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LOCAL MANAGEMENT OF PLANS AND PROJECTS:  
INTRODUCTION TO PROJECT PREPARATION \*/

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## CONTENTS

	<u>Page</u>
SUMMARY.....	1
I. INTRODUCTION .....	2
A. Background .....	2
B. The need .....	4
C. The participants in the provision of infrastructure services .....	5
1. Community organizations .....	6
2. Other non-governmental organizations and groups .....	6
3. Municipal and local authorities .....	6
4. Government controlled national and regional agencies .....	6
5. Funding agencies .....	6
D. The project cycle .....	7
II. PROJECT PREPARATION REQUIREMENTS .....	13
A. Classification of projects .....	13
1. According to the main sector of project activities .....	13
2. According to the type of activity to be carried out .....	13
3. According to the modality of execution and funding .....	14
B. Evaluation requirements .....	15
C. Structure of project proposals .....	16
1. General .....	16
2. Contents of the project proposal .....	17
III. CONCLUSIONS .....	25
<u>Notes</u> .....	25
Annex - POLICIES AND CRITERIA FOR THE DESIGN AND SELECTION OF INFRASTRUCTURE PROJECTS (WATER SUPPLY, SANITATION, ENVIRONMENTAL SANITATION) .....	27



## SUMMARY

A project for the provision of infrastructure services could be broadly defined as the "action, or actions, carried out to decrease the deficit in the provision of adequate infrastructure services". Therefore, a project can consist in the production of goods or services, or a combination of the two. The apparently simple process of satisfying community needs, which could be called the "project cycle", has nowadays become more complicated due to aspects such as the higher physical complexity of satisfying some of these needs, the more sophisticated social, economic and communal government structures, the greater awareness of the impact of physical actions on the environment, and the increased financial demands of satisfying these needs.

The reasons for the present deficit in the provision of adequate infrastructure services in the Latin American region are multiple, but all the countries at present suffer from the common problem of a generalized lack of national financial resources. However, it can be stated that there is plenty of room to increase the efficiency and effectiveness of the use made of the few resources available. In this context, the present document seeks to provide a first approach to the development of an instrument to be used by community and local authorities for the formulation of more adequate infrastructure projects.

The implementation of basic infrastructure projects normally follows a series of stages which are fairly similar or standardized. The stages of the "project cycle" show slight variations, in content and in form, according to the actual subject matter of the project and to the requirements of the various participants in the project implementation. At present, it seems difficult to depart from the present structure of the project cycle, so it would appear that the main task for the optimization of project preparation activities would be to improve the existing project cycle and the pattern of interrelationship among the participants.

In this respect, the present document attempts to clarify the links between the various elements related to project planning and implementation, namely: the participants; the actions or activities carried out at each stage of the project cycle; the instruments of action; the financial requirements and sources; and the results or outputs of each stage.

Projects in the area of infrastructure can be grouped according to: the subject area or main sector in which their activities will be carried out; the type of activity to be effected or specific objective to be achieved; and the mode or type of execution and funding. The above classification, plus the criteria for the evaluation of project proposals, will determine the main items of information to be included in a project study or proposal.

Finally, the document describes the structure of a project proposal, giving an indication of the items of information to be included therein in keeping with the needs of the different stages of the project cycle.

## I. INTRODUCTION

### A. Background

The present document focuses on the provision of infrastructure services through local or municipal-implemented projects. By infrastructure services are understood those physical components of shelter which are not the habitation in itself, but which help to provide adequate living conditions and settlement operation through their direct use, so that their availability is considered a basic need of the community. They would include water supply, sanitation, solid-waste collection and disposal, roads and footpaths, and energy distribution. Other community services, such as schools, health centres, recreation facilities, markets and public protection have functions and implementation requirements that are beyond the scope of the present document.

In this context, a "project" for the provision of infrastructure services could be defined as "the action, or actions, carried out to decrease the deficit in the provision of adequate infrastructure services". Consequently, a project can consist in the production of goods or services, or in a combination of the two, both for the creation and for the improvement of infrastructural physical installations and services. For the purposes of this document, a project would also be understood as an action (or activity) that has specific starting and completion points for reaching a defined objective. Thus, one "project" can consist in the construction of new water treatment facilities and laying of pipelines, while another "project" could consist in the study and design of a water tariff structure to reduce consumption. As may be seen, both projects have the same objective: to reduce the gap between water supply and demand. The selection (evaluation) of project alternatives for achieving an objective will be discussed later on in this document.

A while ago --or even now in a few communities-- when there was awareness of a certain need for the common benefit of the community, e.g., the need for electricity supply, the community itself would normally decide to take action to satisfy it, and the corresponding works or activities were initiated and carried out by themselves. This apparently simple process of satisfying community needs, which could be called the "project cycle", has nowadays become more complex. Some reasons for this fact are: the higher physical complexity of satisfying some of these needs; the more sophisticated social, economic and communal government structures; the closer interaction between neighbouring communities; the greater awareness of the impact of physical actions on the environment; and finally the increased financial demands for

satisfying these needs, partly as a consequence of all the reasons mentioned before.

At present, the conventional design, construction and operation of infrastructure services require the use of technology, materials, equipment and specialized labour that are not always available within a given community, or whose production and marketing cannot feasibly be located in every individual community or settlement. As a consequence, project implementation requires the mobilization of administrative and financial mechanisms for the procurement of these inputs outside the community, and project implementation thus becomes subject to conditionants beyond the latter's control.

With the evolution of basic community organizations to more formal systems of communal and intercommunal organization and government (assuming that the government organizations are chosen and shaped by the community to act as instruments of the execution of its wishes), it was natural to transfer the responsibility for the satisfaction of community needs to government organizations. However, the intrinsic limitations in the operation of systems of representative government (to say nothing of non-representative systems), the tendency of dominant groups to use and manipulate government institutions, and the indifference of the mass of the population towards sustained community involvement in project implementation have created a situation whereby the satisfaction of community needs has become a rigid administrative process, and the government is disassociated from or less responsive to the aspirations of the community.

Today's interrelation between settlements, centres of employment and services, and location of natural resources, such as water or energy, makes it necessary in most cases to study the provision of infrastructure services to an individual community within a wider geographical context. Economies of scale and the location and availability of natural resources are some of the factors that will determine whether the coverage of a project should be restricted to one community or should also include other communities and sectors. A typical example would be the design of the route to be followed by an access road from a point "x" to a rural community. When studying the tentative route, it might be realized that by making alterations to the most direct feasible route, it could also be possible to provide access to another rural community or to an area with potential for mineral exploitations, or to facilitate the transport of the area's agricultural produce. Certainly, the design and implementation of this type of project goes beyond the capacity and area of interest and responsibility of an individual community. Consequently, the execution of such a project would require the collaboration and co-ordination of the various communities and parties involved, as well as other organs of the central government or specialized agencies.

The realization that the world's ecological system has a limited capacity to absorb the products and by-products of human activities without deteriorating to the point of becoming hostile or limiting to human habitation is leading to a more careful analysis and evaluation of the environmental impact of human activities. Though the development of indicators to measure environmental impacts is still far from perfect, the methodologies for impact evaluation studies have developed to a degree of sophistication which is perhaps unjustified in the light of the basic measuring instruments they use.

However imperfect these instruments might be, they are at present the only way to predict or evaluate the probable environmental consequences of some development projects, and they are therefore a necessary component of the studies or proposals for implementing a project. Taking these factors into account, it would be relevant to ask some questions, such as: is a small or medium-sized community in a position to carry out these studies with some degree of reliability?, and if so, in which geographical context and to what detail should the studies be effected? The answers to these questions are complex, but it seems that in many cases the aim of executing environmentally sound projects would necessitate project inputs which are not available within the individual communities or which, in practical terms, individual communities do not have the entire responsibility for supplying.

The factors mentioned above create a need for the mobilization of financial resources and the following of detailed administrative procedures for their procurement and for project implementation. In the process of institutionalization of the implementation of infrastructure projects, funding and executing agencies have developed a series of requirements to be met by any organization or group which wishes to use their assistance for project funding and execution. These requirements and procedures have become more elaborate with time, mainly in order to increase the degree of certainty by the funding/executing agency that the project objectives will be achieved. They are also intended to provide these agencies with safeguards against possible defaults by the participants in project execution. Furthermore, as a result of the greater awareness of the environmental and socio-cultural aspects of projects, funding/executing agencies are increasingly asking for more in-depth studies and provisions in these aspects before funding is considered.

Before continuing, the reader's attention should be drawn to the fact that the lack (and provision) of infrastructure services in human settlements is part of the overall process of human settlements development. It is therefore both subject to and a determinant of physical, social, cultural, political and economic factors. All these factors should be studied in an integrated manner as part of project planning and implementation. The present document focuses on physical infrastructure services and seeks to maintain an integrated approach while being aware that it is only a sectoral contribution to the overall effort to improve the living conditions of the poor.

#### B. The need

At present, there is an obvious deficit in the provision of adequate infrastructure services in the Latin American and Caribbean region (from now on referred as the "region") (see UNCHS: A review of technologies for the provision of basic infrastructure in low-income settlements).<sup>1/</sup> Even more, there is no indication that this situation will be alleviated under the current financial situation, patterns of development and management of infrastructure programmes and projects. The reasons for this state of affairs are multiple, but all have their common source in a generalized lack of national financial resources for satisfying the basic needs of the region's population. Although seeking an explanation for the present precarious financial conditions lies outside the scope of this document, it may be stated



that there is plenty of room for increasing the efficiency and effectiveness of the use made of the few resources available.

One way of increasing investment effectiveness would be by giving more predominance to community participation in the implementation of infrastructure projects. The belief and active participation of the beneficiaries in these projects should take part of the financial and administrative burden from national governments and transfer it, in an equitable manner, to the community. Increasingly, the possibility of the community's participation in the satisfaction of their basic needs and in the management of urban development should also be a right of the population in any form of participative government. These criteria should also be applied to the design and planning stages of project implementation, where the community or their immediate institutional organizations, such as local authorities and municipalities, should take an active role in the generation of detailed proposals for project funding. This approach would have the benefit of designing projects that truly reflect unsatisfied needs as perceived by the community. It would also tend to expedite the project cycle and save time in the implementation of projects, decreasing the overall cost of infrastructure works. National and international agencies should also be made aware of the positive implications of these policies, in order to adopt more flexible approaches to the implementation of projects.

In this context, the present document seeks to provide an introduction to the various factors intervening in project implementation and give the basis for the development of an instrument to be used by the community and local authorities in the formulation of infrastructure projects. Such an instrument, to be effective, should serve the needs of both the entity preparing the project proposal and the entity that will review and appraise it in order to consider its funding or its inclusion in an infrastructure programme. Thus, both groups of participants will have a common instrument to establish a dialogue in the identification, planning, design, execution and administration of infrastructure projects. It is realized that there are difficulties in trying to reach different "interlocutors" --such as the various participants in infrastructure projects-- through the same document. However, it is expected that this first effort will provide the basis for further improvements and development in the identification and preparation of projects by community groups and local authorities.

### C. The participants in the provision of infrastructure services

As mentioned before, there are normally various participants in the execution of activities for the provision of infrastructure services. "Participant" is understood to mean the individual or organization mainly responsible for or involved in the conception and implementation of some of the activities of the project cycle. In this respect, the actual "executor" of an activity (consultant, contractor, etc.) is not necessarily considered a participant since normally they are instruments "used" by the "participant" to achieve specific objectives. However, there are cases where the "participants" are also executors, for example in self-help projects or when implementing agencies rely on in-house resources for project implementation.

To meet the objectives of this document, the following arbitrary classification of the participants in infrastructure projects has been prepared:

1. Community organizations. Where the initiative for action comes from the base or the people. They would include:

- a) Territorial organizations (neighbourhoods, quarters, blocks, streets, etc.) for multi-purpose actions;
- b) Purpose-specific organizations (committees/associations for water supply, electricity, roads, income generation, health, etc.);
- c) Women's groups (territory- or purpose-specific), and
- d) Combinations of the above.

2. Other non-governmental organizations and groups: Where the initiative for action comes from the "organization", working in close contact with the community to obtain their motivation and participation, and in co-ordination or collaboration with government organizations. This case would include:

- a) Political organizations and politicians;
- b) Interest groups;
- c) Religious organizations;
- d) Clubs (social, cultural, sports, etc.);
- e) Private sector requesting infrastructure services (industry, trade, etc.);
- f) Private sector offering services (building materials industry, consultants, contractors, etc.);
- g) Academic and research institutions;
- h) National NGOs, area- and sector-specific;
- i) International NGOs, area- and sector-specific.

3. Municipal and local authorities

4. Government-controlled national and regional agencies:

- a) Ministries at the national level;
- b) Regional authorities, development agencies, corporations, etc.;
- c) Government administered housing and/or service companies, corporations, authorities, institutes, etc., acting at national or regional level;
- d) Autonomous housing and/or service companies, corporations, authorities, institutes, etc., acting at national or regional level;
- e) Government co-ordinating or executing bodies for a specific territorial or socio-economic context (for example, a river valley authority or an emergency/disaster area commission).

5. Funding agencies:

- a) National (public and private);
- b) International (bilateral, multilateral, others).

#### D. The project cycle

The implementation of basic infrastructure projects nowadays follows a series of stages which are fairly similar or standardized and show only slight variations of content or form, according to the actual subject matter of the project and the requirements of the various participants in project implementation. The project cycle could therefore be divided into the following stages:

- a) Identification of needs;
- b) Establishment of order of priority of needs and definition of project objectives;
- c) Project preparation;
- d) Project appraisal;
- e) Project approval;
- f) Project execution;
- g) Administration, operation and maintenance. This stage also includes "Project/Programme Evaluation" which provides the linkage to further "Identification of Needs", in other words, it closes the project cycle.

This document is mainly concerned with "project preparation". However, as this activity is closely related to the other elements of the project cycle it will be conditioned by the order of priority of needs and the definition of objectives, and will also have to consider the main requirements and constraints involved in the stages of appraisal, approval, execution and administration. In fact, the final stages of project preparation will contain the basic elements and guidelines for project execution and administration. It is obvious that if an agency or group of persons wishes to take the initiative of preparing a project proposal, they need to have an idea as to how central governments and funding agencies "appraise" project proposals. Central governments, planning bodies, development banks and funds, bilateral agencies, etc., have internal guidelines that regulate their allocation of funds and set out the criteria that projects must meet in order to satisfy the agency's policy and technical requirements. Examples of these criteria for three international agencies are given in the annex.

Under present circumstances (the prevailing development model), it seems difficult to get away from the structure of the project cycle. It would also appear to be difficult to change the system of interrelations among the participants in project implementation. Thus, it has so far proved impossible to find a better and more practical alternative to a linear relation: community-local authority-national government-external funding agency. Simpler relations, such as community-external funding agency normally exist only in small-scale projects or where the external funding agency does not have funding (or assistance) interests at the national scale and in several sectors which force it to establish relations with national-level responsible institutions. This situation limits participation in such projects to funding and assistance from national and international NGOs, which, by the nature (or scale) of the need to be satisfied and the present (and also future in a non-utopic world) government structures have very limited coverage. It would therefore appear that the main task at present would be to improve the

existing project cycle and the participants' interrelationship model, rather than create new ones.

The following tables show the stages of the conventional project cycle, with brief explanations on:

- the participants;
- the main type of action or activity to be developed at a given stage;
- implementation of the action, that is, who actually executes the action;
- financing requirements and sources, and
- results (or outputs) of each stage.

It has been considered in these tables that "Project preparation" includes all the activities normally carried out to produce the traditional pre-feasibility and feasibility studies (or equivalent documentation) giving the information that would allow a "fair" appraisal of the project proposal. Thus, the preparation of detailed designs, tender and construction documents and costs are considered part of the "execution" stage, which also includes construction and/or implementation of project activities. However, it should be kept in mind that the above sequence does not often take place as indicated. Sometimes, funding agencies will ask for detailed designs before appraising the project, while in other cases the funding agreement will be reached through the preparation of a study that could normally be ranked as a pre-feasibility study.

Table 1

## TYPE OF ACTION OR ACTIVITY

	Participants				
	Community organizations	NGOs	Municipal and local authorities	Government agencies	Funding agencies
Identification of needs	Internal spontaneous process	Sectoral/territorial surveys and requests	Sectoral/territorial surveys and requests	Sectoral/territorial surveys and requests	Funding agencies normally operate at this stage through other participants or through internal sector
Definition of project objectives	Internal discussions, consensus and decision by community representatives	Decision on sectoral/territorial priorities for action	Decision on sectoral/territorial priorities for action	Decision on sectoral/territorial priorities for action	
Project preparation	i) Definition of costs/design/quantities for self-construction ii) Preparation of documentation required by funding agency	Preparation of documentation required by internal procedures or funding agency	Preparation of documentation required by internal procedures or funding agency	Preparation of documentation required by internal procedures or funding agency	Feedback/issue of agency's requirements to other participants
Project appraisal	i) Discussions/agreement on execution of project proposal ii) Submission of proposal to funding agency	i) Internal appraisal of project proposals prepared/received ii) Submission of proposal to funding agency	i) Internal appraisal of project proposals prepared/received ii) Submission of proposal to funding agency	i) Internal appraisal of project proposals prepared-received ii) Submission of proposal to funding agency	Appraisal of project proposal received
Project approval	i) Decision to undertake project ii) NA	i) Decision to undertake project ii) NA	i) Decision to undertake project ii) NA	i) Decision to undertake project ii) NA	Decision to undertake project
Project execution	i) Design, mobilization of resources, execution, commissioning of project ii) Execution of activities if community contribution agreed	i) Design, programming tendering, execution, monitoring, commissioning, evaluation ii) Monitoring/evaluation/inspection of projects executed by other participants	i) Design, programming tendering execution monitoring, commissioning, evaluation ii) Monitoring/evaluation/inspection of projects executed by other participants	i) Design, programming tendering, execution monitoring, commissioning, evaluation ii) Monitoring/evaluation/inspection of projects executed by other participants	Monitoring/evaluation/inspection of projects executed by other participants
Administration Operation Maintenance	i) & ii): O & M administration, cost recovery, loan servicing	i) & ii): O & M administration, cost recovery, loan servicing. Monit. & eval. Loan recovery if appropriate	i) & ii): O & M administration, cost recovery, loan servicing. Monit. & eval. Loan recovery if appropriate	i) & ii): O & M administration, cost recovery, loan servicing. Monit. & eval. Loan recovery if appropriate	Monitor/evaluation Loan recovery

Table 2

## IMPLEMENTATION OF THE ACTION

	Participants				
	Community organizations	NGOs	Municipal and local authorities	Government agencies	Funding agencies
Identification of needs	Community itself	Community-NGOs Contracted studies	Community Contracted studies Local authority itself	Gov. agency itself Contracted studies	Other participants
Definition of project objectives	Community itself	NGOs with/without consultation with community on basis of studies	Local authority itself on basis of studies or conditions imposed by gov. agencies	Gov. agency itself on basis of studies or conditions suggested by funding agency	Funding agency itself in consultation with other participants
Project preparation	i) Community itself ii) Contracted/externally supported studies	i) NGO itself ii) Contracted/externally supported studies	i) Local authority itself ii) Contracted/externally supported studies	i) Local authority itself ii) Contracted externally supported studies	Funding agency itself supporting other participants
Project appraisal	i) & ii): Community itself	i) & ii): NGO itself	i) & ii): Local authority itself	i) & ii): Gov. agency itself	Funding agency itself
Project approval	i) & ii): Community itself	i) & ii): NGO itself	i) & ii): Local authority itself	i) & ii): Gov. agency itself	Funding agency itself
Project execution	i) & ii): Community itself, consultants, contractors, other participants except funding agencies	i) & ii): NGO itself, consultants, contractors, other participants except funding agencies	i) & ii): Local authority itself, consultants, contractors, other participants except funding agencies	i) & ii): Gov. agency itself, consultants, contractors, other participants, except funding agencies	Funding agency itself
Administration Operation Maintenance	i) & ii): Community itself. Other participants except funding agencies	i) & ii): NGO itself. Other participants except funding agencies	i) & ii): Local authority itself. Other participants except funding agencies	i) & ii): Gov. agency itself. Other participants except funding agencies	Funding agency itself

Table 3

## FINANCING REQUIREMENTS AND SOURCES

	Participants				
	Community organizations	NGOs	Municipal and local authorities	Government agencies	Funding agencies
Identification of needs	Not strictly necessary	NGO funds	Local authority funds/ funds allocated by other participants	Gov. agency funds/ funds allocated by other participants	Own agency funds
Definition of project objectives	Not strictly necessary	NGO funds	Local authority funds/ funds allocated by other participants	Gov. agency funds/ funds allocated by other participants	Own agency funds
Project preparation	i) Community funds ii) Funds allocated by other participants	i) NGO funds; ii) Commu- nity and funding agency support	i) Local authority funds ii) Funds allocated by other participants	i) Gov. agency funds ii) Funds allocated by other participants	Own agency funds
Project appraisal	i) & ii) Not necessary	i) & ii) NGO funds	i) & ii) Normally local authority funds	i) & ii) Normally Gov. agency funds	Own agency funds
Project approval	i) & ii) Not necessary	i) & ii) Not necessary	i) & ii) Not necessary	i) & ii) Not necessary	Not necessary
Project execution	i) Community funds ii) Funds allocated by other participants	i) NGO funds ii) Funds allocated by other participants	i) Local authority funds ii) Funds allocated by other participants	i) Gov. agency funds ii) Funds allocated by other participants	Own agency funds
Administration Operation Maintenance	i) Community funds ii) Funds allocated by other participants	i) NGO funds ii) Funds allocated by other participants	i) local authority funds ii) Funds allocated by other participants	i) Gov. agency funds ii) Funds allocated by other participants	Own agency funds



Table 4  
RESULTS (OUTPUTS)

	Participants				
	Community organizations	NGOs	Municipal and local authorities	Government agencies	Funding agencies
Identification of needs	Expression of community needs	Expression of community needs. Sector/area review report	Sector/area review report or part of project identification report	Sector/area review report or part of project identification report	Sector/area review report
Definition of project objectives	Expression of community need for specific project	Expression of community need for specific project. Project identification report	Project identification report	Project identification report	Project identification report
Project preparation	i) Documentation: design, costs, execution details ii) Pre-feasibility and feasibility reports	Documentation: design, costs, execution details, or pre-feasibility and feasibility reports	Pre-feasibility and feasibility reports	Pre-feasibility and feasibility reports	Pre-feasibility and feasibility reports
Project appraisal	i) Expression of agreement/disagreement with proposed project ii) NA	i) Appraisal report ii) NA	i) Appraisal report ii) NA	i) Appraisal report ii) NA	Appraisal report
Project approval	i) Decision to undertake project ii) Decision to undertake project - formalization of agreements - allocation of funds	i) & ii): - decision to undertake project - formalization of agreements - allocation of funds	i) & ii): - decision to undertake project - formalization of agreements - allocation of funds	i) & ii): - decision to undertake project - formalization of agreements - allocation of funds	- Decision to undertake project - formalization of agreements - allocation of funds
Project execution	i) Design details - completed infrast. element/unit ii) Design report - completed infrast. element/unit - loan obligations	i) & ii): - design report - completed infrast. element/unit - loan obligations	i) & ii): - design report - completed infrast. element/unit - loan obligations	i) & ii): - design report - completed infrast. element/unit - loan obligations	- Loan release and monitoring procedures - completed infrast. element/unit
Administration Operation Maintenance	i) & ii): - element/unit operating and financed - awareness of new needs	i) & ii): - element/unit operating and financed - awareness of new needs	i) & ii): - element/unit operating and financed - awareness of new needs	i) & ii): - element/unit operating and financed - awareness of new needs	i) & ii): - element/unit operating and financed - funds recovered



... to aspects of infrastructure provision and operation, such as capital investment, institution building, research, human resources development, financing, operation and maintenance;

... to aspects of infrastructure provision and operation, such as capital investment, institution building, research, human resources development, financing, operation and maintenance;

II. PROJECT PREPARATION REQUIREMENTS

... to aspects of infrastructure provision and operation, such as capital investment, institution building, research, human resources development, financing, operation and maintenance;

A. Classification of projects

Projects in the area of infrastructure can be grouped according to:

- a) The subject or main sector in which the project activities will be carried out;
- b) The type of activity to be carried out or the specific objective to be achieved, and
- c) The modality of execution and funding;

1. According to the main sector of project activities.

Projects can deal with one or more of the infrastructure sectors as defined in section I-A. Thus, it is possible to have:

- a) Integrated projects: those covering all the infrastructure sectors in a balanced manner;
- b) Multisectoral projects: those covering several infrastructure sectors;
- c) Sector-specific projects: covering only one infrastructure sector at a time, such as:
  - water supply projects;
  - sanitation projects;
  - solid-waste collection and disposal projects;
  - energy distribution projects;
  - road and footpath projects.

2. According to the type of activity to be carried out.

A set of actions carried out in order to implement a project normally has a main focus which defines the character of the project, notwithstanding the presence of other elements which will also assist in achieving the ultimate objective of the same. Accordingly, it would be possible to have the following types of projects:

- a) Comprehensive projects: those dealing in a balanced manner with all the aspects of infrastructure provision and operation, such as capital investment, institution building, research, human resources development, financing, operation and maintenance;
- b) Projects dealing with some aspects of infrastructure provision and

use: those covering more than one of the aspects of infrastructure provision and operation mentioned above;

- c) Projects dealing with one aspect of infrastructure provision and use:
- i) Capital investment projects: relating to actions directly geared to the construction and/or physical (technical) improvement of infrastructure services. In this category would normally be included the actual preparatory activities, such as studies, designs and tendering, and the construction and upgrading activities themselves;
  - ii) Institution building and support projects: aiming to assist the implementing entity in developing its own capacity to carry out the functions necessary for the effective planning, implementation and administration of infrastructure services. The assistance usually consists in providing the additional capacity that is lacking or building up existing capacity to carry out the tasks mentioned above, plus any other complementary activity. The concept behind these projects is to build up the capacity of the implementing agency on a permanent basis during the period when the temporary assistance is being provided. This category would also include specific assistance for programme and project preparation studies, or other studies related to infrastructure provision, e.g., tariff studies or improvements in operation and maintenance and administrative procedures;
  - iii) Human resources development projects: including training, education and motivation activities for personnel involved in the provision of infrastructure services;
  - iv) User participation projects: those whose main objective is to promote the participation and collaboration of the community in the adequate development of the different stages of infrastructure provision, operation and administration;
  - v) Research projects: involving the investigation of new or alternative ways to improve the implementation, operation and administration of infrastructure services, both in hardware and software aspects;
  - vi) Operation and maintenance projects: to develop and establish procedures for the administration, operation and maintenance of infrastructure services.

3. According to the modality of execution and funding. There are many possible types of projects, if they are simultaneously classified according to the type of execution (combination of participants, executors, and implementation mechanisms), financing and cost recovery modalities. A general classification considering the most frequent types of funding is as follows:

- a) Community funded and executed projects;
- b) NGO funded and executed projects with community participation;
- c) Government funded and executed projects with community participation;
- d) Government funded and executed projects;
- e) Government executed projects with funds from international agencies.

B. Evaluation requirements

As indicated in section A, national and international funding agencies have established different sets of criteria to evaluate project proposals. These evaluation requirements determine the information that the implementing entity must include in its project proposal. The study and acceptance of a proposal will be facilitated by the degree to which it includes detailed and accurate information, and the reliability with which it makes comparisons among different options for solving a given supply-demand problem, for example, the choice between a capital investment project and a technical support programme. The same criteria would apply to the selection of alternatives within a given option: for example, the selection of the best engineering alternative for a capital investment project. It seems difficult, at this stage, to standardize the evaluation criteria to be applied by different agencies. However, we include below some aspects that are of interest to most government and funding agencies, since they are determinant in defining the structure of a project proposal and the type of evaluation to which it will be subjected. Ideally, these aspects could also serve to set up a project ranking system, to be developed by individual governments and funding agencies according to the relative weights they might give to each aspect, and including other elements of their particular interest. Thus, we have:

1. Capital requirement and measurement of rate of return for execution, operation and maintenance (economic and financial evaluation).

2. Qualitative and quantitative linkages to specific national or regional plans (economic, development, investment), and previous or ongoing programmes and projects in the sector (evaluation of project linkages and sectoral experience).

3. Degree of project acceptability by primary users, and by all levels of government and non-government participants in the project (evaluation of project stability).

4. Degree of project's replicability and applicability of concepts in relation to:

- a) Previously implemented projects, and
  - b) Future projects
- (evaluation of project appropriateness and consistency)

5. Need and use of local and imported resources

<p>Materials</p> <p>Equipment</p> <p>Labour</p> <p><u>Expertise</u></p>	<p>best to</p> <p>for</p>	<p>to</p> <p>to</p>	<p>implementation</p> <p>operation</p> <p>administration</p> <p><u>evaluation</u></p>
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(evaluation of project's contribution to local development).

6. Selection of the most effective type, size and location of project in relation to other options and alternatives for investment in the sector (evaluation of investment advisability).

7. Judgement of expected project impacts on community development and the environment (evaluation of project impacts).

8. Project coverage and required inputs per unit of service (evaluation of cost effectiveness).

9. Relation of the project to other sectoral or extra-sectoral activities which directly reinforce or complement its activities (e.g., human resources development, communications support, and community education and motivation) (evaluation of project's complementarity to other sectoral and territorial activities).

10. Inclusion in the project of other activities aimed at reinforcing or complementing the main action to achieve the proposed objectives (evaluation of project comprehensiveness).

11. Degree of existing community organization and expected participation in project activities (evaluation of community participation).

### C. Structure of project proposals

1. General. The documentation of a project proposal, or of any of the preliminary studies leading to a proposal, should provide in a clear and brief manner all the information required to make a thorough appraisal of the same.

It should also provide the basis for the execution of the activities that will follow its acceptance by the corresponding authority or organization. Large and complex projects require relatively more extensive and in-depth information on their nature, proposed execution and possible impacts. Some projects are part of a sectoral or regional programme for which the corresponding studies should have been carried out at the time. In this event, the project proposal can refer to the previous programme studies for all the general data, and only develop in the proposal those aspects that are specific to the project.

The information contained in a project proposal or study can be presented and arranged in many forms, depending on the particular criteria of the person or institution preparing it, or on the conventions and regulations that might exist in this respect. The present chapter provides a general description of the information items to be included in a project proposal. They cover the information requirements for the conventional stages of:

- a) Identification of needs;
- b) Establishment of order of priority of needs and definition of project objectives;
- c) Project preparation;
- d) Project appraisal;
- e) Project approval.

The information requirements presented herein do not claim to be unique and can be modified according to particular project needs. The same principle

applies to the decision on the information elements which should be included in a specific study.

The development and contents of each information item are not presented in this document, which aims to be only an introduction to project preparation. A future study, to follow the preparation of the present document, will undertake the task of providing the criteria and methodology for the development of each of the information items herein presented, suggesting those stages of the project cycle for which each item of information would be required. It is important to remember that in spite of the project proposal being prepared by one or more of the "participants" in the development of infrastructure projects, the development of such a study or proposal (in each of its stages) should always be co-ordinated and consulted with the other participants. This is especially important in view of the need for the integration of the beneficiary community into the process of project planning and preparation. The following sections of this chapter will deal with the contents of a study or project proposal, on the implicit understanding that the preparation of the same represents a multidisciplinary and multisectoral effort in which there is always consultation and consideration of the needs and interests of the various groups related to an infrastructure project.

2. Contents of the project proposal. The main elements to be included in a project proposal are:

- i) summary;
- ii) statement of the needs to be satisfied and project objectives;
- iii) outputs of the project;
- iv) review of existing conditions;
- v) review of project options and selection of the option to be recommended;
- vi) review of alternatives for the selected project option and selection of the alternative to be recommended;
- vii) technical description of the recommended alternative;
- viii) costs and financial arrangements;
- ix) administrative arrangements, and
- x) evaluation of the recommended alternative.

a) The summary

The study or project documentation should start with a brief summary providing the decision-maker with all the basic information regarding the objectives to be achieved and the actions recommended to that effect. Thus, it should give details on aspects such as the services or goods to be provided; the location where the actions will be carried out; their cost and the financial mechanisms to implement them; administrative arrangements and programming of activities; socio-economic evaluation of the proposed actions, and an abstract of the main sections of the document.

This brief statement of the study or proposed project should take up not

more than three to five pages of the document. It should be presented following the same order or structure used in the document as a whole.

b) Statement of the needs to be satisfied and project objectives

It might seem too obvious to repeat, but every project or proposal to carry out a set of actions must have an ultimate "objective" or "goal" in terms of satisfying an existing need. This basic consideration, which is clearly defined in projects for the industrial or productive sector, is often omitted or not well stated in social development projects. Perhaps the main reason for this situation is that social development projects, as opposed to industrial projects, cannot easily express in numerical or monetary terms the goods to be produced or traded, the demand for the same and the benefits or profits arising from the project activities or outputs. This situation could also explain the permanent position of disadvantage in which the promoters of social development projects stand when competing for funds with other projects or investment opportunities in the productive sector.

In view of the above, and despite the controversy that exists in this respect, the proposals for social development projects should strive to define the ultimate needs to be satisfied in a quantitative or qualitative manner. Thus, it is not enough to indicate that a sanitation project will "improve the health situation and living conditions of the inhabitants of Region A"; instead, the project should state, for example, that its ultimate objectives are:

- to increase the value of the land in the project area by X per cent;
- to reduce the morbidity related to enteric diseases by Y per cent;
- to increase the average household income by Z per cent, etc.

In other words, the project proposal should indicate and evaluate those components of the "living conditions" that are targeted for improvement through the execution of the project. The introduction of these criteria requires the systematic evaluation of infrastructure projects and the accumulation of data for use in the planning of other projects. An "impact evaluation methodology for infrastructure projects" has been prepared for this purpose.<sup>2/</sup> This document, together with the present "introduction", will be the basis for the elaboration of the "project preparation guidelines" to be published at a later stage. It is believed that the additional work necessary to define the project's ultimate objectives will be compensated by a better structuring of the proposal, especially on those aspects related to the formulation of the project outputs. It is also believed that this requirement will not be beyond the capacity of local teams preparing project proposals, since their closer knowledge of local conditions, plus the acquisition of basic training and information on project impacts, qualifies them to undertake this task.

The satisfaction of the perceived needs of a target population also requires the definition of the secondary or intermediate objectives pursued by a project. The description of these objectives is rather general in nature, but they provide a necessary link between the needs to be satisfied and the outputs. Taking again the example of a sanitation project, an intermediate

objective could be defined as "the improvement of the physical sanitation infrastructure for settlement 'A'", "the education of the inhabitants of settlement 'A' on sanitation practices", "the improvement on the operation of the sanitation services in settlement 'A'", etc. As may be appreciated all of the indicated objectives could in principle lead to the satisfaction of a need such as "reducing the morbidity related to enteric diseases by Y per cent".

At the same time, the definition of the objectives will allow the identification of the outputs that need to be produced according to the sector or line of action where it is eventually decided to carry out the proposed project.

c) Outputs of the project

In order to satisfy the perceived ultimate needs of a target group, that is, to reach the proposed objectives of a project, it will be necessary to produce a certain number and type of products and/or services. There is often a tendency, from an accounting point of view, to confuse "objectives" with "outputs". Thus, a project would be considered as having reached its objectives if it has, for example, provided sewerage services to 100 000 households in a given settlement. However, it should be clarified that the installations to serve 100 000 households are only what the project has "produced" in its efforts to attain the objective of improving the physical sanitation infrastructure to satisfy the need of, say, reducing the infant mortality and morbidity in that settlement.

It is important to keep this concept in mind, since most projects successfully reach the programmed targets or outputs, but many of them have end results that do not meet, or are in opposition to, the originally planned objectives or needs to be satisfied.

As with the project objectives, it is important to define the project outputs in a precise manner, since they will be the basis for the definitions of all the project activities, and hence the expected project execution time and costs. This is especially relevant for those outputs that are services, such as a training course or a programme of technical support to a government office or community organization.

As indicated before, there will normally be several options to reach an objective, and at the same time the selected option will have various technical alternatives. This section of a project document will present those outputs emerging from the finally selected option and alternative.

Although the sections dealing with the review of project options and alternatives are to be found later in the document, it is considered more convenient to present the description of the outputs for the recommended option next to the objectives, thus establishing a clear relation between them. In any case, the subject of the outputs will be dealt with again in this document when presenting and describing possible project options and alternatives.



d) Review of existing conditions

Once the proposed objectives and outputs of a project, programme or action have been defined, the project document will proceed with a description of those elements conditioning and leading to the selection of a particular proposal for action. The first step in this direction is to review all the background information relating to the case under study.

A thorough review of existing conditions will consider all those physical, technical, economic, institutional and socio-cultural aspects of a target population, installations and services whose conditions it is desired to improve. The review will not only study present conditions, but will also carry out a historical (in-time) analysis of how these conditions evolved in the past to reach the present situation.

The accumulated information on past and present conditions in the subject-area under study will allow the preparation of projections (estimations) as to how these conditions will develop in the future. The preparation of such projections will require the formulation of a certain number of assumptions or scenarios for change based on the experience of the person preparing the study, or in many cases based on factors or coefficients officially set up by the corresponding authority. Thus, there are often regulations or codes of practice indicating the type of demographic projections to be used, the useful life of installations and structures, the proportional increase with time in the use or consumption of a service or product, etc.

It is therefore clear that this part of the document will provide an indirect indication of the present and future needs to be satisfied, once the existing (and projected) conditions are compared with a desirable or official standard of satisfaction of those needs. At the same time, this section of the document will give information on all those elements that it will be necessary to provide, improve or change in order to satisfy the perceived needs. Finally, it will also give information on those elements and resources that it will probably be necessary to use in implementing the actions to satisfy the said needs.

As may be seen from the above, the information to be provided in this chapter is of key importance both for the correct estimation of the needs to be satisfied and the type of actions to be carried out, as well as for the realistic evaluation of the available and additionally needed inputs or resources for the implementation of the activities to satisfy those needs. Inadequate development of this section will result in the incorrect formulation of the contents and costs of a project proposal, either by omission or by excess.



e) Review of project options and selection of the option to be recommended

As explained before, there are several ways or options to reach an objective with the purpose of satisfying a need. For example, under certain conditions it could be possible to increase the water supply to an under-supplied area of a city by:

- i) upgrading the production and distribution capacity of the water supply system by the construction of new installations and works; or
- ii) increasing the water being distributed in the system, through a leak control programme; or
- iii) reducing over-consumption in certain sectors of the city through a) a public education campaign; b) a new differential tariff structure, or c) restrictions in the supply of water, and redistributing the surplus obtained to the under-supplied area.

The experience of the person preparing a study or project proposal will quickly narrow the field of existing options to the few that are most feasible for the specific conditions of the case under study. As a result of the above, this section of the document will determine in a very rough, but realistic manner, the outputs, activities and costs resulting from each feasible option. All of these will then be compared to identify the best option for future in-depth study. Assuming that all the options are equally effective for reaching the desired objectives, the comparison among them will be mainly based on economic and social considerations. For the evaluation of these social and economic aspects, it might be advisable to use similar criteria to those indicated in section "B" of this document.

f) Review of alternatives for the selected project option and selection of the alternative to be recommended

Now that the study has identified the most favourable option for an action or project, there remains the task of identifying the possible technical alternatives to carry out such an option and choosing the most convenient among them.

Let us take the example of the water supply need presented in the previous section and assume that it was found that the best option was to upgrade the production and distribution capacity of the water supply system by the construction of new installations and works.

The possible technical alternatives for carrying out such a project are numerous and are found at different levels in the formulation of a proposal. In a given situation, there would be technical alternatives at the levels of:

- i) the design of the overall system (e.g., ground water abstraction plus a pressurized (pumped) water distribution system, or ground water abstraction plus regulation/storage units plus a gravity-fed distribution system, or surface water abstraction plus a gravity-fed distribution system, etc.);
- ii) design practices and standards (e.g., applicable to the water demand factors, or to the design pressures, or to the minimum size of the

- network circuits, or to the type of distribution network to be followed, or to the capacity of the storage units, etc.);
- iii) construction or execution standards and processes (e.g., type and material of the storage units, minimum cover depth over pipes, etc.);
  - iv) materials and equipment specifications (e.g., type and class of pipes and accessories, designs of chambers and ancillary works, structural designs for storage units, etc.);
  - v) operation and maintenance standards and practices (e.g., in relation to equipment specifications, personnel needs, training, acquisition of materials and parts, etc.).

Since the purpose of this section of the document is to compare several alternatives without going into detailed descriptions of them, the most practical approach is to develop in some detail those aspects of each alternative related to the design of the overall system and the practices and standards to be applied, dealing in less detail with the operation and maintenance standards. The construction standards and processes, as well as the materials and equipment specifications, could be assumed to be fairly constant for all the alternatives, thus leaving their detailed analysis for the following section of the document.

The comparison of the identified alternatives will be mainly based on the overall technical and economic advantages of each of them, although of course other criteria such as the local availability of materials, parts for equipment or maintenance services would also be considered. Certain elements presented in the project evaluation criteria given in section "B" are also relevant to the analysis of technical alternatives and to the selection of the most appropriate among them.

g) Technical description of the recommended alternative

The previous section has already given us an overall view of the recommended project option and alternative. It is now necessary to provide a more in-depth description of them. How detailed this description should be depends on the purpose and use that the document under preparation will have. Hence, it is possible that this section could be completely omitted from a pre-feasibility study. A feasibility study will normally contain a fairly comprehensive description of the selected action alternative, but without going into the construction or implementation in detail. On the other hand, a project execution document will contain engineering and construction or execution data that will allow their itemization and quantification for the purposes of tendering, implementing and monitoring the actions therein presented. Finally, there is the possibility of combining all the above document "uses" into one, making it necessary to include in it all the information requirements to satisfy the various stages of the project cycle.

The preparation of the technical description for the recommended alternative carries implicit in it the concept of evaluation and selection of the best technical alternatives in relation to the construction or execution standards and processes, materials and equipment specifications, and operation and maintenance standards and practices. Therefore, it will be understood that the person preparing the detailed construction or execution designs is

confronted with a "decision" situation when developing practically every detail of the proposal. It is clear that it would not be relevant to include in a project document the "decision-making" process for every small component of the project proposal. When necessary, it will be enough to give a brief statement justifying the selection of a given project component.

It is important to keep in mind that the technical description of the recommended alternative should not limit itself to the actual construction or execution activities that will take place during the project period, but should also cover those aspects of operation, maintenance or follow-up activities that are a direct consequence of the project (although not carried out within it) and for which it would therefore be necessary to make the corresponding provision.

Finally, the technical description should provide a tentative time schedule or work programme for the execution of the various project activities. This will permit the programming of the expenditures and provide an indication of the amount and timing of the funds that will be needed to execute the project.

#### h) Costs and financial arrangements

Accurate cost estimates for the selected project alternative can be calculated by applying current unit costs to the itemized quantities obtained from the detailed technical description of the project. The costs used when comparing project alternatives in the previous sections were "economic costs", that is, amounts that reflect the actual economic value of a good or service. This was necessary since the only reasonable way of comparing costs between two alternatives is by correcting the market costs or prices to free them from those elements that distort them in an imperfect market (e.g., subsidies, alternative value of labour, etc.).

However, for the purpose of preparing cost estimates and the project budget, the actual financial costs are used. These costs are taken from current market rates for goods and services.

It is then necessary to add to the basic rates for goods and services the profits and overheads of the various intermediaries in project execution, such as management and supervision costs, contingency allowances, insurances and bonds, licenses, permits, interest on capital, etc. All the costs to be added to the basic rates are variable, depending on the type of project execution (contractors, direct labour or administration, self-help, etc.) and the official requirements in such aspects as contract sureties or taxes.

In certain instances it is also useful to disaggregate the overall costs of a proposal into its local and foreign currency components, or into the costs allocated to labour, buildings and installations, and services. The disaggregated presentation of the project costs is necessary for the identification and programming of project inputs and financing, as well as for the socio-economic evaluation of the project.



The estimation of the disaggregated costs will permit the preparation of a detailed time schedule of capital requirements for the project execution and its future operation. These figures will have to be matched against the estimated income, if any, that is expected to be generated by the project, and additional funds to be obtained through subsidies, loans, grants, etc. The proposal should provide a brief analysis of alternative finance sources and financial arrangements for project execution and for the operation of the completed works or activities. This analysis should end with a recommendation for a specific financing package.

i) Administrative arrangements

The administrative arrangements and responsibilities for project execution and administration are often overlooked in the preparation of a proposal, although in many cases they are the main source of conflicts and problems during the execution of a project and the subsequent administration of the completed works or activities.

The document should clearly state the functions, responsibilities, inputs and benefits corresponding to each of the groups or institutions participating in the project. This information is even more necessary for the activities following the completion of the actual project activities. It is often seen that the objectives of a project are frustrated because no provision is made, after its successful completion, for adequate follow-up activities and administration of the completed works or the services set up.

It seems unnecessary to repeat that the greater the number of participant groups or institutions in a project, the more detailed and clearly stated the institutional arrangements and responsibilities should be. If necessary, the above information should be complemented by a description of the desired capacity (personnel and material resources) that the participant groups and institutions should have in order to perform the assigned tasks and responsibilities.

Finally, the document should present, when necessary, preliminary versions of the inter-institutional agreements necessary for the adequate implementation of the project activities.

j) Evaluation of the recommended alternative

The proposal will end with the presentation of an overall evaluation of the recommended project alternative. The evaluation should be carried out both in respect of the project's effectiveness in satisfying the stated needs, and in respect of the socio-economic indicators given in section B. As indicated before, the socio-economic indicators, as well as the indicators of the project's impact on the satisfaction of needs, could be the basis for the development of a project ranking system, thus allowing comparison among different sectoral projects or different project alternatives.

### III. CONCLUSIONS

The preparation of project proposals calls for the combination of apparently conflicting criteria. On the one hand, the structure and presentation of the proposal should be sufficiently standardized to allow its systematic processing and evaluation by funding and executing agencies. On the other hand, it should be general and flexible enough to cover the multiple types of projects, according to the various combinations of activities, instrumentation of the action, financing, outputs and participants that intervene in the execution of a project.

The studies and proposals prepared at the local level should also be simple enough to allow their preparation with the resources normally available to local groups and authorities, while at the same time providing enough substantive information for their evaluation by central government and funding agencies.

The present document has provided the basic context in which to prepare detailed lists of information requirements according to the type of projects to be executed.

A future document in this series will present these "lists" of information requirements, with an indication of the need for their inclusion in a document in the light of the type of project or action to be executed and the stage of the project cycle for which it will be necessary.

#### Notes

1/ United Nations Centre for Human Settlements - HABITAT, A review of technologies for the provision of basic infrastructure in low-income settlements (Nairobi, 1984).

2/ Economic Commission for Latin America and the Caribbean (ECLAC), Impact evaluation methodology for infrastructure projects (LC/G.1373 (SES.21/25)), Santiago, Chile, 1985.



The Bank will ensure that installations and equipment will be maintained to obtain maximum performance and long life; Project funding will require the presence of state institutions and skilled personnel, to ensure proper operation of the systems. The Bank will provide the strengthening of national agencies with capacity to support of project identification, preparation and execution; the design and dimensioning of the services will take account of the interests and proposed degree of participation of the community in the various project activities, construction, administration, maintenance and operation.

POLICIES AND CRITERIA FOR THE DESIGN AND SELECTION OF INFRASTRUCTURE PROJECTS  
(WATER SUPPLY, SANITATION, ENVIRONMENTAL SANITATION)

I. Inter-American Development Bank

- A. The Inter-American Development Bank (IDB) provides funding and technical co-operation support to environmental sanitation projects on:
  - 1. Rural and urban water supply, including abstraction, treatment, transport, distribution and macro/micro metering;
  - 2. Collection, treatment and disposal of waste water in rural and urban areas, including the possible recovery of treated water through biodigestion;
  - 3. Collection and disposal of urban rainwater (drainage);
  - 4. Drainage of the project area, when this is considered desirable for the proper operation of water supply and sewerage systems;
  - 5. Urban solid waste collection, treatment and disposal, including the possible generation of products for agriculture and recycling of materials for industry;
  - 6. Treatment and protection against contamination of soil, river basins, watercourses and air.
  
- B. Technical co-operation is directed to the institutional strengthening of the basic environmental sanitation sector, with emphasis on:
  - 1. Operation and maintenance;
  - 2. Community promotion;
  - 3. Training, administration and management;
  - 4. Execution of sectoral studies and plans, and project preparation;
  - 5. Evaluation of project preparation and implementation methodologies;
  - 6. Support for the review of sectoral legislation and the improvement of its operational performance, and horizontal co-operation;
  - 7. Water losses and waste studies, and research activities.
  
- C. The Bank's basic criterion is the need to realize the benefits that can be derived from basic environmental sanitation. Thus, the Bank's assistance will follow specific guidelines, as indicated below:
  - 1. In expansion programmes, priority will be given to those projects that provide for the rehabilitation and improvement of existing services to

- rationalize their use, ensuring that installations and equipment will be maintained to obtain maximum performance and design life;
2. Project funding will require the presence of an adequate institutional organization, and skilled personnel, to ensure proper operation and maintenance of the systems. The Bank will promote the strengthening of national agencies with capacity to support other national agencies in project identification, preparation and execution;
  3. The design and dimensioning of the services will take account of the interests and proposed degree of participation of the community in the various project activities, such as construction, administration, operation and maintenance;
  4. Project coverage and service levels will be defined on the basis of the community's socio-economic characteristics and its financial and administrative capacity;
  5. Water supply and sewerage projects must meet suitable selection criteria, taking into account, among others, the following factors:
    - a) relation to national development plans;
    - b) the existence of major population areas without services;
    - c) the availability of water in adequate quantity and quality;
    - d) sanitary problems requiring urgent solutions;
    - e) community motivation for the rational use of services, and
    - f) ensuring that water supply projects include provision of complementary sanitation facilities.
  6. Tariff systems must cover operation and maintenance costs and, if possible, debt servicing, depreciation and a certain profit margin;
  7. Systems with water and sewerage "house connections" should include a plan to incorporate users.

In addition to the above, there are other technical and economic criteria that are also included in the corresponding sections of the project proposal presented in this document.

## II. International Bank for Reconstruction and Development (IBRD)

In its operational objectives for the water supply and waste disposal sector, the IBRD (World Bank 1979, Basic needs, water supply and waste disposal, Basic Needs Series, Washington D.C.) specifies its aims as:

1. To promote rehabilitation of existing services to obtain immediate benefit;
2. To promote self-financing measures that extend to low-income groups;
3. To devise investment plans consistent with the actual population to be served, as well as the currently available financial resources and manpower;
4. To provide basic services that can be upgraded as more money becomes available, rather than high-level services in a few areas;
5. To use technology appropriate to the financial and technical capabilities of the user;



6. To increase emphasis on the sanitation and drainage aspects of a co-ordinated programme;
7. To operate more closely with related sectors, such as drainage, solid waste disposal, health education and building codes;
8. To maximize user involvement in planning, implementing, operating and maintaining services, and
9. To develop and strengthen institutions administering water supply and sanitation at the national and local levels.

### III. United States Agency for International Development (USAID)

- A. USAID has established three basic criteria for investment in the water supply and sanitation sector (USAID, 1982, Aid Policy Paper: Domestic water and sanitation bureau for programme and policy co-ordination, Washington, D.C.):
  1. Evidence of need and effective consumer demand, that is, the consumers should be willing to support recurrent costs through some combination of fees and local or national budget allocations, and to cover some portion of investment costs to improve traditional systems or build new ones. USAID will not fund projects where there is inadequate assurance that the community can and will support operation and maintenance costs of the system within a reasonable time frame;
  2. Institutional responsibility and capacity. Local or national capacity must exist, plus concomitant acceptance of responsibility to ensure construction, expansion, operation and maintenance of systems;
  3. Infrastructure. Adequate transportation and communication facilities must be sufficiently developed to permit routine contact with local communities for the purpose of supervision, technical assistance, maintenance, etc.
- B. Accordingly, criteria for project design have been developed and include, inter alia:
  - technology that can be operated and maintained locally;
  - promotion of water conservation and reuse;
  - local involvement in project design and implementation;
  - sustained educational efforts in proper water use and hygiene;
  - long-term local capability to finance, operate and maintain the project;
  - training of national, regional and community-level workers in operation and maintenance, and
  - technical assistance as required to improve administration.

