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ISN 697

REPORT ON A SITE VISIT TO SOMALIA  
(March 15-21, 1981)

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During The Period:  
MARCH 30 AND 31 AND JUNE 17, 1981

Under The Auspices Of The:  
AMERICAN PUBLIC HEALTH ASSOCIATION

Supported By The:  
U.S. AGENCY FOR INTERNATIONAL DEVELOPMENT,  
OFFICE OF POPULATION



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## EXECUTIVE SUMMARY

The project in Somalia is on schedule and within the planned budget. However, although a set number of nomadic households was targeted for interviews, the rains came earlier than expected, before the interviewing could be completed. It is not possible at this time to describe the full effects of the shortfall.

The samples for the survey were drawn with great care, despite very real difficulties in the field and the lack of what were said to be the best maps available.

Much of the fieldwork has been completed. Remaining activities are well under way, and, at most, are no more than a week or two behind. The situation may change, however, with changes in the weather, for an end to the dry spell, or even a heavy rain, would enable the nomadic population to move out of areas where water is concentrated--the principal areas selected for sampling.

Completed questionnaires are legible and essentially complete. The computer check for inconsistencies and impossible entries has just begun. Few errors have been found. No major problems were reported following manual review by supervisors in the field and coding.

The sampling instructions seemed to have been followed carefully, and great care was taken to develop procedures that would ensure that the interviewers observed the requirements of the sampling staff.

The entire operation has been dependent upon AID funding. The Central Statistical Department in Somalia has been particularly active. Local staff, too, have been acquiring experience while helping to administer the survey.

Tabulation is expected to be a problem. In examining the age entries on the questionnaires, the evaluator noted that many respondents could not provide the information that interviewers were seeking. There is a substantial concentration of ages divisible by five and ten. To measure fertility and mortality in the survey area, it will be necessary to develop procedures that take into account this fact.

AID is interested in the health program proposed for the survey area, and in other population-related projects as well. The information being collected in the survey is needed. As baseline information, it can be used to plan and implement the proposed health program. It also can be used to measure changes that occur during the health project.

## ABBREVIATIONS

GNP	Gross National Product
POPLAB	International Program of Laboratories for Population Statistics
PSU	Primary Sampling Unit
SPC	State Planning Commission
U.N.	United Nations
UNC	University of North Carolina
UNFPA	United Nations Fund for Population Activities
USAID	United States Agency for International Development

## I. INTRODUCTION

Somalia is one of the poorest countries in the world. The Gross National Product (GNP) was estimated to be \$110 per capita in 1977. Somalia contains approximately 3.5 million persons who are scattered over some 638,000 square kilometers. The average density is five persons per square kilometer. Statistics generally are lacking. A Census of Population was taken in 1975, but the data had not been released as of mid-1981. The birth rate is estimated to be approximately 47/1,000, and the death rate is approximately 21/1,000. The annual growth rate is between 2.5 percent and 3.0 percent.

It is estimated that, in normal times, food provides approximately 2,230 calories per person--approximately 80 percent of the estimated requirements. Approximately 83 percent of the labor force is engaged in agriculture. Livestock is a major agricultural product. More than half the population engaged in agricultural activities is reported to be nomadic, moving with herds of camels, cattle, sheep, and goats in search of water and forage. Both water and food were in critically short supply early in 1981, and the effects of these shortages were felt in the southern part of the country. The nomads altered their patterns of movement in response to the drought. Their new patterns again changed when the rains came, providing new sources of water for the animals.

None of the estimates includes the large number of refugees who have come into the country to escape from the continuing conflict with neighboring Ethiopia. The number of refugees--estimated to be 1.5 million early in 1981--continues to grow. Refugee camps are located primarily in northern Somalia.

The severe drought and the presence of refugees have become national problems, but the POPLAB project, located in the south, has been relatively unaffected by the influx of refugees.

## II. THE PLAN FOR THE PROJECT

The Demographic Survey of the Bay and Lower Shebelle Regions is being administered under a contract between the University of North Carolina at Chapel Hill (POPLAB/UNC) and the State Planning Commission (SPC) of the Somalia Democratic Republic. The Central Statistical Department in the SPC is responsible for project operations.

The project officially began on January 1, 1980. It is scheduled to conclude on March 31, 1982.

### Objectives

The objectives of the project are described in the contract, which reads:

The objective of this project is to conduct a demographic survey of the Bay and Lower Shebelle Regions. Specific goals are: a) to obtain reasonable, reliable estimates of current levels and trends of fertility, mortality, and migration for the three sectors of urban, rural-settled, and nomadic populations [and] b) to improve the capability of the Central Statistical Department for carrying out sample surveys.

After further negotiations, it was decided that the district including the capital city, Mogadishu, would be included in the geographic area for the survey.

It is stipulated in the contract that POPLAB/UNC will provide technical assistance, especially in sample design and selection, data processing, computer editing, interviewer-training, field operations, questionnaire design, and the analysis and presentation of survey data in written reports.

### Methodology

It was specified that POPLAB/UNC staff would make short-term visits to Somalia to provide technical assistance or to consult with SPC staff who traveled to Chapel Hill. A member of the POPLAB staff was assigned responsibility for continuing project support.

It was specified that the State Planning Commission would have primary responsibility for administering the survey. Specifically, the SPC

was to be responsible for translating and printing the questionnaires and manuals for all three stages of fieldwork; producing a list of urban districts, villages, and water points in the Bay and Lower Shebelle to be used as a sampling frame; recruiting and training approximately thirty interviewers for the fieldwork scheduled for August 1980 and February 1981; providing a sufficient number of vehicles, in working condition, to pretest the mapping and house-listing operations and to conduct the main fieldwork; providing clerical staff to edit, code, and keypunch the data; providing computer-processing facilities and staff time for data processing to ensure the timely production of edited data tapes; publishing and distributing the final report, at least fifty copies of which were to be made available to POPLAB/UNC; and contributing all the necessary physical facilities, including adequate office space and furnishings.

### Costs and Timephasing

Total costs were estimated to be \$152,308, with POPLAB/UNC contributing \$113,700 and the Government of Somalia, \$38,608.

By the time of the visit (March 1981), all the questionnaires from the settled areas were to have been collected, the data were to have been edited and coded, and keypunching was to be under way. Machine editing also was to have begun in March. The schedule was met. Questionnaires are being edited and keypunching is under way.

The director of the project, who is also the director of the Central Statistical Department, plans to come to Chapel Hill later in the year for the computer tabulation and analysis of the survey data. The standard prototypical procedures developed by POPLAB/UNC will be followed to tabulate and analyze the data. The computer equipment available in Mogadishu is adequate for editing, but it cannot be used to prepare the more detailed analytical tables.

### III. EVALUATION OF THE SURVEY

At this time, the project is considered to be on schedule, and the work remaining to be done in Somalia is in hand. The survey of the nomads was to have been completed in February 1981, but the rains came earlier than expected, making it impossible to complete all the interviews. With the appearance of rain, the movement of the herds altered and this, in turn, changed the probabilities for the selected water points. Roads in the areas became impassable. The completed interviews of nomadic households must be studied before the effects of these developments can be assessed fully.

#### Methodology

After studying the distribution of the population in the country, officials decided that the enumeration should be conducted in stages. In the first stage, the settled population, estimated to be approximately 40 percent of the national population, was interviewed. The nomadic population within the defined geographic area was interviewed in the second stage. For the settled population, it was possible to develop a sampling pattern of clusters of housing units and to interview the occupants of these dwellings. It was reported that maps showing the location of each village had been prepared for the military. Unfortunately, the maps were not made available for the POPLAB survey. Thus, as the first step in drawing a sample, a complete list of villages in the districts included in the survey, and a map of each district, were prepared. The inadequate lists and maps which were available were the starting point for this work.

The nomadic population is so scattered and moves about so frequently that it is not possible to pin it down to one geographic area. The nomads can, however, be tracked to water points. These are places to which nomads bring their herds of camels, livestock, sheep, and goats for periodic watering. They are identifiable locations. In one area, one might find mechanized motor-driven wells and permanent tanks and troughs, in another, ponds where surface water collects. Some water points are holes dug in dry river beds. A list of water points was prepared and a sample was drawn, with the probability proportionate to size, size being a measure of the number of nomads who characteristically use the particular facility.

Field crews were sent to the sample water points with instructions to interview drovers with camels, drovers with cattle, drovers with sheep and goats, and drovers with mixed herds. Camels are said to require water every two weeks, whereas cattle, sheep, and goats are watered more frequently. Thus, the crews were less likely to encounter at a given water point a nomad with a herd of camels than a drover with only cattle, sheep, or goats. Interviews were conducted on the spot with whatever member of

the household was present. It was not feasible to go back to the households because, in many instances, the wives and children lived long distances away from the particular water points where drovers were found.

### Management of the Survey

The interviewers were recruited from government offices in the State Planning Commission, in particular, the Central Statistical Department, and from other ministries as well. As many women as men were trained as interviewers. Some secondary school students were hired to supplement the staff. It was decided that interviews would be conducted by teams and that each team would consist of five or six interviewers and a supervisor. The all-important driver was also a member of the team. The teams were dispatched by the Central Statistical Department to the sample points, where they camped until the interviewing in the particular areas was completed. Guest-house facilities were not available usually, and it was necessary to rent tents and carry some cots.

To maintain the crews of interviewers in the field, a variety of items which one would not expect to be needed was provided. Specifically, the contract provided for forty flashlights with batteries, fifty blankets, and four sets of cooking utensils.

Transportation to many watering places was particularly difficult. It was not feasible to have people go from their homes and back the same day. Nor was it practical to try to recruit local interviewers. Few persons owned automobiles. Therefore, a central pool of the Central Statistical Department provided transportation for the interviewers.

The government provided substantial support for surveys in settled areas, and particularly for the enumeration of nomads. It was necessary to purchase not only supplies, but also food for each team for the duration of the activity. The teams could not count on finding food in the areas where they were working. Exemption from gasoline rationing also was sought. According to those who were interviewed, the government was particularly cooperative, and all matters were settled expeditiously. There were no delays in releasing staff assigned to the project, or in securing transportation and necessary supplies, including supplies being rationed in the city and certain purchases that normally are limited to a specified quantity each day or every other day.

### Conditions On Site

The conditions under which some of the work was done were best described by one of the technicians from POPLAB/UNC who was helping to draw

the sample. He wrote in his trip report: "The work in the villages was delayed by numerous vehicle breakdowns, heavy rains, and occasional sickness of team members. During the week of July 16 we were able to visit 17 out of some 90 sample villages."

It is difficult to prepare a list of the villages in a country, but the difficulty of this task pales in comparison with the problems of listing individual water points and their locations. Another consultant wrote in his trip report: "The information on items such as nomadic families using water points per day, and type of herds watered[,] is very rough and should be used with caution. I was told that many wells were either already dry or would be dry, as they did not have enough water in them by the time the nomadic survey [was] carried out in late February or early March. [The team developing a list of water points] was encountering some problems due to the gasoline shortage. The Bay team was also encountering problems due to gasoline shortage, but progress is being made in that region also."

The preparation of lists of villages that indicated sizes and locations and the identification of water points and their locations in relation to roads or villages were time-consuming and very difficult. Less government support than was desired was provided.

### Team Assignments

The duties of the team supervisor were somewhat unusual. In addition to receiving specific training for his position, the supervisor helped to train the interviewers. In the field, he was responsible for transportation, for making sure a vehicle was available and in good condition. He was in charge of the food and other supplies for the team. He assigned households to each interviewer and reviewed every questionnaire before it was accepted. The enumeration in a sample segment was not considered to be complete until the supervisor himself approved the last questionnaire.

The surveyors faced numerous problems while working in the trackless, arid country, and particularly in the so-called rural areas, where eighty-three primary sampling units (PSUs) had been designated. Fieldworkers were unable to find seven of the PSUs. The village lists and maps available at the time the sample points were selected were inadequate. It was not possible to verify the existence of all the sample areas before the interviewers arrived. When the sample areas were selected, provision was made to offset the consequences of a shortfall.

## Calculations

Local officials' estimates of the number of households in each village were exaggerated. In the rural sections, 3,527 households were reported to be included in the sample areas, but only 2,433 were enumerated.

The number of households in the sample areas in the city of Mogadishu was underestimated; 3,882 were found, and not 3,706--the estimate of local officials. The larger figure may reflect the rapidity with which the capital city is growing. In other urban areas, local officials overestimated the number of households. It was estimated that there were 8,833 households in the sample areas, but the enumerators found only 7,819.

Response rates for households in settled areas were uniformly high. For the entire survey, the response rate was 93 percent. It varied somewhat, but, even in the rural areas, averaged 90 percent; in one district, however, only 83 responses were reported.

Local officials' estimates of the number of herds at certain watering points varied considerably. There is little factual information on which one can base estimates for water points at which no charge for water is made. For the others, it is, perhaps, simpler to provide information in advance, although, in times of drought, the patterns of distribution of various herds change constantly. Even the best local informant may not be able to provide information to show how patterns deviate from the normal.

#### IV. OBSERVATIONS ON FIELDWORK

##### Adequacy of Instruments

The evaluator checked the suitability of maps one day when he and his driver, who knew his way about Mogadishu, traveled in the city. Using the maps showing the sample areas, they were able not only to identify the sample areas, but to spot their boundaries also, even where the street pattern became irregular. The maps were detailed enough that critical points, intersecting streets or byways, and other features could be verified. In the rural villages, the problem of mapping was particularly acute because the street patterns usually were not rectangular, and shops, hospitals, schools, government headquarters, and the like tended not to be located in clusters, as in cities. The evaluator was able to reconstruct the sample area in one of the small rural villages without great difficulty. The supervisor had selected the area carefully and correctly.

The evaluator examined various questionnaires completed by the settled population and the nomads. The questionnaires appeared to be legible and complete. The supervisors made few changes in the entries. Also, few changes were made in editing and coding procedures. Undoubtedly, inconsistencies and errors of various kinds will appear during computer-editing, but it is not likely that the timetable will have to be revised.

##### Methodological Problems

Project staff want to tabulate the data by age, but this is expected to be problematic. In Somalia, birthdays receive little attention, and a person's age in terms of numbers is not important. There seems to be a preference for numbers of years divisible by five and ten. For example, on one questionnaire, the ages of the members of the households were 50, 25, 15, 10, and 2. Such responses are not unusual, but they will make it difficult to analyze the survey. In some instances, respondents listed random numbers for ages. Had a reinterview been made, significant inconsistencies would have been revealed that could not have been reconciled. The standard method of tabulation will have to be modified to assess fully the deviations and variability in reports for the adult population. There is some evidence that respondents reported more often the correct ages of younger than older children. Six months after the enumeration was completed, the evaluator visited a rural village to identify several persons who had been included in the enumeration and to verify the information they had provided. The data on the number of children born alive who had

died, the number of children who were living with their mothers, the number of children who were living elsewhere, and the total of all children ever born were consistent with information provided during the re-interview. The reported age of the mother varied.

Originally, it was planned that the team supervisors would conduct a number of reinterviews. However, it was never made clear how many reinterviews were to be done and how the sample of households for reinterviews was to be selected. Few reinterviews were conducted.

To ensure quality-control in the field, the team supervisor reviewed each questionnaire, line by line.

## V. CONCLUSIONS

### Quality of Staff and Technical Assistance

POPLAB/UNC assigned Anne Cross to monitor the project for UNC. Ms. Cross has had extensive experience in Africa; she spent several years in Kenya before returning to Chapel Hill. She was present at the time the evaluator was in Mogadishu. The evaluator observed her while she worked with staff members at all levels. The staff were most cooperative. Ms. Cross was willing to tackle any problem and, without being overbearing, she clearly identified requirements and how they could best be fulfilled. Throughout the project, which has been in operation for fifteen months, Ms. Cross has been willing to go into the field with field crews, and she has adapted to rather difficult situations, taking in stride the problems of food and shelter at each location. Her contacts with the Somali staff and with staff at the AID mission have been most cordial. Relations with some of the advisers to the UNFPA survey have been strained, but no real problems have arisen.

Staff from POPLAB/UNC have made short-term visits to Somalia to provide technical assistance. To date, six different persons have gone at different times to help complete the assigned work. When asked whether it was more effective to send short-term technical consultants than to locate a resident adviser in the country, the Somalis who were interviewed replied affirmatively. POPLAB/UNC believes that in this approach the technicians are used more effectively when they can provide technical advice at specified times, and that local staff are stimulated to complete work so that they will be prepared for the consultants' next visits.

POPLAB/UNC believes that this project has been a model. Staff credit it with stimulating the UNFPA sample survey team to do more. They think that, because of its progress, data have been released earlier than could have been expected, given the initial slow pace of the UNFPA group.

A population and health officer at AID who has been following the project since it began commented that the assignment of specialists at various stages of the project has been beneficial. He noted that in this project the six technical consultants have supported each other, whereas in some other projects different specialists have spent considerable time challenging each other. Clearly, all the POPLAB consultants are working toward the same goal. From the comments of the Somali staff and others who have prepared trip reports, the evaluator has concluded that POPLAB/UNC staff have worked as a team and shown themselves to be alert to local needs and requirements and sensitive to the feelings and technical needs of their Somali counterparts.

Near the end of his visit, the evaluator met with the director of the AID program. He mentioned that he was still waiting to hear the first derogatory remark about the project. The director replied that that was a most unusual statement to make.

### Turnover

Turnover among the Somalis in charge of the project has been unusually high, and POPLAB/UNC has had to assume more responsibility for some work (e.g., drafting questionnaires, manuals, and coding guides) than it had planned initially. The original director of statistics was promoted to director of the Ministry of Planning. Two of his successors at the Statistical Office received fellowships for additional training in the United States. The current acting director of that office is carrying forward the work. At this time, the project is on schedule.

### Use of Survey Results

Somalia's first census of population was taken in 1975. The government rejected the early results of that survey. Not surprisingly, there were many difficulties, and the undercount was significant. The UNFPA has sent one of its experts to Somalia to analyze the available tabulations and to determine what, if anything, can be salvaged for publication. When asked about his work, the expert said that he had not had time to form any conclusions.

When POPLAB/UNC staff first visited Somalia negotiations were under way with the UNFPA to conduct a nationwide household survey to collect basic demographic data. Regional and other subnational estimates would not be provided. The director general of the Ministry of National Planning, the parent organization for the Central Statistical Department, explained that the government was willing to cooperate with both the UNFPA and POPLAB/UNC because it had a particular need for information about the areas which would be surveyed. The Central Statistical Department cooperated on both surveys, and enumerators and supervisors who worked in the field participated also. It should be possible to compare most of the data, at least on the settled population, from the two sample surveys. In each survey somewhat different sampling procedures were used for the nomadic population. Thus, there may be differences in the results for that segment of the sample.

### Involvement of the UNFPA

For the UNFPA-sponsored survey, resident representatives were stationed in Mogadishu. In the time that has elapsed since the project began there have been changes in staff. It has been proposed that another household survey be made to collect labor-force statistics that are not available at this time. However, this proposed effort would not be viewed locally as part of the United Nations' program to build a capability for periodic household sample surveys throughout the world. Rather, it would be a one-time survey which would use to advantage the skills and experience acquired during preparations for the current demographic survey. Some officials in the Somali government have stated that the POPLAB/UNC cooperative project was needed because the country plans to develop a major health program for the areas that are included in that survey. It is felt that the specific information on the survey areas will be useful in planning and developing the health program and measuring subsequent changes. Any data on the composition and distribution of the population and data on mortality rates, birth rates, and infant mortality would be particularly valuable. It has been proposed that the health project be supported by the Agency for International Development.

### AID Support

Without the support of the AID, the project would not have been developed. Moreover, had the AID not provided continuing support through POPLAB/UNC, the project would never have made such progress. At this time, it is almost completed.

### Budgeting and Expenditure

Although the evaluator did not audit all expenditures, he has deduced that the project is within its budget and can be completed with the funds available. It may be desirable to monitor tabulation and report-writing and examine expenditures for these activities. If more computer and professional time than has been budgeted is required to tabulate data, some additional resources may be needed. At this time, additional programming may be necessary to ensure that the data coded on the tapes are used fully.

## Appendix

### LIST OF CONTACTS IN MOGADISHU, SOMALIA

Anne R. Cross, Project Director, POPLAB, University of North Carolina

Hussein Elabe Fahiye, Director General, Ministry of Planning\*

Awil Maxamed Faarax, Acting Director of Statistics

Muzamil Hossain, Sampling Adviser, United Nations

Mohamed Afzal, Demographic Adviser, United Nations

Arjuna Abayomi-Cole, Population and Health Officer, USAID, Mogadishu

Mike Adler, Acting Director, USAID, Mogadishu

Abdullahi Mohamed Yahie, Data Processing Supervisor

Other Somalis who were working on the project were present during some of the discussions, but the consultant was unable to obtain their names.

\* Initially, Mr. Fahiye was in charge of the project in Somalia.