



# CEPAL

COMISION ECONOMICA PARA  
AMERICA LATINA

CENTRO LATINOAMERICANO DE DOCUMENTACION  
ECONOMICA Y SOCIAL

# CLADES

CLADES/PROY.REG/MET/1



THE INVENTORY AS AN INSTRUMENT OF CHANGE:  
THE CASE OF DEVELOPMENT INFORMATION AND  
DOCUMENTATION INFRASTRUCTURES IN LATIN AMERICA

Santiago, Chile, October 1977

77-10-2582-100

MEMORANDUM FOR THE RECORD

On 10/10/54, the Board of Directors of the State of California met in regular session at the State Capitol Building, Sacramento, California. The following items were discussed and action taken:

1. The Board of Directors of the State of California met in regular session at the State Capitol Building, Sacramento, California, on 10/10/54.

10/10/54

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### THEORY OF THE CASE

The following is a summary of the facts and circumstances of the case, as presented in the pleadings and the evidence. The parties have agreed that the following facts are undisputed:

1. The Plaintiff is a resident of the State of California.
2. The Defendant is a resident of the State of California.
3. On or about [Date], the Plaintiff and the Defendant entered into a verbal agreement whereby the Plaintiff would provide services to the Defendant for a period of [Duration].
4. The Plaintiff performed the services as agreed upon.
5. The Defendant failed to pay the Plaintiff for the services rendered.

The Plaintiff seeks recovery of the amount owed by the Defendant, plus interest and costs. The Defendant denies the Plaintiff's claims and asserts that the Plaintiff failed to perform the services as agreed upon.

### CONCLUSION

In view of the facts and circumstances set forth above, the Plaintiff is entitled to judgment as a matter of law. The Defendant's failure to pay for the services rendered by the Plaintiff constitutes a breach of the verbal agreement. The Plaintiff is entitled to the amount owed, plus interest and costs.

### VERIFICATION

I, the undersigned, being a resident of the State of California, depose and say that the foregoing is a true and correct statement of the facts and circumstances of the case, as presented in the pleadings and the evidence.

Subscribed and sworn to before me on this [Date] day of [Month], 20[Year].

Notary Public for the State of California

## SUMMARY

The countries of the Latin American and Caribbean region are familiar with the preparation of inventories of libraries, documentation centres and archives. These studies are prepared with the purpose, at least on paper, of learning about and evaluating these services with a view to obtaining guidelines for improving and strengthening their structure and operation.

These inventories, which are in fact very numerous and diverse in terms of coverage, depth, institutional sponsorship and period of execution, are to a great extent based on standardized research techniques. Much has been written about the advantages and limitations of these techniques and, in general, about the whole group of methodological problems involved in the conduct of a survey.

The present document, however, deals with a problem to which little attention has been paid in spite of its singular importance, i.e., how to establish a link between the results of a study and the promotion of real changes in information services.

The basic assumption in this study is that such a link certainly does not occur automatically, but requires great co-ordination of actions especially devised for these purposes.

The central postulate of this document is that an inventory project can be made into an instrument of change if: (i) the participation of the institutions studied and subsequently bound to be affected by changes is properly organized in all the stages involved in bringing this about, and (ii) a strategy for communication and dialogue is formulated among the institutions covered by the inventory, so that their interaction will give rise to suitable and feasible policies and action for producing the desired changes.

This study presents an abstract scheme for this second aspect (communication and dialogue) its main purpose being to present concepts which are considered useful for the implementation of a strategy of change. This scheme has been conceived within the framework of CLADES' existing resources for carrying out these activities, but it is nevertheless felt that, with appropriate adaptations, it would be of use to other institutions as well.

The validity of this scheme has yet to be tested empirically. It has, however, begun to be implemented - though on a less ambitious scale - in the implementation of the national diagnostic reports involved in the "Inventory of Socio-economic Information Units in Latin America and the Caribbean" which CLADES is promoting in the region with the sponsorship of the Canadian International Development Research Centre (IDRC).

A first application of these ideas is presented in the attached study entitled "Information and Documentation for Development: Analysis and Presentation of an Inventory for a Latin American Country". That study presents an overall and relatively superficial view of information problems, however, it does make possible to visualize what a final report would be like incorporating the whole fund of information collected through the CLADES inventory in the region.

## INTRODUCTION

There is a widespread tendency, among those responsible for the formulation and execution of policies as well as many specialists and methodologists, to view inventory projects as mere measurements of resources or, on the other hand, as events for carrying out complicated intellectual exercises of an academic nature. By all means this is what is shown by wide experience in Latin American countries, with the logical consequence that the end result of an enormous effort of design, data collection and analysis is a thick, dry report condemned to a passive life on library shelves. The lack of interest in consulting such documents stems primarily from their approach, the unattractive presentation of their contents and their undue length, abstractness and saturation with methodological apologies. Besides, their presentation is often unimaginative, presenting exhaustive outpourings of data, long listings of institutions with their resources, and in general exhibiting the information in a way difficult to handle by those who might make real use of it and carry into practice its recommendations and results. In the last analysis, this has led to a loss of credibility and to scepticism, which could be summed up in the assertion, often heard in the region, that nothing happens and nothing has ever happened with inventories.

Since from the outset the CLADES team responsible for the projects has made it clear that it is not interested in producing yet another inventory, a different approach has been adopted aimed at maximizing the communicability of the data in the survey, in order to transform it into an active instrument and a real catalyst of action to integrate national information infrastructures and information policy formulation at different levels.

In this new approach, however, the limitations to the solutions proposed must be borne in mind from the start. Thus, given the critical nature of the restrictions of time and human and financial resources in CLADES, it is natural to look for solutions based on a standardized, 'mass-production' method of work if urgent deadlines must be met.

The problem dealt with in this paper is the following: to find a scheme of analysis and presentation of the results of the inventory which maximizes its impact in terms of changes in the information infrastructure of the countries, subject to the above mentioned restrictions.

The procedure used to tackle this problem is essentially analytical and consists in breaking down, in a first stage, all the data inputs which have to be processed and transferred to different decision-making levels in the countries. This is followed by a second stage involving the selection, grouping and synthesis of those inputs into what we shall call "feasible analysis modules" which harmonize the criterion of maximum change with that of resource availability.

For this purpose a methodology has been designed which contains the following successive stages:

- i) Definition of the "audiences" i.e., decision or action groups in the information field to whom the results of the inventory will be presented.
- ii) Identification of "levels of analysis", i.e., ranges of problems of varying interest and with different possibilities of action for the audiences.
- iii) Isolation of specific problems, in the development information field, which make up each of the above levels of analysis.
- iv) Identification of the "basic analysis modules" which should cover practically all the relevant possibilities of processing and presenting the data of the inventory.
- v) Preparation of a communication strategy consisting in the choice of a sub-group of "analysis modules" which maximize the impact of the inventory, given the resources available ("feasible analysis modules").



## Chapter I AUDIENCES

In this paper we start from the premise that the change desired in the national information infrastructures can be brought about at the following levels:

- i) A political decision level, basically characterized by authorities capable of taking decisions, designing regulations and allocating resources through which the structure and operation of information units can be changed.
- ii) A technical level of specialists in a position to modify the internal operating behaviour of the units in order to make them work more efficiently.
- iii) A level of users of the developments information and documentation services basically made up of professionals specialized in some area of development, either the formulation of policies and plans, their implementation, or the administration and operation of the institutions, projects, or enterprises responsible for their execution.

Obviously, at each level, different groups of persons and/or institutions with different needs in terms of the survey's result presentation can be identified. Table I gives a tentative classification of the "audiences". There, it may be seen that each of the groups needs to be informed of the results of the inventory in a different way, at least in principle. The language in which the results are communicated should be adapted to the language normally used by those persons or entities, and in addition the contents should be organized in such a way that the recommendations correspond exactly to variables which those groups or entities are in position to modify, either directly through political decisions or indirectly through pressure upon or negotiation with the authorities.

It should be stressed that the classification of the different groups in the audience levels is somewhat arbitrary, since an institution may belong to various audiences. It is therefore important to note that the table involves a selection of the most important functions from the standpoint of capability of changing the information infrastructure. For example, the National Information and Documentation Centre has been included in the political decision level,

although it could also be considered to belong in the users and specialists levels. It has been assumed however, that the political level is the most important function by which to characterize it.

TABLE 1

AUDIENCES

<u>Political decision level</u>	<u>Technical level</u>	<u>Users level (Development community)</u>
- Authorities, "decision-makers"	- Social science methodologies	- Planners
- Administrators of entities with information units	- Information science researchers	- Administrators
- Heads of National Information Centres	- Information Specialists: heads of networks and services	- Businessmen
- International Information networks promoters (IDRC, UNESCO, IFD)	- Information specialists: technical processors	- Investors
- Librarians and documentalists Associations	- Information Sciences Educational Centres	- Academic researchers
	- International promoters of documentation techniques (IDRC, UNESCO, IFD)	- Consultants
		- Teachers
		- General public

## Chapter II "LEVELS OF ANALYSIS" AND INFORMATION PROBLEMS

With an extensive, detailed inventory such as the one we are dealing with it is possible to study many problems relating to different aspects of the organization and operation of the national information infrastructure. The job of making each of the problems correspond to possible interests of the audience is certainly easier if approached systematically, by arranging and classifying the problems according to clear, preestablished criteria. The aim is thus to produce an organization and content for the feasible reports avoiding the overlapping which would result from a case-by-case design of the reports.

To this end we shall establish two major organizational criteria for inventory problems. That of:

- i) Strategic level criterion, by which problems are classified according to how easily they can be modified by the action of the "audiences".
- ii) Depth of analysis criterion, which is related to the approach or specific angle with which the national information infrastructure is considered. They range from an overall national plan to the study of detailed problems of particular agents.

The combination of these two criteria provides a classification of "levels of analysis", i.e., degrees of organization of the data provided by the inventory for communication to the "audiences". In this chapter we shall examine the internal sub-division of these criteria.

To begin with, the categories of strategic level consist of four strata of increasing intensity.

1. Analysis of representativity: this category provides audiences with information about the validity of the conclusions and analysis presented. The analysis consists in comparing the features of the sample of development information units actually analysed in the inventory with the national universe of development information units and the national universe of information units of every kind. From this comparison an estimate can be made of the relative

importance of the different sectors for which the information units exist, to decide if the sample is biased for example in favour of the university sector or the private sector, etc. Clearly, it may be very risky to speak of the situation of the governmental libraries when the government sector in the sample represents only 10 per cent of the total. The first column of Table 2 gives the details of different problems which should be considered in the analysis of representativity.

On the other hand it is evident that the strategic level is nil in this case, since the audiences can do little to change the results except to produce better answers to the questionnaires of a future inventory.

2. Structural analysis: This category corresponds to problems over which no audience has absolute and immediate control, i.e., they cannot be tackled directly through policies, and even if they could, the results would normally only be seen over a long period. This is primarily due to the fact that the variables which make up such problems are of a historical, institutional and societal nature, whose evolution can only be changed very slowly or with great difficulty. Examples would be the problems of geographical concentration of information units, pattern of growth of information services among the different institutional sectors, etc. (see Table 2, column 2).

3. Conventional strategic analysis: This category groups all the problems which are normally dealt with in inventories. Its great limitation is that by being excessively descriptive it is less operational and interesting and does not allow a clear definition and implementation of information policies. For example, the problem of the quality of the human or physical resources from a global point of view is interesting but does not easily allow for direct concrete action to change the structure of the resources in the short term. Normally a change in these global indicators is only possible by means of a concerted, integrated plan consisting of policies dealing with employment, educational policies, wages, and also, information services pricing policies, legislation on legal deposit, etc. At all events they are indispensable inasmuch as they constitute a preliminary reference framework for the definition of more precise policies. The problem is that this framework, while valuable, is not sufficient in isolation to specify the necessary policies (Table 2, column 3).

4. Non-conventional strategic analysis: This category comprises problems on which more precise, short-term policies can be defined and which therefore enable a large number of actions to be oriented and realized. The

variables which form these problems are to some extent more controllable and therefore manageable by the corresponding audiences. The "non-conventional" designation refers to the fact that normally these problems are not analysed in other inventories or have not received sufficient importance at the stages of data analysis and elaboration of final reports. For example, the problem of the unit's technical performance is made up of sub-problems such as the choice and adoption of different techniques (openness to innovation) and the approach with which the information unit services are given (degree of interaction with the users). The specification of the factors which influence these sub-problems in principle makes possible the definition of precise guide-lines in order possibly to modify this technical behaviour in the short and medium terms. This category therefore has the highest strategic level. (See Table 2, column 4.)

The second major criterion by which to organize problems concerns what we have called the depth of analysis. Obviously, one problem can be approached from at least three different standpoints according to the degree of focus:

- i) A national standpoint, for example, a comparative analysis of the number of information units per capita between developed and developing countries.
- ii) An intersectorial standpoint, for example, a comparison of the quality of human resources between the public and private sector; or a study of the attitude to technical innovation of the university information units in relation to the government information units.
- iii) A micro-sectoral standpoint, which considers a problema in a sector or a very homogeneous set of units, for example, survey of the data retrieval instruments in International Bodies' Documentation Centres situated in Central America.

The interesting aspect of these two organization criteria is that they are correlated with the interests of the audiences. The problems of representativity will have a greater appeal for persons working in information sciences research or social sciences' methodologists in general. On the other hand, a structural analysis may be of greater interest to bodies at the government level which are in a position to manage some of the aggregate national variables.

In addition, the depths of analysis also correspond roughly to different audiences. The global or intersectoral standpoint will normally be of interest to the government authorities, national information centres, etc. while the micro-sectoral approach will primarily interest groups of users, groups of library administrators, etc.

The combination of the categories of strategic level with those of depth of analysis provides different "levels of analysis" for the preparation of the reports. Thus one might speak of a "conventional-strategic-intersectoral" level, which would mean placing a group of problems of the conventional strategic area -for example, services- and studying them from a comparative intersectoral standpoint: for example, the public versus the private sector, the government versus the university sector, etc.

TABLE 2

LEVELS OF ANALYSIS AND THEIR PROBLEMS

1 Level: <u>Analysis of representativity</u>	2 Level: <u>Structural analysis</u>	3 Level: <u>Conventional strategic analysis</u>	4 Level: <u>Non-conventional strategic analysis</u>
1. Representativity in terms of the total number of information units.	1. Evolution and global growth of national information infrastructure.	1. Human resources.	1. Styles of administrative management.
2. Representativity according to function of entity (government, education, ...)	2. Evolution and distribution of information units according to institutional sector (government, university, ...)	2. Physical and financial resources.	2. Styles of technical management.
3. Representativity according to social and economic fields (economics, planning ...)	3. Trends in the development information holdings.	3. The bibliographic holdings.	3. Openness to innovation.
4. Representativity according to legal nature of entity (public sector, private sector, international bodies).	4. Geographic concentration of national information infrastructure.	4. Membership of national and international networks.	4. Potential openness to networks.
5. Representativity according to geographic location (capital, counties or provinces, ...)	5. Global pattern of links among development agents (users) and national information infrastructure.	5. Information services.	5. Professionalization of the information function.
6. Representativity according to type of information unit (libraries, documentation centres, archives).	6. Evolution of legal framework regulating the information infrastructure.		6. Status of the information function.



### Chapter III "ANALYSIS MODULES" AND COMMUNICATION STRATEGY

"Analysis modules" are elements of reports (groups of concepts and data) which set forth problems or sets of problems of the inventory organized according to a certain level of analysis and presented in a communicable form which is useful and interesting for a specific audience. For example, one module would be constituted by a study on the problem of the professionalization of the information function through a comparative analysis of the professionals in the government sector as opposed to the university sector (level of analysis: non-conventional-strategic-intersectoral) to be presented to the Librarians Association of a particular country (specific audience).

In order to avoid duplication of effort, these modules should be prepared in two stages:

- i) "Basic analysis modules": Parts of a report consisting of an exhaustive study, at a given level of analysis, of all the collected data relevant to a problem or set of problems. They include a complete sweep of relations, substantive interpretations and methodological discussions. They are prepared once and used only as internal reference documents.
- ii) "Directed analysis modules": These are prepared by adapting a basic analysis module to the language, interests and mentality of a specific audience which is to be influenced. It would be a reduced version of the above modules and would be written in a fluent language entirely stripped of technical jargon.

Decisions on priorities in the preparation of "basic analysis modules" and their corresponding "directed analytic modules" depends, in a given country, on the existence and importance of the national audiences and the resources available to communicate the information to that country. The specification of the priority set of "feasible analysis modules" (both basic and directed) and their relations to the different audiences would be called a global communication strategy. It is obvious that this strategy will in principle be different for each country since it will depend on the existence, power and permeability of the different audiences which must be influenced.

The global communication strategy of the inventory may be designed on the basis of a synoptic table in which the analytic modules are specified. This Table, which for the purpose of simplification we shall call the Audience Matrix, will establish; (i) the total number of "basic" and "directed analysis modules" which can be prepared, and (ii) which of them have priority and are feasible given the resources available. Table 3 give and example of an audience matrix.

The columns of the table represent the audiences to be influenced, while the side-heading arrange the problems of each strategic level according to the different depths of analysis with which the information resulting from the inventory can be communicated to the audiences. Each box in the table would be a possible "directed analysis module". The boxes marked with an (x), on the other hand, represent potentially important "directed analysis modules", i.e., modules which should be prepared in view of the possible importance of the problem they represent for specific audience.

The sum of the boxes of the columns gives the number of "directed modules" which would have to be prepared for each audience, or in other words, the number of possible chapters of a report to be presented to a specific audience. On the other hand, the sum of the side-headings represents the total number of "directed modules" which can be prepared using one "basic module". The total number of "directed modules" which measures the multiplier effect of each "basic module" is indicated in brackets in the column of totals at the right of the table.

A global communication strategy is established by: (i) preparing a listing of the "basic modules" classified according to their multiplier effect; (ii) evaluating the number of "basic modules" and "directed modules" which can be prepared with the resources available (in principle assuming an approximate average amount of resources for the preparation of each type of module); and (iii) comparing those values with the list to determine a set of "basic" and "directed modules" which both are feasible and have priority.

Table 3 assumes that the audiences are all equally important. Obviously the scheme shown can be altered in a number of ways. For example, priorities can be assigned to the audiences, which signifies a change in the value of the multiplier effect of the "basic modules".

With this table it is possible to visualize the two extremes for the production of reports in an inventory. On the one hand, the full materialization of all the boxes of the matrix (marked or not) would represent an exhaustive analysis and total dissemination corresponding to the technical upper limit of the inventory. Obviously, while this limit is possible it would not normally be feasible for most of the institutions responsible for inventory analysis, and certainly for CLADES. Moreover, it would not even be desirable from the point of view of the audiences, given that it implies a great redundancy of information. An example of the other extreme would be the single report prepared on the basis of the "directed analysis modules" corresponding to one column of the matrix and prepared thinking in terms of a specific audience. This alternative represents the traditional case characterized by a monolith view of the presentation of information, frequently redundant or insufficient, and written in scarcely communicable language. The suggested procedure would give maximum flexibility to the analysis, dissemination and comprehension of the inventory, and identify perhaps the two, three or four feasible reports with highest priority, which might have the most influence and bring about changes.

TABLE 3

AUDIENCE MATRIX: SIMPLIFIED CASE WITH 2 TYPES OF AUDIENCES, 4 PROBLEMS AND 6 LEVELS OF ANALYSIS

LEVELS OF ANALYSIS (Strategic level, problems and depth of analysis)	AUDIENCES	<u>POLITICAL DECISION LEVEL</u>				<u>TECHNICAL LEVEL</u>				Basic analysis modules and their directed modules according to problem and level of analysis (TOTALS)		
		"Decision-Makers"	Entity Administrators	Directors of Nat. Information Centres	Librarians Associations	Information-sciences researchers	Heads of information services	Specialists in technical processes	Informational and Documentation Educational Centres	N	I	M
<u>CONVENTIONAL STRATEGIC ANALYSIS</u>												
Level of Training of information specialists	N I M	x	x	x	x	x	x		x	1(5)	1(6)	1(1)
Level of costs of information services	N I M	x	x	x	x	x	x			1(4)	1(5)	0(0)
<u>NON-CONVENTIONAL STRATEGIC ANALYSIS</u>												
Adoption of new processing methods	N I M			x	x	x	x		x	1(4)	1(6)	0(0)
Institutional status of the information function	N I M	x		x	x				x	1(5)	1(4)	1(2)
Directed analysis modules by audience (TOTAL)		3	5	8	5	6	9	2	6			

N: Depth of analysis - National

I: Depth of analysis - Intersectoral

M: Depth of analysis - Microsectoral

## FINAL CONSIDERATIONS

The following remarks are in order at this preliminary stage:

- i) The proposed methodology is aimed at a rationalization of work and the preparation of a systematic method of preparation of reports.
- ii) The paper suggests a basic terminology which should obviously be improved. It may be viewed, for the time being, as a useful tool of communication among those responsible for inventory analysis.
- iii) It is considered that this flexible scheme is globally more efficient than the production of a single report. Costs can be controlled, and in addition sectoral or partial seminars should become more manageable and fruitful. In these seminars the aim is not only to reach consensus but also to make policy formulation, decision making and corresponding action more expeditious.
- iv) Finally, the scheme permits a stage-by-stage approach in which the most important and feasible reports can be produced first while the communication strategy is being rounded off, either by delegating the preparation of reports in the countries or by continuing to prepare them in CLADES if budgetary resources are made available after the project has officially ended.

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