KPIs and targets. To be effective, MEL must operate at all levels of the project results chain.

During the project, MEL as part of the management process, should consider questions related to availability of inputs, use of budget, timing of activities, unanticipated disruptions, quality, and timeliness of output delivery. If things are progressing as planned, the processes can continue. However, if some things are not going to plan, and if there are delays or problems, there is a need to evaluate the situation and decide what adjustments are needed. This helps management to learn from progress and how to improve the project implementation.

After project completion, MEL as part of project closure, identifies progress (the funds used, the outputs produced, the stakeholders support) against what was planned. It can help identify areas where bottlenecks developed or unanticipated risks arose. After closure, if MEL is appropriately designed, it can help answer questions in the longer run about the sustainability of the project and longer-term contribution to the stakeholders.

# 4. ANNEX

## 4.1. Annex One: Results Based Approach

The results chain is a powerful part of the Results Based Approach. It can assist with many initiatives for change, including the design of plans, policies and projects. Section 3.7 outlines the results chain and the nature of each part of the chain.

With reference to Table 4, the top three bars relate to the results being sought. The output level refers to an individual's or an organization's direct role. The top two bars are results further out – outcomes and impacts.[12] The higher results become broader, more general and cover more people, and often take a longer time to appear. The bottom two bars are the items that foster the results – the inputs and activities used to produce the outputs.

Table 4: Results Chain

| | Results Chain | Parts of Chain | An Example |
|---|---|---|---|
| Results | Impact | High level results we contribute to with others | Healthier population |
| | Outcome | Medium level results we support with others | Decreased mortality |
| | Output | The result we are responsible to deliver | Improved health services |
| Foster | Activities | The things we do to produce the outputs | Increase number and access to Health professionals |
| | Inputs | The resources we need to undertake the activities | Increased budget for hospital and operations |

The links and logic of the results chain work in both directions:

- ***Bottom to Top***: the logic of the chain is ***'if…then'***:
  - ***if*** the inputs are available, then the activities can take place
  - ***if*** the activities are completed, then the outputs will be delivered
  - ***if*** the outputs are delivered, then the outcomes are possible (not guaranteed)
  - ***if*** the outcomes are possible, then the impacts may eventuate
- ***Top to Bottom***: the logic of the chain is ***'how…by':***
  - ***how*** impacts will be supported? by the outcomes (other outcomes needed for delivery)
  - ***how*** will the outcomes be supported? by the outputs (delivery needs other outputs)
  - ***how*** will the outputs be produced? by the activities
  - ***how*** will the activities be possible? by the inputs

The ***'if…then'*** and ***'how…by'*** logic of the links can be used to check the validity of results chains from both directions and ensure it is consistent. Poor logic in the results chain tends to produce poorly designed projects.

### Difference within results: outputs versus the rest of the results

The output level refers to what an agent (individual, or organization)[13] is directly responsible to deliver. The top two bars are results further out. They lie beyond the direct control of the agent which supports outcomes and contributes to impacts. It is not directly responsible for their delivery.

On the other hand, depending on how the results chain is designed, a failure to deliver an output can feed up into failure at the outcome level and beyond. This raises the distinction between a necessary condition (that must be in place but alone cannot deliver the result) and a sufficient condition (which is also necessary but alone can deliver the result).

The choice of the output level is critical for the design of any intervention. It must be set at a level that the agent can manage and deliver.

### Difference between results and activities

A result is described as a situation or condition, it is not a process or activity.

Activities describe how to take the inputs and convert them into the required outputs, to support the higher-level results. Activities can be described with verbs, or 'doing words' like, walk, build, design, make, write. 'To' can be used in front of the verb like 'to walk', 'to build', etc.

While the wording may be similar, the differences are important:

**Output:** a well designed and constructed road providing safe and easy transport [a condition, something that has been done].

**Activity:** design and construct a safe and easy to use road [thing to do].

12 This guidance is using the widely recognized results-based language. Some approaches, while basically following the same logic, use different terms.

13 The individual's outputs support the organization's outputs, therefore the organization's outputs are outcomes to the individual. This logic flows through all levels of results.

## 4.2. Annex Two: Cost-Benefit Analysis

Cost-benefit analysis (CBA) provides a decision framework that helps us to answer two important questions regarding project appraisal:

- **Is a proposed investment justified (on either financial or social grounds)?**

  To invest or not to invest? The answer may depend on whether who is asking this question, i.e., a financier, investor, producer, consumer, or government, could all have different perspectives. CBA enables us to provide advice to decision makers as to the likely answers. This is usually determined by whether the project generates net benefits (i.e., benefits less costs), and whether the project return exceeds a desired rate of return – or 'hurdle rate'.

- **How can we rank a set of project proposals (on financial and social grounds)?**

  Appraisal agencies are typically met with many proposals for investment. The question is, even if all projects are justified based on net benefits – which projects should we recommend for implementation? CBA enables us to compare net benefits of projects, and thereby assist with ranking.

Several practical issues need to be factored in when applying cost-benefit analysis. Often project proposals for the investment projects lack adequate information about costs and benefits. This absence of data for the conduct of cost-benefit analysis will impact the quality of project appraisal. Attempts to impose a 'strict' framework of cost-benefit analysis – involving accurate and comprehensive estimation of costs and benefits in all project profiles - are unlikely to succeed, net benefits would almost certainly be negative, and risks would largely be 'downside'.[14] However, a simple framework for cost-benefit analysis that aims to get policy debates moving in the right direction, and reduce transaction costs associated with processing project applications is likely to be well justified.

14 For example, projects would be delayed, and staff would be diverted from service provision to information collection and analysis.



Resources are available online[15] and can provide detailed guidance and tools to support CBA needs, which users could consult depending on needs. The basic steps involved in conducting a CBA are outlined in the text box below.

### BOX 2: BASIC STEPS FOR CBA

(i) Estimate project costs as comprehensively as possible.

(ii) Estimate financial benefits as comprehensively as possible.

(iii) Convert financial costs and benefits to economic values using conversion factors.

(iv) Address potential for non-cash, and spillover costs, taking care to specify any environmental, and cultural costs.

(v) Address potential for non-cash, and spillover benefits:

- If estimates are readily available, use them to conduct analysis;
- If estimates are difficult to quantify, insert annual benefit required to deliver a Net Present Value of zero. Use 'goal seek' function if necessary;
- Assess required benefit per beneficiary and make judgment about likelihood of achieving that level of benefit per person; and
- Make qualitative judgment about spillover benefits for public goods.

(vi) Conduct sensitivity analysis of key project assumptions and assess risks.

15 For example, refer to: Asian Development Bank website (https://www.adb.org/documents/cost-benefit-analysis-development-practical-guide) for a practical guide on CBA; a spreadsheet and approach (https://www.treasury.govt.nz/information-and-services/state-sector-leadership/investment-management/plan-investment-choices/cost-benefit-analysis-including-public-sector-discount-rates/treasurys-cbax-tool) developed by The Treasury, in New Zealand; an introduction to CBA (https://library.sprep.org/sites/default/files/PACC_CBA_Background_Paper.pdf), prepared by the Pacific Community; and CBA in World Bank projects (https://ieg.worldbankgroup.org/sites/default/files/Data/Evaluation/files/cba_full_report1.pdf).

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