

# I. WRITING THE FEASIBILITY REPORT<sup>1</sup>

## 1. The Project Cycle

All projects go through a series of distinct stages, or project cycle, between the initial idea for the project and the time when the project is completed. In general, the following stages can be identified in the project cycle.

1. An **identification stage** - The problematic situation that needs to be adressed by the project is identified. The needs, goals and purpose of the project are broadly identified.
2. The **planning and preparation stage** - During this stage alternatives for the project are analysed that are to address or mitigate the identified problematic. A project alternative is selected and a feasibility report for this project alternative is produced which explains in detail the rationale of the project.
3. The **appraisal or approval stage** - The approval stage is the stage where decision-makers, including financiers, determine whether or not the project will be implemented.
4. The **implementation stage** - In this stage detailed designs are completed and the project facilities are built and commissioned. Supporting activities such as staff training are also under way.
5. The **operational stage** - During the operational stage the project facilities are integrated with the existing system to reach the specified objective or goal.
6. The **evaluation stage** - During this final stage, the project is evaluated and the lessons learnt are identified so that future projects can be improved accordingly.

In this section we will concern ourselves **solely with the planning and preparation stage of projects** in which the preferred project is selected, the feasibility of this project is assessed and the report detailing the feasibility of this project is written. The main focus will be on two reports, the **pre-feasibility** report and the **feasibility report**, that are generally written as part of this stage. These two reports form the basis of a bankable proposal.

---

<sup>1</sup> The section on writing a feasibility report is largely based on Grover (1983).

## 2. Planning and Preparation Stage

### Key issues in the preparation of pre-feasibility and feasibility reports

The decision by an agency to finance and implement a project is generally based on findings of a comprehensive feasibility study which shows that the proposed project is the preferred solution and is technically and institutionally feasible, financially viable, socio-culturally acceptable and economically justified.

Both the pre-feasibility report and the feasibility report, form the basis on which the decision will be made to approve or reject the proposed project. Based on the pre-feasibility report, which includes the selection of the preferred project, a comprehensive feasibility report is drafted in which a more in-depth analysis is undertaken of the preferred project alternative.

#### The Pre-Feasibility report

##### Aim

The basic aim of the pre-feasibility report is to select a project alternative that can improve wastewater management at minimum cost in the near future.

##### Key issues

The pre-feasibility report analyses the past and present situation in which the project will intervene. Also included is a preliminary analysis of alternative projects, which can address this problem situation. Projects that are technically inferior or culturally unacceptable are eliminated. Ideally, the pre-feasibility report is based on limited fieldwork. Initial consideration is given to relevant institutional arrangements and financial considerations. The pre-feasibility report can be used to secure political commitment (at the municipal and/or national level), to identify stakeholders, and to involve the private sector and communities.

#### The Feasibility Report

##### Aim

The aim of the feasibility report is to confirm the rationale for selecting the chosen project.

##### Key issues

The feasibility report will be the basis on which decision-makers decide whether to support or reject the project. Eventually, project appraisal and investment decision are based on the feasibility report.

This report provides preliminary designs and cost estimates for the selected project, based on considerable data gathering and analysis,

with input from ultimate users (e.g. all relevant stakeholders). This means that considerable information is required at the time the feasibility report is written. Feasibility studies are expensive and require intensive effort and, therefore, should not be done until a preliminary screening and ranking of alternatives is made to show the relative merits of the projects proposed for implementation.

The feasibility report also defines required supporting activities and provides a cost-estimate for them. Detailed consideration is also given to institutional arrangements (both at the agency and the community level), the subsequent operation and maintenance of facilities, and financial aspects. Very important are the investments, the need and costs for operation and maintenance, as well as the ways to secure cost-recovery. Finally, all probable impacts are considered and a conclusion is drawn whether the project is technically and institutionally feasible, financially viable, socio-culturally acceptable and economically justified.

## **Design Aspects**

### **Structure and content of a pre-feasibility report**

#### **Summary**

In the summary the main points of the pre-feasibility report are summarized for individuals without the time or need to read the entire report.

#### **Introduction**

This chapter briefly explains the reasons for the report and how it was prepared. Preferably, the introductory chapter will contain information about:

The *Project Origin* – a description of how the proposed project idea was developed.

The *Organization and Management of the Study* – an explanation how the pre-feasibility study was carried out.

*Scope and Status of this Report* – an explanation of how this pre-feasibility report fits in the overall process of project preparation.

#### **The Water Sector**

This chapter (although highly desirable) is not an absolutely essential part of a pre-feasibility study. It provides a general overview of the water sector. The advantage of such an overview is that it provides the decision-maker with a general context in which it can place the proposed project. Ideally, this chapter should show how the proposed

project supports national and sectoral development plans. In most countries this sectoral overview would have a national focus, but in some countries (where individual states are large or where the national government does not have the basic responsibility for sector services) the overview should be presented in the context of the individual state or particular region. This chapter can include aspects like:

Country Background – (topographic features, climate, population, urbanization, overview of government structure, etc.).

Economic and Health Indicators - summarize the main features and principal sectors of the national economy, including information on per capita income, levels of poverty, health indicators, etc.).

Water Resources and Control - Provide an overview of water resources and water use.

Sector Organization and Developments – briefly describe the government and non-government institutions, which have an impact on the sector.

Present Service and Coverage Standards - discuss the patterns of wastewater treatment by region and by season. Also discuss the service reliabilities.

Sector Goals - Describe the country's past record in setting and fulfilling sector goals.

Past Projects - List and describe briefly all projects undertaken within the past ten years (by region) and estimate the total expenditure for each project.

### **The Project Area and the Need for a Project**

This chapter explains why a project is needed and tells the reader about:

- The project and its people.
- The present wastewater management services in the project area; the prospects for future development.
- The need to improve existing services.

The following sections should be dealt with in this chapter:

Project Area – description of the project area.

Population Patterns – discuss the population and its distribution in the project area.

Economic and Social Conditions - Give a general description of present living conditions for people of different socio-economic and ethnic groups.

Sector Institutions - Discuss the role and responsibility of all institutions (government and non-government) involved in wastewater management in the project area.

Available Water Resources - summarize the quantity and quality of surface and groundwater resources, actual and potential, in the project area and vicinity. Comment on the quality and reliability of available data.

Existing Sanitation Systems and Population Served - this section should summarize and assess all existing sanitation and waste disposal systems in the project area and estimate the number of people each system serves.

Need for a Project - This is the key section of this chapter. In this section conclusions are drawn about the need for a project in light of population patterns and projections, existing service levels and standards, and prospects for improving and expanding existing systems. Basically in this section it is summarized why the existing systems cannot cope with present (and projected) demands for services.

### **Project Alternatives**

In this chapter alternatives for improving wastewater management services are proposed and evaluated. The main aim is to recommend a feasible and affordable project aimed at mitigating the problem described earlier. The alternatives should be evaluated in terms of their social, economic, technical, financial, environmental and institutional feasibility.

### **Conclusions and Recommendations**

This chapter informs decision-makers of the essential results of the pre-feasibility report, including the next steps necessary to develop a project. This chapter includes the following aspects:

Conclusions - a brief summary of the results of the pre-feasibility study.

Issues and Risks – a major objective of the pre-feasibility stage of project investment is to identify and resolve potential problems that could endanger the success of the project. Possible issues and risks should be identified.

Recommended Actions - all actions necessary to complete project preparation and implementation should be identified.

### **Structure and content of a feasibility report**

The following report format is generally applicable, although it may vary depending on the specific project.

### 1. Summary

The most important results of the feasibility study should be summarized for the convenience of the readers. The summary should be concisely written and should present the proposed project clearly.

### 2. Background

This chapter should describe the history of the proposed project and explain how it fits into the national sector strategy and the long-term development program. Plus municipal responsibilities and roles of stakeholders involved.

### 3. The Project Area and the Need for a Project

This chapter of the feasibility report is similar to the same chapter in the pre-feasibility report.

### 4. The Proposed Project

This chapter describes the recommended project in detail. Information here is based on extensive analyses and preliminary design. Summary information in the report is supported in back-up documentation in annexes.

Dimensions of the project that should be elaborated upon in this chapter include:

*Objectives* - objectives that the project should achieve should be expressed both as general development objectives and operational objectives. General development objectives include aspects such as expected health improvements, improved living standards, institutional improvements etc. Operational objectives for the project concern improvements in coverage and treatment standards. Each objective should be quantified (to the extent possible), and a schedule for achieving these objectives should be presented.

*Project Users and their Perspectives* - the expected beneficiaries and other stakeholders of the project should be defined. The benefits that the project will bring to the beneficiaries should be realistically estimated. This section should also contain an explanation about the involvement and input of potential users of the project.

*Project Description* – Where the need for the project and the analysis of project alternatives is the most important part of the pre-feasibility report, the project description forms the backbone of the feasibility report. In this section the various components of the project are clearly described.

*Integration of the Project with Existing Systems* - explain how the various physical components of the project will be integrated into the existing systems.

Responsibilities for Project Implementation - This section describes how the project will be designed and built and how it will later be operated and maintained, including the role of other stakeholders.

Cost Estimates - provide an overview of the estimated cost of the entire project and detailed cost estimates for each project component for each year of the project period, as well as cost recovery.

Implementation Schedule - Provide a detailed and realistic implementation schedule for all project components.

Future Operation and Maintenance of the Project - describe all groups that will be involved in operation and maintenance after the project facilities are built, including donor innovative financial arrangements and an exit strategy.

Environmental Impacts - Briefly describe the various environmental impacts that are expected to result from the project, including those on public health and/or water resources. This could be done with a step-wise approach.

Institutional Aspects – Describe how the organization and management of the project during the operational stage of the project is arranged. This section should include an assessment of the organization responsible during the operational stage in terms of management and personnel.

Financing Plan - This section summarizes all sources of funds (e.g. user-pays principle, cross-subsidizing etc.) for the implementation of the project.

## **5. Conclusions and Recommendations**

This chapter states whether the proposed project is feasible when judged from all perspectives and recommends actions to be taken for its implementation. It also discusses issues and risks associated with the implementation of the project.

Justification - Discuss in why the proposed project is justified and should proceed. This includes summarizing how the project will satisfy the desired objectives and confirming that the proposed project is the most cost-effective solution to meeting these objectives. The interest of the intended beneficiaries of the project should be highlighted and their role in project preparation. Specific reference can be made to the willingness and capability of the intended beneficiaries to support the project. In case the project benefits can be reasonably quantified and valued, compare them to project costs for each year in the future. Finally, the justification of the project also includes a brief discussion of the effect of not proceeding with the project.

*Conclusions* - the conclusions should be summarized that demonstrate that the project is feasible economically, technically, socially, financially, environmentally and institutionally.

*Issues and Risks* - Identify all issues that may pose a risk to project implementation and operation. Make a judgment as to the gravity of each risk and suggest ways of minimizing such risks.

*Uncertainty and Sensitivities* - Examine the consequences of small and large changes in the major assumptions on which the report is based. Test the sensitivity of the project to changes in basic parameters such as delay in project implementation, reduction in benefits, increases in costs, etc.

## References

- Grover, B. (1983). Water Supply and Sanitation Project Preparation Handbook: Volume 1, Guidelines, World Bank Technical Paper Number 12, Washington.
- Sturrock, W. (2001). English Communication Skills: Technical Writing and Presentations, IHE028/01/1.