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CELADE

A Proposal
for a
PROGRAM ACTION PROJECT
to plan

**NO SACAR DEL SECTOR
DE FERTILIDAD**

A LATIN AMERICAN FERTILITY DOCUMENTATION SERVICE

A Request to the
Information Science Division of
the International Development Research Center
Ottawa, Canada

Fertility Sector
CELADE
Santiago, Chile
4 July, 1974

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SUMMARY

In order to promote a more adequate utilization of Latin American population research, CELADE, with the collaboration of CLACSO, has proposed the development of a documentation service organized to meet the needs of Latin America. At first it would treat only fertility, but later would be expanded to other fields of population. The service would accumulate in CELADE all relevant documents, index and abstract them in Spanish, organize the information for retrieval, publish cumulative author, country and detailed subject bibliographies along with the abstracts, and provide copies of the documents on request through a clearinghouse.

While the basic structure of the system can be envisioned by CELADE, there are many unknowns to be determined and various choices that must be made among alternatives for which the assistance of specialists are required. To insure that recent advances in population documentation and information retrieval are taken into account when designing the system, CELADE, acting on a suggestion made by the Information Sciences Division of the IDRC, proposes that consultant services of a population documentalist and an information retrieval specialist be provided through a Program Action Project (PAP). After analyzing the situation, they would meet with CELADE staff to aid in drawing up a final proposal for the development and operation of the documentation service.

I. INTRODUCTION

The amount of population research in Latin America has expanded rapidly since the early 1960's. This is particularly true in the field of fertility as a result of the many fertility sample surveys undertaken and the increasing development of family planning programs in the region. The number of documents produced per year on fertility topics may be expected to continue to increase with the publication of special studies based on the 1970 round of censuses, with the probable participation of various Latin American countries in the World Fertility Survey during the mid 1970's and with the increasing interest of economic and social planners in policies affecting fertility. The World Population Conference in late 1974 should give added impetus to the trend already established.

Most theoretical and empirical studies as well as government policy papers and analyses are not widely distributed — they appear as mimeographed documents or semi-published documents which are available only in the producing agency. Even formally published items usually reach only a few major institutions in Latin America. Hence, in a region where resources are scarce and where population parameters are increasingly being recognized as influencing and influenced by development, the researchers, teachers and policy makers tend to be relatively unaware of what has been done, often even in their own countries.

Since this low circulation of information on population and the consequent underutilization of research findings is associated with development, per se, the problem cannot be solved by taking an appropriate action but it can be partially alleviated through the provision of a documentation service specifically designed to meet the needs of Latin America. Since no other organization is providing such a service, the United Nations Latin American Demographic Center (CELADE), with the collaboration of the Latin American Commission for the Social Sciences (CLACSO), proposes to develop a service which would accumulate relevant documents, index and abstract them, organize the information for retrieval, publish a cumulative bibliography with abstracts, and provide copies of the documents on request through a clearinghouse.

While such a documentation service eventually must cover the entire field of population, initially the service would begin in the field of fertility because that field is perhaps the most well developed of the major areas of population in Latin America and is of very wide interest. As soon as the service is functioning, it will be expanded to include other important subfields of population such as migration and population policy.

CELADE has played a significant role in the development of population research in Latin America; it could now assist the countries to utilize the research more fully through the provision of a documentation service. The needs of the region at present and in the future can best be served if

the documentation service is based on recent methodological advances in the field of information retrieval. Although CELADE must provide assistance to countries consistent with their level of development it should try to be ahead of the immediate requirements of the region and should be preparing to meet future more complex ones. Since CELADE has a well developed computer division which provides technical assistance to various institutions in the region, the information system can take advantage of this capacity even though CELADE may have limited experience in the specific field of information retrieval.

Although the general requirements of the documentation service have been defined by CELADE (see the next section), the importance of designing an efficient system that will meet present needs while permitting future development, has led us to recognize that consultation is desirable in the fields of population documentation and information retrieval prior to the writing of a final proposal requesting funds for developing and operating such a system. The present request is for a Program Action Project (PAP) that will provide such assistance.

II. COMPONENTS OF THE PROPOSED DOCUMENTATION SERVICE

To facilitate consideration of this request for a Program Action Project, the components of the system, as presently envisioned, will be defined. A later section will suggest problem areas for consultation.

A. Content

Subject Scope

The documentation service will index all materials treating, as dependent or independent variables, the non-medical aspects of fertility or fertility related variables in Latin America.^{1/} The "fertility related variables" will include the nuptiality, bio-social and deliberate control variables known as the intermediate variables ^{2/}, through which individual

^{1/} Latin America includes the 18 Spanish speaking republics plus Brazil and Haiti. The English speaking Caribbean islands might be included although the value to them would be limited by the fact that the working language of the index and abstracts would be Spanish.

^{2/} The set of eleven intermediate variables are often divided into those that affect exposure (a) to the risk of coitus, such as the age of first union, divorce and separation; (b) to the risk of conception, such as contraception, involuntary infecundity and voluntary sterilization; and (c) to the risk of successful gestation and parturition, such as induced and spontaneous abortion.

and social system factors determine fertility levels. All documents concerned with any of the intermediate variables will be indexed even when fertility is not mentioned. Naturally, factors such as the many aspects of family planning programs, including their administration and evaluation, as well as studies of attitudes toward fertility and the intermediate variables would be in the system.

A small number of books and articles considered of key importance in the field should also be included even though they do not refer to the region. This is desirable to meet the needs of persons who may be relatively isolated and unable to keep up with major theoretical, methodological and empirical advances if they do not find the documents abstracted in the system.

While there may be a small overlap with some medical and biological studies of reproduction, for example, in the bio-social intermediate variables, the overlap will be kept to a minimum since BIREME (Biblioteca Regional de Medicina) in Sao Paulo is developing a system covering the biology of reproduction. Naturally at the interface of the two systems, an attempt should be made to have compatible indices and to share resources.

A starting date of 1970 would be logical, although this might later be moved toward 1965.

Type of Documents

Initially all published books, chapters, and articles, plus all "semi-published" (fugitive) materials such as mimeographed reports and typed working papers will be collected and indexed. This may mean some documents of low quality are collected. However, given the rather large percentage of all population work in Latin America that appears in fugitive form, it would seem preferable first to obtain the documents and later to make a decision as to their value. By coding the form of printing and type of document into the record of each document, it will be possible to eliminate some when publishing lists or meeting a demand request.

B. Document Collection

So that indexing and abstracting by specialist documentalists can be carried out in CELADE and to permit the provision of copies on request through a clearinghouse, CELADE would attempt to obtain a copy of each document. These would be kept at CELADE-Santiago since it already has the largest population library in Latin America and because its being part of the United Nations should assist in legitimizing and, hence, institutionalizing the documentation service. Documents would be located via direct links with the producing agencies as well as through the examination of the lists of bibliographic services such as the Population Index.

C. Indexing and Abstracting

The documents must be indexed so that cumulative bibliographies by author, country and subject can be issued periodically and more detailed searches can be made on demand. Although a matter that will have to be discussed in detail with the consultants, one would presume that a thesaurus would have to be utilized. If so, the thesaurus would be in Spanish. The thesaurus would have to permit later integration of other population fields. Some form of weighting or ranking might be built into the procedures.

The difficulties involved in the distribution of documents in Latin America, seem to require that informative abstracts be written and published in Spanish for some or all documents. Careful consideration must be given to this since the costs and complexity of abstracting will be high, but the value of the service to researchers and others using the information will be vastly increased. It would also allow persons who do not read the language of the original document to be aware of its content.

D. Information Manipulation

Given CELADE's extensive experience with computer data processing and the requirements of the service, the computer will be used in this project even though, this naturally, may require some learning of new information retrieval techniques and programs on the part of the computer division staff.

It is our hope that a relatively advanced computer program would be utilized although we will, of course, be limited by the computers available to us in Santiago. We hope to have access to a IBM 370/165 within less than a year; at present we have access to IBM 360/40's and IBM 360/50; Appendix A gives the configurations. The program utilized should permit a large expansion in the number of documents as the system is expanded to include all areas of population.

E. Publication of Detailed Bibliographies and the Clearinghouse

Bibliographies

Two types of information display are envisioned. First, and most important, are periodically published author, country and detailed subject lists which incorporate the abstracts in some way. The second type would be presented via demand searches.

The published lists probably would be directly copied from the computer printouts although care would have to be used to maximize readability for persons who are unaccustomed to read computer style formats. The bibliographies must be institutionalized perhaps through publication as part of a Spanish language professional journal. Most convenient may be to incorporate the cumulative bibliographies once or twice a year as a supplement to CELADE's new journal, Notas de Población, published in offset by CELADE's publication division. Between cumulative lists, supplementary updates might be included as a section of the journal.

Demand searches will be available although one would expect that at first they are more likely to be used by CELADE researchers than by outsiders. Other institutions with access to computers could be provided with the cumulative tapes and programs.

Clearinghouse

For most of its users the bibliography will be little more than a list of documents if there is no means of providing access to the items. This problem will be somewhat alleviated by the provision of informative abstracts but this cannot solve the problem in all cases. Hence, copies of the documents will have to be provided on request, probably at subsidised costs to persons from developing countries. Advantage can be taken of the Xerox machine now at CELADE as well as of the availability of a microfiche making machine to which CELADE probably will have access at the cost of the materials used.

F. Administration of the System

The project will require the cooperation of at least three units within CELADE -- the Fertility Section, the Computer Section, and the Library. It is proposed that initially the administration and organization of the project be within the Fertility Sector since it has been the prime mover in the matter, has experience with some aspects of computer information manipulation and much of the preliminary work will concern substantive issues in fertility. As the system operation becomes routinized and a proposed CELADE Documentation Sector begins to function, the latter sector will take over the operation and begin to integrate in other fields. Eventually the system will be considered a regular ongoing service of CELADE.

III. THE NEED FOR CONSULTANT SERVICES TO ASSIST IN THE DEVELOPMENT OF A FINAL PROPOSAL

While the basic structure of the system can be specified by CELADE, there are many unknowns and various choices that must be made among alternatives that will strongly affect the functioning, development time, and costs of the system. An evaluation of the problems and alternative solutions requires specialized knowledge and experience in population documentation and information retrieval which is unavailable at CELADE at present. Since CELADE envisions this project as a major advance in its promotion of the utilization of demographic research in Latin America, and as a means to more generally developing its capacities in the area of information retrieval (for example, in the organization of its data bank of censuses and surveys), there is a need to begin properly by drawing on expert advice during the planning phase. Hence, CELADE proposes that IDRC fund a Program Action Project (PAP) to provide the needed consultant assistance. The end product of the PAP should be a final proposal for the development and initial operation of the documentation service.

A. Some Suggested Areas for Consultation

Although most aspects of the system are open for consideration by the consultants, it might be desirable to mention a number of areas which have been so far identified as problematic. On the basis of the questions listed below the types of consultant services can be defined.

Collection of Documents

1. What is the best means of identifying producers of documents in Latin America?
2. What is the likely output of documents on fertility in and about Latin America per year?
3. How can one institutionalize the document collection?
4. How does one obtain physical copies of fugitive materials which may be in short supply?

Indexing and Abstracting

1. Should a Spanish language thesaurus be developed or should computer inversion of detailed abstracts be used?
2. If a thesaurus should be used:
 - a. How can the existing thesauruses in population and in sub-fields of fertility be utilized to derive one suitable for the purposes defined here?
 - b. How can the thesaurus developed be made to mesh with the medical-health system being developed by BIREME (Biblioteca Regional de Medicina) in Sao Paulo?

- c. How can the thesaurus be made to fit within the macro-thesaurus of OJCD (is it desirable to do so?)
- d. Who would develop the thesaurus? What additional staff would be required? What is the likely amount of time required?
3. Does the value of informative abstracts to the users justify the additional costs and complexity?
4. If abstracts are desirable:
 - a. Who would do them (what skills and what amount of substantive knowledge is necessary?) Could the same persons do the indexing?
 - b. How should the abstracts and the indexing be integrated?
5. Should a system of weighting be used and if so, which?

Information Manipulation

1. What is the most appropriate computer program that is available, given:
 - a. the present and future needs of the system,
 - b. the computer facilities that will be available when the system comes into operation,
 - c. the CELADE computer section manpower capabilities,
 - d. the need to be compatible with other systems being developed?

Publication of Detailed Bibliographies and the Clearinghouse

1. What is the most appropriate form in which to publish the cumulative bibliographic lists, particularly the subject index which must not cause an avoidance reaction by those unaccustomed to using formats dictated by computer conveniences?
2. How often should the cumulative lists be published? Should some older items gradually be dropped from the cumulative published lists, and by what criteria?
3. Should a program of selective information dissemination be included?
4. What is the likely number of requests to the clearinghouse for documents?
5. What subsidy for purchasing documents (and for making demand lists) should be provided to persons from developing countries?
6. What means of reproduction or mix of means of reproduction should be utilized in the clearinghouse (Xerox, microfiche, etc.)
7. What legal aspects are involved in a clearinghouse (copyrights, etc.) and how can they be dealt with?
8. Should there be other key centers in Latin America where copies of all documents are available?

General Administration

1. How can the system be coordinated with other related efforts in Latin America (e.g., BIREME) and within CELADE?
2. What specialized staff will be needed not now available at CELADE?
3. What steps in CELADE can be taken now that will facilitate later expansion of the system to other population areas?

IV. THE PROGRAM ACTION PROJECT

Based on the types of questions listed in the previous section and following a suggestion made by the IDRC Information Division, a Program Action Project involving the services of two consultants is requested. One should have experience in the field of population documentation and the other in the technological aspects of information retrieval. Ideally, at least the former should have Spanish language capacity. Each should spend a period of time in Santiago although some travel in the region might be necessary, possibly in connection with a CELADE staff member.

While the organization of the work is perhaps best based on the experience of the Information Science Division of IDRC, we suggest that the documentation specialist in population arrive somewhat earlier since such a person will be fundamental in determining the basic needs and structure of the system. The technical expert's time in Santiago should overlap that of the documentalist so that the substantive aspects of system could be discussed before the technological problems are examined. When both complete their analyses, a working meeting of the two consultants plus one or more persons from CELADE should be held to draw up a final proposal for developing the actual system and beginning its operation.

The length of time that each consultant should spend on the Program Action Project is best determined on the basis of IDRC experience. We would suggest that it be long enough to permit them to provide a form of on-the-job training in their specialities for those at CELADE who will be involved in the documentation service.

Since it is desirable to start actual development and operation of the system soon, the Program Action Project should begin at the earliest possible date. Advantage might be taken of the period in the Northern Hemisphere when universities are on vacation and consultants perhaps more available. Under no circumstances should the consultants visit CELADE during January or February, 1975, since these are the months of vacation in much of the Southern hemisphere and many key persons are not available for discussions.

A. Selection of Consultants

Because CELADE has little experience in this field, we cannot suggest the names of suitable consultants. An available and suitable documentalist might be found at the Population Center at the University of North Carolina, at George Washington University, or at the International Institute for the Study of Human Reproduction of Columbia University. We have even less knowledge concerning information specialists. Hence, we must depend on the IDRC to assist in the selection of consultants if this Program Action Project is approved.

B. Budget

No budget has been submitted since the costs are dependent on factors such as consultant costs, possible travel within Latin America, and the time required, all of which are unknown to CELADE. If the timing of the consultants' visits do not permit them to develop the final proposal together with CELADE staff in Santiago, funds should be included to permit a final working meeting of the consultants with at least one CELADE staff member.

APPENDIX A

Configurations of Computers
Presently Accesible to CELADE
in Santiago
(July 1974)

IBM/360-40	University of Chile:	128 K
		4 tape units:2400
		3 disc units:2311
		1 printer
IBM/360-40	ECOM:	256 K
		4 tape units:2400
		3 disc units:2311
		3 disc units:2314
		2 printers
IBM/360-50	ECOM:	312 K
		6 tape units:2400
		5 disc units:2311
		8 disc units:2314
		2 printers
		2 card readers