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FINAL REPORT

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EVALUATION OF MULTIPURPOSE HOUSEHOLD SURVEY
(EL SALVADOR)*

Jan. 22-Feb. 9, 1979

*This report was prepared by Benjamin Gura, Statistical Consultant, pursuant to Contract No. AID/lac-C-1313 for the Agency for International Development.

BACKGROUND

Objectives and Scope of Work

1. This study, designated as Final Report, presents the results of a regular in-progress evaluation of the El Salvador multipurpose household survey project (MPHS-519-0176), as specified in contract No. AID/lac-C-1313. These specifications called for an evaluation of the current status and physical progress of the MPHS(519-0176). The evaluation was to be based on an in-depth review in El Salvador which would include AID and host country personnel interviews, documentation analysis of project accomplishments and deficiencies, and a review of overall progress of the project toward established goals. The evaluation was to be carried out with reference to Parts I and II of the AID Project Evaluation Summary (PES), AID Forms 1330-15, 15A and 15B, and the appropriate guidelines set forth in AID Handbook 3.
2. It was stipulated that the Final Report, presenting the results of the evaluation, follow the outline provided on AID Form 1330-15A(PES Part II). In accordance with this outline, the following topics are to be addressed ... 13. Summary; 14. Evaluation Methodology; 15. External Factors; 16. Inputs; 17. Outputs; 18, 19. Purpose and Goal/Subgoal; 20. Beneficiaries; 21. Unplanned Effects; 22. Lessons Learned; 23. Special Comments or Remarks.

Agencies Directly Involved

3. The conduct of multipurpose household survey programs in El Salvador is the responsibility of the Seccion de Investigaciones Muestrales (SIM), a dependency of the Ministerio de Planificacion y Coordinacion del Desarrollo Economico y Social (MP). An AID MPHS project agreement (519-0176), dated

Oct. 21, 1976, and covering the period Oct. 1976-Nov. 1979, was undertaken to provide specific kinds of assistance to SIM to improve and institutionalize its multipurpose household survey activities. This assistance consisted of a full-time project consultant, also short-term consultation and on-the-job instruction by technical specialists, participant training opportunities in the United States, and the provision of some commodities. A PASA was signed with the U.S. Bureau of the Census to provide the assistance required and to help carry out the terms of the AID project agreement. The decision of the U.S. Census Bureau to participate was based on a management survey by members of the Bureau staff of conditions in El Salvador bearing on the successful operation of the project.

Pre-project Activities

4. A Project Identification Document (PID) was prepared in Aug-Sept. 1975 and approved by the AID Mission Director and the Minister of Planning. Subsequently, a Project Review Paper (PRP) and a Project Paper (PP) were prepared for consideration by the Development Action Executive Committee (DAEC). The PP, which is a fully developed description of the projected development activity, was approved by the DAEC in Jan. 1976. In anticipation of the initiation of this project the Ministry of Planning leased a building and began to assemble a staff during the period May-Sept. 1976.
5. By Sept. 1976 the newly assembled staff of SIM consisted of 5 permanent professionals and 50 temporary employees; in addition, 2 vehicles with chauffeurs were assigned to SIM. The permanent professionals had previous experience in ad hoc labor force, fertility, and

other types of surveys. Thirty of the 50 temporary employees had been transferred to SIM from the Direccion General de Estadistica y Censos (DIGESTyC) along with their workload of 3 surveys in progress at the time.

6. During this period visits were made to officials in the different Salvador Ministries and agencies who would have an interest in the data from the proposed multipurpose household survey program. These included government agencies involved in education, health, agriculture, finance, labor, economics, and social planning. Visits were also made to semi-autonomous agencies such as the Demographic Association and to the Central Bank. As a consequence wide support was generated for the MPHS project.

7. The Project Agreement (PROAG) was signed by the Minister of Planning on Oct. 21, 1976, and the U.S. AID Mission Director on the following day. Participation of the U.S. Bureau of the Census in the project commenced with the release of allotments by AID/W late in Oct. 1976. With the beginning of the Salvadoran fiscal year on Jan. 1, 1977 the Ministry of Planning officially commenced its participation with financial and other support.

8. Attention is called at this point to the patience and technical skills required to have shepherded the MPHS through the different phases and negotiations which were needed to successfully launch this project.

Basic Survey Design

9. This AID/BUCEN project was designed to help the SIM implement a continuing multi-purpose household survey program for El Salvador. Based on a scientifically selected sample of households, information would be compiled on a series of high-priority topics relating to national development goals and plans. The survey design used by SIM for this purpose is based on the so-called Atlantida model developed by the U.S. Bureau of the Census under AID auspices for statistical offices of developing countries. This model has been adapted for use by many countries in Latin America as well as in other areas of the world. The program design calls for information to be collected in detail over a continuing series of survey rounds for a specific set of important topics (labor force, unemployment, earning, housing conditions, etc.) to obtain trend and progress indicators. However, each time a survey is conducted, a number of additional or supplementary questionnaires are included which relate to such other topics as education, fertility, etc. Thus, a survey round which contains two continuing type questionnaires and three supplementary ones may, to some extent, be regarded as approaching the equivalent of 5 separate ad hoc surveys, but with substantial savings resulting from the integration of efforts.

(13) SUMMARY

Initial Activities

1. During the first 12 months of the project, the different steps necessary to carry out the survey program were realized. These steps included the design of a projected 10,000 household sample, acquisition and use of maps in the development of an area sample frame, listing procedures for selection of the sample households, determination of the content of the questionnaires and their design, and preparation of enumerator and other manuals to carry out this work. A separate building was provided, also vehicles, telephones, office equipment and some data entry equipment. A staff was hired on the basis of a budget which would enable personnel expansion to about 85 posts.

Project Surveys

2. Survey I was carried out during the second year of the project from Feb. 1978 to Sept. 1978, over a period of 30 weeks. Two basic questionnaires and four supplementary ones were used in this survey. The same basic questionnaires are intended to be used over subsequent survey rounds to obtain trend indicators. However, supplementary questionnaires will vary from round to round. Through the basic questionnaires information was compiled on selected demographic variables, educational status, housing conditions, and on labor force characteristics (employment, unemployment, underemployment, and earnings, etc.) Supplementary topics included mortality, internal migration, fertility, vocational preparation (formacion profesional) and household industries. Survey I is in a final stage of computerized edit review. Tabulation of the final results is expected to begin in April 1979.

2. Survey II began in Oct. 1978 and is expected to be completed in Feb. 1979, over a period of 22 weeks. In addition to the basic questionnaires used, supplementary topics in Survey II included: seasonal movements of workers during the coffee, cotton, and sugar harvests; environmental sanitation; nutrition; medical services; physical defects; vaccination of children under 5 years of age; dental services; and alcoholism. Survey II is currently in the stage of manual editing and coding which should be completed by March 1979 shortly after the close of the enumeration period. Data processing is awaiting the installation of the electrical connection for the new data entry equipment (2 stations).

3. Decisions have to be made in the next few weeks by SIM as to the survey design and questionnaire content of Survey III and Survey IV. It is presumed that Survey III will extend from April-Dec. 1979, and that Survey IV will be conducted during the period Jan-Dec. 1980. Possibly the questionnaires to be used in Survey III will be limited to the two basic ones and one supplementary questionnaire previously used in Survey I or II. There will then be sufficient lead time during the period Mar-Dec. 1979 to develop new supplementary questionnaires and related documentation for use in Survey II.

Implementation Plan

4. The original implementation plan called for six quarterly surveys.

Early in project execution, however, it was recognized that the implementation plan was overly ambitious in relation to the available resources,

and project activities were adjusted accordingly. Due to the difficulty of the terrain, limitations as to number of enumerators and available vehicles, and the considerable amount of high-priority information to be compiled, it was realized that the scheduled enumerative workloads had been set too high. Resolutions to these problems were found in extending the periods for Survey I and II. As a consequence, no more than 3 survey rounds will be conducted during the project period. Nevertheless, an extraordinary amount of data will have been collected relating to a wide spectrum of development objectives. Presumably all parties concerned agreed that the reduction in the number of surveys was a correct decision.

Note: I consider that the decision to modify the implementation plan was a correct one, and I recommend that this modification be appropriately recorded as an amendment to the project agreement.

5. At present the computerized edit specifications to be used in the processing of Surveys I and II are being prepared and debugged. This phase is taking longer than anticipated because of a lack of ready access to the computers in other institutions.

6. It should be pointed out that the problems indicated above are soluble. They are associated with starting up a survey and should diminish as the total survey design becomes more finely tuned to the resources available. It is considered that as these problems become resolved, the goals and purpose of the project--as represented by the institutionalization of a survey capability and the production of development-oriented data--will have been achieved.

(14) EVALUATION METHODOLOGY

Objectives and Scope

1. The objectives and scope of the evaluation methodology used in this study have been described in the chapter entitled "Background".

Officials Interviewed

2. The officials interviewed, by agency for whom they work, were, as follows:

AID/ES

Aldemo Ruiz, Director
Jesse Snyder, General Development Officer
Marvin Schwartz, Program Officer

SIM/GOES

Francisco Aleman, Director
Salvador Centeno, Chief/Methodology and Analysis
Jose Alvarenga, Chief/Field Work
Julio Pineda Rojas, Receipt and Editing
Carlos Garcia, Chief/Data Processing
Jose Ramirez Pineda, Cartographer/Field Work
Jose Eduardo Navarro Q., Staff assistant/Methodology and Analysis (M and A)
Salvador Armando Melgar, Staff assistant/Methodology and Analysis (M and A)
Susana Maribel Lopez G., Staff assistant/ M and A
Jose Oscar Perla, Programmer/Data Processing
Juan Gilberto Guevara, Supervisor/Field Work

Team of 5 unnamed enumerators during field work

U.S. Bureau of the Census

David McNelis, SIM Project consultant (full-time)
Carl Grey, Consultation Branch, ISPC

AID/W

Floyd O'Quinn, Mathematical Statistician

Ministry of Planning

Jorge Escobar, Vice-Minister

Direccion General de Estadistica y Censos (DIGESTyC)

Hector Fermin Aguila, Director-General
Luis A. Bermudez, Sub-Director

Organization of American States

Froilan Fernandez, Sampling Statistician
Francisco Molina, Consultant to DIGESTyC

Demographic Association of El Salvador

Alex Alens, Demographer
Angela Merlas de Mendoza, Chief/Dept. of Studies and Evaluation

Banco Central

Herbert Giordano Rodriguez, Depto. de Investigaciones Economicas

3. Interviews were conducted with the SIM staff indicated above to obtain an on-the-spot appreciation of the activities for which they were responsible. These activities included the sample and survey design, mapping, questionnaire design and content, editing and coding, computerized edit specifications, table plans, data processing, aspects of organization and administration, field work, and population estimation procedures. In addition, a day was spent in the field with a team of enumerators observing the conduct of interviews, the supervision provided the enumerators, and the attitudes of respondents.
4. Unstructured interviews were conducted with key Salvadoran officials collaborating in the implementation of the SIM survey program, and with selected Salvadoran data users. Reactions were obtained from them on the SIM survey capability, their work relations with SIM, and their appreciation of the data being collected by SIM.

5. Unstructured interviews were conducted in the United States Bureau of the Census and AID/W staff participating in or contributing to this project. Information was obtained from them on their roles in this project and the SIM survey capability.

6. Special interviews were conducted with key consultants to SIM. These were David McNelis of the U.S. Bureau of the Census, the full-time resident consultant to the project, and Froilan Fernandez of the OAS.

Mr. Fernandez was a U.N. and subsequently a Salvadoran direct-hire advisor to the SIM; he was responsible for the design of surveys conducted by SIM previous to this project, and, for a period of time, his assignment overlapped that of Mr. McNelis.

7. The following documents pertaining to the MPHS were reviewed:

- a) PID
- b) PP
- c) Project Agreement
- d) U.S. Bureau of the Census Management Report
- e) Monthly Reports of David McNelis, U.S. Bureau of the Census, Full-time consultant to SIM
- f) Multi-purpose Household Survey, End of Tour Report, by David McNelis.
- g) Sample Design of the El Salvador Household Sample Survey, by Woltman, O'Quinn and Fernandez.
- h) Enumerator Manuals (Survey I and II)
- i) Coding Manuals (Surveys I and II)
- j) Tabulation Plan of Data from Basic Questionnaires, Survey I
- k) Questionnaires, Survey I

- 1) Questionnaires, Survey II
- m) Quality Control Procedures as Applied to Manual Editing and Coding.
- n) Multiple Data Entry Design, Survey I
- o) Range, Consistency and Completeness Specifications for Computer Edits.
- p) Special Procedures Concerning Households to be Duplicated and Multiple Type Households.
- q) Data Processing Flow Charts
- r) SIM Organization Charts and Staffing Patterns

8. Evaluation questions relating to the documentation listed above were, as follows:

- a) Is the documentation of an acceptable or recognized standard as compared to comparable technical materials?
- b) Is the documentation complete in the sense that instructions have been appropriately recorded for carrying out all phases of the survey work?
- c) Is the survey being over-or-underdocumented; is the documentation properly controlled?

(15) EXTERNAL FACTORS

Government Support

1. In broad terms, it appears that the Salvadoran government continues to give priority to this project and to the goals which it pursues. Officials of Salvadoran agencies, which were consulted, are awaiting the results of the survey program for various uses relating to their own activities. As an example of interagency cooperation the DIGESTyC prepared a letter of explanation about the MPHS which the SIM enumerators give to survey respondents to good effect. Generally, there appears to be excellent interagency cooperation with respect to this project.

Public Support

2. The population has been very collaborative in receiving the SIM enumerators and in providing them with the information required. This was observed during a field inspection trip. The low non-response rate (type A) of 0.3% for Survey I reflects the collaboration of the public as well as the energy put into call-backs by the SIM field staff.

Current Situation

3. Socio-economic conditions, requiring accelerating development programs, persist. The GOES appears to place high priority on obtaining SIM survey data in order to quantify key problem situations.

(16) INPUTS

Commodities and Personnel

1. The MPHS field staff is transported to the different sample sectors in four jeeps. At any one time, however, one or more of these vehicles may be out of commission. The field work would be considerably facilitated if an additional two vehicles were provided for the use of the SIM field staff.
2. Enumerative teams transported by the jeeps consist of 5 enumerators, a supervisor, and a chauffeur. Enumerative teams may be reduced through illness and job turnover. The recruitment of an additional enumerative team and the training of a "backup reserve" would insure that the field work would be completed in accordance with a desired schedule.

Documentation

3. The documentation already prepared for the conduct and office processing of Surveys I and II appear to be complete and suitable. Survey I data is awaiting the completion and debugging of the computerized edit specifications before the editing and tabulation can be carried out. Presumably delays in the programming of these specifications is due to lack of ready access to a computer. SIM purchases computer time at Social Security, Hacienda, and DIGESTyC. However, SIM has a low priority rating as compared to other computer users. Over the short-term, sufficient blocks of computer time should be made available to clear this particular

hurdle. Over the long-term, the acquisition of a computer by SIM appears to be indicated; a study should be conducted on this matter by the appropriate agencies.

Technical Services

4. SIM regards the short-term TDY's as highly desirable but considers that such assignments should not be less than 4 weeks each. This is to insure that expert recommendations will be fully discussed and sufficiently implemented during the experts assignment in El Salvador.
5. It is estimated that approximately 15 weeks of short-term AID project consultation (TDY's) remains to be carried out in calendar 1979. In addition, there remains 3 weeks for final evaluation of the project. This should be sufficient time to meet the different short-term technical assistance needs of the MPHS. SIM is in the process of identifying these needs for submission to AID/ES. Equivalent periods of short-term AID consultation assistance is suggested for calendar years 1980 and 1981.
6. It is suggested that AID/ES may be able to make available the full-time resident services of a BUCEN systems analyst/programmer to help SIM resolve forthcoming data processing problems, and to provide appropriate instruction to the SIM computer staff during calendar years 1980 and 1981.
7. The technical assistance suggested in (5) and (6) above for calendar years 1980 and 1981 will require an extension of the project agreement. This is recommended.

(17) OUTPUTS

Modification

1. As indicated under "Summary", during the early stage of this project it was realized that in relation to available resources, the implementation plan was too ambitious. Therefore, instead of 6 quarterly surveys, 3 surveys extending over longer periods would be carried out during the time allotted for this project. Presumably everyone agreed that this was the correct decision. Too much would have been required in the way of additional resources by SIM to carry out 6 quarterly surveys. Data users consider that the information being compiled through the modified design would amply satisfy their informational needs. It is, therefore, recommended that the formal implementation plan be appropriately amended to reflect the actual situation.

2. For calendar 1980, it has been suggested by the survey consultants that Survey IV consist of one round extending over a one-year period. At different times during the course of this round, supplementary questionnaires may be introduced at different times for short-term periods (perhaps 13 weeks) to obtain information on different subjects pertaining to development objectives.

Sampling Frame

3. The sampling frame developed in connection with the MPHS has achieved the purpose of enabling surveys of other organizations to be carried out through subsamples selected from the frame at substantial cost savings. For

example, it was estimated that subsamples from the frame resulted in a cost avoidance to AID/ES of about \$103,000 for two surveys it carried out. As another example, a subsample of 2,000 households was drawn in behalf of a regional UNICEF survey project on The Situation of Children. In the opinion of survey specialists, this sample frame is one of the most important outputs resulting from the project.

Documentation

4. The different kinds of documents produced adequately cover the different phases of the MPHS. They are of acceptable quality. Still to be completed in the next few months are the editing and tabulation programs for computer. Much of this documentation represents a capital investment which can be used in about the same format for future survey rounds.

Publications

5. The following publications have been issued by SIM relating to the surveys which were in process at the time of the conception of the project:

- a) La Situation de la Vivienda (Descripcion Comparativa entre 1971-1975).
- b) Algunos Resultados de la Encuesta Nacional de Presupuestos Familiares (1976-1977) y Calculos de Coeficiente de Elasticidad ... de los Principales Subgrupos de Articulos Consumidos por las Familias Salvadorenas (Doc. de discusion).
- c) Algunas Caracteristicas Educacionales de la Poblacion Salvadoreña - Enero 1976 (Doc. interno para discusion - Informe No. 1).
- d) Migracion Interna, Abril-julio 1975.

- e) Encuesta Nacional de Mano de Obra y Aspectos Demograficos, Abril-julio 1975.
- f) Resultados Sobre la Vivienda, Abril-julio 1975.
- g) Encuesta Nacional de Presupuestos Familiares, 1976-1977.
- h) Proyecciones de Poblacion por Departamento, Area Urbana y Rural y Municipal. El Salvador, 1970-2000.

(18, 19) PURPOSE AND GOAL/SUBGOAL

1. AID/ES has not become involved in assisting GOES on the goal level which would be concerned with the establishment of the national statistical system. Rather AID/ES has concentrated its collaboration on the project purpose level which is to assist in the design and implementation of a national, continuing and multi-purpose household sample survey program. The link between the goal and the project purpose is that the MPHS represents a major component of the national statistical system.
2. SIM is producing periodic surveys that appear to be of an acceptable quality because of built-in design features. The results of the surveys undertaken as part of this project have not been tabulated as yet, and the appropriate technical evaluations of the results are pending. However, the sampling frame is being employed by other national and international organizations, which is an indication of their confidence in its integrity.
3. GOES agencies and other users are relying upon the SIM survey results for quantitative insights that will affect planning and decision-making. For example, the results of the Family Income and Expenditure Survey is being used to update the vitally important cost of living index. Also selected data from the 1975 and the 1975-77 surveys are being used by the Demographic Association. It is expected that fully integrated use of survey data by the Ministries will begin with the tabulation of the Survey I data under this project.

4. It appears that up to the present SIM has progressed steadily to end-of-project status. By the end of the current project agreement in November 1979, and with the provision of the short-term technical assistance desired, SIM will be close to achieving the desired objectives. Nevertheless, it is believed that the results of the survey design modifications contemplated will require continuing short-term technical assistance in calendar years 1980 and 1981. Furthermore, during these two same years, it would appear that the evolving of data processing needs would require the resident full-time services of a systems-analyst/programmer, possibly through an extension of the BUCEN-PASA.

(20) BENEFICIARIES

1. The design of the MPHS enables data to be compiled on the different criteria pertaining to Section 102(d) of the F.A.A. For example, survey data have been collected on topics concerned with measuring employment, unemployment and underemployment; income distribution, population growth; infant mortality; household industry; and earnings of small farmers, among others. It is believed that the dissemination of these survey results will impact directly on development planning and government policies. Those in the poor majority should, therefore, stand to benefit from this project. Similar surveys of this type are being carried out in other countries of the American Region.

(21) UNPLANNED EFFECTS

This chapter is not pertinent at this time.

(22) LESSONS LEARNED

1. Considerable time and effort, often more than anticipated, are devoted to pre-project justifications and documentation. During this protracted period, there may be frequent turnover of the key decision-making officials. This leads to additional rounds of repetitive justifications and required approvals from the newly appointed officials. Under these circumstances, the successful initiation of projects such as this one depends on patient and continuing efforts of the technicians responsible for the project proposal in the first place.

2. The Salvadoran survey is adapted from the Atlantida model developed by the U.S. Census Bureau about 1965. This model needs to be updated to take into account advances in computer applications with respect to editing and data tabulation. Possibly the time being devoted to these aspects for the Salvadoran survey program would have been shortened if such updating had already taken place.

3. At the beginning of a survey program to be carried out over a number of years, there is a pent-up demand for different kinds of data. This tends to cause a certain amount of "information overload," although initial surveys should be carried out with minimum data requirements until the different phases have been properly tested and successfully installed. The development aspect of this type of project should be more fully taken into consideration.

4. Proper attention to field instructions can be assured through introducing into the program of activities regularly scheduled retraining periods for enumerators and supervisors to maintain the integrity of the scientifically selected sample and to conserve the quality of the data.

(23) SPECIAL COMMENTS OR REMARKS

1. To a greater extent than ever, household surveys are used to provide, on a current basis, vitally important socio-economic data about people, their family units, and their living and working conditions. As a consequence, there has been a substantial increase in relatively costly ad hoc surveys. The success of a multipurpose household survey project, such as this one, will lead to the integration of the ad hoc survey efforts. Costs would be reduced significantly, and, at the same time more insightful data would be provided.