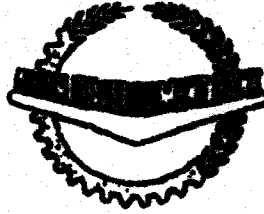


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RMI



ADB



UNFPA

**REPORT ON  
THE MULTI-SUBJECT HOUSEHOLD SURVEY  
IN THE MARSHALL ISLANDS  
1994**

**UNFPA Project MAS/92/P01 : Establishment of a Population Focal Point  
at the Office of Planning and Statistics**

**ADB T.A. Project 1671-MAR : Institutional Strengthening of the Office of  
Planning and Statistics**

## Preface

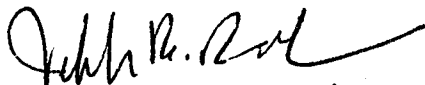
This report presents the results of the 1994 Multisubject Household Survey conducted by the Office of Planning and Statistics. The Survey was the joint effort of the government of the Marshall Islands, the United Nations Fund For Population Activities, South Pacific Office in Suva and the Asian Development Bank. The cost of the Survey was shared between the government of the Marshall Islands and UNFPA. The Asian Development Bank provided the services of Dr. H.M. Gunasekera, Project Manager of ADB Technical Assistance Project 1671-MAR, Institutional Strengthening of the Office of Planning and Statistics who acted as the overall Manager of the Survey and of Mr. Myint Thann UNV Statistician in the ADB Project, who carried out the Survey and analyzed the results which are presented in this report. UNFPA also provided the services of Mr. Mohamoud S. Mohamoud, UNV Demographer and advisory services from two of its Advisors in the Country Support Team. The tables presented in this report as well as the original data gathered are being analyzed by the UNFPA Country Support Team in Suva, Fiji. A preliminary presentation based on this analysis was presented at the National Seminar on Population and Development in Majuro during 10-12 July 1995. An estimation of population parameters based on the tables given in this report has been prepared by Mr. Mohamoud Said Mohamoud UNV Demographer attached to the UNFPA assisted Population Focal Point at the Office of Planning and Statistics and is published separately.

The tables presented in this report must be interpreted cautiously since they come from a sample survey on a small population of about 50,000 people. Needless to say, when in doubt experts will use these results in conjunction with other available data such as the 1988 census on Population and Housing.

The successful completion of this survey has been the common result of the efforts of many individuals and organizations. We would like to thank His Excellency President Amata Kabua, his Cabinet and Nitijela for providing part of a funding for the survey, the Public Service Commission and Heads of Ministries for releasing some of their officers to serve as supervisors and interviewers.

We would like to thank Dr. H.M. Gunasekera for his contribution as the Manager of this project, Mr. Myint Thann for conducting the survey and analyzing the results, Mr. Mohamoud Said Mohamoud for jointly Co-ordinating the Survey and providing technical inputs from the demographic point of view, Mr. Takaji Abo, Officer-in-Charge of OPS for translating the questionnaire into Marshallese and managing the budget for the Survey, Mr. Jesse Riketa for collecting data for the sampling frame, Mr. Thomas Lokot for

translating the interviewer's manual into Marshallese. We also thank all the supervisors and interviewers whose names are given in the text of the report. We would like to thank the UNFPA for providing part of the funding needed for the project. The technical assistance given by Mr. Laurie Lewis UNFPA/CST Advisor on Census and Surveys and by Dr. William House Advisor on Population and Development Planning and Policy is gratefully acknowledged.



Jefferson B. Butuna  
Director/Chief Planner  
OPS



Phillip K. Kabua  
Chief Secretary

## INTRODUCTION

This report presents the results of the 1994 Multi-purpose Household Survey conducted by the Office of Planning and Statistics under the UNFPA assisted project MAS/92/PO1: "Establishing a National Focal Point at OPS for Improving Integrated Population and Development Planning and Policy Co-ordination". The survey was conducted by Mr. Myint Thann UNV Statistical Specialist in the Asian Development Bank Technical Assistance Project 1671-MAR: "Institutional Strengthening of the Office of Planning and Statistics". He was assisted by Mr. Mohamoud Said Mohamoud UNV Demographer in the UNFPA project.

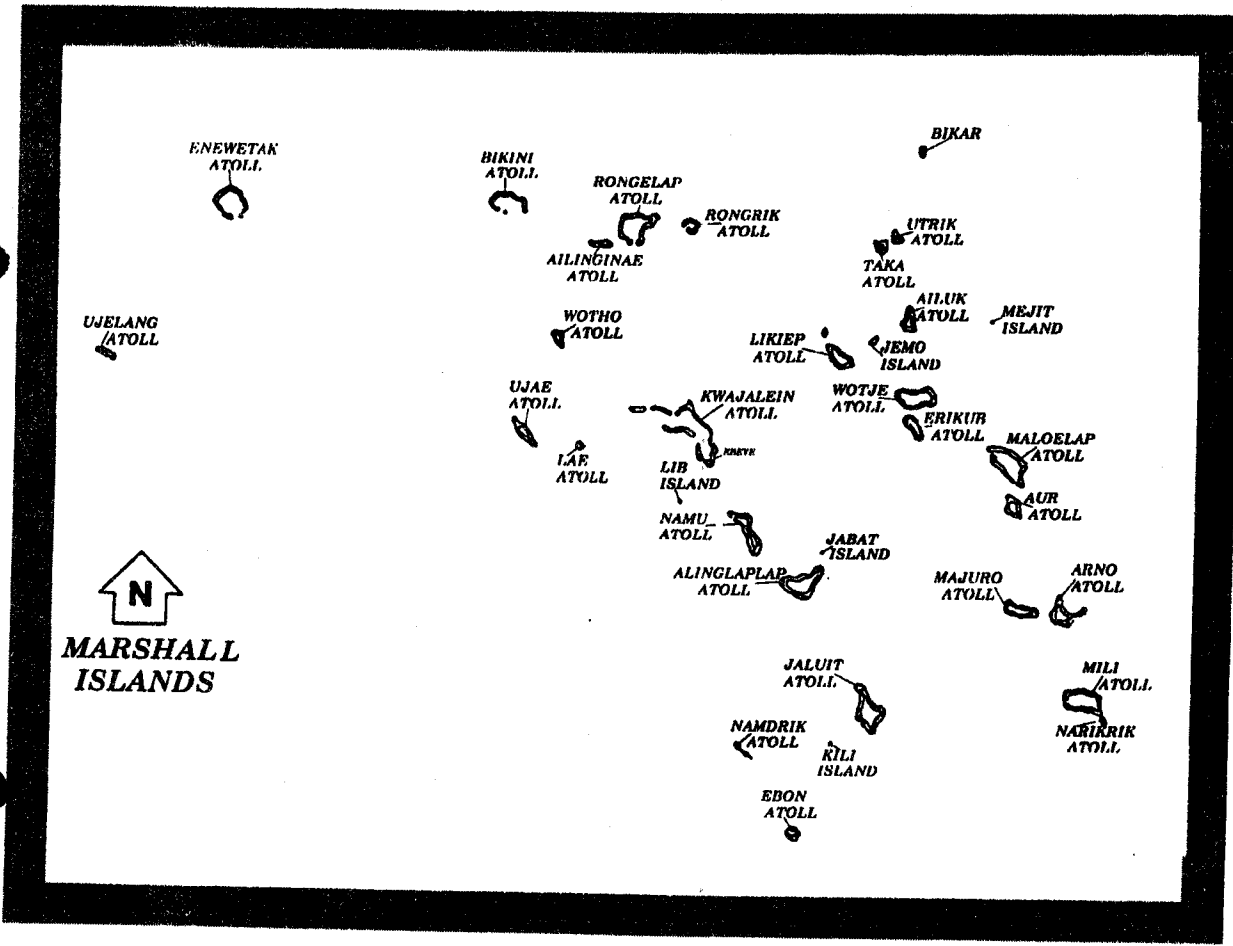
In this survey, the government of the Marshall islands has been able to successfully interface two technical assistance projects implemented through the Office of Planning and Statistics, namely, the above mentioned Asian Development Bank technical assistance project and the UNFPA project. The ADB technical assistance project's terms of reference included, inter alia, the following activity: "establishing a population policy unit within OPS to coordinate activities relating to the implementation of population policy as an integral part of the development planning process". The objective of the UNFPA Project was similar, as illustrated by its title given above. Hence, the Manager of the ADB project at OPS was able to function, in addition, as the Co-ordinator of the UNFPA project. Mr. Myint Thann was selected, over other candidates, as the UNV Statistical Specialist in the ADB project because of his experience in conducting surveys and his computer skills specifically to conduct this survey and to analyze its results. In view of the availability of Mr. Thann, the project's original plan to engage the services of a short term Consultant to design the survey was changed and it was mutually agreed between UNFPA and RMI government to use the resources thus saved to field a UNV population economist for the project.

Valuable inputs for the survey were received from various sources. I would like to take this opportunity to thank His Excellency President Amata Kabua who is also the Minister responsible for the Office of Planning and Statistics for his assistance at all times during the survey including assistance in securing government funding for the project. Thanks are also due to Mr. Faysal Abdel Gadir, UNFPA Country Director South Pacific and UNFPA Program Officer Mrs. Urmila Singh for their support as well as for UNFPA funding. Support from the following organizations and persons is gratefully acknowledged. The Public Service Commission, especially its Chairman Mr. William Allen and the Chief Secretary Mr. Phillip K. Kabua kindly consented to make available the services of all government officials who took part in the survey. Working with the Project Co-ordinator, Dr. William House UNFPA/CST Advisor in Population and Development Planning and Policy and Mr. Laurie Lewis

UNFPA/CST Advisor in Census and Surveys made valuable inputs to the survey questionnaire as a result of which it became possible to give the survey its present multi-purpose character. In addition, Mr Lewis assisted in the training of supervisors.

Finally, I would like to thank Mr. Myint Thann, Mr. Mohamoud Said Mohamoud and all the supervisors and interviewers for the job well done. Last but not least, the support given by all OPS staff led by its Officer-in Charge Mr. Takaji Abo is gratefully acknowledged.

Dr. H.M. Gunasekera  
Manager, ADB T.A. Project 1671-MAR  
Co-ordinator, UNFPA Project MAS/92/PO1  
Office of Planning and Statistics  
Majuro, Marshall Islands MH 96960  
June 27, 1995



## About the report

This report is conceived as a technical report describing, and presenting the results of the Multi-Subject Household Survey conducted in October 1994. As such, it is not intended for the general public and therefore covers materials on design and execution of the survey than is needed for introducing results of the survey to the general user.

The report contains a comprehensive set of tables, estimates of sampling errors and background technical materials to cater to the needs of the analysts in subject-matter areas and survey statisticians. One difficulty with presenting the results of the survey, however, was foreseen from the outset. To begin with, Marshall Islands is a small country with a population of about fifty thousand living in about five thousand households. In such a situation, a sample survey of households or the population will necessarily be small, and will not meet the size necessary for looking at characteristics of households or individuals in detail. This survey was one such case.

In presenting the data the author was faced with the dilemma: whether, (i) to give tables with all the meaningful cross-classifications of various individual characteristics, or (ii) to leave out cross-tables with sparse data in many cells of the table, or to combine cross-classes as appropriate. The latter option is aimed at preventing the user of the results of the survey from misusing the tabulated results, as small number of units in a cell of the table would be associated with large sampling errors. Despite warnings of dangers of such misuse accompanying the survey reports, even the *technical* user may occasionally interpret and draw conclusions from the data in oblivion. Hence the justification for the latter practice.

Here I have chosen the first option. The reason for this is that by giving all the cross-tabulations, the user interested in designing surveys in the future will have more information at hand to base upon. On the other hand, the user interested in interpreting and using the tabulated results directly can combine the cross-classes as appropriate to come up with more reliable estimates. At all times the analyst, I hope, would be guided by the estimates of sampling errors and comments on non-sampling errors given in the report.

Myint Thann

Majuro, 27 March 1995

UNV Statistician

ADB TA Project 1671-MAR: Institutional Strengthening of the Office of Planning & Statistics

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*Part-I*

**Description  
of the  
survey**

## 1. Introduction

Within the framework of the Government of the Republic of the Marshall Islands' population policy, the Government and the United Nations Fund for Population Activities (UNFPA) had agreed to embark on a project directed at establishing a national focal point in Office of Planning and Statistics (OPS), for coordination and monitoring of all population programs, and to improve the integration of population consideration in planning.

This project seeks to implement, among others, a multi-subject household survey by the end of 1994, with the objective of contributing to improvement of information base needed in order to (i) incorporate population variables and strategies in the planning and policy process, and (ii) develop a multi-sectoral population program in line with the national population and development goals. The rationale for the survey and its intended scope were given in the project MAS/92/P01 entitled "Establishing a national focal point at OPS for improving integrated population and development planning and policy coordination".

As formulated in the project document, the detailed design and implementation plan for the above-mentioned survey were to be worked out by the short-term consultant on survey design and analysis who was to be employed for a total of 3 months.

On the other hand, the complementary ADB project on Institutional Strengthening of the Office of Planning and Statistics that had a strong statistical capability component was in existence for some time. The mandate for the statistical component of this project is, widely, to assist in the implementation of the Statistical Act of the RMI. As such, it was felt that it would be advantageous to integrate the efforts of the two projects in strengthening the information base and in building up the national capability for data collection and analysis. Subsequently, the UNV Statistician of the latter project voluntarily undertook to design and conduct the survey without hiring any outside consultant.

When the preparations for the survey were initiated a difficulty was encountered in deciding the content of the survey. The survey has to accommodate the diverse expressed needs of the UNFPA, Asian Development Bank, and the Office of Planning and Statistics of Marshall Islands. A particularly difficult need was to obtain the fertility history of women as well as to obtain information on contraceptive awareness, accessibility and practice, and family planning concerning both men and women in addition to collecting demographic information such as age, sex, marital status, children ever born, internal migration, other information such as literacy, education, employment, vaccination of children, housing and household characteristics, subsistence production and consumption. Taking account of the current status of the statistical system in Marshall Islands, such an ambitious program of data collection may not yet be operationally feasible. Therefore it was decided that the attempt at a deeper study of fertility and family planning knowledge, attitudes and practice should be handled by a separate survey following the main survey, while the main survey should concern with satisfying the rest of information needs. The discussion of this issue was dealt at some length in the two internal documents at OPS entitled, *Proposed Plan for Multi-Subject Household Survey, Republic of the Marshall Islands, 1993-94* and *Organizing the Multi-Subject Household Survey, 1994*.

After some initial delays in getting the decision to implement the survey, active preparation for the survey started in the last week of March 1994. Data collection was completed by the end of October 1994, and results of the survey were ready by the end of February 1995.

The fertility and family planning survey was conducted by the Health Ministry with the assistance of an ADB consultant in November 1994. Apart from taking the sample of men and women for this second survey from the list of persons in the selected households obtained from the results of the main survey,



there was no technical link between the two surveys either in terms of preparation or of execution. The present report in its entirety relates only to the first survey for which the Office of Planning and Statistics was responsible.

### ***1.1 Purpose of the report and target audience***

The purpose of this volume of the report is to present findings of the survey to statisticians and analysts in different subject-matter areas. It is hoped that the needs of the end-users such as decision makers and policy analysts would subsequently be served, in good time, by the substantive analyses of the results of the survey by those two categories of professionals. It is envisaged that the sequel to this volume of the report will cover various areas of substantive analysis and designated as "Volume II. Analytical Report."

## **2. Planning and preparation of the survey**

In planning for the execution of the survey, acute need was felt for getting adequate manpower to carry out the necessary field work. The Office of Planning and Statistics (OPS) was small and it was apparent that at any time during the survey period only three or four staff would be available for work. These people were not trained in survey methods nor the Office itself have had any substantial experience in sample surveys. It is true that the Census of Population and Housing was carried out by the Office of Planning and Statistics, but at the time for this survey all the staff in existence at this office were recruited after the census and were in no way involved in it. Situation was not much better in other government agencies outside of OPS also. Computer facilities located in OPS was adequate for processing the survey data, but local staff lacked knowledge or experience for handling survey data processing by themselves. Therefore, the planning of and execution of the survey had to be conceived along the following lines:

- All the technical preparation and control for the survey will have to be taken care of by expatriate staff of the UNFPA project and ADB project in OPS.
- OPS staff and other government staff will have to work as field supervisors during the field work for data collection. They will also have to work as subject-matter specialists in preparatory stage of the survey and also in data processing and analysis stages.
- Because of the dual role of supervisors as both field supervisors and as subject-matter specialists they will have to be involved in all aspects of the survey and also will have to receive extensive training
- Temporary interviewers will have to be hired for collecting data.
- The expatriate staff will also have to take care of the data processing entirely.

### **2.1 Objectives of the survey**

The objective of the survey was to obtain information on demographic characteristics of the people living in Marshall Islands, such as, number of persons in a household, relationship of members of household, their age, sex, marital status, fertility and mortality and also information on education, employment, vaccination of children, housing and household facilities, subsistence fishing and fishing equipment, ownership of livestock, and consumption of some locally produced food items. All results of the survey were to be disaggregated by sex and urban or rural as appropriate.

### **2.2 Coverage**

The survey intended to cover all the Marshallese citizens living in all the households in Marshall Islands. Foreigner households were excluded from the survey.

### 2.3 Scheduling of work

The schedule of major activities for the survey was drawn up as follows:

Activities	93	1994				1995			
	mth	month				month			
	111 012	123	456	789	111 012	123	456	789	
1. Recruit UNV population specialist	■								
2. Acquire computer, accessories, supplies		■							
3. Form survey working group		■							
4. Determine coverage, scope, data collection method, organization		■							
5. Meet data users		■							
6. Prepare tabulation plan, publication plan		■	■						
7. Prepare detailed plan		■							
8. Develop concepts, questionnaire		■	■						
9. Sample design		■	■						
10. Develop field procedures			■						
11. Develop data processing procedures			■	■					
12. Develop quality control & operational control procedures			■						
13. Prepare sampling frame			■						
14. Plan & conduct pretests			■						
15. Prepare manuals			■						
16. Conduct & evaluate pilot survey				■					
17. Reproduce questionnaires, forms & manuals				■					
18. Recruit and train supervisors		■	■						
19. Recruit and train interviewers				■					
20. Conduct interviews .....					■				
21. Check-in questionnaires					■				
22. Manual edit & coding					■				
23. Computer data entry & verification					■				
24. Computer edit						■			
25. Tabulation						■			
26. Review of tables & analysis							■		
27. Prepare report								■	
28. Publish report								■	

Also a network plan of the main survey activities is given in annex-1.

As actual work progressed, some difficulties were encountered and modifications were inevitably introduced. These were the major changes: (i) planned meeting with data users (activity No. 5, above schedule) was dropped, (ii) the development of data processing procedures including writing and testing of computer programs can only be started after the data had been collected in October 1994, instead of starting in April 1994 as planned.

## 2.4 Personnel

The plan was to gather a core group of technical personnel from various government agencies that will have interest in the results of the survey and would benefit from results as well as from experience in working closely through the various stages of implementation of the survey. They were to form the survey working group together with the UNV Statistician from the ABD project and the UNV Population Specialist from the UNFPA project in OPS.

From a list of about sixteen persons supplied by OPS and other government agencies eleven were actually available for working with the survey when actual preparations for the survey started. One person dropped out during the pilot survey. At that stage, the survey needed ten supervisors at the absolute minimum to run the survey at a proper level of technical control envisaged. Another supervisor dropped out while the data collection was due to start. This was an unexpected incident that the survey had to live with till the end of the field work since no reserves were available and there was no time for recruitment and training.

A few temporary data keyers were hired for entering data.

## 2.5 Organization of work

The survey was coordinated by Myint Thann, UNV Statistician of the Institutional Strengthening of the Office of Planning and Statistics Project. He was responsible for the design of the survey, writing computer programs for data processing and generally for all technical aspects of the survey.

Mr. Mahmoud Said Mahmoud, the Population Specialist of the UNFPA project in OPS served as demographer for the survey and assisted in defining the survey objectives, in making the tabulation plan, technical supervision of field work, drawing sample in the field, in supervisor and interviewer training, and in supervising the preliminary manual edit of collected data, and generally in the subject-matter aspects of the survey, especially concerning demography.

Mr. Takaji Abo, the Officer-in-Charge of OPS was responsible for all inputs from OPS. He was specifically responsible for logistics and administrative aspects of the survey. Ms. Netha Jack Gideon and Ms. Hemline Ysawa, both statistical staffs of OPS assisted in secretarial work of the survey, assisted in testing the data processing programs, and in communicating with outside agencies. All three persons also worked as field supervisors for the survey.

The following persons worked as supervisors for the survey:

<u>Name</u>	<u>Area responsible</u>
Mr. Takaji Abo, Officer-in-Charge, OPS	Majuro atoll
Ms. Netha Jack Gideon, OPS	Jaluit and Aur atolls
Ms. Hemline Ysawa, OPS	Kili island
Ms. Elizabeth Anni, Ministry of Internal Affairs	Maloelap atoll
Mr. Jesse Riketa, Ministry of Internal Affairs	Ebeye, and Wotho atoll
Ms. Carlin Jerom, Ministry of Social Services	Utrik and Mili atolls
Mr. Alex Maine, Ministry of Social Services	Ailinglaplap atoll
Mr. Kumi Hanerq, Ministry of Health	Wotje atoll
Mr. Thomas Lokot, Ministry of Education	Ebeye, Lae and Enewetak atolls

Mr. Laurie Lewis, Advisor on Population Census and Surveys of the Country Support Team, UNFPA, Suva advised the survey on the design of questionnaire and on concepts and definitions adopted for the survey. He also assisted in the training of supervisors who also worked as trainers for the interviewers.

## **2.6 Basic considerations on the survey design**

In defining the purpose of the survey some of the interested parties wanted the survey to provide information for updating the 1988 census results. From the outset a difficulty was foreseen in accommodating this wish. First, this implied a comparison of results from two different data sources in two different points of time. That is much more than comparing one set of numbers with another set of numbers. The difference we find in comparing those two data sets would be a combination of sampling error on the side of survey results, actual changes in characteristics over time, and non-sampling error in both the census and the survey.

The recommended sample size for demographic surveys from authoritative sources is of the order of forty or fifty thousand persons, or alternatively about five thousand households. In case of Marshall Islands, this amounts to taking a census instead of a sample survey. Therefore a sample survey would not, most likely, be adequate for estimating the standard demographic parameters of the population of Marshall Islands in a reliable way. Thus if we take this argument forcefully, it would mean rejecting a sample survey altogether.

However, the decision to conduct a survey had already been reached and work on the survey had to proceed. The only option available was to try to optimize the survey and sample design so far as possible in the given setting; to hope for the best, and proceed to execute the survey. The constraint now would be that the survey would not be able to produce extensive cross-classification of one variable with another. Even customary cross-classifications like crossing of other variables by standard categories of the population, such as five-year age groups, may be unreliable and inappropriate.

In designing the survey, the basic working rule adopted was to simplify all the procedures as much as possible. Another design target was to preserve uniformity of concepts and definitions between the survey and those of the Population and Housing Census of 1988 as much as possible. The aim was to adhere to the current international recommendations also. Attempt was made to learn from the 1988 census and other surveys carried out in recent times in Marshall Islands. From this, two areas in which particular attention should be given were identified as, (i) achieving a good supervision of field work, and (ii) devising a good sampling frame. On the whole the design of the survey was considered a unique exercise and effort was made to look for optimal solutions within the given setting in the Marshall Islands and not to rely on prototypes from anywhere.

## **2.7 Planning on the major activities**

In planning for the survey, procedure outlines were developed and used as guide for detailed development of procedures and for setting the detailed work schedule. The main activities included were, (i) development of tabulation plan, (ii) development of questionnaire, (iii) development of concepts to be adopted, (iv) mapping and frame preparation, (v) listing and canvassing of households, (vi) development of data processing procedures and programs, (vii) conduct and evaluation of pilot survey, and (viii) training. The procedure outlines are given in annex-1A.

In the actual work situation, considerable modifications were needed in implementing those activities, and comments on the modifications that were made are noted in appropriate sections of the present report.