

PROJECT AND ADVISORY ASSISTANCE PROGRAMME

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**PUBLIC INVESTMENT, PROJECT CYCLE AND
PROJECT BANKS**

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1. INVESTMENT PROGRAMMING

1.1 Introduction

Over the last few years ILPES has received various requests from a number of countries in Latin America and the Caribbean to undertake technical assistance programmes aimed at the preparation and formulation of public investment programmes. This subject area, which is normally associated with the idea of investment projects and is often limited in its theoretical and practical development, to the component of the economic and social evaluation of projects, has not exhibited in the recent past an integrally structured methodological framework.

In the first place, the area of planning, policies and projects has, to a certain extent, developed autonomously and has been at the centre of the debate on the technical and political viability of the planning process. From a strictly methodological perspective it has been argued that development plans need projects and policies for their implementation, just as the latter need objectives and an overall strategy to guide them.

Within the context of public sector planning, projects should be the concrete manifestation of a programme of investments that seeks to achieve some of the development objectives proposed in the plan. In this sense, the public sector is required to develop the technical and operational capacity necessary to prepare an adequate number of well-thought-out projects, either of investment or of a social nature, which, by constituting a significant portion of its budget for investment and/or social expenditure, and even under its current expenditure head, effectively fulfill the proposed development guidelines.

From a political perspective, however, in Latin America there are various levels of State participation in the process of investment, which range from States with central planning in which a high percentage of the national investment is programmed by the State, to regimes in which the participation of the State is less significant and in which the scale of public investment depends on its size and its level of participation in the economy.

If the State is restricted to a secondary role, its action will be directed towards sustaining the process of accumulation by the private sector, and very likely a large part of its projects will be directed towards investment in support of infrastructure for production and subsidies to enterprises, and social expenditure together with subsidies to families, aimed at meeting the most urgent needs of the community.

If, on the other hand, it is felt that the State should participate more actively in the running of the economy, it will probably participate directly in the production of goods and services, thus establishing a significant autonomous base of capital accumulation, investing directly in the productive sectors and in those sectors which are considered strategically important to develop. In this case, the process of investment programming may acquire more relevance in-so-far as the State participates to a significant degree in the expansion of the country's productive capacity and, consequently, in determining the growth of the national economy.

Whichever the case, the process of project planning designed to contribute to the decision-making process and to the preparation of investment programmes is important in both options and, depending on the scale of the investments, what is likely to vary most significantly are the depth and characteristics of the studies, which in the so-called preinvestment phase, the public

sector should undertake in order to decide whether or not to carry through with its investments.

Secondly, and also from the point of view of methodology, the aspect of finances and the public budget, generally speaking, has not been properly integrated into plans, projects and policies, a situation which would tend to render incomplete the very process of investment programming. In-so-far as the provisions for public expenditure (investment, social and current) included in the budget, and the financing of such expenditure are coordinated with the elaboration of investment programmes, one may be assured, on the one hand, of the rationality of the budgeting exercise as an effective instrument of the State, not only for contingent policy reasons but also for the objective of development and, on the other hand, of the financing of approved investment projects that are geared towards this objective.

However this may be, the planning that may be involved in the preparation of a public sector investment programme, rather than a programme for the economy as a whole, generally requires that a series of element be defined whose degree of detail will be in direct relation to the perceived significance of its impact on the country's development.

Some of these key elements will be the preparation of macroeconomic forecasts that are capable of providing a framework of reference for decision-making, including scenarios of likely patterns of growth and feasible levels of investment to be achieved annually. It will also be necessary to determine, grosso modo, the need for public investment in individual sectors by determining the degree of consistency throughout the sectoral programmes.

Generally speaking, in light of the objectives being sought and of the current prospects, it will be useful to make certain forecasts on the evolution of certain fundamental macroeconomic

variables such as product, domestic and external savings, government revenues, public expenditure, exports, imports, the flow of capital from and into the country, in order to establish different scenarios which show the probable options for the growth of investment and the limitations imposed on those options by the level of resources available.

Having established what investments will be necessary, and particularly what investments the public sector will be required to make, it will then be important to identify and design the investment projects which could effectively achieve the proposed investment objectives in the various sectors.

These investments could be effectively made without undue delay and excessive studies only if the political will exists to carry them through. In practice, this will is often lacking, in which case resources could be committed without achieving the desired results. Or, adopting a more rational approach, a methodology of project selection may be proposed which, by following certain pre-established steps, leads to a more documented decision and to a more efficient allocation of public investment resources.

While acknowledging that many investment decisions may be adopted using the first approach, even in this case, the development of a system of follow-up to public investment could contribute to a better execution of such investment.

Notwithstanding, it would be ideal if the execution of the projects which will concretize the development aims elaborated at the highest level could be carried out in accordance with certain pre-established methodological procedures, and it is these procedures which are briefly examined in this document.

1.2 The National System of Public Investment

As is well-known, the State, through the administration of the government, undertakes a series of substantive activities which consist of the production of goods and/or provision of services aimed at satisfying the needs of the community.

This involves the use of scarce resources which are diverted from alternative uses, either within the public sector itself or in other areas of production. Obviously, in times of crisis, the allocation of resources should be as efficient as possible, which means that the organizational methods and procedures adopted to carry out such activities should be perfectly structured in order to improve the capacity to manage the national investment. Indeed, the expansion or limited decline in a country's productive capacity is clearly a direct function of the level and quality of investment, which in turn depends on the capacity of the country to generate or attract domestic and external savings.

In the current circumstances of severe restrictions on the use of external resources, it is essential to make a greater effort to augment domestic financing, in addition to enhancing the efficiency of the process of allocating the most scarce resources. In other words, it is a question of ensuring that with a given supply of resources production is significantly increased, in conditions of permanent stability.

In this context, the management of public expenditure (specially investments) is particularly important, since in many countries public investment now constitutes a significant proportion of total investment, and by its nature, it is the expenditure whose contribution may be essential to the attainment of the objectives of distribution of the benefits of growth.

To ensure the proper management of this expenditure, the administrative and political authorities which make decisions on the allocation of investments should have available to them a broad base of alternatives, in order to conduct an efficient process of selection in accordance with the proposed objectives.

In order to achieve this result it has been felt that, thanks to the rapid development of computer technology in recent times, the development of National Project Inventories, or Project Banks, may become a very useful tool for rationalizing and ensuring the operational effectiveness of the process of public investment.

The compilation, in a National Planning Office, of a computerized national project inventory, whose components are identified, formulated and evaluated by Sectoral and Regional Planning Offices, and whose attributes are known to all such offices, constitutes an excellent basis for making the process of public investment programming operational.

The preparation of these inventories is based on the premise that public investment may be likened to a productive process in the sense that it requires inputs of resources and yields products as its result. It may therefore be said that public investment inputs or requires financial, human and material resources and produces goods and services aimed at satisfying certain predetermined needs.

Public investment in general, and more strictly speaking, public expenditure, may be divided into various components which comprise the phases through which a project passes and which constitute the continuum that likens it to the different phases of the above-mentioned productive process. These are preinvestment, general or social investment, and current or operational expenditure, which are basically the same elements that define the life cycle of projects, whether these are investment projects, that

is to say where there are counterpart assets, or a social project, in which current or capital resources are transferred to the community. In short, national project inventories compile in a dynamic manner the information on projects which may be in one or other of the phases that are described briefly below:

- i) The Preinvestment Phase refers to all the activities associated with the identification, preparation, formulation and evaluation of projects. The continuous changes in investment ideas requires the use of resources which keep on adding value to these ideas as they pass from this phase to the subsequent phases of profile, prefeasibility and feasibility. The technical and economic studies which are undertaken in this phase feed the process of decision-making.

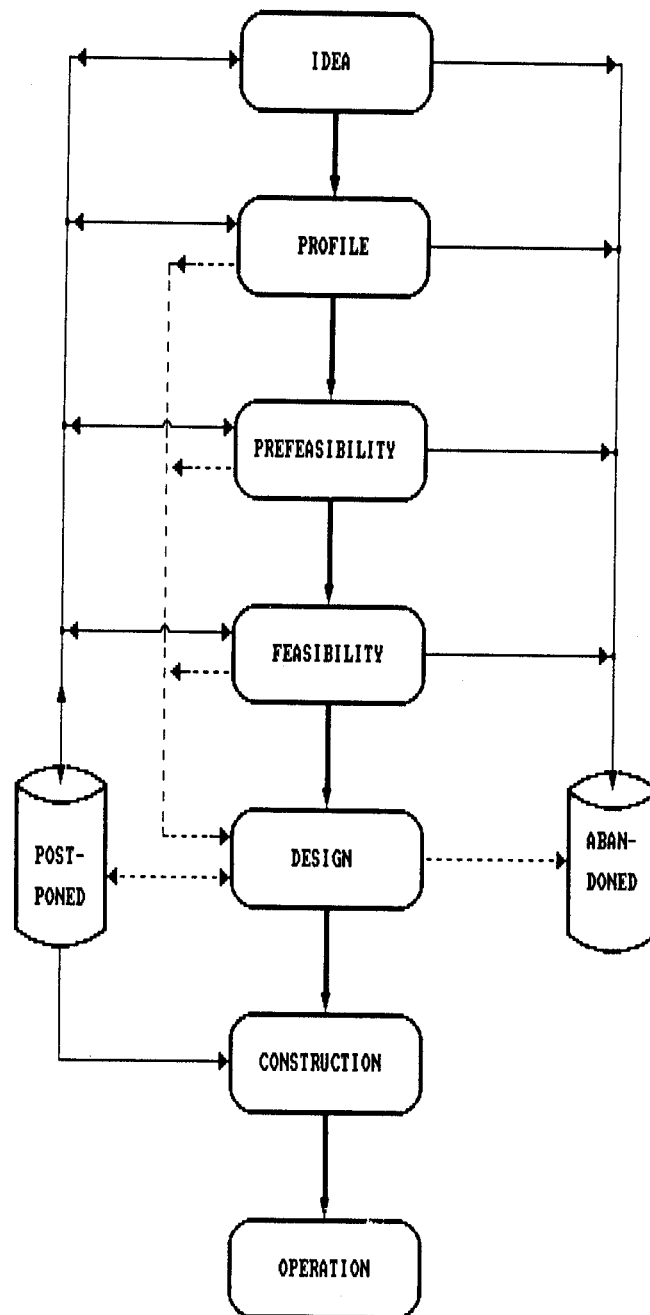
The projects developed and studied in this phase should be those which will constitute new investment in future budgetary periods.

The product of the preinvestment phase, which are the technical/economic studies, require as their principal inputs, methodologies for the formulation and evaluation of projects, shadow prices for the economic and social evaluation of projects, personnel qualified in the use of these methodologies, as well as financial resources (see Figure 1).

- ii) The Investment Phase, which refers to the investment in project execution in general terms, uses resources and delivers as its product completed works. These works, in turn, become part of the resources available for the development of other public sector activities and programmes. An intermediate product at any point in time will be those works which are being executed and which represent committed expenditure or, as it is also called, carry over investment.

The process of expenditure or social investment includes those activities or programmes to which resources are assigned and whose objectives are to improve health care, social security, the security and educational level of the population, as well as activities aimed at the physical or social rehabilitation of those requiring such rehabilitation. Its output, which augments the pool of resources, is the physical and intellectual development of the human resources available to the country.

FIGURE 1
PROJECT CYCLE



- iii) The Operational Phase refers to those expenditures which the public sector is required to make in order to operate over a period of time and which do not lead to the gross accumulation of capital, whether public or private. Once the projects become operational, they will place pressure on the current expenditure of the budget, which should have been taken into account during the phase of studies. Similarly, it is important to analyze current expenditure during the preinvestment phase since, particularly with social projects, a large quantity of resources is earmarked for the development and implementation of programmes that are considered current within the budget.

The identification of all these actions, which form part of the process of public investment, may thus be developed into a Project Information System (PIS), through which the complete cycle may be covered through their preinvestment, investment and operational phases (see Figure 2).

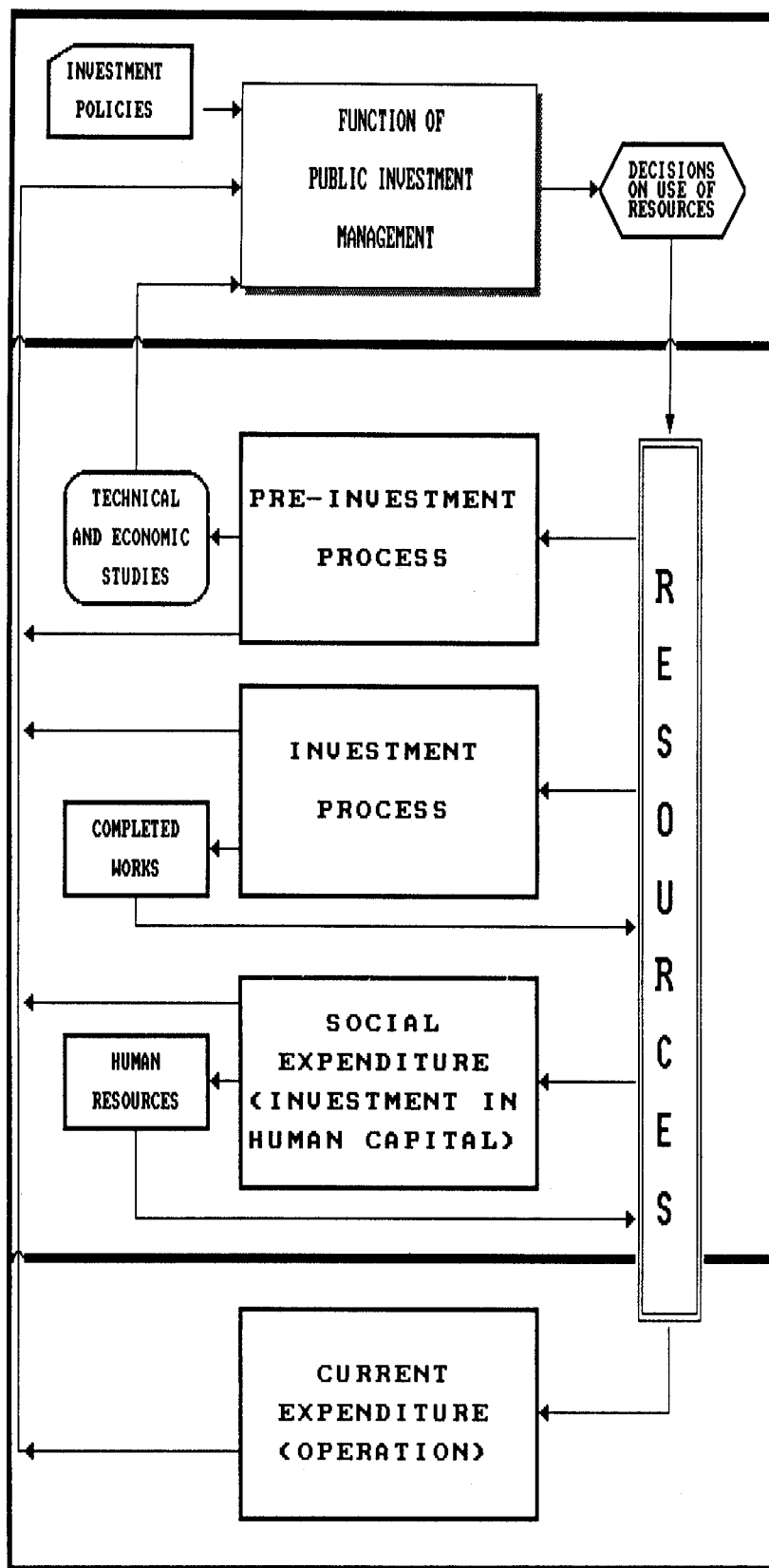
The process of preinvestment is described in greater detail in the following chapter, while the structuring of the project banks is examined in chapter III of this document.

1.3 The System of Public Investment Programming

The ultimate objective of the system is to produce the programme of public investments and, if this exercise and its process is to have any real sense, the investment that is actually made should reflect, in some measure, the investment that was programmed, that is to say, it should tend to narrow the gap between the proposed and actual investment.

To achieve this, the system should, in formulating the possible investment scenarios or programmes, cover the various areas of analysis which should feed the process and thus enable it to produce an efficient and effective investment programme.

FIGURE 2
THE PUBLIC INVESTMENT FUNCTION



The main areas to be covered are the block of macroeconomic projections, a system of budgetary follow-up and control, the technical/economic studies, public expenditure policies, the allocation of current expenditure and, lastly, the allocation of social expenditure.

The block of macroeconomic projections should produce the scenarios which, through the main macroeconomic variables, show the future socioeconomic situation. This, together with the process of budgetary follow-up and control, will permit, on the basis of estimates of income and expenditure of the public sector, a determination to be made of the financial ceilings for the investment programme.

The system of budgetary follow-up and control permits information to be received on the implementation of the current budget and of social programmes, as well as on the physical and financial progress of studies and projects. Hence the importance for this system to produce, in conjunction with the macroeconomic block, "realistic" financial ceilings.

Once these references have been established, it is important, particularly in the case of large projects, to incorporate the technical/economic studies which are the ones that will in fact determine the economic and social advisability of executing the various projects that comprise the investment programme.

On the other hand, it is important to incorporate public expenditure policies, particularly those relating to subsidies, subventions, investment, wages and salaries policies, as well as the set of economic policy measures which may affect or help to promote a given expenditure policy.

Finally, the programming of social expenditure and its priorities should be evaluated and incorporated, as well as the allocation of current expenditure, its likely evolution and orientations in relation to future allocations, which should be complementary to the programmed investment expenditure and its orientation.

Lastly, it should be mentioned that an assessment must be made of the dynamic impact of the resulting investment programme on the economy as a whole at the national, regional and sectoral levels. This is very important on account of the feedback effect of the system, which will make it possible to see new potential or unforeseen obstacles.

In the cases of the specific experiments which the Institute has conducted in this field, it should be noted that these areas tend to be only partially covered and, consequently, the process of investment programming, from this perspective, usually remains incomplete.

In the case of the Dominican Republic, for example, the system of investment programming is not institutionally integrated and macroeconomic forecasting is not coordinated with budgetary follow-up activities and the elaboration of investment programmes. In this case, it may be said that what is currently being done with the system that has been developed is a follow-up activity to those projects that are in the phase of execution.

Despite this, however, using as a support the system of project information, a version of the 1987-1990 public investments programme was produced that included aspects such as the general orientation of public investment, its sectoral distribution, the sources of financing and an analysis of the macroeconomic impact

of the programme, reflected in variables such as employment, value added, foreign exchange and certain specific sectoral variables.^{1/}

A similar situation is to be found in Guatemala, where there is need to prepare periodically annual operational programmes which contain the investment expenditures that the public sector will make during the forthcoming budgetary period. This exercise, is undertaken by drawing together the programmes which the various public sector agencies submit. The process, however, exhibits no uniformity of criteria in the sense of determining which components it should contain and the requirements that should be met by the investment projects that are identified in the various areas.^{2/}

Moreover, the exercise is undertaken as an independent activity at a certain period of the year, and is not viewed as an ongoing activity of generation and follow-up of projects which follow a predetermined path, with its possibilities being periodically compared and contrasted with the objectives which the government proposes to fulfill.

^{1/} See ILPES document "El sistema nacional de proyectos de República Dominicana: una herramienta para la programación de inversiones públicas", 1988.

^{2/} See ILPES document "Guatemala: A Proposal for the Organization and Functioning of a National System of Public Sector Investment Programming".

2. PREINVESTMENT IN THE 1990s

2.1 The Process of Preinvestment

Preinvestment, as a process aimed at reducing the uncertainty regarding decisions about investment, is basically composed of the phases of idea, profile, prefeasibility and feasibility. During each one of these phases and to different degrees of detail, preinvestment studies must be carried out consisting in the preparation, formulation and evaluation of projects. These are the same studies that are required to ensure an efficient allocation of public investment resources.

The origin of preinvestment activities in Latin America and the Caribbean goes back to the 1950s being motivated mainly by the need to provide technical and documentary assistance to the process of making decisions concerning the allocation of resources.

The various specific reasons which led to its development include the need to assist planning systems in harmonizing the selection of projects with the set of national policy objectives put forward in the plan and thus, to promote greater coherence between priorities and resources. At the same time, the possibility of having a set of projects available in advance will lead to a reduction in the extent of dispersion and improvisation in the allocation of resources. In addition, the preparation of project portfolios could provide adequate bases for negotiation with international financing agencies and, lastly, an integrated effort of intra- and intersectoral coordination was being promoted based on macroeconomic programming, national accounts and the budget.

In the context of the foregoing objectives, most of the countries in the region were successful in establishing and institutionalizing preinvestment funds which continued to be devoted mainly to the task of identifying investment ideas, preparing project profiles following the guidelines of national development strategies, and financing feasibility studies. In most cases such tasks constitute significant contributions to the rationalization of public expenditure and to the systematization of the phases prior to the investment phase within a strict context of scarcity and priority.

2.2 Limitations on the Preinvestment Process

Notwithstanding the progress made, it is necessary to point out some of the obstacles which may impede the achievement of the results expected of the preinvestment phase or which have prevented it from having a more significant impact. These obstacles include the following:

- i) Preinvestment, like planning, requires a minimum of decentralization, participation and management from the bottom up, from the regions to the central authority and from the intermediate levels of decision-making to the higher decision-making bodies. However, the achievements of the different approaches and styles of indicative and policy-setting planning have been very limited. It is only in recent years that action has begun to be taken to correct this style. If this phenomenon can be said to have characterized planning over the last few decades, the process of preinvestment has undergone a similar experience. Its activities have been characterized by a tendency towards centralization, discontinuous management, an approach that is unrelated to the needs of the community in the phase of identification, and an orientation that is not coordinated with the institutions responsible for the preparation, formulation and evaluation of the project.

- ii) A basic task is related to the preparation of a Project Inventory and, more particularly, to the generation of ideas and the preparation of profiles. This phase is crucial in-so-far as problems are identified, solutions proposed, the costs and benefits outlined and institutional responsibilities determined. These tasks presage the subsequent activities in terms of possible options for subsequent evaluations. Despite its importance, the system has not been conceived as a dynamic process which needs to be continuously fed by the broad participation of sectors and institutions. For reasons of coordination or systematization, the ideas for projects are scarce and, from the inception, the basis of the process does not have the elements that are necessary for analyzing alternatives with a minimum of participation or sectoral and regional coverage.
- iii) One crucial point, which is directly connected to the development of preinvestment, has to do with the generation, handling and distribution of information. When a considerable number of projects is involved the preinvestment phases require a coherent and dynamic system of analysis and evaluation. Once the process is started, the information that is required and processed increases in volume and rigor but, despite this, there has been no accompanying development of computerized systems which handle information and facilitate decision-making in a comprehensible and timely manner. This is one of the reasons why preinvestment has not become a fundamental routine function. In this case we are referring to the tasks of selecting priorities and to the reconciliation of the resources available with national, regional and sectoral objectives.
- iv) In light of the regional experience, preinvestment plans have usually tended to ignore the capacity of the community to identify its needs and to suggest solutions, frequently overlooking the institutional context and poorly reflecting the characteristics of the beneficiaries.

Preinvestment has thus been based on a marked "supply side approach" under which the fate of each phase depends on that phase itself and the only requirement is for an adequate supply of resources to be made available. It would seem that behind the preinvestment phase there are no actors or specific interests and that the latter have nothing to do with the concrete dynamic and determinants of a process which is essentially of a social, economic and, to a large extent political nature.

- v) As regards the aspects of an institutional nature, the cycle of a project requires consultation and coordination between various institutions of an inter- and intra-sectoral nature which becomes difficult to monitor and direct in the case of a large number of projects.

This situation becomes even more difficult when there are no effective and operational norms and procedures within the public administration. Moreover, in view of situations of a lack of institutional coordination, the progress of a project through its various phases becomes more difficult when proposals of a multisectoral or multipurpose nature are being considered.

- vi) From the point of view of methodology, despite greater information on the methods of evaluation of costs and benefits, the application of these methods has encountered serious operational difficulties in economic and social projects involving a low level of investment and usually with domestic financing.

In this case, it is a question of a subset of projects with a high percentage of Total Public Investment which presents difficulties for individual technical analysis on account of the lack of adequate information or because of cost/benefit elements that are difficult to quantify. In conclusion, the result has been that it is difficult to generalize techniques for the formulation and evaluation of all public sector projects.

- vii) Although this may appear unusual, in the area of human resources and training, countries, and particularly planning offices and preinvestment funds, do not have suitable staff for decentralizing and systematizing national preinvestment plans. This limitation is much more severe at the sectoral and regional levels, where human resources are scarcer and less qualified.

There are two consequences of this situation. On the one hand, there is no continuous flow of ideas, with the result being that preinvestment activities are biased towards the analysis of technical aspects to the detriment of generating suggestions, identifying possibilities and preparing background data.

On the other hand, the preinvestment phases are not coordinated with the subsequent phases of generation of options or maintenance of a stock of projects to replace those that have been shelved, abandoned or initiated.

2.3 Preinvestment Inputs

A recent study by ILPES ^{3/} identifies four basic inputs of the preinvestment process. These are: methodologies for the evaluation of projects, social prices, qualified personnel and financial resources. It may be useful to make a few practical and brief comments on some of these inputs.

- i) Methodologies of Evaluation and Social Prices. Economic literature contains three major approaches to this subject. That of UNIDO, that of the OECD and World Bank (IBRD), and the Chicago or Arnold Harberger approach.

In general, the first two approaches favor the integration of the criteria for project evaluation with the national development objectives on the basis of a set of parameters or shadow prices which seek to reflect not only the economic value of certain key resources but also value judgements on aspects of a redistributive nature. Independently of the unit of account which is used (consumption or foreign exchange) the approaches of UNIDO and the OECD/World Bank comprise three stages:

- i) a financial evaluation at market prices for products and inputs;
- ii) an analysis of efficiency at shadow prices; and
- iii) a social analysis to determine the impact of the projects on redistribution.

The Harberger approach advocates the traditional neoclassical assumptions to maximize social well-being according to which, in the absence of externalities, demand and supply prices will reflect the marginal benefits and marginal costs respectively. In these terms the net effect of a project for the society would amount

^{3/} ILPES: "Bases metodológicas y operativas para la administración de la inversión pública". Santiago, mayo 1988.

to the sum of benefits and costs without taking into account the redistributive effects on the receivers. In light of these general references the immediate question is: what type of projects should be submitted to cost-benefit analysis? This question may be answered by saying that preference should be given to those projects that are of greater cost, scale or importance for the country. Such a criterion would, however, appear arbitrary in that the application of the methodology would depend in each country on the quality of information, the availability of human resources, the institutional framework, the level of disaggregation or sophistication that is adopted with the preinvestment and, lastly, on the manner in which the budget is allocated.

There are countries which make greater use of cost-benefit analyses and others which have to some degree systematized the concepts from the first phase of the project cycle. The great majority, however, use this approach only in the case of large-scale projects which are almost always financed from external resources. The usual approach is to make preinvestment a formal filtering procedure to rationalize the investment plan with a high weighing of subjective and political criteria at the regional and sectoral levels.

The cost-benefit analysis is normally applicable to larger-scale projects which require and often dispose of greater information, are normally capital intensive and its economic benefits are easy to quantify. This head would cover the large projects for production and infrastructural projects such as highways, dams, bridges, and airports.

At the other extreme, however, are small and scattered investments, which are generally labour intensive and clearly social in character, some of which take the form of rural aqueducts, health outposts, primary schools, supply centers, and low-cost housing.

For this type of project it is essential to develop appropriate methodologies which would contribute to early decision-making as regards the allocation of resources, thus significantly shortening its life cycle. In these cases, evaluation at the profile level, using methodologies such as cost effectiveness, would be highly recommendable.

It is important that the investment plan should not be a reflection of the initial bias which may be present in the preinvestment stage, in the sense of leading to

an overinvestment in sectors which, on account of their capacity to formulate and evaluate projects (energy sector for example), promote actions that go beyond what could be the objective needs of the country. In this sense there is a frequent tendency to underinvest in social sectors in which conventional methods are more difficult to apply and the scarcity of personnel trained to identify and formulate projects is usually more acute.

This problem, however, should be resolved at the very start of the process which is when, at the highest level, a preliminary idea ought to have been reached as to how the public expenditure will be divided between productive investment and social investment since, even if it were possible, there would be no sense in comparing, through evaluation, projects from the two sectors.

Generally speaking, the calculation of national parameters or national shadow prices, independently of the methodology used, may be a very useful empirical exercise when the aim is to ensure that the public sector acts according to criteria that are consonant with economic efficiency. However, in practice, the use of such parameters has been rather limited and a significantly high percentage of public investment still does not go through any previous phase of evaluation in a rigorous or systematic manner. Thus, preinvestment, has generally not become a basic component of the System of Public Investments.

While acknowledging the usefulness of having information on prices of efficiency and social prices, the scant use that has been made of such information is perhaps due both to the difficulty in obtaining the basic information on which the calculation is based and to the low percentage of technical personnel who, despite their involvement in the process of investment, are familiar with these concepts.

- ii) Human Resources. The quality and numbers of technical staff and the degree of institutionalization of the preinvestment process will, to a large extent, determine the level of efficiency with which the allocation of resources is managed. However, the regional balance in terms of preinvestment experiences suggests that, apart from the National Planning Offices or the preinvestment funds, in the regions, ministries, State and local bodies, the human resource capable of formulating and evaluating projects is scarce, lacks the necessary training, or is simply non-existent. This is one of the principal obstacles that have prevented preinvestment

from becoming a widely used tool within the public sector.

Finally, it should be pointed out that what is required is a thorough review of the prevailing institutional framework within which the preinvestment process takes place, in order to ensure better coordination within the central government, a more wide ranging decentralization to include municipal, regional and sectoral levels of participation and an operational framework that permits the system to be fed and to receive feedback in a continuous and expanding manner.

3. PROJECT BANKS

3.1 Objectives and Structure

The elaboration of investment programmes involves a long and tedious process of compilation and analysis of information. Also, the information required is frequently not available and where it is, it must be completed and standardized. On the other hand, when preinvestment is carried out in a consistent manner for all public sector projects, it generates a wealth of information which may become unmanageable.

The complexity of the task which planners face in seeking to achieve an optimal allocation of available resources has led to the development of a series of methodologies and information tools intended to facilitate that task. One of the main supportive tools whose use has already spread to various Latin American and Caribbean countries are project banks.

The aim of these banks is to facilitate, standardize and coordinate the follow-up and monitoring of investment projects and basic preinvestment studies, as well as to support the execution

and planning of preinvestment, investment programming and the carrying out of ex-post project evaluations.^{4/}

The project bank was introduced as an information system on public investment projects, whose objective was to organize and standardize information relevant to monitoring activities and to decision-making. Subsequently, with the advent of computerization, and in view of the large volume of information to be handled, computerized systems were developed to expedite the management of available information. At the same time, since the quality of the results always depends on the quality of inputs, the project banks were strengthened by preinvestment support measures so as to obtain more and better information for planning.

The logical structure of project banks is based mainly on the project cycle. The basic element for its functioning is the project. The system records the most important information about each project in each one of the phases of its life cycle. As the project moves from one phase to another, the project bank records all the information generated during each phase.^{5/} A complete and updated "life record" of each project is thus maintained, which makes it possible to adopt timely measures for the success of the project and to learn from the errors and successes of abandoned or completed projects.

The quantity of information increases as the project progresses through its life cycle. In the phases of idea, profile, prefeasibility, feasibility and design, the information recorded will be basically that which concerns the main characteristics of

^{4/} See ILPES document, "Bases metodológicas y operativas para la administración de la inversión pública". Santiago, mayo 1988.

^{5/} For an example of this see ILPES document, "Guatemala: una propuesta de organización y funcionamiento del sistema nacional de programación de inversiones públicas". Convenio de Cooperación Técnica BID/SEGEPLAN/ILPES, July 1988.

the project, indicators for the establishment of its priority, and decisions concerning the subsequent phases. In the phase of execution, on the other hand, the information recorded will cover information relating to the physical and financial monitoring of the progress of work. Usually, the volume of this information will be significantly greater than that corresponding to the previous phases. Moreover, the intervals at which such information must be received are also more frequent.

This structure based on the project cycle confers on project banks one of their main advantages. In fact, the project cycle usually cuts across various government institutions. Planning offices, ministries of finance, preinvestment funds and sectoral executing agencies, are involved in one or more phases of the life cycle of a project. This situation is further complicated by the existence of decentralized institutions (regional, departmental or municipal) and of different sources of financing. Where there is no instrument to set standards for and facilitate the management of information on projects, the coordination, programming and planning of public investment may be practically impossible.

A project bank should not be seen as an inventory of projects but rather as a methodological approach for the programming and monitoring of public investment. The project bank has a dynamic character in the sense that the information it contains is constantly changing. Moreover, numerous other elements beyond data bases, programmes and computers are part of the concept of the project bank.

The establishment of a project bank requires the development of methodologies to identify, formulate and evaluate projects, the determination of social prices, the establishment of frameworks and norms for the physical and financial follow-up of projects, the design of procedures for the delivery and updating of information and the widespread training of public sector personnel in the use

of the methodologies, norms and procedures. The development of a project bank naturally requires that efforts be made to increase preinvestment and improve investment monitoring.

The methodologies are necessary in order to obtain standardized, adequate and reliable information on the various investment initiatives. Only in this way will it be possible to compare and establish a hierarchy of projects, at least at the sectoral level, based on a similar framework of measurement.

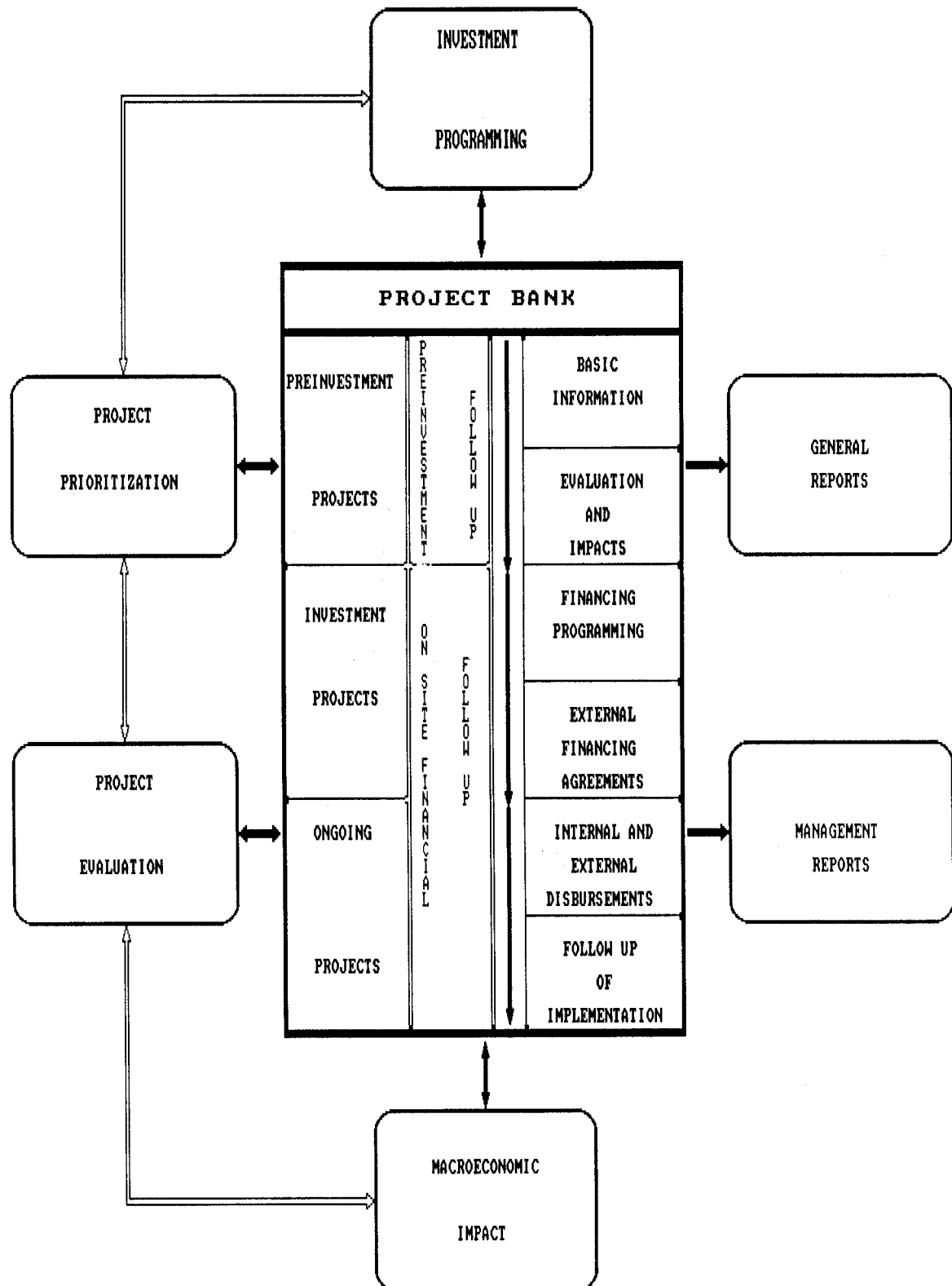
The compilation of information in a timely manner requires that the procedures for the delivery and analysis of such information be defined. It also means defining the roles to be played by the various institutions concerned with public investment, in the context of the project bank. This ensures that the information handled by the system is sufficiently up-to-date as to constitute a reliable basis for the adoption of monitoring mechanisms or for the planning of future activities (see Figure 3).

Finally, it is necessary to consider the training of personnel in the use of the methodologies and procedures of the system.^{6/} This aspect is essential to ensure the smooth operation of a project bank and the quality of the information processed.

With respect to the architecture of the system, there are basically three approaches which have been adopted in accordance with the particular characteristics of each project bank.

^{6/} For an example of a document prepared within the framework of a project bank and aimed at the training of personnel involved in its functioning, see: ILPES/Ministry of Economic Development, "Project Bank: Manual for the Appraisal and Monitoring of Projects", Belize, April 1988.

FIGURE 3
STRUCTURE OF THE PROJECT INFORMATION SYSTEM



A first option is to develop a centrally operated and managed computerized system. Under this approach, the institution responsible for the project bank has a computer which contains the data bases, establishes all the norms and procedures of the system, and ensures that these are observed. It is also responsible for the quality and currency of the information on projects. The various institutions that participate in the investment process are linked to the project bank through forms for the delivery of information and through reports and lists which they receive from the system, or through terminals installed in each one of them.^{7/}

A second option is to establish a system which is physically centralized but whose operations are decentralized. This approach provides for a computer to be located in the institution responsible for the management of the project bank and terminals in each decentralized institution. In this case, however, unlike the preceding approach, it is the decentralized institution which is responsible for ensuring that the procedures (standardized at a central level) are applied and for the information (regional or sectoral) contained in the system.

Lastly, there is the possibility of developing a project bank using an approach of dispersed bases. Following this approach, the establishment of norms to govern the operation of the system continues to be the responsibility of the central authority. However, each institution participating in the network will have its own equipment and data base, facilitating exchanges of information between the various bases in accordance with

^{7/} The Integrated Project Bank of Chile, BIP, in operation since 1978, uses this approach.

pre-established procedures.^{8/} The last mentioned approach has received a boost with the advent of microcomputers and the development of better communications programmes and networks.

The systems developed so far are generally biased towards preinvestment or towards investment. There are few systems in which these two aspects (information for the planning of preinvestment and investment programming versus the physical and financial monitoring and follow-up of projects under way) have attained a comparable level of development. This has been due in large measure to the fact that these two functions are usually the responsibility of different institutions (finances, planning) while the project banks have been set up in only one of the institutions involved (usually the planning institution). This leads to resistance to the delivery of information on the part of the institution which does not physically possess the system.

3.2 Current State of Development

In view of the importance of project banks as a modern tool of support for planning, the Office of the Director of Projects and Advisory Assistance Programme of ILPES established as its principal working objective support for the setting up of project banks in countries of the region and the continued development of this instrument, particularly those of its aspects related to project identification, formulation and evaluation.

^{8/} The project bank of Bolivia, known as SISIN, is a good example of this type of system. The National Investment Project Bank of Colombia is being developed with this structure. The first phase of its development may be analyzed in the ILPES document, "Colombia: Manual del Sistema (Versión Preliminar)", Project DNP/IDB/ILPES, August 1990 and "Manual de Operaciones y Metodologías (Tomo I)", Project DNP/UIP/DOS, October 1990.

In keeping with this objective, the Institute has participated in the development of a large number of the project banks existing today in the region.

The oldest of the project banks is that of Chile which has been fully operational for six years now. It was developed in a mainframe computer with terminals distributed in the regional and sectoral capitals. In this experience, particularly noteworthy is the major training effort that has been undertaken, under which more than 3,500 public sector personnel have already been trained. Considerable work has also been done on the development of methodologies for the evaluation of projects at the profile stage. All this has had a considerable impact on the quality of public investment.

One case which is completely the reverse, in terms of size and complexity of the system, is that of Belize. There ILPES designed and installed, in conjunction with the Ministry of Economic Development and with the financial support of UNDP, a small and simple project bank, which is nevertheless capable of satisfying the information requirements of the Government.^{9/} The system is operated through a microcomputer and information is sent out by the various ministries through specially designed forms. The output of the system, in the form of lists, is supplied by the Ministry of Economic Development to the Cabinet, the Parliament and to the Office of the Prime Minister. Unfortunately, the operation of this initiative has been hampered by institutional and human resources problems.

In the Dominican Republic, ILPES, through an agreement with the National Planning Office (ONAPLAN) and with financing from the

^{9/} See document "ILPES/Ministry of Economic Development of Belize, Project Bank: User's Manual" (LC/IP/L.20), Belmopan, April, 1988.

IDB, acted as the executing agency in the development of the project bank.^{10/} In this case the system was installed in ONAPLAN in a minicomputer. The information is supplied from the other ministries through fiches which are designed to store information on the different aspects and phases of a project. ONAPLAN processes this information and provides lists and reports to the National Development Council and to the Office of the President.

In the case of the Dominican Republic, the Institute has played a pioneering role in ensuring greater integration of the macro and micro economic aspects through the use of the project bank.^{11/} This type of application is one of the most important which may be given to project banks. From the point of view of planning it is of fundamental importance since it makes the relationship between the macroeconomic programme and projects operational.

In Guatemala, the General Secretariat of Planning (SEGEPLAN) entrusted ILPES with the task of developing a project bank, also in this case with IDB financing. Setting the standards for and operating the system are the responsibility of SEGEPLAN, assisted by the Office of the Vice President. The latter office is one of the main users of information from the system since it uses such information for the formulation of the Annual Operational Programmes (AOP) which are part of the investment programme. From the point of view of computer equipment, this project bank is distinguished by the fact that it operates on the basis of a network of microcomputers.

^{10/} See ILPES documents "Sistema de información e inventario de proyectos", Vols. 1, 2 and 3 and "Convenio de Cooperación Técnica" BID/ONAPLAN/ILPES, March 1988.

^{11/} See ILPES document "El Sistema Nacional de Proyectos de República Dominicana: Una Herramienta para la Programación de las Inversiones Públicas (Informe Final del Proyecto)", Santiago, Chile 1988.

In Bolivia, the Ministry of Coordination and Planning is currently in the process of expanding the project bank, known as the System of Information on Investments, or SISIN, to cover all corporations and ministries. The system, whose structure is that of a dispersed data base, is basically designed to support the planning of preinvestment and the elaboration of investment programmes. The collaboration of the Institute has been requested in order to expand the system to the stage of the physical/financial follow up of projects and to develop methodologies to establish a hierarchy of projects.

In Colombia, work is proceeding rapidly on the establishment of the National Investment Project Bank since this is a key element in ensuring success of the process of decentralization which the government has embarked upon. This process requires a significant transfer of resources and responsibilities to the municipalities since it is necessary to have a system which would assist mayors to assume their new responsibilities in the field of public investment. This system should also assist the Regional Council on Economic and Social Planning (CORPES) in coordinating the work of municipalities with the efforts of institutions at the departmental or national level.

3.3 Recent Work

The activities of the Office of the Director of Projects and Advisory Assistance Programme of ILPES have basically concentrated on the area of investment programming and project banks. The publication and distribution to all the countries of the region of the Project Information System, SILPES/INFOPROJECT^{12/} was a major step forward. It is a system basically designed to collect, handle and analyze important information on public investment project at

^{12/} SILPES/INFOPROJECT: Project Information System (version 2.1: LC/IP/L.32), Santiago, Chile, August 1990.

the national, sectoral and regional levels. In collaboration with the Economic Development Institute of the World Bank, two regional seminars were held in Santiago in October 1990; the first was on "Public Expenditure and Investment Programming" while the second (2 to 5 October 1990) was on "Fiscal Decentralization and Project Banks". A third seminar will be held for all the countries of the Caribbean and some South American countries on "Investment Programming and Project Banks" in Kingston, Jamaica in late November 1991.

Under the modular and decentralized approach of project information systems, the following degrees of progress can be noted in national activities:

- a) **Colombia:** The following facts can be highlighted under the BID/DNO/ILPES (AT/JF-3342-CO) agreement on the establishment of a project bank for national investments:
 - i) Preparation and dissemination among all ministerial agencies and municipalities of the document entitled "Manual of Operations and Methodologies" (Volume I) aimed to: i) explain the procedures that should be applied to all the projects at the sectoral or territorial level which are going to be either financed or co-financed by the General Budget; ii) clarify the flow of information for registering the public investment projects into the project data bank; iii) develop the procedures for handling the Form of Basic Investment Statistics (EBI); and iv) explain the physical and financial follow-up system of the projects.
 - ii) Installation of the project data base together with its respective manuals in all the ministries, CORPES and project executing agencies.
 - iii) Signing of the letter of agreement between the Pan American Health Organization (PAHO/UNDP) and ECLAC for the acquisition of the project's computer equipment.
 - iv) Strengthening of training activities in the formulation and evaluation of projects for all the regions and municipalities.

- v) Elaboration of the final documents concerning the conceptual, logical and physical design of the national investment Project Data Bank (Volumes I, II and III).
- vi) Preparation of the general methodology for project identification, formulation and appraisal and the development of sectoral methodologies for key sectors of the economy such as health, education, justice, drinking water, transport and agricultural projects.
- vii) Publication of the new organic budget law and the corresponding Presidential Decree regarding the functioning of the national investment project data bank and in general, stating the rules to be followed by all the projects either financed or co-financed by the General Budget.
- viii) Elaboration and dissemination among all the users of the document entitled "Diagnosis of the Investment Budget and Census of the Projects at the Sectoral and Regional level".

b) **Chile:**

- i) Under the agreement signed between IDB and the Government of Chile on the basis of which the Undersecretariat for Regional and Administrative Development shall formulate an institutional development plan, ILPES in conjunction with and the Ministry of Planning and Cooperation (MIDEPLAN) organized 13 two-day seminars for each of the country's regions on "Decentralized Management of Public Investments". One thousand one hundred civil servants attended the seminars. The seminars focused on the theoretical and institutional principles of public investment, the framework of the process of decentralization, the allotment of public investments and the integral project bank.
- ii) At the end of April 1991, signed a technical cooperation agreement with ILPES on the implementation of a plan for the strengthening of institutions whose main objectives will be to boost the technical and institutional capacity of regional, public and private agencies for managing and monitoring regional public investments and strengthening the technical resource base in order to ensure that the regions have greater autonomy with respect to the development policies that they have to promote. The specific programme that is the

subject matter of this agreement which will be for two years, will basically cover the following areas and activities:

Specific studies. Development of methodologies that serve as a reference and supplement the analysis of projects based on strictly individual selection criteria. To that end, the following studies will be carried out:

- Methodology for identifying pockets of poverty and identifying local development projects.
- Methodology for the ex-post evaluation of projects.
- Methodology to establish a hierarchy of projects.
- Instruments for the physical and financial follow-up of projects.

Training programme. In keeping with the objectives of the plan to strengthen institutions, the training programme will consist of a series of courses and seminars aimed at training participants in key aspects of decentralization, spatial planning and the identification and programming of investments. The courses and seminars that will be conducted between 1991 and 1993 are as follows:

- Decentralization, spatial planning and identification of investments. 13 three-week courses in each of the regions of the country.
- Preparation and evaluation of projects. 26 two-week courses. Two courses per region.
- Follow-up and management of projects. 13 two-week courses in each of the regions of the country.
- Operation of the integral project bank. 13 one-week courses in each of the country's regions.
- Seminars for regional governments. 13 regional seminars on the management of public investments and budgetary aspects.
- Main seminars. Six main seminars to be attended by participants from all the regions of the

country on topics relating to regional and local governments, decentralization, financing and regional investments.

- c) **Jamaica:** Under the National Development Plan (Project JAM/89/019) funded by UNDP and executed by ILPES progress was made in the development of the following activities:
- i) Design of a project bank with its respective preinvestment and physical and financial follow-up modules and establishment of procedures for data collection. Its design also includes the special profile of technical cooperation projects.
 - ii) Design of a short-term macroeconomic model and simulation of results.
 - iii) Design of a system of short-term indicators for monitoring the economy.
 - iv) Providing on the job training to officials directly involved in the operation of the project bank (PIOJ/Finance/PAMCO) and the macroeconomic model.
- d) **Costa Rica:** At the beginning of April 1991, ILPES provided support to the Ministry of National Planning and Political Economy (MIDEPLAN) in the preparation of a technical assistance agreement aimed at implementing the following activities:
- Designing and establishing the project information system (INFOPROJECT).
 - Formulating and implementing a training programme for the preparation and evaluation of public investment projects.
 - Developing appropriate methodologies on the preparation and evaluation of projects.
- e) **Venezuela:** At the request of the Director General of the Social Investment Fund (FONVIS) technical assistance has concentrated on discussing the participation of ILPES in the preparation and implementation of the training programme within the framework of the agreement signed between IDB and the Government of Venezuela. ILPES's involvement will be in any area relating to the preparation and evaluation of public investment projects.

3.4 Exchange of Experiences

Six officials of the Government of Jamaica responsible for the implementation of the project bank and the macroeconomic model visited Santiago in November 1990 in order to be trained on how to use these instruments; they familiarized themselves with the operation of the instruments and also learned about similar experiences of the Government of Chile through visits to MIDEPLAN, Subdere and the Central Bank. Similar activities have been conducted on other occasions with officials from Colombia, Bolivia and Trinidad and Tobago.

Following suggestions made by the Government of Venezuela through CORDIPLAN and the Solidarity and Investment Fund (FOSIS) two officials visited ILPES Headquarters at the end of 1990 in order to familiarize themselves with the performance of project banks, the process of decentralization in the allocation of public investments and techniques for pinpointing areas of social expenditure.

3.5 Future Developments

Even though the concept of project banks is no longer new since its basic principles are known and have been applied for several years now, some interest has been generated in the development of this important instrument of support for the management of public investments. In view of this situation, the Office of the Director of Projects and Advisory Assistance Programme of ILPES has sought to assume the leadership role in the development of project banks. It has thus embarked upon a significant task of research and designing through which it hopes to transform project banks into planning instruments that are even more complete and useful. Some examples of the areas in which work is being done or will have to be done are given below.

As far as methodology is concerned, one of the most important tasks is the designing and start-up of the project information system known as SILPES/INFOPROJECT. The system is designed, constructed and programmed to collect and process important project data as projects pass from one phase to the other during their life cycle. This system will be continuously updated and improved to reflect national performances and new developments in computers.

Some resources have also been allocated for the development of methodologies to establish a hierarchy of projects which are compatible with project banks. These methodologies are designed to use the large quantity of information available through project banks to facilitate and introduce more scientific methods into the process of preparing investment programmes.^{13/} Similarly, equal attention has been focused on the methodological aspects of the physical and financial follow-up of projects and institutional and legal reforms in order to ensure that such systems are fully operational. Equally important are all the efforts that are being made to adapt training programmes and enhance their efficiency.

At the same time, work needs to be done on developing methodologies for the ex-post evaluation of projects. Ex-post evaluation can provide useful information on the quality of preinvestment and investment processes, suggesting which aspects should be improved in order to enhance their efficiency. The development of ex-post evaluation methodologies within the context of project banks would probably require modifications to the traditional structure of such banks so that they would effectively support this task.

^{13/} An example of this kind of work may be found in the ILPES document entitled "Colombia: Elementos para una metodología de priorización de proyectos municipales". Santiago, Chile, August 1988.

Another aspect which can revolutionize the capacity of project banks and radically affect their current structure is the development of communications software and hardware and of increasingly sophisticated networks. The development of microcomputers has made it possible to develop systems which range from those that are large, costly and centralized to those that operate on multiple data bases and which exchange information. By extrapolating this technology, it is possible to envisage extensive networks of microcomputers exchanging information in an automatic and instantaneous manner among all the institutions involved in the process of public investment.

In view of the successes achieved in investment programming and the monitoring and follow-up of public projects through the establishment of project banks, great interest has developed in applying the same concept to other areas of public sector management. Having regard to the large quantity of resources which some countries of the region receive in the form of technical cooperation, the Institute has taken steps to apply the methodology of project banks to the design of a system of support for the management of technical cooperation.^{14/} It is hoped in this way to develop parallel and interrelated systems which would facilitate the integral management of current budgetary and technical cooperation resources.

^{14/} See the ILPES document "Conceptual and Methodological Basis for the Development of a Support System for the Management of Technical Cooperation" (LC/IB/R.65), Santiago, July 1988.