

## **AREA OF ADVISORY SERVICE PROGRAMMES**

### **GUIDE FOR RANKING PROJECT PROFILES**

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**GUIDE FOR RANKING PROJECT PROFILES**

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## FOREWORD

The present document is the materialization of a new stage in the work programme for providing the Belizean Ministry of Economic Development with a Project Bank. This step consists basically in the elaboration of a set of indicators for immediate incorporation in the taking of investment decisions through the use of this Project Bank.

The work developed constitutes a proposal, for making the information required by the usual methodologies compatible with the statistical information available. This exercise inexorably leads to a recognition of methodological limitations which will be more severe in the case of those projects where there is less statistical information. Overcoming this restriction, however, depends mainly on the possibility of improving the quality of the statistics available.

This work was carried out with the technical co-operation of the Latin American and Caribbean Institute for Economic and Social Planning (ILPES) to the Government of Belize through the Ministry of Economic Development (MOD), and within the aims of the DTCD/UNDP Agreement (El Salvador).

The document was drawn up by the advisor Carlos Castillo E. with the valuable assistance of Pablo Ezpat of the Ministry of Economic Development and the technical team of the ILPES Advisory Service Programme.

## SECTION 1

### GUIDE FOR RANKING PROJECT PROFILES

#### I. INTRODUCTION

The development process in Latin American countries has been a continual search for new or improved models for social organization to overcome the limitations to achieving greater growth rates. Preoccupation with this has recently grown in Latin America because of the growing unsatisfied demand for basic needs resulting from the high rates of population growth and the low rates of GNP growth in most of the countries of the region.

Various factors indicate that the scarcity of investment resources which normally affects Latin American economies will continue to be a serious limitation to growth. It is therefore, increasingly important to use available resources efficiently. This is very noticeable in recent models where product growth rate depends on the quality of the investment made. The effect of the quality of the investment on public welfare is explicitly stated in these models, by taking into account the cost to the whole society of new investments, a cost which consists in sacrificing current consumption units.

This means, that investments with a low rate of return in terms of GNP growth mean less return in future consumption units than those potentially obtainable and, therefore, a lower level of welfare for future generations. Thus, the importance of the efficient use of resources comes from its direct impact on social welfare which largely affects future generations.

The present work is an effort to make allocations of investment resources more efficient and is a reaction to the preoccupation of the Belizean government with developing procedures to assist in the investment decision-making process. The scheme is developed in the framework of the Belizean Project Bank and takes into account that the system will be incorporated in a context which is highly restricted by lack of the necessary

technical input. For this reason, the scheme developed consists in an elementary proposal to use existing information in the hope that in subsequent stages the remaining necessary technical input will be developed. This description makes it clear that essentially, the proposed methodology must make intensive use of physical statistical information, since it is immediately available.

## II. BACKGROUND

The Government of each country guides the allocation of resources to both the public and the private sector through the structure made up of the set of rules under which the various agents and markets operate and their corresponding roles in it. The development strategy of each country establishes outlines promoting specific goals. Later, in the course of the planning process, the requirements, of the different agents and the restrictions on them for achieving the purposes established by the government and/or the private agents are discovered. The final stage of this process consists in identifying project ideas which, in the normal course of events, finally determine the investment plan.

The private sector allocates resources using market prices as the main basis of investment decisions. In fact, the competition of multiple producers and consumers, simultaneously interacting, guarantees that the observed prices faithfully reflect existing shortages in each market. For this reason, market prices are a good indication of the opportuneness and quantity of investment required in the corresponding market. Thus, provided there are no distortions, resources flow towards those sectors where they are most necessary, as indicated by the signs that the prices provide.

In those cases where, because of distortions, these do not provide the investors with the right guidelines, complementary measures are established to correct these anomalies. These

situations are detected in the planning process in order both to guide, public sector investment towards potential bottlenecks for private investment and to precisely identify the sectors where additional measures, usually taxes or subsidies, are needed for correcting the effect of such distortions.

Public sector investment is usually directed towards goods or services which do not fully meet all the conditions for the functioning of competitive markets. Frequently, market failure results from the presence of "externalities", common resources and public goods, or from the existence of incorrect prices (monopoly, unemployment, overvalued exchange rate, inflation), which prevent the direct use of prices for evaluating the priorities of the projects being studied. In such conditions, the public sector falls back on the social evaluation of projects as a tool for more rigorously measuring the priority of each project. In other words, for the public sector, the social evaluation of projects is a tool which complements market prices as a component of resource allocation.

Public sector investment decisions are made by carrying out different stages of analysis in terms of the contribution each one of them makes to social welfare. These stages are normally known as: 1) Idea, 2) Profile, 3) Prefeasibility, 4) Feasibility, 5) Design, 6) Construction, and 7) Operation, and were presented and analyzed in the first design document of the Belizean Project Bank, "MANUAL FOR THE APPRAISAL AND MONITORING OF PROJECTS". Generally, it is noted in this process that public sector investment decision-taking means an increasing demand for information on the part of the different agencies charged with such decisions. Also, the information accumulated through the different stages is interrelated and therefore a systematization and analysis of this information is necessary. That is to say, investment decision-making is highly information-intensive and information is its main input. The Project Bank is a tool for contributing to this process by permitting the accumulation of

information, its processing, and prompt retrieval for decision-making.

The Belizean Project Bank constitutes a useful tool for decision-making in the different stages of the project cycle. Since it generates information on the general characteristics of each project, its profitability, labour needs, financing, and geographical impact, it permits not only a better ranking of projects, but also more suitable follow-up programmes.

Finally, it should be noted that the Project Bank proposed for Belize is a flexible instrument and as such can be structured according to the demands for investment information made by the political institutional structure of the country. This aspect has become more relevant in recent years as a result of the experience of several countries which are developing regionalization processes parallel with systems for the administration of public investment. In these cases the delegation of power to local authorities has given more importance to the decentralization needed for investment decisions.

This process requires that the instrument for supporting decision-making be redirected to serve local authorities with equal efficiency. The Project Bank has such flexibility and can even, if necessary, allow the interchange of information among the various decision levels, both local and national. Structured in a decentralized way, the Bank can help to make investment decisions taken by different authorities contain the maximum participation and co-ordination possible.



### III. METHODOLOGIES AND CHOOSING PROJECTS

Public sector investment decisions have originated considerable research to identify rules to help make this sector's resource allocation as efficient as possible given the opportunity cost of these resources for society as a whole. The various methodologies designed differ in their treatment of the main topics involved in evaluating projects. In some cases these differences arise from the numerary chosen as a means of measuring the benefits and costs of each project. In other cases, they are due to the methodological treatment in the calculation of the shadow prices of the primary factors or the treatment of externalities or, finally, arise from the total approach to the interpretation of the results in terms of the proposed goals of the public investment. These methodological differences affect the final ranking of projects and therefore, the projects chosen to be carried out.

The practical advantage or disadvantage of each approach depends on the economic and social policies adopted by the corresponding Government and not on technical reasons. Nevertheless, the governments should be familiar with the technical aspect, so that the corresponding decisions are taken with a full knowledge of the costs involved in adopting any particular methodology. The following paragraphs present a brief analysis of the main topics to be considered.

The first choice to be made is of the rule to be used for accepting or rejecting a project. These rules were previously described in the document "MANUAL FOR THE APPRAISAL AND MONITORING OF PROJECTS". Going back to the comments made there, it will be remembered that the two main profit indicators are Net Present Value (NPV) and the Internal Rate of Return (IRR). In connection with these indicators it should also be kept in mind that NPV has practical advantages over IRR because of its clearer, interpretation of the bearing of each project on social

welfare. Although this advantage is theoretically not sufficiently clear, there is, nevertheless, a high degree of consensus on the practical usefulness of the NPV.

The main discrepancies in the application of these rules arises from the treatment given to distortions and from the convention adopted for making adjustments to correct market prices, especially of foreign exchange, different types of labour, and capital. Another source of discrepancies arises from interpretations of equity in income distribution and from the decision to include or exclude, through adjustments to variables or parameters, different goals of profit maximization in the evaluation of the projects.

#### IV. THE METHODOLOGY PROPOSED

##### a) Methodological approach

The approach proposed is based on both theoretical and practical considerations. The viability of any methodology will depend on the following considerations:

- The Availability of Technicians Qualified in Project Evaluation. The introduction of project evaluation methodologies, whose manipulation requires highly-specialized technical ability for is humpered by the scarcity of technical teams with sufficient experience. This limitation leads to the design of methodologies which, while adequately contributing to improve the investment decision-making process, are at the same time sufficiently practical to administer and use.
- Availability of Statistics. The methodology to be designed should take into account existing statistics as well as alternative available sources of the necessary information. The best methodology may fail in practice if the necessary information is not feasibly collected because the information does not exist or the cost of obtaining it is very high.

It must be noted however, that the relevant information for evaluating projects is that which refers to the direct influence area of the project and that, therefore, not all the information available at the national level is useful for studying the feasibility of carrying out a project. For this reason, the present case will consider that statistical information relevant for the study of each project, which is available for the geographical area which best approximates the project influence area, where useful statistics exist. This convention is justifiable for projects involving amounts of investment where additional costs for generating specific and disaggregated statistics cannot be justified.

In those cases where the potential investment would be significantly large, it would be fully justifiable to develop preliminary or complementary studies to generate appropriate statistics for making the most correct investment decisions for the country. By their very nature, the statistics necessary for carrying out studies to calculate social costs need national information and are, therefore, an exception to the above rule.

- Institutional Structure. The definition and allocation of institutional roles is another consideration affecting the methodological design to be proposed, since the information which each agency must administer must be directly related to the responsibilities assigned to it in the system of investment decisions. In those cases where the ministries are responsible for generating projects, the technical teams of these ministries should be trained in carrying out the studies required by the methodologies in order to achieve projects of good technical quality. Where this role is centralized in a distinct body specializing in these matters, the ministries must play a supporting role for the pre-investment process, providing the statistical information required by the specialized body. It should also be kept in mind that the distribution of roles in the

investment system is dynamic and may also vary as technical conditions permit.

- Development Strategy. The development strategy adopted by the country should also be taken into account inasmuch as it determines priorities for public investment and therefore, towards which sectors efforts should be directed to improve public investment decisions. Frequently, the public sector is responsible for social and infrastructure investment. In these cases attention should preferably be directed to obtaining methodologies for improving investment decisions in these sectors.

The above considerations limit the methodological choices applicable in the case of Belize. Consequently, an approach will be adopted which takes the following limitations into account:

- At the moment there is a shortage in Belize of some basic input required by the system for analyzing pre-investment such as: a) a scarcity of methodologies developed specifically for Belize, b) a shortage of technical teams trained in project evaluation techniques, and c) a limited availability of statistics for projects.
- The development strategy adopted by the Belizean government lays down that productive investment corresponds to the private sector. Nevertheless, the public sector has developed a policy of stimulating such investment consisting mainly in the granting of tax concessions. To receive such benefits the private businessman must apply and provide financial information about the projects which he wishes to carry out. These applications make it possible to obtain a profile of private investment in the country. This information also helps identify the factor demand of each project, information which is indispensable for the practical application of the methodology.

Finally, the above points suggest the adoption of an approach with the following characteristics:

a) Global approach based on distributive weighting methodology.

b) Information at the project profile level.

c) A system designed to be centrally administered by the Ministry of Economic Development with the support of the other ministries.

d) Information based on available statistics and on information obtained from private projects applying for Government concessions.

e) Minimum requirements of technical teams specializing in project evaluation.

The existence of economical and social policy goals defined by the Government and made explicit through the Plan as integral elements for social welfare, permits using an evaluation of the achieving of such goals as profitability indicators of the different projects. Although this method is useful in the present stage of development of the system, it is not the best, since the weightings applied to each goal are based on subjective variables and, as such, frequently change. The method described is generically known as the distributive weighted approach.

The methodology proposed is based on the manipulation of project profitability indicators at the profile level. This scheme has the advantage of providing profitability information based largely on physical indicators for identifying the supply and demand of the goods or services studied, thus avoiding the need, at the initial stage, of using traditional profit indicators such as NPV or IRR which require greater skill in economically analyzing projects. Nevertheless, it should be kept in mind that both indicators are suitable for measuring profitability since they allow the incorporation in a single variable of all the effects of a project on the economy. Therefore, these indicators are the objectives towards which the system should be directed as soon as the objective conditions mentioned at the beginning of the paragraph permit.

The basis of the approach adopted is the immediate availability of the resources required by the proposed methodology. The integral components of this approach are designed to provide, for each type of project, the minimum information sufficient for making decisions, even though these elements are all defined at the profile level. These components can later be substituted by better quality information as such information becomes available. Consequently, the formats for projects at the profile level which are described below will be incorporated in the Project Bank in order to facilitate the user of this information in the making of decisions.

b) Data Structure

The order in which data are presented is the same for all cases and its structure follows a typical ordering pattern for project analysis. As has been pointed out, the indicators considered are preferably physical, for the reasons above explained. Data structure consists of the following parts:

- Data Directed to the Goals. The first section is designed for identifying in terms of supply and demand the particular existing situation which leaves room for a project and the contribution to each goal which that project would make if it were carried out. The variables considered are mainly physical, although not exclusively, since money variables are included in cases where these exist.
- Social Indicators. This set of information is to provide the variables which most represent the existing social situation in the project area. It should supply an approximation of the main social groups which will be directly benefited from the project.
- Infrastructure Indicators. This group of indicators is for measuring another aspect of project impact -- the generation of new demands for infrastructure as an indirect effect of the project. Thus, an effort is made to obtain different types of information on infrastructure demand which could

possibly arise from the existence of the new project under consideration. Hopefully, by this means the approximate social cost of the main investment can be estimated. This information also permits identifying and projecting demand for public investment, since normally projects of this type are carried out by the public sector.

The indicators which make up each one of the parts described are part of an interrelated set. The blocks of information maintain their basic structure through the different sectors. Nevertheless, some indicators are adjusted to the characteristics of each project in order to make their evaluation more specific.

#### V. OTHER CONSIDERATIONS

As has been pointed out, the objectives fixed by the Government form the central axis on which the proposed approach is based. In the case of Belize, these objectives have been presented in the document "Five Years Macro-economic Plan for Belize, 1985-1989", and incorporated into the methodology in every possible case where explicit objectives exist related to the type of project being considered. In those cases where the objectives have not been explicitly defined, it is proposed to substitute a consideration of the average national situation to establish a parameter against which to measure the situation of any area where eventually a deficit could exist which may make room for a project to solve it.

In the case of economic objectives established by the plan, the three following can be clearly identified:

- Increasing Employment. To measure the achievement of this purpose the measuring unit proposed is "Salary Cost Per Investment Unit" (definition identified as ULE/I and defined in number 8.3 in section III, Definition of Variables). The higher this ratio, the greater is the contribution of the project to this objective.

- Generating Foreign Exchange. In this case two types of measures are proposed, depending on the specific case:

If it is a project which generates exports it is proposed to use the concept "Net Exports per Investment Unit" (definition identified as NX/I and defined in number 10.1 in section III, Definition of Variables).

If it is an import substitution project it is proposed to use the concept "Net Imports Substitution per Investment Unit" (definition identified as NMS/I and defined in number 9.2 in section III, Definition of Variables).

In both cases described, the same criterion will be applied as in the first objective analyzed.

- Maximizing Growth. To measure the contribution to this objective it is proposed to use the concept "Net Benefit per Investment Unit" (definition identified as NB/I and defined under number 10.1 in section III, Definition of Variables). The concept used formally corresponds to the definition commonly known as "benefit-cost-ratio", except that, in this case, for reasons which are indicated in section III, the benefits considered correspond exclusively to those obtained in the first year of operation. This modification has led us to designate this indicator with the name mentioned in order to establish this difference. As in the previous cases, the higher this ratio, the greater is the contribution of the project to this objective. In the cases of social sectors and infrastructure, as well, the objectives established as variables of the first group have been incorporated. In this case, although the plan does not explicitly state the objectives related to any type of project in particular, it is proposed to use variables related to the average situation of the country for the problem being considered in order to discriminate between different areas with similar problems. Additionally, the approach proposed incorporates efficiency indicators for establishing priorities among similar projects for different sectors, as well as to discriminate among different solution alternatives for the same project. For this



purpose, a variable is included to measure the investment per person or unit benefitted by the project, using as guideline in this case the criterion of minimum cost. In the case of social sectors the set of indicators defined for this purpose is the following:

SECTOR	INDICATOR
Education and Culture	Investment per student
Health	Investment per bed
Housing	Investment per house
Justice	Investment per case (civil or criminal)
Drinking water treatment	Investment per connection
Sewerage	Investment per connection

For social sectors and infrastructure a further variable has been added which is investment to Budget as a control variable for each alternative selected in terms of the total budget allocated to each ministry.

For infrastructure, for the same reason as in the previous case, the following efficiency indicators have been incorporated.

SECTOR	INDICATOR
Sports and recreation	Investment per population assigned
Energy	Investment per connection
Urban transport	Investment per population benefitted
Rural transport	Investment per population benefitted

It is necessary to keep in mind that the indicators mentioned as decision instruments should be later complemented with the profitability indicators mentioned above, that is to

say, NPV and IRR, since these incorporate all the effects on profitability of each project in particular. Obviously this phase will require the previous development of all the theoretical and practical elements mentioned in chapter IV.

## VI. RANKING PROCEDURE

The ranking procedure used by this methodology is described below by means of an example of a productive type project. The method proposed first requires the allotment on the part of the corresponding authorities, of the weightings they give to the different objectives laid down. Two cases of weightings will be assigned to illustrate the differences in results, as follows:

	CASE 1	CASE 2
W1= Objective weighting 1	0.5	0.2
W2= Objective weighting 2	0.3	0.3
W3= Objective weighting 3	0.2	0.5
	<u>1.0</u>	<u>1.0</u>

It will also be assumed that the resulting values from estimating the variables of the different objectives are the following:

VARIABLE	PROJECT 1	PROJECT 2	PROJECT 3
ULE/I	0.3	0.2	0.6
NX/I	0.8	0.9	0.3
NB/I	0.4	0.7	0.4

In this way the weighted values which are obtained for each project come from the application of the procedure represented in this example by the following expression:

$$\text{PROJECT } i = (\text{ULE/I})_i * W1 + (\text{NX/I})_i * W2 + (\text{NB/I})_i * W3$$

where it is established that the value of the indicator representing each project corresponds to the result of multiplying the index which represents each specific objective by

the weighting which has been allotted to it by the corresponding authority. This procedure and the values corresponding to the example being developed are illustrated below:

CALCULATING PROCEDURE	RESULTING	PRIORITY
<u>PROJECT 1:</u>		
CASE 1	$0.3*0.5 + 0.8*0.3 + 0.4*0.2 = 0.47$	2
CASE 2	$0.3*0.2 + 0.8*0.3 + 0.4*0.5 = 0.50$	1
<u>PROJECT 2:</u>		
CASE 1	$0.2*0.5 + 0.9*0.3 + 0.7*0.2 = 0.51$	1
CASE 2	$0.2*0.2 + 0.9*0.3 + 0.7*0.5 = 0.45$	2
<u>PROJECT 3:</u>		
CASE 1	$0.2*0.5 + 0.9*0.3 + 0.7*0.2 = 0.47$	2
CASE 2	$0.6*0.2 + 0.3*0.3 + 0.4*0.5 = 0.41$	3

As can be seen, the projects which would be chosen would be different depending on the weightings the authorities decide to give to the different objectives. If the weightings considered correspond to those used in CASE 1, PROJECT 2 would be selected first, since it has a higher profitability indicator than the other two projects, where the last two show priority indifference. If, conversely, the weightings corresponded to those used in CASE 2, PROJECT 1 would be chosen first, then PROJECT 2, and, finally, PROJECT 3, according to the respective value of the profitability index.

Finally, it is indispensable to repeat that the method described here is an intermediate step towards the full functioning of the Project Bank, given that once this step is completed, the selection of projects to be supported (in the case of private projects which apply for Government exemptions) or to be carried out (in the case of projects which would be directly carried out by the public sector), should be carried out with the NPV or IRR indicators, using the results corresponding to the social evaluation of those projects.

With respect to the formats described below, the final stage

will only need slight modifications to incorporate or substitute (when appropriate), these indicators of social profitability.

## SECTION 2

### PROPOSED PROFILE FORMATS

The following pages contain the formats proposed, at the profile stage, for each type of project. The structure of formats was described in general terms in point IV.b. Nevertheless, there are slight differences, according to type of sector, which are described below:

- Productive Sectors. In this case, as has already been pointed out, the format consists of three parts. The first contains supply and demand variables for measuring deficits and indicators for measuring contribution to objectives. Given the productive and private character of these projects, some money-type variables are incorporated. With respect to social indicators and infrastructure no relevant differences exist. This category includes the formats corresponding to Agriculture, Agroindustry, Forestry, Livestock, Fishery, Irrigation, Tourism, Industry and Mining.

- Social Sectors. In the first part of the model format for these sectors, the variables considered are basically physical, with the purpose of identifying potential deficits by determining supply and demand. In this case a subset of data is added for identifying solution alternatives with its respective indicators of investment, efficiency and a control variable for budgetary effects. This difference grows out of the typically public character of these projects. No other relevant differences exist in the other indicators considered. This category includes formats corresponding to Education and Culture, Health, Housing, and Justice.

- Infrastructure Sectors. In general the format for this type of project follows the outlines mentioned in the previous case. This category includes projects corresponding to Drinking

Water, Sewerage, Sports and Recreation, Energy, and Urban and Rural Roads.

## CROP-GROWING INDICATORS

## I) DATA DIRECTED TO OBJECTIVES

TYPE OF PRODUCTION	(1) :	
AREA USED	(2) :	ACRES
EST. ANNUAL PRODUCTION	(3) :	
UNIT PRICE	(4) :	
ANNUAL PRODUCTION VALUE	(5) :	
TYPE OF MARKET:		
EXTERNAL	(6) : %	QUANTITY: VALUE:
DOMESTIC	(7) : %	QUANTITY: VALUE:

EMPLOYMENT INCREASE: (8)

UL: (8.1)	W: (8.2)	ULE/I: (8.3)
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FOREIGN EXCHANGE GENERATED (9)

NX/I : (9.1)	NMS/I: (9.2)
--------------	--------------

GROWTH: (10)

NB/I : (10.1)

RESTRICTIONS: (11)

SLE : (12)

## II) SOCIAL INDICATORS (13)

INCOME DISTRIBUTION	PROPORTION OF FAMILIES
HIGH INCOME	%
MEDIUM INCOME	%
LOW INCOME	%
UNEMPLOYMENT RATE (14)	%

## III) INFRASTRUCTURE INDICATORS (15)

SERVICES AVAILABLE	QUANTITY	QUALITY	ASSOC. PROJ.
HEALTH (16)			
SCHOOLS (17)			
HOUSES (18)			
ROADS (19)			
DRINKING WATER (20)			
SEWERAGE (21)			
ELECTRICITY (22)			
COMMUNICATIONS (23)			
PROPERTY RIGHTS (24)			

## AGROINDUSTRY INDICATORS

## I) DATA DIRECTED OBJECTIVES

TYPE OF PRODUCTION	(1) :	
AREA USED	(2) :	ACRES
EST. ANNUAL PRODUCTION	(3) :	
PRICE UNIT	(4) :	
ANNUAL PRODUCTION VALUE	(5) :	
TYPE OF MARKET:		
EXTERNAL	(6) : %	QUANTITY: VALUE:
DOMESTIC	(7) : %	QUANTITY: VALUE:

## EMPLOYMENT INCREASE: (8)

UL: (8.1)	W: (8.2)	ULE/I: (8.3)
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## FOREIGN EXCHANGE GENERATED: (9)

NX/I : (9.1)	NMS/I: (9.2)
--------------	--------------

GROWTH : (10)

NB/I : (10.1)

RESTRICTIONS: (11)

SLE : (12)

## II) SOCIAL INDICATORS (13)

## INCOME DISTRIBUTION

## PROPORTION OF FAMILIES

HIGH INCOME  
MEDIUM INCOME  
LOW INCOME

%  
%  
%

UNEMPLOYMENT RATE (14)

%

## III) INFRASTRUCTURE INDICATORS (15)

SERVICES AVAILABLE	QUANTITY	QUALITY	ASSOC. PROJ.
HEALTH (16)			
SCHOOLS (17)			
HOUSES (18)			
ROADS (19)			
DRINKING WATER (20)			
SEWERAGE (21)			
ELECTRICITY (22)			
COMMUNICATIONS (23)			
PROPERTY RIGHTS (24)			

## FORESTRY INDICATORS

## I) DATA DIRECTED TO OBJECTIVES

TYPE OF PRODUCTION	(1) :	
AREA USED	(2) :	ACRES
EST. ANNUAL PRODUCTION	(3) :	
UNIT PRICE	(4) :	
ANNUAL PRODUCTION VALUE	(5) :	
TYPE OF MARKET		
EXTERNAL	(6) : %	QUANTITY: VALUE:
DOMESTIC	(7) : %	QUANTITY: VALUE:

EMPLOYMENT INCREASE: (8)

UL: (8.1)	W: (8.2)	ULE/I: (8.3)
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FOREIGN EXCHANGE GENERATED (9)

NX/I : (9.1)	NMS/I: (9.2)
--------------	--------------

GROWTH : (10)	NB/I : (10.1)
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RESTRICTIONS: (11)

SLE: (12)	
TYPE OF RESOURCES (25)	

## II) SOCIAL INDICATORS (13)

INCOME DISTRIBUTION	PROPORTION OF FAMILIES
HIGH INCOME	%
MEDIUM INCOME	%
LOW INCOME	%
UNEMPLOYMENT RATE (14)	%

## III) INFRASTRUCTURE INDICATORS (15)

SERVICES AVAILABLE	QUANTITY	QUALITY	ASSOC. PROJ.
HEALTH (16)			
SCHOOLS (17)			
HOUSES (18)			
ROADS (19)			
DRINKING WATER (20)			
SEWERAGE (21)			
ELECTRICITY (22)			
COMMUNICATIONS (23)			
PROPERTY RIGHTS (24)			



## LIVESTOCK INDICATORS

## I) DATA DIRECTED TO OBJECTIVES

TYPE OF PRODUCTION	(1) :	
AREA USED	(2) :	ACRES
EST. ANNUAL PRODUCTION	(3) :	
UNIT PRICE	(4) :	
ANNUAL PRODUCTION VALUE	(5) :	
TYPE OF MARKET:		
EXTERNAL	(6) :	%, QUANTITY: VALUE:
DOMESTIC	(7) :	%, QUANTITY: VALUE:

EMPLOYMENT INCREASE: (8)

UL: (8.1)	W: (8.2)	ULE/I: (8.3)
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FOREIGN EXCHANGE GENERATED: (9)

NX/I : (9.1)	NMS/I: (9.2)
--------------	--------------

GROWTH : (10) NB/I : (10.1)

RESTRICTIONS: (11)

SLE: (12)	
TYPE OF RESOURCES (25)	

## II) SOCIAL INDICATORS (13)

INCOME DISTRIBUTION

PROPORTION OF FAMILIES

HIGH INCOME	%
MEDIUM INCOME	%
LOW INCOME	%

UNEMPLOYMENT RATE (14) %

## III) INFRASTRUCTURE INDICATORS (15)

SERVICES AVAILABLE	QUANTITY	QUALITY	ASSOC. PROJ.
HEALTH (16)			
SCHOOLS (17)			
HOUSES (18)			
ROADS (19)			
DRINKING WATER (20)			
SEWERAGE (21)			
ELECTRICITY (22)			
COMMUNICATIONS (23)			
PROPERTY RIGHTS (24)			

## FISHERY INDICATORS

## I) DATA DIRECTED TO OBJECTIVES

TYPE OF PRODUCTION	(1) :	
AREA USED	(2) :	ACRES
EST. ANNUAL PRODUCTION	(3) :	
UNIT PRICE	(4) :	
ANNUAL PRODUCTION VALUE	(5) :	
TYPE OF MARKET:		
EXTERNAL	(6) : %	QUANTITY: VALUE:
DOMESTIC	(7) : %	QUANTITY: VALUE:

EMPLOYMENT INCREASE: (8)

UL: (8.1)	W: (8.2)	ULE/I: (8.3)
-----------	----------	--------------

FOREIGN EXCHANGE GENERATED: (9)

NX/I : (9.1)	NMS/I: (9.2)
--------------	--------------

GROWTH : (10)	NB/I : (10.1)
---------------	---------------

RESTRICTIONS: (11)

SLE: (12)	
TYPE OF RESOURCES (25)	

## II) SOCIAL INDICATORS (13)

INCOME DISTRIBUTION	PROPORTION OF FAMILIES
HIGH INCOME	%
MEDIUM INCOME	%
LOW INCOME	%
UNEMPLOYMENT RATE (14)	%

## III) INFRASTRUCTURE INDICATORS (15)

SERVICES AVAILABLE	QUANTITY	QUALITY	ASSOC. PROJ
HEALTH (16)			
SCHOOLS (17)			
HOUSES (18)			
ROADS (19)			
DRINKING WATER (20)			
SEWERAGE (21)			
ELECTRICITY (22)			
COMMUNICATIONS (23)			
PROPERTY RIGHTS (24)			

## IRRIGATION INDICATORS

## I) DATA DIRECTED TO OBJECTIVES

TYPE OF PRODUCTION	(1) :	
PRESENT SUPPLY SOURCE	(26) :	ACRES
ADDITIONAL IRRIGATION AREA	(27) :	
POTENTIAL ESTIMATED ANNUAL PROD.	(28) :	
ANNUAL PRODUCTION VALUE	(5) :	
TYPE OF MARKET:		
EXTERNAL (6) :	% , QUANTITY:	VALUE:
DOMESTIC (7) :	% , QUANTITY:	VALUE:

EMPLOYMENT INCREASE: (8)

UL: (8.1)	W: (8.2)	ULE/I: (8.3)
-----------	----------	--------------

FOREIGN EXCHANGE GENERATED: (9)

NX/I : (9.1)	NMS/I: (9.2)
--------------	--------------

GROWTH : (10)

NB/I : (10.1)

RESTRICTIONS: (11)

SLE: (12)	
TYPE OF RESOURCES: (25)	

## II) SOCIAL INDICATORS (13)

INCOME DISTRIBUTION

PROPORTION OF FAMILIES

HIGH INCOME  
MEDIUM INCOME  
LOW INCOME

%  
%  
%

UNEMPLOYMENT RATE (14)

%

## III) INFRASTRUCTURE INDICATORS (15)

SERVICES AVAILABLE	QUANTITY	QUALITY	ASSOC. PROJ.
HEALTH (16)			
SCHOOLS (17)			
HOUSES (18)			
ROADS (19)			
DRINKING WATER (20)			
SEWERAGE (21)			
ELECTRICITY (22)			
COMMUNICATIONS (23)			
PROPERTY RIGHTS (24)			

## TOURISM INDICATORS

## I) DATA DIRECTED TO OBJECTIVES

TYPE OF SERVICE	(29) :	
AREA USED	(2) :	ACRES
EST. ANNUAL PRODUCTION	(3) :	
UNIT PRICE	(4) :	
ANNUAL PRODUCTION VALUE	(5) :	
TYPE OF MARKET:		
EXTERNAL	(6) : %	QUANTITY: VALUE:
DOMESTIC	(7) : %	QUANTITY: VALUE:

EMPLOYMENT INCREASE: (8)

UL: (8.1)	W: (8.2)	ULE/I: (8.3)
-----------	----------	--------------

FOREIGN EXCHANGE GENERATED: (9)

$(X + MS) / I$ (30) :
-----------------------

GROWTH : (10)

NB/I : (10.1)
---------------

RESTRICTIONS: (11)

SLE : (12)
------------

## II) SOCIAL INDICATORS (13)

INCOME DISTRIBUTION

PROPORTION OF FAMILIES

HIGH INCOME	
MEDIUM INCOME	
LOW INCOME	

%
%
%

UNEMPLOYMENT RATE (14)

%

## III) INFRASTRUCTURE INDICATORS (15)

SERVICES AVAILABLE	QUANTITY	QUALITY	ASSOC. PROJ.
HEALTH (16)			
SCHOOLS (17)			
HOUSES (18)			
ROADS (19)			
DRINKING WATER (20)			
SEWERAGE (21)			
ELECTRICITY (22)			
COMMUNICATIONS (23)			
PROPERTY RIGHTS (24)			

## INDUSTRY INDICATORS

## I) DATA DIRECTED TO OBJECTIVES

TYPE OF PRODUCTION	(1) :	
AREA USED	(2) :	ACRES
EST. ANNUAL PRODUCTION	(3) :	
UNIT PRICE	(4) :	
ANNUAL PRODUCTION VALUE	(5) :	
TYPE OF MARKET:		
EXTERNAL	(6) : %	QUANTITY: VALUE:
DOMESTIC	(7) : %	QUANTITY: VALUE:

EMPLOYMENT INCREASE: (8)

UL: (8.1)	W: (8.2)	ULE/I: (8.3)
-----------	----------	--------------

FOREIGN EXCHANGE GENERATED: (9)

NX/I : (9.1)	NMS/I: (9.2)
--------------	--------------

GROWTH : (10)

NB/I : (10.1)

RESTRICTIONS: (11)

SLE : (12)

## II) SOCIAL INDICATORS (13)

INCOME DISTRIBUTION	PROPORTION OF FAMILIES
HIGH INCOME	%
MEDIUM INCOME	%
LOW INCOME	%
UNEMPLOYMENT RATE (14)	%

## III) INFRASTRUCTURE INDICATORS (15)

SERVICES AVAILABLE	QUANTITY	QUALITY	ASSOC. PROJ.
HEALTH (16)			
SCHOOLS (17)			
HOUSES (18)			
ROADS (19)			
DRINKING WATER (20)			
SEWERAGE (21)			
ELECTRICITY (22)			
COMMUNICATIONS (23)			
PROPERTY RIGHTS (24)			

## MINING INDICATORS

## I) DATA DIRECTED TO OBJECTIVES

TYPE OF PRODUCTION	(1) :	
AREA USED	(2) :	ACRES
EST. ANNUAL PRODUCTION	(3) :	
UNIT PRICE	(4) :	
ANNUAL PRODUCTION VALUE	(5) :	
TYPE OF MARKET:		
EXTERNAL	(6) :	% QUANTITY: VALUE:
DOMESTIC	(7) :	% QUANTITY VALUE:

EMPLOYMENT INCREASE: (8)

UL: (8.1)	W: (8.2)	ULE/I: (8.3)
-----------	----------	--------------

FOREIGN EXCHANGE GENERATED: (9)

NX/I : (9.1)	NMS/I: (9.2)
--------------	--------------

GROWTH : (10)

NB/I : (10.1)
---------------

RESTRICTIONS : (11)

SLE : (12)
------------

MAIN INPUTS (31)	SUPPLY SOURCE
1.	
2.	

## II) SOCIAL INDICATORS (13)

INCOME DISTRIBUTION

PROPORTION OF FAMILIES

HIGH INCOME  
MEDIUM INCOME  
LOW INCOME

%  
%  
%

UNEMPLOYMENT RATE (14)

%

## III) INFRASTRUCTURE INDICATORS (15)

SERVICES AVAILABLE	QUANTITY	QUALITY	ASSOC. PROJ.
HEALTH (16)			
SCHOOLS (17)			
HOUSES (18)			
ROADS (19)			
DRINKING WATER (20)			
SEWERAGE (21)			
ELECTRICITY (22)			
COMMUNICATIONS (23)			
PROPERTY RIGHTS (24)			

## EDUCATION AND CULTURE INDICATORS

## I) DATA DIRECTED TO OBJECTIVES

LEVEL : (32)

DEMAND : (33)

## COVERAGE IN THE PROJECT AREA

POTENTIAL SCHOOL POPULATION: (34)

EFFECTIVELY SERVED POP. : (35)

ESTIMATED DEFICIT (%) : (36)

SUPPLY: EXISTING SERVICES (37)

EXISTING BUILDINGS: (38) STANDARD B: (40)

QUALITY OF EXISTING BUILDINGS: (39)

BUILDINGS DEFICIT: (41)

TEACHERS PER STUDENT: (42) STANDARD T: (43)

TEACHER DEFICIT: (44)

ALTERNATIVES (45)

LOCATION	INVESTMENT	INVEST/STUD.	INVES/BUDGET.
1. (46)	(47)	(48)	(49)
2.			
3.			

## II) SOCIAL INDICATORS (13)

## INCOME DISTRIBUTION

## PROPORTION OF FAMILIES

HIGH INCOME

MEDIUM INCOME

LOW INCOME

%

%

%

UNEMPLOYMENT RATE (14)

%

## III) INFRASTRUCTURE INDICATORS (15)

SERVICES AVAILABLE	QUANTITY	QUALITY	ASSOC. PROJ.
HEALTH (16)			
SCHOOLS (17)			
HOUSES (18)			
ROADS (19)			
DRINKING WATER (20)			
SEWERAGE (21)			
ELECTRICITY (22)			
COMMUNICATIONS (23)			
PROPERTY RIGHTS (24)			

OTHERS: (50)

HEALTH INDICATORS

I) DATA DIRECTED TO OBJECTIVES

LEVEL : (32)

DEMAND : (33)

ASSIGNED POPULATION : (51)

TYPE OF SERVICE PROVIDED : (52)

STATE OF HEALTH INDICATORS	LOCAL	NATIONAL
MATERNAL MORTALITY RATE (53)		
INFANT MORTALITY RATE (54)		
LIVE BIRTHS OUTSIDE HOSPITAL (55)		
DIARRHEA CASES (56)		
MAINUTRITION RATE (57)		
TUBERCULOSIS (58)		
SEXUALLY TRANSMITTED DISEAS. (59)		
MALARIA & WATER BORN DISEAS. (60)		

SUPPLY : (37)

EXISTING SERVICES

EXISTING BUILDINGS: (61)

QUALITY OF EXIST. BUILDINGS: (39)

TOTAL BEDS/10 000 INHABS.: (62)

DOCTORS/10 000 INHABS.: (63)

NURSES/10 000 INHABS.: (64)

ALTERNATIVES (45)

LOCATION	INVESTMENT	INVEST./BED	INVEST/BUDGET
1. (46)	(47)	(114)	(49)
2.			
3.			

II) SOCIAL INDICATORS (13)

INCOME DISTRIBUTION

PROPORTION OF FAMILIES

HIGH INCOME

MEDIUM INCOME

LOW INCOME

%

%

%

UNEMPLOYMENT RATE (14)

%

III) INFRASTRUCTURE INDICATORS (15)

SERVICES AVAILABLE	QUANTITY	QUALITY	ASSOC. PROJ.
HOUSES (18)			
ROADS (19)			
DRINKING WATER (20)			
SEWERAGE (21)			
ELECTRICITY (22)			
COMMUNICATIONS (23)			
PROPERTY RIGHTS (24)			



HOUSING INDICATORS			
I) DATA DIRECTED TO OBJECTIVES			
DEFICIT INDICATORS : (33)			
EXISTING CAPACITY		LOCAL	NATIONAL
EXISTING DWELLINGS: (65)			
EXISTING FAMILIES: (66)			
FAMILIES/AVERAGE NUMBER			
PER DWELLING: (67)			
APPROXIMATE DEFICIT: (67.1)			
ALTERNATIVES (45)			
LOCATION	INVESTMENT	INVES./DWELL.	INVES/BUDGET
1. (46)	(47)	(68)	(49)
2.			
3.			
II) SOCIAL INDICATORS (13)			
INCOME DISTRIBUTION		PROPORTION OF FAMILIES	
HIGH INCOME		%	
MEDIUM INCOME		%	
LOW INCOME		%	
UNEMPLOYMENT RATE (14)			%
III) INFRASTRUCTURE INDICATORS (15)			
SERVICES AVAILABLE	QUANTITY	QUALITY	ASSOC. PROJ.
HEALTH (16)			
SCHOOLS (17)			
ROADS (19)			
DRINKING WATER (20)			
SEWERAGE (21)			
ELECTRICITY (22)			
COMMUNICATIONS (23)			
PROPERTY RIGHTS (24)			

## JUSTICE INDICATORS

## I) DATA DIRECTED TO OBJECTIVES

DEFICIT INDICATORS: (33)

EXISTING CAPACITY	LOCAL	NATIONAL
SPACE AVAILABLE: (69)		
POPULATION SERVED: (70)		
POP. SERVED/SQUARE FOOT: (71)		
POP. STANDARD/SQUARE FT. (72)		
DEFICIT (73)		
QUALITY (39)		

ALTERNATIVES (45)

LOCATION	INVESTMENT	INVES./PERSON	INVES/BUDGET.
1. (46)	(47)	(115)	(49)
2.			
3.			

## II) SOCIAL INDICATORS (13)

INCOME DISTRIBUTION	PROPORTION OF FAMILIES
HIGH INCOME	%
MEDIUM INCOME	%
LOW INCOME	%
UNEMPLOYMENT RATE (14)	%

## III) INFRASTRUCTURE INDICATORS (15)

SERVICES AVAILABLE	QUANTITY	QUALITY	ASSOC. PROJ.
ROADS (19)			
DRINKING WATER (20)			
SEWERAGE (21)			
ELECTRICITY (22)			
COMMUNICATIONS (23)			
PROPERTY RIGHTS (24)			

## DRINKING WATER INDICATORS

## I) DATA DIRECTED TO OBJECTIVES

## SUPPLY - EXISTING SYSTEM

PRESENT SUPPLY SOURCE	(74)	
QUANTITY AVAILABLE	(75)	
STANDARD	(76)	
WATER QUALITY	(39)	
EQUIPMENT QUALITY	(39)	

## DEMAND

POPULATION	(77)	
EXISTING DWELLINGS	(78)	
NUMBER OF CONNECTIONS	(79)	

## BALANCE

CONNECTIONS DEFICIT	(80)	
STANDARD DEFICIT	(81)	
TOTAL DEFICIT	(82)	
RATIONING	(83)	

## ALTERNATIVES (45)

LOCATION	INVESTMENT	INVES./CONNEC	INVES./BUDGET
1. (46)	(47)	(84)	(49)
2.			
3.			

## II) SOCIAL INDICATORS (13)

WATER-BORN DISEASES:	(85)	
----------------------	------	--

## INCOME DISTRIBUTION

## PROPORTION OF FAMILIES

HIGH INCOME	%
MEDIUM INCOME	%
LOW INCOME	%

UNEMPLOYMENT RATE (14)	%
------------------------	---

## III) INFRASTRUCTURE INDICATORS (15)

SERVICES AVAILABLE	QUANTITY	QUALITY	ASSOC. PROJ.
ROADS (19)			
SEWERAGE (21)			
ELECTRICITY (22)			
COMMUNICATIONS (23)			
PROPERTY RIGHTS (24)			

## SEWERAGE INDICATORS

## I) DATA DIRECTED TO OBJECTIVES

## EXISTING SYSTEM

## SUPPLY

TYPE OF EXISTING SYSTEM	(86)	
-------------------------	------	--

## DEMAND

POPULATION	(77)	
EXISTING DWELLINGS	(78)	
NUMBER OF CONNECTIONS	(79)	

## BALANCE

CONNECTIONS DEFICIT	(80)	
---------------------	------	--

## ALTERNATIVES (45)

LOCATION	INVESTMENT	INVES/CONNEC.	INVEST/BUDGET
1. (46)	(47)	(84)	(49)
2.			
3.			

## II) SOCIAL INDICATORS (13)

## INCOME DISTRIBUTION

## PROPORTION OF FAMILIES

HIGH INCOME  
MEDIUM INCOME  
LOW INCOME

%  
%  
%

UNEMPLOYMENT RATE (14)

%

## III) INFRASTRUCTURE INDICATORS (15)

SERVICES AVAILABLE	QUANTITY	QUALITY	ASSOC. PROJ.
ROADS (19)			
DRINKING WATER (20)			
ELECTRICITY (22)			
COMMUNICATIONS (23)			
PROPERTY RIGHTS (24)			

## SPORTS AND RECREATION INDICATORS

## I) DATA DIRECTED TO OBJECTIVES

## EXISTING SYSTEM

## SUPPLY

## TYPE OF EXISTING LOCATIONS (87)

IDENTIFICATION (89)	TYPE OF SPORT (90)	#

## DEMAND

ASSIGNED POPULATION (88)	SPORTS PRACTICED (88.1)

## ALTERNATIVES (45)

LOCATION	INVESTMENT	INVES/POP.AS.	INVES/BUDGET
1. (46)	(47)	(116)	(49)
2.			
3.			

## II) SOCIAL INDICATORS (13)

## INCOME DISTRIBUTION

## PROPORTION OF FAMILIES

HIGH INCOME  
MEDIUM INCOME  
LOW INCOME

%  
%  
%

UNEMPLOYMENT RATE (14)

%

## III) INFRASTRUCTURE INDICATORS (15)

SERVICES AVAILABLE	QUANTITY	QUALITY	ASSOC. PROJ.
ROADS (19)			
DRINKING WATER (20)			
SEWERAGE (21)			
ELECTRICITY (22)			
COMMUNICATIONS (23)			
PROPERTY RIGHTS (24)			

## ENERGY INDICATORS

## I) DATA DIRECTED TO OBJECTIVES

## SUPPLY (EXISTING GENERATING SYSTEM)

TYPE OF PLANT (91)	MAX. CAPAC. (93)	ENERGY GENERATED(94)	ENERGY SOLD (95)

DOMESTIC INPUTS: (92)      IMPORTED INPUTS: (92)

## DEMAND

	COMMERCIAL	DOMESTIC
CONSUMERS (96)		
EXISTING DWELLINGS	(78)	
NUMBER OF CONNECTIONS	(79)	

## BALANCE

CONNECTIONS DEFICIT	(80)	
TRANSMISSION LOSSES	(97)	
GENERATING DEFICIENCIES	(98)	

## ALTERNATIVES (45)

LOCATION	INVESTMENT	INVES/CONNEC.	INVES/BUDGET.
1. (46)	(47)	(84)	(49)
2.			
3.			

## II) SOCIAL INDICATORS (13)

INCOME DISTRIBUTION	PROPORTION OF FAMILIES
HIGH INCOME	%
MEDIUM INCOME	%
LOW INCOME	%
UNEMPLOYMENT RATE (14)	%

## III) INFRASTRUCTURE INDICATORS (15)

SERVICES AVAILABLE	QUANTITY	QUALITY	ASSOC. PROJ.
HEALTH (16)			
SCHOOLS (17)			
HOUSES (18)			
ROADS (19)			
SEWERAGE (21)			
COMMUNICATIONS (23)			
PROPERTY RIGHTS (24)			

## URBAN TRANSPORT INDICATORS

## I) DATA DIRECTED TO OBJECTIVES

SUPPLY: EXISTING OR ALTERNATIVE STREETS (105).

STREETS	SIDEWALKS (99)	ROADWAYS (100)

EXISTENCE OF COLLECTORS FOR: (101)  
 DRINKING WATER:           SEWERAGE:                               OTHERS:

## DEMAND

DIRECTLY BENEFITTED POPULATION: (102)	
PUBLIC TRANSPORT: (103)	
PRIVATE TRANSPORT (104)	

## BALANCE

SIDEWALKS DEFICIT (106)	
ROADWAY DEFICIT (107)	

## ALTERNATIVES (45)

LOCATION	INVESTMENT	INVES./POP.	INVES/BUDGET
1. (46)	(47)	(108)	(49)
2.			
3.			

## II) SOCIAL INDICATORS (13)

INCOME DISTRIBUTION	PROPORTION OF FAMILIES
HIGH INCOME	%
MEDIUM INCOME	%
LOW INCOME	%
UNEMPLOYMENT RATE (14)	%

## III) INFRASTRUCTURE INDICATORS (15)

SERVICES AVAILABLE	QUANTITY	QUALITY	ASSOC. PROJ.
HEALTH (16)			
SCHOOLS (17)			
HOUSES (18)			
DRINKING WATER (20)			
SEWERAGE (21)			
COMMUNICATIONS (23)			
PROPERTY RIGHTS (24)			

## RURAL TRANSPORT INDICATORS

## I) DATA DIRECTED TO OBJECTIVES

SUPPLY: EXISTING OR ALTERNATIVE ROADS (109)

ROADS	QUALITY (99)	ACCESSIBILITY (110)

## DEMAND

DIRECTLY BENEFITTED POPULATION:	(102)	
PUBLIC TRANSPORT:	(103)	
PRIVATE TRANSPORT:	(104)	
ADDITIONAL PRODUCTION VALUE:	(111)	
INCREASE IN LAND VALUE:	(112)	

## BALANCE

ROAD DEFICIT (113) 

## ALTERNATIVES (45)

LOCATION	INVESTMENT	INVES./POP.	INVES/BUDGET
1. (46)	(47)	(108)	(49)
2.			
3.			

## II) SOCIAL INDICATORS (13)

## INCOME DISTRIBUTION

## PROPORTION OF FAMILIES

HIGH INCOME

MEDIUM INCOME

LOW INCOME

%

%

%

UNEMPLOYMENT RATE (14)

%

## III) INFRASTRUCTURE INDICATORS (15)

SERVICES AVAILABLE	QUANTITY	QUALITY	ASSOC. PROJ.
HEALTH (16)			
SCHOOLS (17)			
HOUSES (18)			
DRINKING WATER (20)			
SEWERAGE (21)			
COMMUNICATIONS (23)			
PROPERTY RIGHTS (24)			



**SECTION 3**  
**DEFINITION OF VARIABLES**

This section defines each one of the variables proposed in the above described formats. A correlative numbering order is followed. That is to say, the numbering order which these follow does not correspond to an one format since many of these variables are repeated in different formats. This factor reflects the methodological approach used which, since it is the same for all cases, uses the same definitions.

1. **TYPE OF PRODUCTION:** In the space for this variable the specific type or class of good or service to be produced by the project being studied should be indicated.
2. **AREA USED:** In this space the total area of land to be used by the project should be indicated. The unit used should be the acre, to conform with existing statistics.
3. **ESTIMATED ANNUAL PRODUCTION:** In this case the average annual production projected by the project should be indicated. The unit used should be the pound (lbs) to conform to the corresponding statistics. This quantity can be compared for verifying the accuracy of the figures, with yield per acre indicators provided by the statistics, by item and district. This information is provided by the document "Annual Report and Summary of Statistics", edited by the Department of Agriculture of the Belizean Ministry of Agriculture.
4. **UNIT PRICE:** The monetary unit used for indicating price per unit should correspond to the same date as that employed for estimating investment cost. It is necessary, therefore, to establish the date to which the monetary units refer and define the relevant prices for the project. For this purpose, the following price guidelines are proposed:
  - a) If the good is directed to the export market, the relevant price is that which corresponds to the FOB export value, since those are the prices which guide

investment decision. These prices should be expressed in national currency (Bz \$) at the official exchange rate.

- b) If the good is directed to import substitution, the relevant price is the price on the domestic market, since this includes the effect of tariffs or any other similar measure (protection measures) which may affect this price. This is the relevant price since it is that which is used by investors for taking investment decisions.
- c) If the good is directed to the domestic market, the relevant price is the market price because this includes all the information necessary for making investment decisions.

All types of goods taxes must be discounted from these prices because of the distortion effect of these where the rates are different. It should also be remembered that the proposed scheme only takes into account private prices and in no way considers social prices.

5. VALUE OF ANNUAL PRODUCTION: The annual production value should be indicated which corresponds to the product of 3 \* 4.

6. TYPE OF MARKET: EXTERNAL. The annual production value and the total of annual units allocated to the external market must be indicated both for exports and for export substitution. These goods are usually negotiable.

7. TYPE OF MARKET: DOMESTIC. The production value and the total number of units allocated to the domestic market should be indicated. By definition it is assumed that there is no external competition, which is the case for non-negotiable goods.

8. INCREASE IN EMPLOYMENT. This variable is for measuring the contribution of the project to this goal. The variables used for measuring this effect are:

- 8.1 UL: Unskilled labour. This refers to the average annual number of unskilled labourers employed in the operational stage throughout the useful life of the

project. That is to say, it excludes the unskilled labour used in the investment stage. This criterion is adopted only as an approximation of the measure of total employment generated by the project, since it excludes employment generated during the investment stage as well as the influence on employment of the useful life of the project. Both these factors detract from the validity of this indicator. Nevertheless, its adoption is based on the operational advantage resulting from incorporating it in the methodology for measuring the contribution to the objective being considered.

8.2 W: WAGE LEVEL. This corresponds to the normal annual wage paid by the project to each unskilled labourer. The wage used should include all costs to the employer, such as social security contributions and other benefits he must pay, because all these are elements which the employer takes into account in determining the number of workers to employ. This wage does not necessarily have to correspond to market wages since the marginal productivity of each worker depends on the specific type of project on which he is employed, that is to say, only private wages are considered and not the social cost.

8.3 ULE/I: THE COST OF WAGES/ TOTAL INVESTMENT. This is a measure of the relationship between the cost of unskilled labour and the total investment cost programmed by the project. It should be remembered that the unskilled labour considered corresponds to the average for the operation period and, therefore, labour participation in the entire investment is not measured, but monetary units of unskilled labour generated in the operation period per monetary unit of investment made by the project. The indicator is the product of 8.1 times 8.2.

Although these restrictions lessen the validity of this indicator, its usefulness results from its generalized use for all types of project as an indicator of the contribution which each one makes to the objective. Only in this context is it valid as a means of giving priority to projects. For these reasons, it is assumed that the bias introduced by this methodology is the same for all type's of project being considered.

9. GENERATION OF FOREIGN EXCHANGE. This consists in measuring the net increase in the supply of foreign exchange which the country will obtain as a result of carrying out the project being studied. For this the following two indicators are proposed:

9.1 NX/I: NET EXPORTS PER INVESTMENT UNIT. In the case of export projects, this variable is for obtaining the net increase in the supply of foreign exchange per investment unit.

For this purpose the variable NX is defined in the following way:  $NX = X * Mi$ , where:

X = Total annual value of exports made by the project so that:  $X = px * qx$ , where:

$px$  is defined in 4.a and  $qx$  is defined in 6.

$Mi$  = Total value of annual imported input as a result of the project, so that:

$Mi = mi * pi$ , where:

$Mi$  corresponds to the total quantity of input imported annually as a result of the project.

$pi$  is defined in 4.b.

9.2 NMS/I: NET IMPORT SUBSTITUTION PER INVESTMENT UNIT. In this case the net increase in available foreign exchange obtained by the substitution of foreign exchange spending as a result of the existence of the project is measured. For this purpose the variable NMS is measured:

$NMS = Mp * Mi$  where,

$NMS = M_p * M_i$  where,

$M_p$  = Value of imports substituted annually by the project, so that:

$M_p = p_d * q_{mp}$  where:

$p_d$  is the domestic price of the imported goods, as defined in 4.b and  $q_{mp}$  is the quantity of imported goods annually substituted because of the project.

$M_i$  = The total value of input imported annually because of the project to produce  $q_{mp}$ , defined as in 9.1.

10. GROWTH: The space under this heading is for measuring, by an indicator, the contribution of each project to the economic growth objective. In general terms, this contribution is measured by the indicators given in the form "PROJECT DATA CAPTURE FORM 2, PRIVATE SECTOR PROJECTS", in part number 16, PROFITABILITY. Nevertheless, it has been pointed out that to obtain such indicators at the present stage, (NPV or IRR), implies high costs because of the level of studies required (pre-feasibility or feasibility) required. Therefore, it is proposed to consider such indicators only for those projects which involve significant quantities of investment in which case the relevant indicator for measuring the contribution of the project would be one of the two mentioned and should be incorporated in the methodology described in section 1. In the case of small investment projects, the concept of NET BENEFIT (NB) is suggested, obtained at the idea stage from the format required of private investors by the Ministry of Economic Development. This concept is described as follows:

10.1 NB/I: NET BENEFIT PER INVESTMENT UNIT. By definition this concept is total income less total cost, that is to say, only capital return is taken into account. Technically this concept is proposed as a substitute or an approximate variable for the concept of Aggregate

Value, which, by definition, would be more appropriate considering:

$GNPt = \dot{E}VAt$ , where:

$GNPt =$  Gross National Product in year  $t$ .

$\dot{E}VAt =$  Aggregate Value in year  $t$ .

In this case the total contribution of the project is measured as:

$d(GNP) = d(\dot{E}VAt)$ , so that  $d =$  change

$d(\dot{E}VAt) = VAp =$  Aggregate Value resulting from the project, since:

$d(GNP) = VAp$

Consequently, the contribution of each project to the growth of the country can be measured using the concept of Aggregate Value. By definition this concept includes the sum of the payment of returns to the owners of the productive factors used in the project, that is to say, capital and work. Nevertheless, in this case, the use of the Net Benefit concept which only considers returns to the capital used is proposed. This concept is substituted because returns to the work factor have already been considered in definition 8.3 for measuring the contribution to the Employment Increasing objective. If it is considered again it would introduce a bias in favour of more labour-intensive projects, since this variable would be weighed twice. Moreover, the concept of Net Benefit has the advantage of measuring only returns to capital, which is the scarcer factor in underdeveloped countries (LDC's). In this way the recompense obtained by this resource and measured by this concept, constitutes an index of the efficiency with which capital is allocated. The concept is also known as a profitability index or benefit-cost ratio, although in this case it is employed considering only the average annual Net

Benefit of a project, given that the realization of the net benefit implied by the benefit-cost ratio is excluded. Finally, the interpretation of this concept in the methodology developed corresponds to annual net benefit per investment unit obtained by society as a result of carrying out the project. For this reason this concept is used as an approximate variable for social profitability, measured by NPV or IRR in social terms.

11. **LIMITATIONS:** This space is for identifying and measuring any variable which acts as a restriction on the project.
12. **SLE: EMPLOYMENT OF SKILLED LABOUR.** The incorporation of this variable as a restriction on the project is due to the statement made by the plan in force which establishes that skilled labour is scarce in the economy. The assumption adopted in the present work is that a project which intensively uses skilled labour must take it away from other projects being carried out, putting a cost on society which should be taken into consideration in the decision to support the carrying out of the project being studied. For the calculating methodology the same elements established in points 8.1 and 8.2 should be considered.
13. **SOCIAL INDICATORS.** This set of indicators is for providing a profile of the social situation of the population which resides in the area which will be affected by the project. Particularly, it is necessary to have an estimate of the proportion of the population in each income level, high, medium, and low.
14. **UNEMPLOYMENT RATE.** This indicator is for completing the social profile in the project influence area. Present statistics only supply figures at the district level. The optimum figure, however, corresponds to a figure which represents the project influence zone, since only this population would be potentially affected by the project.

Therefore, district figures should later be substituted for local figures in so far as existing statistics permit.

15. **INFRASTRUCTURE INDICATORS.** The purpose of this set of information is to identify additional infrastructure needs associated with the location of a new project in any particular area. This information reveals approximately, the total cost to society of carrying out the project and, also, allows the public sector to identify eventual investment alternatives in those geographical areas where projects are located and sectors where it is responsible, such as social and infrastructure sectors. The categories used in the columns "QUANTITY" and "QUALITY" correspond to qualitative-type variables, since their purpose here is not to measure the need, but only to detect it as a source of project ideas. The column "PROJ. ASSOC." is for identifying the respective project by code number. The categories defined are:

**GOOD:** If the specific type of infrastructure in question is sufficient both in quantity and in quality, it is not necessary to complete the space in the column "PROJ. ASSOC."

**BAD:** This corresponds to the opposite case where the existing infrastructure is insufficient in either sense. In this case, it is necessary to identify the number of the associated infrastructure project in the PROJ.ASSOC." column.

Among the sectors considered for identifying infrastructure demands the following have been identified:

16. HEALTH
17. SCHOOLS
18. HOUSING
19. ROADS
20. DRINKING WATER
21. SEWERAGE



22. ELECTRICITY
23. COMMUNICATIONS
24. PROPERTY RIGHTS
25. TYPE OF RESOURCES: In some cases the specific type of natural resource puts restrictions on the rate with which these can be exploited because of their reproduction rate. This is the case of resources called "Renewable". In other cases, the resource is exhaustible and called "Unrenewable". Obviously, in both cases the nature of the resource must be taken into account for deciding to what extent these can be exploited by new projects which affect these goods.
26. PRESENT SOURCE OF SUPPLY. The convenience of this type of project depends on the irrigation area to be incorporated to production and also on the type of agricultural production to be generated by the project. This makes it necessary to know the present state of that area, what is the present source of water used, in order to estimate net production increase resulting from the project. It is necessary to indicate whether this source is deep-well or other.
27. ADDITIONAL IRRIGATION SURFACE. Tied to the previous point, this space should be used for indicating the additional area to be irrigated by the project.
28. ESTIMATED POTENTIAL ANNUAL PRODUCTION. As an approximation of the benefits generated by the project, this variable allows an estimate of the potential quantity of agricultural production which it will be possible to generate by the project. The yield obtained in each branch should be compared with existing standards of yields.
29. TYPE OF SERVICE. It is necessary to identify the specific type of tourist service provided by the project. It is understood that the benefits generated depend on whether these services are directed towards foreign or national tourists.

30.  $(X + MS)/I$ : This formula measures the total equivalent quantity of foreign exchange generated by this project. These variables means the following:
- X: Is the total quantity of foreign exchange spent by a typical foreign tourists per year multiplied by the official exchange rate. Consequently, this variable is expressed in Belizean dollars.
- MS: Total quantity of Belizean dollars spent by a local tourist per year. This is considered a saving of foreign exchange, since it is assumed that without the project this local tourist would spend these resources for financing trips abroad.
31. MAIN INPUTS: Mining projects usually require imported inputs which appear as a limitation when foreign exchange is scarce in the economy. That is to say, this type of project is highly sensitive to the existence of this type of input. Therefore, these project's will be less sensitive as foreign input requirements are fewer.
32. LEVEL: This space is for identifying the different categories of educational services offered (pre-basic, basic, secondary, etc.).
33. DEMAND: This block is for identifying the main variables which define demand behaviour for each type of educational service.
34. POTENTIAL SCHOOL POPULATION: In this space the number of persons in the area of appropriate age to the level being studied should be identified.
35. EFFECTIVELY SERVED POPULATION: In this space the number of students effectively served by establishments existing in the project area should be identified.
36. ESTIMATED DEFICIT: This is the difference between variables 34 and 35, indicating the potential number of students who are not being served by the educational system. It should be considered that in secondary and higher

education, a proportion of students leaves the educational system to seek work. Therefore, to identify the real deficit it is necessary to subtract from the number of persons of school age in each level, the number of persons of this age seeking work or employed. Only the remaining proportion represents the real deficit in coverage of the educational system.

37. SUPPLY: EXISTING SERVICES. The variables in this block are for identifying the conditions in which the corresponding educational services are supplied, including alternative establishments.
38. EXISTING BUILDINGS: This is for identifying the actual availability of space per student in the project area. The measuring unit to be used, to conform with official statistics, is square foot per student.
39. QUALITY OF EXISTING BUILDINGS: This space is for indicating the state of maintenance of existing infrastructure in the following terms:
  - GOOD: The state of existing infrastructure is not dangerous for the persons attending the establishment.
  - BAD: The state of existing infrastructure is dangerous for the students attending the establishment. In this case it is necessary to identify the corresponding building in space number 50.
40. STANDARD B: This space is for identifying the usual standards of space per student according to existing rules for school construction. Generally this standard is expressed in terms of the number of students per square foot.
41. BUILDING DEFICIT: This space is for the difference between variables 38 and 40, multiplied by variable 36. The resulting value corresponds to the deficit in space per student. It is multiplied by variable 36 to identify the total space required to provide total coverage of the

42. TEACHERS PER STUDENT: This space is for identifying the present availability of teachers per student.
43. STANDARD T: Here it is necessary to establish the usual standard of teachers per student according to the norms applied for this purpose.
44. TEACHER DEFICIT: These are the additional requirements for teachers resulting from the deficit of teachers and is the difference between variables number 42 and 43.
45. ALTERNATIVES: This block is for indicating the result of the proposed investment under different solution alternatives, locating the project in different places or in different sizes.
46. LOCATION: This is a generic term for identifying each one of the alternatives being studied.
47. INVESTMENT: This space is for indicating the investment cost corresponding to the respective alternative.
48. INVESTMENT/STUDENT: This space is for indicating the effective cost per student attending classes which each alternative would mean in the case with a project.
49. INVESTMENT/BUDGET: This heading indicates the proportion of the total budget allocated to the respective ministry which would be required by the alternative being studied in the event that it were chosen.
50. OTHERS: This space is allocated for complementing the data with any additional relevant information.
51. POPULATION ASSIGNED: Consists of the population which would be served by the project based on theoretical, administrative, or geographical considerations.
52. TYPE OF SERVICE PROVIDED: This space is for indicating the values corresponding to the variables indicated by the necessary information, depending on the type of service to be provided by the project being studied. In some cases, the indicators are related to primary health services (indicators 53, 54, 55, 56 and 57), in the remaining cases

(indicators 58 and 59) these refer to secondary health services. In general terms, these indicators show the health situation in the area being considered.

53. MATERNAL MORTALITY RATE: This information is necessary at the district and the national level so that a better approximation of the real situation in the area can be obtained by comparing both sets of information. This figure is available from existing statistics and is one of the objectives fixed by the plan in force.
54. INFANT MORTALITY RATE: In the same way as in the previous case, this indicator shows the district situation in relation to the national situation. In this way, the priority of the project at the national level can be appreciated.
55. LIVE BIRTHS OUTSIDE THE HOSPITAL: In this case it is necessary to indicate the corresponding value at the district level and the average national district figure in order to identify the situation of the district as compared with the average district situation.
56. DIARRHEA CASES: This indicator measures the number of cases detected at the district level as a percentage of the whole country. The national column is for indicating the respective average percent per district at the national level. Under these conditions it is possible to know the comparative relative situation of each district in the country.
57. MALNUTRITION RATE: As in the previous case, this rate is for knowing the relative situation of each district by incorporating in the national column the average per district of this rate.
58. TUBERCULOSIS: In this case it is necessary to identify in the district column the percentage of the whole country which corresponds to the district; in the national column the average percentage of all the districts of the country

should be indicated in order to make to comparisons for identifying relative priorities.

59. SEXUALLY TRANSMITTED DISEASES: The corresponding figures should be indicated in the same manner as in the previous case.
60. MALARIA AND WATERBORNE DISEASES: As in the previous case the figures corresponding to the percentages indicated in (58) should be indicated.
61. EXISTING BUILDINGS: This space is for indicating the number of buildings for providing this service in the project area.
62. TOTAL BEDS/10 000 INHABITANTS: This indicator is for existing statistics and allows an appreciation of the relative situation of each district and an overall view of the available capacity in each case.
63. DOCTORS/ 10 000 INHABITANTS: As in the previous case, this permits an appreciation of the same problem, but in this case related to the availability of doctors in each health centre.
64. NURSES/10 000 INHABITANTS: As in the previous case, the purpose of this indicators is to provide information on the existence of these professionals in each health centre.
65. EXISTING DWELLINGS: In this space it is necessary to indicate the number of existing dwellings in each district and in the whole country.
66. NUMBER OF FAMILIES: It is necessary to indicate the number of families existing at each level.
67. AVERAGE FAMILIES PER DWELLING: It is necessary to indicate here the ratio between variables numbers (66) and (65). This ratio provides a knowledge of the comparative situation between the district level and the national level with respect to the existing deficit.

67.1. APPROXIMATE DEFICIT: This corresponds to the number of dwellings which should be constructed on the principle of one dwelling per family.

68. INVESTMENT PER DWELLING: This corresponds to the total cost of investment per dwelling, analyzing different alternatives of location and size.
69. SIZE: This space is for arriving at a knowledge of the space available in the project area for this type of proposal.
70. POPULATION SERVED: The total number of persons served by these services should be indicated.
71. POPULATION SERVED/SQUARE FOOT: This indicator permits a knowledge at the district and national level of the relative situation in terms of priorities.
72. POPULATION STANDARD/SQUARE FOOT: As in the previous case, this permits a comparison of the actual situation with this theoretically optimum index.
73. DEFICIT: This space is for indicating the existing deficit by comparing variables (71 and (72) both at the district and national level.
74. PRESENT SOURCE OF SUPPLY: This space is for identifying the source of supply presently used (deep well, surface capturing, etc.).
75. AVAILABLE QUANTITY: This permits a knowledge of the total amount available from the source. This variable is usually defined as water stock per inhabitant per day.
76. STANDARD: The definition of this variable is based on theoretical considerations of minimum water requirements per person to satisfy minimum needs.
77. POPULATION: This is the total number of persons provided with drinking water under the existing system.
78. EXISTING DWELLINGS: This is the total number of existing dwellings with system coverage, with or without connection to the network.
79. NUMBER OF CONNECTIONS: This is the total number of dwellings connected to the public network.

80. CONNECTION DEFICIT: This is the result of subtracting variable (79) from variable (78).
81. STANDARD DEFICIT: This deficit is estimated taking the difference between variables (75) and (76). The resulting figure corresponds to the water deficit per person per day.
82. TOTAL DEFICIT: This figure is the product multiplying variable (81) by variable (77), that is to say, it is the total existing deficit for satisfying total demand for coverage by the system, independently of whether they are connected or not.
83. RATIONING: This corresponds to the total hours per day in which no water is available in the system. This indicators is an approximation of the deficit which affects only those persons connected to the system.
84. INVESTMENT/CONNECTION: This ratio measures the average cost per potential connection of different alternatives of system design.
85. WATERBORNE DISEASES: This corresponds to the number of diseases related to the availability of water in the project area.
86. EXISTING TYPE OF SYSTEM: This space is for indicating the system for waste water disposal (septic tank, sewerage system, etc.).
87. TYPE OF EXISTING LOCATIONS: This is for identifying the characteristics of the existing sports centres in the area.
88. POPULATION ASSIGNED: This consists of the population served by the infrastructure existing in the area according to existing dispositions.
  - 88.1. SPORTS PRACTISED: This is for indentifying the sports preferences of the population identified in column 88.
89. IDENTIFICATION: This is for identifying the existing sports centre, either by its name or in the way the relevant authorities describe it.



90. TYPE OF SPORT: This space is for specifying the type of sports practiced in each one of the establishments identified in space 89.
91. TYPE OF PLANT (GENERATING): It is necessary to specify with the usual terms (hydroelectrical, thermoelectrical, etc.) the type of generating plant existing at present. The importance of this variable is in knowing on the basis of this information, the existing possible alternatives, for example: substitution.
92. DOMESTIC INPUTS: It is necessary to specify the type of domestic input used if these exist (coal, petroleum, water resources, etc.).

IMPORTED INPUT: It is necessary to specify the type of imported input used, if these exist (same as above).

The previous information allows the approximate identification of the marginal cost of electrical energy production which allows the detection of project alternatives in this area.
93. MAXIMUM CAPACITY (GENERATING): This is the maximum generating capacity per hour of the existing plant. It refers to the capacity to meet peak demand.
94. ENERGY GENERATED: This is the generating capacity per hour actually generated at peak time.
95. ENERGY SOLD: This is the quantity of energy sold per hour, duly registered, to consumers connected to the system.
96. CONSUMERS: This corresponds to the number of consumers both commercial and domestic. The purpose of this information is to know the approximately source of existing demand in order to define alternatives among projects and fix tariffs.
97. TRANSMISSION LOSSES: This corresponds to the difference between variables (94) and (95). This figure represents the energy losses through the transmission process.
98. GENERATING DEFICIT: This corresponds to the deficit in capacity for totally satisfying existing demand at current

- prices. This quantity is estimated according to the annual growth rate of total demand in the existing system or according to some standard of consumption per connection.
99. (QUALITY OF) SIDEWALKS: It is necessary to identify the general state of maintenance of existing sidewalks. The categories to be used for this classification should be established by the relevant authorities according to usual quality standards.
  100. (QUALITY OF) ROADWAYS: It is necessary to identify the general state of maintenance of existing roadways. The categories to be used for this classification should be established by the relevant authorities according to the normal quality standards used.
  101. EXISTENCE OF COLLECTORS FOR: The purpose of this space is to avoid running into additional costs as the result of the need to break the pavement for installing collectors for drinking water services, sewage, or any other system which requires installations under the pavement.
  102. DIRECTLY BENEFITTED POPULATION: It is necessary to identify in this space the population which will be directly benefitted by the project. This definition considers the population living directly in the street (or road), being studied (in those cases in which the street is not used by public transport), or persons who live in the area benefitted by the project if the street (road) is used by public transport.
  103. PUBLIC TRANSPORT: It is necessary to identify whether the street (or road) being considered is used for public transport. In this case it is only necessary to answer Y or N.
  104. PRIVATE TRANSPORT: As in the previous case, it is necessary to identify if this road is used by the private sector.
  105. SUPPLY: EXISTING OR ALTERNATIVE STREETS: In this block it is necessary to identify whether in the study area other alternative streets exist to that being studied by the

- project. Additional information about their quality is required.
106. SIDEWALK DEFICIT: It is necessary to indicate in this space the total amount of payment required to satisfy existing demand.
  107. ROADWAY DEFICIT: As in the previous case, this indicates the total amount of roadways necessary in the project area.
  108. INVESTMENT/POPULATION: In this space the cost per person directly benefitted by paving the street being studied should be indicated.
  109. SUPPLY: EXISTING OR ALTERNATIVE ROADS: In this block it is necessary to identify whether other alternative roads to the road being studied by the project exist.
  110. ACCESSIBILITY: It is necessary to indicate in this space the time required from the project area to the closest alternative road by the most rapid existing route.
  111. ADDITIONAL PRODUCTION VALUE: This consists in measuring one of the main potential benefits to be obtained from the existence of the project. In this case it is assumed that the project will make it possible to increase the production of the benefitted area to some degree as a result of the existence of the road. This information is necessary only in the case that it exists.
  112. INCREASE IN LAND VALUE: As an alternative to the previous point for measuring benefits, increased land values can be indicated as a reflection of the expected benefits to be gained from the existence of the road.
  113. ROAD DEFICIT: It is necessary to indicate in this space the conclusion from the above-mentioned information about the priority for building the road being studied.
  114. INVESTMENT/BED: It is necessary to indicate in this space, the cost of investment per bed obtained by different alternatives of location and size of the project being considered.

115. INVESTMENT/PERSON TREATED: This consists of the total investment per patient required under different alternatives of location and size.
116. INVESTMENT/ASSIGNED POPULATION: This consists of the total investment required per person assigned under different alternatives of location and size.