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The World Fertility Survey:
January 1980 - December 1980

ANNUAL REPORT

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The World Fertility Survey (WFS) is an international research programme whose purpose is to assess the current state of human fertility throughout the world. This is being done principally through promoting and supporting nationally representative, internationally comparable, and scientifically designed and conducted sample surveys of fertility behaviour in as many countries as possible.

The WFS is being undertaken, with the collaboration of the United Nations, by the International Statistical Institute in cooperation with the International Union for the Scientific Study of Population. Financial support is provided principally by the United Nations Fund for Population Activities and the United States Agency for International Development. Substantial support is also provided by the UK Overseas Development Administration.

For information on Country Reports, WFS publications, and WFS depository libraries, write to the Publications Office, International Statistical Institute, 428 Prinses Beatrixlaan, P.O. Box 950, 2270 AZ Voorburg, Netherlands. For information on the WFS, generally, write to the Information Office, World Fertility Survey, International Statistical Institute, 35-37 Grosvenor Gardens, London SW1W OBS, UK.

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The World Fertility Survey—A Summary

The WFS is an international research programme designed to assist interested countries, and particularly the developing countries, in carrying out nationally representative, internationally comparable and scientifically designed and conducted surveys of human fertility behaviour. The objectives of the WFS programme, set out at its inception, are as follows:

- To assist countries to acquire the scientific information that will permit them to describe and interpret the fertility of their population.

- To increase national capabilities for fertility and other demographic survey research, particularly in developing countries.

- To collect and analyse internationally comparable data on fertility and to make these available to researchers for comparative analysis.

The WFS was started in 1972 in response to the announcement of the World Population Year 1974 and the United Nations' call for concerted world action on population matters. The project drew renewed support from the Plan of Action adopted by the World Population Conference of Bucharest in 1974, which invited countries to participate in the WFS. The WFS is undertaken by the International Statistical Institute (ISI) with the collaboration of the United Nations and in cooperation with the International Union for the Scientific Study of Population (IUSSP). The project is financed principally by grants to the ISI from the United Nations Fund for Population Activities (UNFPA) and the United States Agency for International Development (USAID), with contributions also from the United Kingdom Overseas Development Administration and a number of other sources. The WFS programme is carried out by an international staff located in London under the directorship of Miloš Macura. Four divisions deal with data collection, data processing, data analysis, and administration and information. Responsibility for finance and for publications is taken by the ISI office in The Hague.

Project Director

To the profound regret of all friends of the WFS, Sir Maurice Kendall resigned as Project Director in May 1980 for reasons of ill-health. Appointed as Project Director in 1972, Sir Maurice built up the project from small beginnings to its present worldwide activity. His determination, foresight and practical sense guided the WFS through seven challenging years; their reward has been the success of a unique enterprise – as he has often said, 'the largest social survey ever undertaken'.

In November 1980 Dr. Rafael Salas, Executive Director of the United Nations Fund for Population Activities, travelled to London to present the UN Peace Medal to Sir Maurice Kendall. In the citation conferring this honour upon Sir Maurice, the UN Secretary-General Kurt Waldheim expressed his 'sincere appreciation for the valuable support that you have extended to the United Nations, particularly in the field of international population activities'. The citation concluded: 'The World Fertility Survey, which you directed with such distinction, has achieved results which will have a lasting impact on development and population planning'.

The WFS has been fortunate in obtaining the services of Dr. Miloš Macura of the Economic Institute, Belgrade, Yugoslavia, who joined as Project Director on 16 May 1980 and undertook to guide the project through the WFS Conference and the crucial months to follow. Dr. Macura was Chairman of the two Ad Hoc Technical Advisory Meetings whose recommendations led to the launching of the WFS in 1972, and has been a member of the WFS Programme Steering Committee since its inception. He was Director of the United Nations Population Division from 1966 to 1972 and President of the International Statistical Institute from 1975 to 1977. He is a Council Member of the International Union for the Scientific Study of Population.

Abbreviations Used in the Report

CCAF	Committee on Comparative Analysis of Fertility (IUSSP)
CCRP	Corporación Centro Regional de Población (Colombia)
CELADE	Centro Latinoamericano de Demografía
ECA	Economic Commission for Africa
ECE	Economic Commission for Europe
ECLA	Economic Commission for Latin America
ECWA	Economic Commission for Western Asia
ESCAP	Economic and Social Commission for Asia and the Pacific
IDRC	International Development Research Centre, Canada
ILO	International Labour Organization
INED	Institut National d'Etudes Démographiques
INSEE	Institut National de Statistique et des Etudes Economiques
IPPF	International Planned Parenthood Federation
ISI	International Statistical Institute
IUSSP	International Union for the Scientific Study of Population
LSHTM	London School of Hygiene and Tropical Medicine
NAS	National Academy of Sciences, USA
OECD	Organization for Economic Cooperation and Development
ORSTOM	Office de la Recherche Scientifique et Technique Outre-Mer, France
POPLAB	Population Laboratory, University of North Carolina, USA
PSC	Programme Steering Committee
UKODA	United Kingdom Overseas Development Administration
UNDP	United Nations Development Programme
UNESCO	United Nations Educational Scientific and Cultural Organization
UNFPA	United Nations Fund for Population Activities
USAID	United States Agency for International Development
WFS	World Fertility Survey
WHO	World Health Organization

1 Review of the Year

WFS activities during the year were dominated by the World Fertility Survey Conference held in London in July 1980. This large international conference brought together more than 600 participants from 93 countries over a five-day period. Twenty-nine sessions were held, organized in three series; plenary, methodology, and substantive findings. For a fuller account see Chapter 7. A full report, together with the conference papers and discussions, will be published during 1981.

The WFS Conference marked approximately the midway point in the programme of WFS first round surveys. At that point 19 'first country reports' of developing country surveys had been published. The total number of developing countries, past and present, participating in the WFS is 43. The progress of country surveys as of 31 December 1980 may be summarized as follows:

Preparatory or data collection stage[1]	5
Data processing or report stage[2]	15
Further analysis stage[3]	23
	43

Among these 43 participants 12 are in Africa, 12 in Asia and the Pacific, 4 in the Caribbean, 1 in Europe, 9 in Latin America, and 5 in the Middle East. Field work was completed during the year for five countries (Ecuador, Egypt, Ghana, Morocco and Portugal). Two countries published their first report (Jordan and Turkey); two other countries published one volume each (Kenya, Volume 1 and Venezuela, Volume 2) and in each case the other volume is expected early in 1981. In addition, a further 20 developed countries have participated in the WFS programme, all except one of which have completed their field work; a variety of reports have been published on these surveys. More detailed information on the 63 country surveys will be found in Chapter 2 and Appendices I and II.

In July–August 1980, the funding agencies UNFPA and USAID sent a project evaluation mission under the chairmanship of Dr. T.E. Smith to assess the work of the WFS. The six members (see Appendix X) of the mission attended the WFS Conference, spent a week at headquarters in London and two days at the ISI Permanent Office in The Hague, and visited a number of countries which had participated in the WFS. The mission's report was submitted to the agencies in October 1980.

WFS policy is to encourage as far as possible the execution of all survey work *in the countries* and by *national personnel.* With this objective the WFS staff based on London

[1] From approval of finance to end of field work. Figure includes one survey suspended *sine die.*
[2] From end of field work to publication of first country report.
[3] Includes all countries having participated which have completed their first country report.

has continued to provide assistance and coordination to the developing country surveys. This activity covers all stages of the surveys – planning, data collection, data processing, report writing and analysis. In addition to such support to individual surveys, the staff has engaged in a variety of broader activities supportive of groups of countries or of the programme as a whole. The main activities of this kind are described briefly in the paragraphs below and more fully in the rest of this report.

Assessment of Past Experience. A start has been made on the assessment of WFS data collection methodology. Special studies have been started on sampling errors and sample design, on survey costs, on the analysis of tape recordings of interviews, on the statistical assessment of response error, and on data cleaning procedures.

Evaluation of the Quality of WFS Surveys. The close scrutiny of WFS procedures described above is paralleled by an equally intense study of the data themselves with a view to the evaluation of their quality. This process begins shortly after each country's data become available. The work is carried out by a national of the country who is invited to participate for three months in an 'evaluation workshop' held in London. Two such workshops were held during 1980, covering nine countries. Thus 21 countries in all have undertaken such evaluation studies.

Illustrative Analyses. In close collaboration with national staff, WFS has been producing and publishing a series of illustrative analyses designed to assist countries in carrying out in-depth analyses of their data. Each study deals with a different specific topic which is analysed in detail, generally for a single country. A further five such studies have been published during 1980, bringing the total to seven. Another two are in press.

Comparative Analysis. WFS staff contributed (in sole or joint authorship) 10 of the papers presented at the WFS Conference in July. Most of these papers are essentially comparative analyses of WFS methodology or results. WFS also published in 1980 12 'cross-national summaries', each of which presents in convenient form with a minimum of analysis the findings of the first 19 country surveys in one specific subject area. (The series includes three reports describing the main features of the surveys and their comparability.) The series aims to provide the essential starting point for more detailed comparative analysis of WFS results. Other comparative studies carried out by WFS during the year are described in Section 4.4.

Data Processing. WFS continues to provide data processing support for country survey operations by installing statistical data-processing software packages, training local staff in the use of these packages and supporting local activities in systems design and program-

ming. Standard WFS software and its user documentation have been revised to provide increased capabilities or more flexible operation. Headings and labels for First Country Report tables have been standardized in English and French and are available in machine readable form. Work was begun on methods for data validation on non-IBM computers. Simple format and structure edit programmes are available and a strategy for the development of editing programmes when package programmes are not available has been written and incorporated into the manual *Data Processing Guidelines.*

Archive. Standard tapes have been prepared or revised during 1980 for 13 country surveys, bringing the total to 21. The data are the property of the countries and can be distributed only with the country's permission. A total of 276 data sets were distributed during 1980 to support research projects in different parts of the world.

Publications. WFS publications produced during the year totalled 40. Apart from the Annual Report for 1979, these comprised 11 in the *Basic Documentation* series, 4 *Technical Bulletins*, 9 *Scientific Reports*, 12 *Comparative Studies* and 3 *Occasional Papers.* In addition WFS continues to produce summaries of the First Country Reports; during the year eight summaries have been published in English, six in French and five in Spanish. A further four summaries appeared relating to developed country surveys.

In all of its work, WFS maintains close contact with the appropriate bodies within the United Nations. In particular, WFS work on data analysis is carried out in close coordination with the Population Division, and contact is maintained in relation to field activities with the National Household Survey Capability Programme of the UN Statistical Office. Such coordination is facilitated by the presence of technical advisers specifically responsible for WFS matters within the Population Division (New York), ESCAP (Bangkok) and CELADE (Santiago).

2 Country Progress and Participation

2.1 THE DEVELOPING COUNTRIES

At the end of 1980 there were 43 developing countries participating in the WFS programme. In one of these, Burma, survey operations were suspended at the end of 1978 and have not been resumed. In one other, Fiji, the survey field work was completed in 1974 and no analytic work now seems to be in course or planned. There remain, therefore, 41 developing countries which are currently active in the WFS programme. Details of the current situation of the surveys of these 41 countries are given in the following pages. See also Appendices I and III.

AFRICA

Benin

The Benin Fertility Survey is being carried out by the Institut National de la Statistique et de l'Analyse Economique. The fertility survey is being carried out as a subsample of the multi-round demographic survey. The first round of the latter should take place in July 1981 and the fertility survey is to follow in October. Preparatory work started towards the end of 1980.

Cameroon

The National Fertility Survey of Cameroon was executed by the Direction de la Statistique et de la Comptabilité Nationale. Field work was carried out in 1978. Since then there have been numerous delays due to changes in senior personnel. Machine editing and recoding were completed in November 1980 and tabulations were started in December. Publication of the First Country Report is planned towards mid-1981. Albert Bioumla, who is in charge of the survey, attended the WFS Evaluation Workshop for French-speaking countries which started in London in October 1980.

Ghana

The Ghana Fertility Survey is being carried out by the Central Bureau of Statistics and the Ghana National Family Planning Secretariat. Progress of the survey has been impressively maintained in the face of economic difficulties and shortages. Field work commenced early in 1979 but was interrupted for a period of nearly three months due to a currency reform. After further delays due to fuel shortages and other problems, inter-

viewing was finally completed in March 1980. Meanwhile coding and editing had continued concurrently and so were completed shortly after termination of the field work. Punching was delayed, this time by a shortage of cards, which had to be specially shipped from abroad. However, programming work had been continuing and this made it possible to recover the lost time and to complete the cleaning of the data tape by the end of the year.

Ivory Coast

The Ivory Coast Fertility Survey is being carried out by the Direction de la Statistique of the Ministère de l'Economie, des Finances et du Plan. The pre-test operation took place in January 1980 and the finalization of the questionnaires in the 10 selected languages was completed in February 1980. The organization of the field work was planned in two major stages: the first covered the large towns (Abidjan, Bouaké), the second the rest of the country. In the large towns the mapping and listing operation was completed by August 1980 and immediately followed by the main field work which finished in mid-October 1980. In the rest of the country mapping and listing started on 18 August and ended as scheduled in mid-November. The main field work began on 1 November and is expected to be completed by the end of March 1981. The husband's survey is being conducted immediately following the women's survey in each cluster.

Kenya

The Kenya Fertility Survey was undertaken by the Central Bureau of Statistics and field work was spread over the period from August 1977 to April 1978. Volume 1 of the First Country Report was published in June 1980 but the printing of Volume 2, containing the detailed tables, has been delayed until early 1981. Nevertheless the results were made available to the Government in summary form in mid-1980 and have already had a considerable impact.

Analysis is proceeding well, with the completion of five projects during the year and several others under way. WFS continued to maintain a full-time Resident Adviser (Linda Werner) in Nairobi during the year; since publication of Volume 1 of the First Report she has undertaken further analytic work on the survey results and has assisted the Central Bureau of Statistics in preparing a summary of findings and their policy implications, which is intended for wide distribution within the country.

Lesotho

The Lesotho Fertility Survey was carried out by the Bureau of Statistics. Punching of the main survey was completed by the end of 1978. Computer editing of the large household survey and that of the individual survey continued through 1979. The tabulation work was completed in May 1980 and the First Country Report is expected to be published in early 1981. Lesotho is one of four countries participating in the WFS to undertake a

special study of response errors, involving randomization of interviewers' assignments and re-interview in a subsample of 736 women.

Mauritania

The Direction de la Statistique et de la Comptabilité Nationale of the Ministère de l'Economie et des Finances is the executing agency for the Mauritania Fertility Survey. Younès Zoughlami is assisting as WFS Resident Adviser.

The pre-test was conducted in October 1980. Cheikh Ould Sidi Abderrahmane, Survey Director, came to London in December 1980 to work on the Arabic documentation for the survey and to supervise the printing of the questionnaires and manuals. Field work is planned for the first half of 1981.

Morocco

The Morocco Fertility Survey is being undertaken by the Ministère de la Santé Publique. Francis Notzon, who has been working in Morocco as WFS Resident Adviser, completed his assignment in November 1980. The updating of the sampling frame began in April 1979 and was finished by the end of August. The pre-tests of the household and the individual surveys took place in September 1979 and were followed six weeks later by the main field work for the household survey which lasted two and a half months, and finished as scheduled by the end of January 1980. By mid-July 1980, the main field work for the individual survey was completed within the three and a half months' period originally planned. Editing and coding of the household questionnaires was completed in mid-September and key punching by the end of October. Office editing and coding of the individual questionnaires began in October and is expected to be completed by mid-January 1981. All edit specifications for the household survey as well as for the individual survey have been completed and computer editing started on the household questionnaires. The entire data processing work should be completed by September 1981 and the clean standard recode tape with a final set of tables should be available in November 1981. The First Country Report should be published by April 1982.

Nigeria

The Survey will be undertaken by the National Population Bureau. The sample will comprise about 10,000 women (regardless of marital status) aged 15 to 50, selected from 250 clusters. An extensive verification of cluster boundaries started in December 1980.

The questionnaire, incorporating the module on Factors other than Contraception and elements of the Family Planning Module, will be translated into at least five local languages and pre-tested in April 1981. The main field work is planned to start late in 1981.

Senegal

The Direction de la Statistique of the Ministère des Finances et des Affaires Economiques is the executing agency for the Senegal Survey. Field work was completed in 1978. The data were cleaned by July 1980. A preliminary set of tabulations was produced at that time. The tabulations were modified and put into their final form by December 1980. Lamine Gueye, Survey Director, came to London in September 1980 to draft the Report. At the same time he participated in the WFS Evaluation Workshop for French-speaking countries which started in October. It is expected that the final version of the First Country Report will be sent to the printers in Senegal in February 1981.

Sudan

The executive agency for the Sudan Fertility Survey is the Department of Statistics, Ministry of Finance, Planning and National Economy. Mahmoud Farag assisted as WFS Resident Adviser until May 1980. The survey has been limited to the northern part of the country.

Field work was from December 1978 to April 1979. A post-enumeration survey was carried out in June 1979. Office editing and coding was completed in July 1979. Machine editing continued through 1980. Recoding and tabulation will be started in January 1981, and the First Country Report should be published later in the year.

Tunisia

The national executing agency for the Tunisia Fertility Survey is the Office National du Planning Familial et de la Population. The listing operation began in January and finished in March 1978. The pre-test for both household and individual surveys took place in January 1978. The main field work ran from May to mid-October 1978. Office editing and coding was carried out simultaneously with the field work starting on 1 June and ending in October 1978. Key punching lasted three months from the beginning of December to the end of February 1979. Specifications for computer editing were prepared and available by November 1978. Computer editing started in January 1979 and was completed for the individual questionnaires in August 1980. A clean raw data tape and a standard recode tape for the individual survey are now available at the WFS London Office.

The clean tape for the household survey was produced at the end of December 1980. First run of individual tables has been produced and a final set of tables for both the household and individual surveys should be available by February 1981. The First Country Report should be published by June 1981.

Evaluation of the quality of data in the TFS started in October 1980 within the WFS Evaluation Workshop in London, at which Tunisia was represented by Hedi Jemai.

Bangladesh

Field work for the Bangladesh Fertility Survey was completed in 1976 and the First Country Report was published in March 1979. Since that time a total of 12 analysis projects have been completed while the rest are in progress. These include studies of determinants and differentials of fertility, studies of infant and child mortality, and an intensive research into the dynamics of the interview, based on tape recordings of over 200 interviews which have been transcribed in Bengali and translated into English.

Fiji

The Fiji Fertility Survey was the first in the WFS programme and served as a pilot for the whole WFS project. Field work was undertaken in 1974 and the First Country Report was published two years later. Because of the early availability of the tape and absence of restrictions on its use, the Fiji data have been used extensively for methodological purposes. Nine projects are known to have started and of these seven have been published. No new projects were started during 1980.

Indonesia

The Indonesia Fertility Survey was carried out as the third stage of the SUPAS project (Intercensal Population Survey), with field work in 1976. The First Country Report was published in January 1979. The main survey was followed by a post-enumeration check on a subsample of the women already interviewed and a report on this reliability study was published by WFS in 1978. A total of 12 other analysis projects are known and six of these have been published. The total includes the findings on the quality of the data resulting from Indonesia's participation (through Bondan Supraptilah) in the WFS Evaluation Workshop held in London from January to April 1980; the report has been completed and is being prepared for publication.

Iran

A National Fertility Survey was carried out in 1977. As a result of the political changes, progress has been very slow during the past years. It is reported that editing and cleaning work is now in operation and the First Country Report may be prepared during 1981.

Korea, Republic of

The Korea National Fertility Survey completed field work in 1974 and the First Country Report was published in early 1978. Since that time 13 analysis projects have been published or completed and a further four are under way. These include a programme of eight projects, funded by USAID and executed in collaboration with the WFS, which has been completed. A seminar was held in December 1980 to present and discuss the findings, at

which two WFS staff members participated. In addition to local publication, it is planned to print a monograph in English containing the major findings of each research project.

Malaysia

The Malaysia Fertility Survey went into the field in 1974 and the First Country Report was published in 1977. Over 20 analytic reports or projects based on the data are known and 13 of these have been completed or published. Malaysia participated in the WFS Evaluation Workshop held in London from January to April 1980, through Masitah Mohd. Yatim; the report has been completed and is being prepared for publication. WFS also sponsored a special study of the community module data for Malaysia and the report on this is expected in early 1981.

Nepal

The Nepal Fertility Survey went into the field in April 1976 and the First Country Report was published in August 1977, setting a record within the WFS programme for speedy data processing and publication. Analysis of the Nepal data has been limited by the homogeneity of the population. Nevertheless, most of the feasible topics have been studied. Two new analysis projects were started in 1980, bringing the total known to 10, of which at least four have been completed.

Pakistan

Field work for the Pakistan Fertility Survey was undertaken in 1975 and the survey was one of the first in the WFS programme to be published, the First Country Report appearing in October 1976. Pakistan was chosen for a WFS 'illustrative analysis' on breastfeeding and its impact on fertility; the report has been received and is under review. Pakistan was also selected for a country case study for the WFS Conference in July 1980 and this led to six further analysis projects. More than 20 analysis projects are known, the majority of which have been completed. A monograph comprising papers on further analysis with a chapter on major policy implications is now under preparation.

Philippines

The Republic of Philippines Fertility Survey went into the field in March 1978. Following publication of the First Country Report and its presentation to a National Meeting in December 1979, an impressive range of further analysis topics has been agreed, and funded by USAID *via* WFS. Nine of these are under way and a further one has been completed: an evaluation of the quality of the RPFS data, based on the work done by the Philippines participant (Florentina Reyes) at the WFS Evaluation Workshop held in London from January to April 1980. Plans are being formulated for the analysis of the post-enumeration survey of the RPFS.

Sri Lanka

Field work for the Sri Lanka Fertility Survey was carried out in 1975 and the First Country Report was published in 1978. Widespread interest in the demography of the country, coupled with an absence of restrictions on the use of the data tape, have led to the Sri Lanka data set becoming one of the most thoroughly analyzed of all those in the WFS programme. Sri Lanka was chosen for four of the WFS 'illustrative analyses' dealing with fertility levels and trends, fertility differentials, fertility preferences, and family structure and fertility. Of these, the second is with the printer, the third was published during the year and the other two are in draft form. Several other projects have been published and yet others are nearing completion. Altogether 21 analysis projects are known, most of which are complete or nearly so. These exclude a survey funded by the World Bank which involved re-interviewing respondents in the fertility survey; the analysis of this is reported to be under way.

Thailand

The Survey of Fertility in Thailand went into the field in 1975 and the First Country Report was published in October 1977. A strong and well organized Thai interest in further analysis resulted in an extensive list of projects covering most of the possibilities for analysis. Thailand was selected for two of the WFS 'illustrative analysis' projects, on socio-economic determinants of the use of contraception, and age at marriage (using also data from the Sri Lanka survey). These were published in 1979 and 1980 respectively. Few new analysis projects were started in 1980 but two were published (including the illustrative analysis mentioned) and a further three completed. The total of projects known to WFS now comes to 18, of which eight have been completed.

CARIBBEAN

Guyana

Field work for the Guyana Survey was completed in 1975. Limitations in data processing capacity led to considerable delays and the First Country Report was published in 1979. Despite local personnel shortages affecting analysis work, a reasonably wide range of topics will be analyzed by Guyanese or Caribbean nationals. Eight analysis projects are under way. Guyana participated in the WFS Evaluation Workshop held in London early in 1980, through Sundat Balkaran; the report has been completed and is being prepared for publication.

Haiti

The Haitian Fertility Survey was carried out by the Institut Haitien de Statistique. Field work was completed in December 1977.

Due to severely limited hardware in Haiti, much of the tabulation work has been done in London, while maintaining very close co-ordination with Haiti where the questionnaires have been held. Further data processing delays resulted from the need for many country-specific tables and also for special attention to table titles and headings, which had to be prepared in French for the first time in WFS. The final set of tab es was produced in July 1980. The report should be finalized in Haiti in March 1981.
Meanwhile, Haiti has been participating in the WFS Evaluation Workshop for French-speaking countries held in London from October 1980 to January 1981, through Camille Tardieu.

Jamaica
The Jamaica Fertility Survey was carried out by the Department of Statistics and the field work was completed early in 1976. A variety of problems were encountered during the data processing, particularly in relation to the CONCOR edit program. There were further delays at the printing stage and the First Country Report was finally published in December 1979. Meanwhile a number of analysis projects were started and seven are now in progress – all being undertaken by Caribbean researchers.

Trinidad and Tobago
The Trinidad and Tobago Fertility Survey was carried out by the Central Statistical Office. Field work took place in 1977. Tabulations were run by December 1979 but, owing to the subsequent discovery of the need to weight the sample, they had to be re-run in June 1980. In the following months the First Country Report was written and is now completed. Further analysis is being planned, on the lines described for Jamaica and Guyana, but work has not yet started. Six such projects are currently foreseen.

EUROPE

Portugal
The Portugal Fertility Survey is being carried out by the National Institute of Statistics. The Commission on the Status of Women, the Ministry of Health and the Ministry of Social Security are collaborating with the National Institute of Statistics in the survey work. Field work was completed by the beginning of August 1980. By the end of 1980 machine editing had started. Data processing is expected to continue for a further six months. The First Report of the survey results should be published in the second half of 1981.

Colombia

The Colombia Fertility Survey, undertaken by the Corporación Centro Regional de Población, went into the field in 1976. The First Country Report was published in April 1978. Colombia was selected for three WFS 'illustrative analyses' which were published in 1980 (Appendix VIII SRs 10, 15, 16) and, in September, WFS convened a meeting in Bogotá to present and discuss the results with Colombian researchers. Another meeting held in Bogotá in October by the IUSSP resulted in the presentation of three papers. Altogether, 12 further analysis projects have been completed and published and a further four are in course.

Costa Rica

The First Country Report was published in October 1978, based on field work undertaken two years earlier. Two new analysis projects have been started during 1980. One of these is based on information collected during a re-interview of the original fertility survey sample and is expected to offer new methodological and substantive insights into fertility behaviour and attitudes. In all, eight further analysis projects are known to have been started and of these four have been published.

Dominican Republic

The Dominican Republic Fertility Survey was one of the first to be conducted under the WFS programme. Field work was completed in July 1975 and the First Country Report was published in 1976. Six further analysis studies have been published. The Dominican Republic participated in the WFS Evaluation Workshop held in London from July to October 1979, through José Miguel Guzmán; the resulting report was published as *Scientific Report* No. 14 (Appendix VIII SR 14).

A second fertility survey, using closely similar instruments, was conducted in 1980 and although the project does not formally belong in the WFS programme the WFS has been providing some limited technical assistance. A report is expected in 1981. The country has authorized the WFS to use the results of the two surveys for a special study of fertility change; WFS plans to use this opportunity to gain insight into the problems and advantages of conducting 'second round' fertility surveys.

The second round Dominican Republic survey has also provided the opportunity for the fourth of the WFS 'Response Errors' studies, funded through the IDRC, Canada (see Subsection 6.2.3).

Ecuador

The executing agency for the Ecuador Fertility Survey is the Instituto Nacional de Estadística y Censos. The main field work was carried out from August 1979 to January 1980.

Office editing, coding and punching are completed. During the WFS Conference in July 1980 preliminary results on fertility trends were distributed, based on partially clean data. The machine editing, although delayed because of financial problems, should be finalized by December 1980. Computer programming for recoding and TPL tabulations is in progress. The First Country Report is expected to be published in mid-1981 and second stage analysis could be started immediately thereafter. (See also Andean Seminar, Section 8.1.)

Mexico

Field work for the Mexican Fertility Survey was carried out in 1976 and the First Country Report was published in 1979. Despite a National Meeting in May 1979 to present the Report and consider projects for analysis, and a visit by a WFS staff member in June 1980 to discuss further analysis, the number of research projects is still disappointing. Mexico participated in the WFS Evaluation Workshop held in London from July to October 1979, through Manuel Ordorica; the resulting report has been completed and is being prepared for publication. Four other analysis projects are known to be under way.

Panama

Field work for the Panama Fertility Survey was completed in 1976 and the First Country Report was published in 1978. Panama participated in the CELADE workshop on analysis of WFS data during 1980 and two further analysis projects started as a result. However, progress in analysis has been limited. Five analysis projects are known, of which two have been completed.

Paraguay

The Paraguay Fertility Survey was carried out by the Dirección General de Estadística in collaboration with the Ministerio de Salud Pública. Field work took place from February to May 1979. A complete set of tabulations (SPSS) was run in January 1980 for analysis purposes, but camera ready tabulations (TPL) were obtained in June 1980. The First Country Report will be published in January 1981. Further analysis has overlapped with the printing of the survey report, in the sense that an analysis on women's employment and fertility has already been carried out as part of the CELADE WFS In-depth Research and Training Seminar (see Subsection 3.5.5).

Peru

The Peru Fertility Survey was in the field from July 1977 to June 1978 and the First Country Report was published in May 1979. The survey was one of four in the WFS programme in which a special response error study was incorporated, funded by the Canadian IDRC (see Subsection 6.2.3); two interim reports of findings of this study have already appeared. Peru participated in the WFS Evaluation Workshop held in London

from July to October 1979, through Yolanda Céspedes; the resulting report has been completed and is being prepared for publication. The 1980 CELADE workshop on analysis of WFS data stimulated three new projects bringing the total to seven, of which two have been completed.

Venezuela

The Venezuela Fertility Survey went into the field in March 1977. A draft report was prepared in 1979. However, changes in the senior staff and pressure on printing facilities at the Dirección General de Estadística led to publication of the First Report being delayed; Volume 2 was received towards the end of the year and Volume 1 is expected early in 1981. No proposals have been received for further analysis projects. However, an evaluation of the data has been completed by the Venezuelan participant (Gilberto Vielma) at the WFS Evaluation Workshop held in London from July to October 1979; this is being prepared for publication.

MIDDLE EAST

Egypt

The Central Agency for Public Mobilization and Statistics (CAPMAS) is undertaking the Egyptian Fertility Survey. A master sample design was prepared with the aid of a consultant, Professor G. Kalton, during October–November 1978. The survey was designed to take place in two phases. The First Phase corresponded to the WFS individual survey and was addressed to ever-married women. The Second Phase – financed by the World Bank – was administered to one-third of the total sample, and included two questionnaires: Household Economic Questionnaire and Husband's Fertility Questionnaire. A pre-test for the First Phase was held in May 1979, while two pre-tests for the Second Phase were held in June and October 1979. Main field work was carried out during February–March for the First Phase, and May–June for the Second Phase. The community level module was used in rural areas. Office editing and coding of all questionnaires was completed in December 1980 and punching is in progress. The First Country Report is expected towards the end of 1981.

Jordan

Field work for the Jordan Fertility Survey was undertaken in 1976. Many problems were encountered in data processing and the final tables were produced in 1979. The First Country Report was published in April 1980 and presented to the public in a two day national meeting held in Amman in May 1980, which stimulated considerable local interest in analysis. Twelve analysis projects are known, of which four have been published. Jordan participated in the WFS Evaluation Workshop held in London from January to

April 1980, through Abdullah Abdul-Aziz; the resulting report has been completed and is being prepared for publication.

Syria

The Central Bureau for Statistics and the Centre for Population Surveys and Research are undertaking the Syria Fertility Survey. The main field work was completed by August 1978. Office editing and coding started in August 1978 and finished in April 1979. Machine editing was completed in November 1980. The tabulations will be ready by February 1981 and the First Country Report is expected to be published by September 1981.

Turkey

The Turkey Fertility Survey was undertaken by the Institute of Population Studies, Hacettepe University. The field work was done from September to November 1978, together with a smaller study on survey response errors. Editing and coding operations were completed in 1979 and the First Country Report was published in 1980. The report is in two volumes, one summarizing the findings and the other presenting selected tabulations. A national seminar to present the findings and to introduce topics for possible further analysis was held in Istanbul during November 1980.
The study of response errors is expected to be completed in 1982.

Yemen Arab Republic

The Department of Statistics, Central Planning Organization, is the executive agency for the Yemen Fertility Survey. Field work was carried out in 1979. Office editing and coding were completed during 1980 and machine editing was in progress at the end of the year. Tabulations are expected by late 1981 and the First Country Report by early 1982.

ASSOCIATE STATUS

Guadeloupe and Martinique

The fertility survey in Guadeloupe and Martinique was carried out by the French Government through the Institut National d'Etudes Démographiques (INED), in collaboration with INSEE and ORSTOM. Field work was completed in 1976 and the Report was published in 1980. Four analysis projects were undertaken, of which three have been published.

Hong Kong

The Census and Statistics Department of the Government of Hong Kong carried out a By-census in 1976 which included some WFS-type questions, and offered to prepare from

the data available a report along the lines of the WFS Guidelines for the First Country Report. The magnetic tape containing the data of the By-census has been made available to the World Fertility Survey, together with a set of tables. The report was published in April 1979.

2.2 THE DEVELOPED COUNTRIES

Developed countries are participating in the WFS programme. The nature of their participation is different in the sense that WFS does not provide direct financial or technical assistance to these countries as in the case of developing countries. However standardization of questionnaires and the needed coordination has been implemented in the past through the Conference of European Statisticians and the UN Working Group on Social Demography. The ECE Population Activities Unit has assumed the main responsibility for the ECE/WFS Comparative Study on Fertility and Family Planning in Europe and the United States. ECE has so far received data tapes from 16 countries and another two countries have promised to provide the tabulations needed for the comparative study. The bulk of the tabulations will be completed in 1981 and the analysis and drafting are expected to be carried out in 1981 and 1982. Available details of the surveys are given in Appendix II and what follows is a summary of progress in various countries.

Belgium
Work on the analysis of the data from the third Flemish survey carried out in 1975–76 is progressing. Reports on selected topics have been published and the final report is expected in 1981. A summary of findings was published in the WFS series during the year. A new survey on family development is being planned for 1981.

Bulgaria
Preliminary tables from the 1976 Bulgarian fertility survey have been prepared. The work on the main country report is progressing and is expected soon.

Czechoslovakia
A summary of findings was published in the WFS series in 1979. Three articles have been published during the year, based on the data from the fertility survey carried out in 1977.

Denmark
A number of papers presenting the results of the Danish survey of 1976 have been published by the Social Research Institute.

Finland

The Finnish survey was carried out in 1977 and the first report has been published in Finnish. Work is progressing in the preparation of an English version which should be available in 1981. Also in progress is work on more in-depth analysis.

France

The 1978 French survey interviewed a sample of both men and women. Data on selected variables were processed and the findings were published in *Population*. The data cleaning work has been completed and the main analysis is under way.

Hungary

The first publication from the 1977 Hungarian survey appeared in Hungarian in late 1978 and in English in January 1979. A summary of findings was published in the WFS series during the year. A more detailed report in two volumes is expected during 1981.

Israel

During 1973–75 several related surveys were carried out. A large sample of women were interviewed with a short questionnaire by the Central Bureau of Statistics and a more detailed questionnaire was used in the survey carried out by the Hebrew University. Two papers giving the results appeared in *Population Studies* in 1978 and 1979.

Italy

A national fertility survey was conducted in 1979 in which a sample of ever-married women aged 18–44 years and a subsample of their husbands were interviewed. A general report containing basic tables from the WFS guidelines is being prepared, together with a series of special reports on methodological and substantive topics.

Japan

Japan was the first developed country to join the WFS and the survey in Japan was conducted in 1974. A report on the survey was published in 1976, and a summary of findings was published in the WFS series in 1979. The Nihon University Population Research Institute has agreed to play the coordinating role in organizing and implementing further analytical work.

Netherlands

The 1975 Netherlands survey covering 10 marriage cohorts is now in its final stage. Several reports have been published and others are in progress. A summary of findings was published in the WFS series in 1979. A full report in English including the design and organization of the survey and summaries of the publications is now being prepared.

Norway

The Norwegian survey went to the field during 1977–78. Work on tabulations is progressing in spite of programming difficulties. A general report on the findings is in progress. A follow-up of the respondents is planned.

Poland

The field work of the Polish survey was done in 1977. Analytical tables based on the tabulation plan prepared by the ECE have been prepared and the principal report is nearing completion. A special comparative study based on the surveys in Czechoslovakia and Poland is in progress.

Romania

The survey in Romania was conducted in 1978. Tabulation and analysis work are in progress.

Spain

A report on the Spanish survey of 1977 was published in May 1978 and the summary of findings was published in the WFS series during 1980. A special study of non-response was also carried out.

Sweden

The planning for the first Swedish fertility survey is in progress. The field work is planned for the Spring of 1981 with a sample of 5,000 women aged 20–44 years. Though the survey is not formally a part of the WFS, the questionnaire used will have much in common with that of WFS. The major emphasis of the survey is on motivations for parenthood.

UK

A comprehensive report on the findings from the 1976 survey was published in September 1979. A summary of the findings for publication in the WFS series is being finalized. No further major reports are planned but the data are being continuously used for extended analyses of various topics.

USA

The tape of the 1976 National Survey of Family Growth has been released for public use and now priority is given to publication of results. A summary report has been prepared and this will appear in the WFS series during 1981. The tabulations for the main report are ready and the drafting is to be completed in 1981. A further cycle of the survey has now been funded and in that connection a procedure for interviewing unmarried minors with parental consent has been tested.

Yugoslavia

A large number of principal tables have been prepared from the data of the 1976 survey. Analytical reports are being prepared for publication by the Federal Statistical Institute. Also a report based on the 1970 and 1976 survey data, among other sources, is in press.

3 Technical Assistance and Coordination

3.1 INTRODUCTION

Every WFS survey is a national operation, organized locally and executed by national staff under a national director. Within this framework it is the role of the WFS organization to provide whatever technical support the country may need and to ensure coordination at the international level. In pursuit of these objectives the WFS employs a variety of methods, notably the preparation and distribution of manuals, illustrative analyses, technical bulletins and computer software; organization of technical assistance missions to countries; and sponsorship of visits by national staff to work at the London headquarters. This chapter gives information on these activities with particular reference to work accomplished in the year 1980.

3.2 BASIC DOCUMENTATION

The WFS has prepared and distributed 11 manuals in the series *Basic Documentation* (see Appendix VIII). These cover all the stages of survey operations, from survey organization, through field instructions, to guidelines for processing and reporting. Most of the manuals were completed in earlier years and no further report on them is needed here. *Data Processing Guidelines* is a special case. A draft of this manual was produced in 1976. The WFS was aware, however, that its policy in the area of data processing was not, and should not be, rigid but should steadily evolve on the basis of experience gained over successive country surveys. The first draft was therefore used in the earlier country surveys but modifications were made to it progressively. Over four years it gradually attained stability, to the point where in 1980 there seemed to be justification for publication of a definitive version. Such a version appeared in December 1980 and this completes the *Basic Documentation* series. The new publication is in two volumes. The first volume (which is being translated into French) is a general account, in reasonably non technical terms, of the data processing required for a WFS survey. The second is a detailed description of all documentation, data processing specifications, systems design, timing estimates, programs required and sample program output, based on the Core Questionnaire. The whole forms a complete data processing manual and is easily adapted to provide all required data processing and program specifications for a particular country survey.

3.3 IN-COUNTRY TECHNICAL ASSISTANCE

By far the greatest part of the in-country WFS technical assistance effort goes into individual advisory missions of short duration to developing countries. Headquarters staff members spent a total of 289 person-weeks on such missions during 1980. Adding in the visits of regional WFS staff and consultants (43 person-weeks), the total breaks down as follows between the regions:

	Person-weeks of country visits
Africa	175
Asia and Pacific	12
Caribbean	16
Europe	15
Latin America	44
Middle East	70
	332

Additional assistance is provided in certain countries by WFS resident advisers (212 person-weeks in 1980) and by United Nations liaison staff for the WFS (9 person-weeks). Extensive assistance is also provided by CELADE to Latin American countries in data processing of WFS surveys.

As these figures show, an overwhelmingly high proportion of the WFS in-country assistance is now going to African countries (Egypt is classified under Middle East, not Africa). Indeed, all of the countries which received assistance through WFS resident advisers during the year are African: Kenya, Mauritania, Morocco, Senegal (data processing) and Sudan. This concentration on the African Region represents a marked shift of emphasis from earlier years.

WFS in-country assistance is given at all stages of country surveys. Typically, a three-person mission visits the country at the early planning stage (the 'WFS design visit') and works with national staff to produce a project document, constituting a detailed survey plan with timetable and budget. Thereafter visits are made according to country needs, whether for sample design, pre-test assessment, training, field monitoring, data processing, report writing, or analysis. For convenience, WFS uses a classification of work in countries according to the stage of progress of their survey. The table below shows a breakdown of country visit-weeks in 1980 by WFS staff and consultants according to the survey stage.

Survey stage	Person-weeks of country visits
Preliminary (prior to pre-test)	47
Preparation	27
Field work	35
Data processing (incl. manual editing and coding)	161
Report stage	13
Further analysis	49
	332

NOTE: Excludes visits for work not specific to a particular country. Also excludes resident advisers and UN liaison staff. Note that the classification is based on the stage of operations of the surveys at the time of the visit, rather than on the specific purpose of the visit.

By far the largest share of WFS assistance is devoted to data processing. This is, of course, not only the most complex area of the survey operations but also the longest in duration. If the assistance given to Latin American surveys by CELADE were also considered, the preponderance of data processing would be even more marked.
In the area of data processing, technical assistance is given by WFS for the following:

- specifications for editing, recoding, tabulation
- system design
- installation of, and training for, general purpose software
- writing of special purpose software
- monitoring of data processing execution.

During the year, data processing assistance was given to 16 countries and 38 visits were made by WFS staff.
The very low figure for assistance at the report stage would be misleading if account were not taken of the assistance – particularly significant in the area of report writing – given to national survey staff by arranging for them to visit London for a spell of work with the WFS staff. This form of assistance is the subject of the next section.

3.4 VISITS BY NATIONAL STAFF TO LONDON

In addition to direct technical assistance provided to the countries through country missions by staff and consultants, researchers from various countries spent time in the WFS office in London working on a specified topic. During 1980, 23 officials and researchers from

18 countries spent a total of 170 weeks in the London office. The duration of stay for a particular project varied between one week and 16 weeks. Participation in the evaluation workshops is included here. The work carried out during such visits essentially depended on the needs of the country concerned. However the three main areas of work were data processing, preparation of First Country Report, and in-depth analysis of a selected topic. Such on-the-job visits by national staff were found to be an extremely useful and productive way of providing technical assistance. The visiting professionals are free from the normal administrative and other responsibilities which they have to shoulder back at home and are able to interact with different staff members at the WFS office. In the context of the workshops, participants are also able to exchange their experiences and to discuss various issues in a group.

3.5 WORKSHOPS

The series of evaluation and analysis workshops started in 1978 continued successfully during 1980. Two new evaluation workshops were held at WFS headquarters in London. In addition, WFS staff were engaged in follow-up activities to ensure publication of the results of previous workshops.

3.5.1 WFS EVALUATION WORKSHOPS

1) Evaluation Workshop for Latin American Countries (follow-up)
The first WFS workshop on the Evaluation of the Quality of Data took place in July–October 1979 and was described in the 1979 WFS *Annual Report.* All participants completed a first draft of their reports by the close of the workshop, but follow-up activities were required during 1980 to revise and finalize the draft reports.
José Miguel Guzmán completed his report on the evaluation of the Dominican Republic National Fertility Survey 1975 and the study was published as WFS *Scientific Report* No. 14 in May 1980. Manuel Ordorica and Joseph Potter completed a revision of their report on the quality of the demographic data collected in the Mexican Fertility Survey, and the report is being prepared for publication. Yolanda Céspedes completed the Spanish version of her report on the Peru Fertility Survey, while Gilberto Vielma completed a revision of the Spanish text of his evaluation of the Venezuela Fertility Survey. These two reports are now being translated into English for publication in the WFS *Scientific Reports* Series.

2) Evaluation Workshop for Asian, Middle East and Caribbean Countries
The second WFS workshop on the Evaluation of the Quality of Data took place in London from January to April, 1980, under the coordination of Shea Rutstein and with Noreen

Goldman acting as consultant. The participants were Abdullah Abdul-Aziz from Jordan, Sundat Balkaran from Guyana, Bondan Supraptilah from Indonesia, Masitah Mohd. Yatim from Malaysia and Florentina Reyes from Philippines.

The purpose of the workshop was to evaluate the quality of the data used in the estimation of levels and trends in fertility, nuptiality and infant and child mortality. The evaluation procedures are both conventional and new, and involve internal comparison of the survey data for consistency as well as comparisons with data from other sources such as censuses, vital statistics and previous surveys.

The analysis includes examination of reporting of ages and dates of events, digit preferences, sex ratios by age, calculation of proportions ever married by age, fitting model nuptiality schedules, reconstruction of the marital status distribution as of census dates, calculation of age-specific fertility rates for comparison with other sources, calculation of period-cohort rates and application of the P/F technique by age and by marital duration, analysis of rates by birth order, reconstruction of mean number of children ever born as of census dates, examination of sex ratios at birth, proportion of children surviving among children ever born, and estimation of infant and child mortality by period.

The workshop was concerned not only with the assessment of levels and trends at the national level, but also with the evaluation of fertility within subgroups of the population defined by ethnicity, education or residence.

By the close of the workshop all participants had completed a first draft of their report. The reports have now been completed and are undergoing final editing. They will be published during 1981 in the *Scientific Reports* series.

3) Evaluation Workshop for French Speaking Countries

The third WFS Workshop on the Evaluation of the Quality of Data started in London in October 1980, under the coordination of Shea Rutstein and with the collaboration of Hedi Jemai and Benoit Ferry. The participants are Albert Bioumla from Cameroon, Camille Tardieu from Haiti and Lamine Gueye from Senegal. In addition, Hedi Jemai, a WFS staff member from Tunisia, is working on an evaluation of the data from his country by agreement with the Tunisian Government.

The purpose and contents of the workshop are essentially as described above for the second evaluation workshop. Work will be completed by February 1981, and the reports should be published by the end of the year.

3.5.2 WORKSHOP ON THE APPLICATION OF MULTIVARIATE TECHNIQUES (follow-up)

The ESCAP/WFS Workshop on the Application of Multivariate Techniques was held in Bangkok from September to November 1979, with participants from 11 countries in the ESCAP region, and is described in the 1979 WFS Annual Report. All participants prepared a draft report on their research topic by the end of the workshop and continued work

after returning to their home countries. In August 1980 ESCAP organized a follow-up meeting, inviting all participants to return to Bangkok to discuss the final draft of their reports. John Cleland of the WFS staff collaborated with Jay Rele from ESCAP, Naohiro Ogawa (Nihon University, Tokyo) and Jay Palmore (East-West Center, Honolulu) in finalizing the manuscripts with the authors.

ESCAP will publish a volume containing the reports completed by the participants: 'Determinants of Contraceptive Use in Bangladesh' by Abdur Rahim; 'Differentials in Cumulative Fertility in Rural Bangladesh' by Mohammad Sohail; 'A Multivariate Analysis of the Determinants of Contraceptive Use in Java-Bali' by Budi Soeradji and Sri Harijati Hatmadji; 'Preferences for Number and Sex of Children and Contraceptive Use in Korea' by Nam Il Kim and Byoung Mokh Choi; 'Factors Affecting Contraceptive Use in Peninsular Malaysia' by Tey Nai Peng and Idris Abdurahman; 'Contraceptive Knowledge in Nepal' by Gokarna Regmi, and 'The Effects of Education on Contraceptive Use in Thailand' by Mathana Phananiramai. The volume will also contain a regional analysis prepared by Jay Palmore. The WFS intends to publish the studies on Indonesia, Korea and Malaysia in its *Scientific Reports* series.

3.5.3 OTHER ACTIVITIES

The WFS In-depth Research and Training Seminar organized by CELADE is relevant in this context, even though the WFS was not directly involved in its organization. The eight-month long seminar started in June 1980 with A. Marckwardt (UN Technical Adviser for WFS in Latin America) as Director and M. Culagovski as Coordinator. Nine researchers from five countries – Colombia, Costa Rica, Panama, Paraguay and Peru – are participating in the Seminar and are working on policy oriented research projects approved by a government agency in the country concerned. The studies are listed in Appendix III under the country concerned.

3.6 TECHNICAL BULLETINS

During the year 1980 four Technical Bulletins were published by the WFS. Technical Bulletins constitute one of the means of providing needed technical assistance to the participating countries in carrying out meaningful analyses of the data. Essentially each bulletin deals with a specific method of analysis – generally already known and used but sometimes innovative. The objective is to describe the particular method in the context of analyzing fertility survey data. The presentations are generally more technically oriented than other WFS publications, however, efforts are made to illustrate the application of the techniques with examples from real data from one or more country surveys. These

documents have proved useful to analysts not only in the developing countries but also in many developed countries. The four reports completed in 1980 are described below.

No.4 *Basic Fertility Measures for Retrospective Birth Histories*

This document, prepared by Vijay Verma of the WFS staff, presents a comprehensive description of the fertility rates of various types and other basic fertility measures which can be constructed from retrospective birth and marriage histories of the kind collected through WFS enquiries. Age-specific, marriage duration-specific and parity-specific rates are defined for different denominators, on both a cohort as well as period basis. Numerical examples for the construction of the various measures and full computational details are given. Most of the measures described in the bulletin can be computed with a programme called FERTRATE which has been developed at the WFS.

No.6 *Life Table Analysis*

WFS staff member David Smith has prepared this bulletin which explains the basic life table methodology of single and multiple decrement tables and provides formulae for sampling variances of life table survival and termination rates. The bulletin also provides illustrative examples of application of the methods to data that may demand the use of techniques such as those on infant and child mortality, age at marriage, birth and pregnancy intervals, and breastfeeding. Also included are the appropriate modifications to the basic methodology for three types of situations: (a) retrospective data on events with precise information on 'durations' in completed months or years, (b) retrospective data with information on calendar dates of occurrence of events, and (c) current status data. The methods are now being used in many national analysis projects.

No.7 *Maximum Likelihood Estimation of the Parameters of Coale's Model Nuptiality Schedule from Survey Data*

This has been jointly prepared by Germán Rodríguez of WFS staff and James Trussell of Princeton University. The authors explain the advantages of and need for fitting a model in the analysis of WFS nuptiality data, both for in-country and for inter-country analysis. This bulletin, therefore, develops procedures for fitting Coale's model nuptiality schedule to the type of data produced by the WFS, using the method of maximum likelihood. After describing the Coale model and the method of estimation, including standard errors, goodness of fit and robustness, the document illustrates estimation of parameters (a) for a cohort using data on age at marriage from a sample of ever-married women alone and (b) by combining the individual data with household information on marital status by age. The bulletin

also discusses estimates using ungrouped or continuous data from an 'ever-married' or 'all-women' sample. The procedures are illustrated using data from the Colombian National Fertility Survey of 1976. Also a computer program (NUPTIAL) specially suited to handle the different types of data available has been prepared and is now available from WFS.

No.9 *Linear Models from WFS Data*

In the context of further analysis of data at the country level, most researchers are seen to use multivariate methods mainly based on the linear model (also sometimes identified as the linear regression model). The technical bulletin by Roderick Little, a WFS staff member, gives a comprehensive exposition and discussion of the use of linear models. Starting with simple methods such as direct standardization using one, two or three-way cross-classifications, the document proceeds to cover more sophisticated methods such as analysis of variance, multiple classification analysis, analysis of covariance and multiple linear regression, with the needed but often ignored emphasis on interaction between factors. Most of these methods are described in many statistical text-books; however, here the emphasis is on demonstrating the use of these methods in the WFS context. Throughout the document illustrative examples based on real data are provided.

3.7 ILLUSTRATIVE ANALYSIS

The Illustrative Analysis Project was essentially completed in 1980 and it is therefore appropriate to give in the present report an overview of the project's history and achievement.

The project was organized in late 1977, when the Programme Steering Committee recommended that the WFS undertake a series of illustrative analyses of selected topics, using data from selected countries in Asia and Latin America. The studies would be part of an effort to provide guidelines for analysis to all WFS participant countries; they should therefore contain a clear statement of the substantive and methodological approach adopted and a detailed example of the application of this approach to the data from a particular country, with emphasis on the general applicability of the analysis.

Following these recommendations, the WFS prepared a detailed proposal which was submitted to the funding agencies in early 1978. The proposal covered 12 topics, selected, in consultation with the participating countries, as those considered to be of top priority and greatest interest. Considerations of data availability led to the choice of Colombia, Sri Lanka and Thailand for most of the studies, and in three exceptional cases Bangladesh, Pakistan and Panama. Six of the topics were allocated to outside consultants and six to

WFS central staff, with the proviso that all studies be conducted in close collaboration with the country involved. The proposal was approved by the funding agencies and work started in mid-1978.

All work on the project was centrally coordinated by the WFS with the assistance of an *ad hoc* Advisory Committee appointed in consultation with the IUSSP. An important decision of the Committee was that all reports be refereed prior to publication in the WFS *Scientific Reports* series. (See Appendix X for list of Committee members and referees.) Details of the 12 studies are given below. One of the original topics was later dropped but another was divided into two, leaving the total number of studies at 12. At the time of writing, seven of these have been published, two are in press and three are at various stages of review and revision.

1) *Analysis of Fertility Levels and Trends from the Sri Lanka Survey*
Iqbal Alam and John Cleland of the WFS staff worked on the estimation of fertility levels and trends from birth histories, using data from Sri Lanka. The study includes a detailed scrutiny of the data for possible deficiencies in reporting and proceeds to the estimation of levels and trends in fertility at the national level and for subgroups defined by region and type of place of residence, ethnicity and religion, migration status, educational level and occupation of husband. Publication is planned for early 1981.

2) *Evaluating Fertility Levels and Trends in Colombia*
John Hobcraft of the WFS staff (formerly Southampton University) tackled the subject of direct and indirect estimation of fertility levels and trends using data from Colombia. The study uses data from both the household and individual surveys and pays considerable attention to issues of consistency and data quality. In addition to direct estimates of fertility derived from data on date of the last birth and the maternity history, the author describes the use of Brass's P/F techniques for all births and first births as a diagnostic tool and the calculation of indirect estimates based on the own-children technique. The study also considers educational differentials and the effect of a changing educational composition over time. The report was published in 1980 as WFS *Scientific Report* No. 15.

3) *Life Table Analysis of Birth Intervals in Colombia*
Germán Rodríguez and John Hobcraft of the WFS staff worked on the application of life table techniques to the analysis of birth intervals. The study describes the construction of life tables, introduces summary indicators of the quantum and tempo of fertility and discusses in detail the issues of selectivity and censoring. The analysis considers age, period and cohort effects on birth intervals, the effect of childhood

residence, education and work status, and differentials according to infant mortality, breastfeeding and contraception. The report was published in 1980 as WFS *Scientific Report* No. 16. A companion paper on methodological aspects was presented at a seminar on the Analysis of Maternity Histories in April 1980 (see section 8.1) and will be published in due course.

4) *The Analysis of Nuptiality in Sri Lanka and Thailand*
This topic was subdivided into two studies. James Trussell of Princeton University worked on the analysis of Age at First Marriage in Sri Lanka and Thailand. The author describes simple techniques for direct examination of the data, considers a more refined analysis of levels and trends based on fitting Coale's model nuptiality schedule to household data on marital status and individual data on age at marriage, and describes extensions of the analysis to subgroups of the population and to the study of first births. Due consideration is given to assessment of the quality of the data from internal evidence as well as by comparison with other sources of data. The final report was published in 1980 as WFS *Scientific Report* No. 13. A companion paper by Germán Rodríguez and James Trussell develops the procedures used for fitting Coale's model to survey data and was published in 1980 as WFS *Technical Bulletin* No. 7.
David Smith of the WFS staff analyzed dissolution and remarriage patterns in the two countries, principally through the application of life table techniques. The study begins with marital dissolution and presents total and cause-deleted rates of widowhood and divorce/separation for the two countries as well as for subgroups defined by education, region and religion. The study then proceeds to an examination of remarriage rates and total time spent in unions. Linear regression analysis is used to clarify some relationships that life tables could only partly resolve due to small sample sizes. The final report is in press and will appear as WFS *Scientific Report* No. 17.

5) *Contraceptive Sterilization and Births Averted in Panama*
Charles Westoff, James McCarthy and Noreen Goldman of Princeton University, with Felix Mascarín of the Ministry of Health in Panama, worked on the study of contraceptive sterilization in Panama. The analysis considers a number of demographic and background variables associated with contraceptive sterilization, describes the timing of sterilization in terms of the life cycle, introduces synthetic cohort estimates of the probability of sterilization and develops several measures of births averted by sterilization including estimates based on the concept of the unwanted fertility rate. This was the first illustrative analysis to be completed and was published in 1979 as WFS *Scientific Report* No. 4.

6) *Socio-Economic Determinants of Contraceptive Use in Thailand*
John Cleland and Roderick Little of the WFS staff, with Pitchit Pitaktepsombati of Chulalongkorn University, studied contraceptive use in Thailand. Their analysis starts from a review of family planning in Thailand and the preliminary findings contained in the first report of the survey and proceeds to a detailed consideration of the determinants of contraceptive use. Hierarchical regression analysis is used to assess the effects of number of living children, age, region and type of place of residence, husband's education and occupation, and standard of living, on current use of efficient contraceptives among exposed women. The report was published in 1979 as WFS *Scientific Report* No. 5.

7) *Breastfeeding and its Impact on Fertility in Pakistan*
Ronald Lesthaeghe of Vrije Universiteit in Brussels, Hilary Page of Rijksuniversiteit in Ghent and Iqbal Shah of the Interuniversity Programme in Demography in Brussels worked on the analysis of breastfeeding using data from Pakistan. The study discusses the nature and quality of the data available, describes several procedures for the estimation of breastfeeding, includes a multivariate analysis of the determinants of breastfeeding and discusses the impact of breastfeeding on fertility. The completed manuscript is now under review. Publication is expected by mid-1981. (It may be noted that this study was commissioned considerably later than the others.)

8) *Fertility Preferences in Sri Lanka*
Thomas W. Pullum of the University of Washington conducted an analysis of fertility preferences in Sri Lanka. The study includes a regression analysis of the determinants of stated desired family size and of preference for additional children, a synthetic cohort approach to the measurement of desired family size, discussion of the relationship between sex composition and measures of preferences, and an analysis of explicit statements on sex preferences. The study concludes with a discussion of the implications of the findings for theory and for policy. The report was published in 1980 as WFS *Scientific Report* No. 9.

9) *Use of Contraception as Related to Fertility Preferences*
This subject was originally assigned to a local institution in a participating country. In spite of many efforts, however, it proved impossible to generate a research proposal from the institution concerned. The Advisory Committee eventually recommended that the topic be dropped from the series.

10) *Family Structure and Fertility in Bangladesh and Sri Lanka*
John Caldwell, George Immerwahr and Lado Ruzicka of the Australian National

University tackled the subject of family structure and fertility. The study includes a discussion of the concept of family structure and a review of the available empirical evidence, describes in detail a methodology for the classification of households by family type, and proceeds to an extensive analysis of the characteristics of different types of households, including their reproductive behaviour, using data from Bangladesh and Sri Lanka. Publication of the report is planned for early 1981.

11) *Socio-Economic Differentials in Cumulative Fertility in Sri Lanka*
Roderick Little of the WFS staff and Soma Perera of the Department of Census and Statistics in Sri Lanka have studied the determinants of cumulative fertility using a marriage cohort approach. The study focusses on the effects of age at marriage, zone and type of place of residence, race, religion, work status, education of wife, occupation of husband and standard of living on fertility. The analysis is conducted separately for each of three marriage cohorts. Two measures of marital fertility are used: 'early' as measured by births in the first ten years and 'late' as measured by births in the following ten years. Hierarchical regression models are used to study the effect of each factor of interest on fertility before and after adjusting for age at marriage and other factors. The report is in press and will be published as WFS *Scientific Report* No. 12.

12) *Infant and Child Mortality in Colombia*
Jorge Somoza analyzed infant and child mortality in Colombia. The study starts with a series of tests of the quality of the data. It also includes an exposition of direct methods for estimating infant and child mortality with applications to the study of differentials by birth cohorts, age of mother, birth order, calendar period of birth, sex of child, region and type of place of residence, and educational level of mother. A final section deals with indirect methods for estimating infant and child mortality and applies the latest procedures due to Brass, Feeney and Trussell. The report was published in 1980 as WFS *Scientific Report* No. 10.

The series has already proved invaluable in assisting researchers in the participating countries in undertaking meaningful analysis of the data. The studies dealing with fertility and nuptiality (1, 2, 4, 5) have served as illustrative materials in the evaluation workshops whereas those dealing with multivariate analysis (6, 11) were extremely useful in the context of the multivariate analysis workshop held in Bangkok (see Section 3.5). Investigators from Indonesia, Jordan, Korea, Malaysia and Venezuela have completed studies replicating an illustrative analysis (3, 4, 6, 12) and many more analysts are using these materials in ongoing research projects.

3.8 COMPUTING SUPPORT

3.8.1 SOFTWARE DEVELOPMENT AND MAINTENANCE

To support technical assistance activities, WFS staff in London are engaged, albeit to a limited extent, in software development and maintenance. Some of this software is primarily for use in the WFS participating countries. Other software, developed for preparation of technical bulletins, illustrative analyses, research reports, data evaluation reports, etc., is maintained in London for use by WFS staff as well as by visiting researchers from the countries. During the year, the following computer programs have been developed or upgraded:

Existing Programs Updated

CONCOR — A new version (3.1) has been released by CELADE after extensive collaboration with WFS. This version aims to check the user program more carefully in order to avoid system failures during execution. Error messages are clearer and the maintenance of CONCOR has been simplified by merging DOS and OS versions wherever possible. There is as yet no system or implementation documentation and the new manual is in Spanish only.

COCGEN — Version 4.0 of this program (which generates COCENTS commands from user-supplied table descriptions) is now available. Improvements include a set of run-time options giving greater flexibility in how tables are formatted on the printed page, how headings are handled, etc. New libraries of standard table headings and row and column headings have been constructed in both English and French. The standard set of table parameters for defining the tables recommended for WFS country reports has also been rewritten so that it will function with either the English or the French headings library.

CROSSREF — This is a new program to be used with the COCGEN table parameter files to produce a cross reference listing showing which variables are used in which tables.

DEIR/FDEIR — Work has continued on tidying up loose ends in the WFS Date Edit, Imputation and Recoding program. This program is now used for editing dates and for generating recoded date variables in all countries, thus simplifying the task and at the same time assuring standards. A modified version of the program, FDEIR, has been developed this year for use with

WFS data from the module 'Factors other than Contraception affecting Fertility'. FDEIR processes entire birth histories (live and non-live births) and generates the standard 'F' variables for the recommended analysis plan connected with this module.

FERTRATE — This program for calculating fertility rates and associated measures has now been thoroughly tested and made much more efficient. The somewhat awkward fixed format for parameter specifications has been replaced by a full set of easy-to-use keyword style parameters by incorporating the new WFS Parameter Processing System (see below). Complete documentation both for the user and for the programmer has been written and the program and its associate documentation are available for distribution.

SPSS — Continues to be heavily used for data analysis at the WFS headquarters. This year, a new version of SPSS (almost 8.0) has been installed which includes a life table procedure, and various errors have been fixed and reported back to the SPSS distributors.

New Programs

CONVDICT — This program converts WFS data dictionaries (machine readable codebooks for WFS data) into SPSS data description commands or COCENTS load cards. It is hoped that a transportable version for general distribution will be developed in the coming year.

FORMAT/ STRUCT — Two small programs for checking the format of data cards and for checking their overall structure (i.e., that the correct cards exist for each questionnaire) have been developed and tested and are now available for use as required.

NUPTIALS — Finds the maximum likelihood (or least squares) estimates of the parameters of the model nuptiality schedule proposed by Coale and McNeil (1972). It has been used fairly widely at the WFS, for example in the Illustrative Analysis on 'Age at Marriage and Fertility' and in *Technical Bulletin* No. 7. It has also been distributed to several interested people in different countries.

Software Development Aids

PPS — Parameter Processing System. This is a set of computer subroutines for incorporation in any application program for processing of user-supplied run-time parameters. The first and master version of PPS has been completed together with extensive system and user documentation, and has been incorporated into the FERTRATE program (see above). A cut-down version more suitable for use with small programs will be developed next year.

Graphics — A package of subroutines, GPGS, was acquired this year (from the Norwegian Shipbuilding Institute) to simplify the production of pictorial representations of statistical results. These subroutines were incorporated into a special display system used at the WFS Conference to present some results from surveys. Since pictorial presentations are often more easily understood and digested than rows of numbers, it is hoped that work in this area will continue next year in order to improve the presentation of statistics for the benefit of potential users of survey findings.

Editing Software — A framework program has been developed in COBOL which can be used as a base for generating editing and recoding programs for data from any WFS survey. As an example of how this base is used, it has been modified to give a set of programs to edit and recode the core questionnaire. This system has been recommended in countries where CONCOR is not available.

3.8.2 SOFTWARE DOCUMENTATION

Standards for user documentation of software have been set up and implemented. Such documentation is now required before any program is released for general use.

Work is in progress to produce a set of standards for all aspects of software development, from an original skeleton proposal through detailed specifications and testing plans to the final documented product. It is hoped that, by adherence to such standards in the future, better software will be developed and in a more efficient manner.

3.8.3 WFS COMPUTER SERVICE

Headquarters Computer

The WFS computer is used for software development, for assistance in the final stages of

editing, recoding or production of country tables when this cannot be done in the country, for data analysis, e.g. for workshops and other research projects, and for all aspects of the data archive. The system is heavily used and must run smoothly at all times to support these activities. Over the year, various improvements in systems management have been made:

Job Scheduler	This was developed to give short jobs higher priority than long and to allow for different job mixes during the day (when terminals are in use) than at night (when only queued or streamed jobs are run). The scheduler was installed on a trial basis early in the year and was so successful that it was immediately accepted on a permanent basis.
File Store	To solve the problem of continual shortage of disc storage space, a system was developed whereby any disc file not referenced since a specified date is copied to 'file store' tapes. This system has also been very successful and is run about once a month whenever free disc space is running out in order to clear the way for new files. Users can retrieve files from the tapes very easily if necessary.
Archive Administration Data Base	This has been designed (and development will continue in 1981) to maintain automatic records of all aspects of data acquisition and distribution, including information on research projects using WFS data (see Chapter 5 for details).

Use of Service Bureaux

Service bureau computers have been used for preliminary testing of the new version of CONCOR and for attempting to replicate and solve country CONCOR problems. They have also been used for copying non-standard tapes received from or destined for other computer installations. During the year several new such bureaux have been approached to locate the cheapest and most convenient service.

A new systems manager was recruited in April and is responsible for the provision of the computer service.

3.8.4 SUPPORT TO USERS OF THE WFS COMPUTER

Throughout the year, data processing staff have continued to give training and assistance in the use of the computer to visitors coming to London to do research. In particular, visitors not familiar with the SPSS package are instructed in its use. Wherever possible, researchers are encouraged to do their own computerized data analysis, thus enabling a much higher level of production and better comprehension of the results.

4 Country Reports and Data Analysis

4.1 FIRST COUNTRY REPORTS

In the year 1980, Jordan, Kenya, Turkey and Venezuela published their First Country Reports. In addition, reports were completed and finalized for Lesotho, Paraguay, Senegal and Trinidad and Tobago. Other countries in which the preparation of the report has been progressing are Cameroon, Ecuador, Haiti, Sudan, Syria and Tunisia. Egypt, Ghana, Morocco and Yemen A.R. are well ahead in the data cleaning stage and the reports are expected to be finalized before the end of 1981. Thus, a total of 22 countries have published their first reports and in the coming year another 13 countries are expected to finalize their reports, of which at least nine should be published. The WFS staff continued to provide substantial technical assistance to these countries in the data processing and report writing stages. Yet the time taken for the completion of reports was longer than originally planned. Apart from innumerable problems related to data processing, an increasing number of countries have had difficulty in providing the manpower needed for the actual drafting of the reports. In some instances there was a basic lack of skilled manpower; in others the senior staff were either given additional responsibilities or moved into other jobs in or outside the country before the reports were prepared. In either case, the net result was a delay in the publication of the reports. In this situation, WFS is faced with two opposing demands. On the one hand there is the urgent need to make the results of the survey available to the national policy-makers before they become out of date; on the other hand there is the commitment and pressure to carry out the work in the country with local participation, thereby achieving the aim of increasing national capability. These objectives could not be simultaneously achieved in the absence of full time senior national staff with responsibility to see through the completion of the work. In many cases the compromise was to accept some delay with increased input from WFS staff.

The summaries of the First Country Reports have continued to be published in English, French and Spanish. With increasing experience and involvement in the preparation of the reports, the time taken for the preparation of the summaries has been reduced considerably. Recently, as in the case of Jordan, Kenya and Turkey, summaries have been published almost at the same time as the release of the First Country Report.

4.2 NATIONAL MEETINGS

National meetings are organized by the countries following the publication of the First Country Report. These meetings have generally been successful in achieving their main objectives, namely:

i) disseminating information about the survey and the main findings given in the First Country Report;
ii) stimulating interest in further analysis of the data among national researchers and policy-makers;
iii) obtaining feedback for policy-makers and researchers on the priority topics to be studied.

In 1980 such meetings were held in Jordan and Turkey. In both cases ministers and other high ranking government officials responsible for policy-making participated in the meetings. The meetings also contributed to wide publicity for the survey, its results and their policy relevance, by the mass media in the country. Participation by researchers and government officials made a valuable contribution in assessing the usefulness and policy implications of the survey findings, as well as their limitations. Finally the discussions provided useful guidelines for identifying the major areas to be tackled through further analysis of the survey data.

A limited number of copies of the reports of the national meetings held earlier in Indonesia, Malaysia, Nepal, Philippines and Sri Lanka are now available with WFS.

The results of the second-stage analyses (including three illustrative analyses) based on Colombian Fertility Survey data were presented and discussed at a National Seminar held in Bogotá, 22-23 September 1980. The seminar was organized by CCRP with substantial participation by Colombians from a wide range of institutions including the Statistics Bureau (DANE), the Ministry of Health, the Office of National Planning and a number of universities.

In addition to the two above-mentioned national meetings, the Republic of Korea also organized a National Seminar, not on the First Country Report but to discuss the findings from the second stage analysis projects carried out by Korean researchers and the policy implications of the findings. A total of eight analytical reports were presented and discussed. It has been agreed that a summary document describing the policy implications emerging from the analysis of the data from the Korea Fertility Survey should now be prepared. This, along with the revised papers, will then be published as a single volume.

4.3 SECOND-STAGE ANALYSIS

The total number of country-specific analytical studies using WFS data exceeded 250 by the end of 1980, of which nearly 100 were launched during 1980. These studies covered 24 countries (including Guadeloupe and Martinique) which have either published their First Country Reports or are expected to publish them soon. Almost half of them have been completed in the sense that a final report giving the findings has been prepared, though not all of them are published.

It is satisfying to record that more than half of the studies have been initiated by the country concerned and are carried out by national researchers. Technical assistance was provided, whenever needed, by the WFS staff and by the UN Regional Advisers located in Bangkok and Santiago. There were also a number of instances where the researchers from the country visited WFS London to work in collaboration with the staff (see Section 3.4). Finally, the survey data are reported to have been used in another 38 analytical studies carried out by students from the countries studying abroad in the preparation of theses for a Masters or Ph.D. degree. All these activities reflect the high degree of utilization of the data at the country level; they also contribute significantly to increasing the analytical capability among the researchers in the participant countries. A complete list of the projects known to WFS at the end of 1980 is given in Appendix III.

Now that a considerable amount of analysis has been carried out on the data from the first few participant countries, the immediate task, as seen by WFS, is to carry out a synthesis of the results of the analyses and to present the findings, and their implications from the country's point of view, in simple non-technical language. Here it needs to be recognized that the WFS is a scientific fact-finding exercise and is not committed to any particular policy. However there is a crucial and urgent need to bring out the relevance and implications of the survey findings for the participant countries' policies. Hence WFS intends to support and pursue this activity in each country, subject only to the country's wishes.

4.4 COMPARATIVE ANALYSIS

There is increasing awareness of the value of cross-national comparative analysis based on World Fertility Survey data. As a result, the United Nations and a number of other institutions are initiating projects which utilize WFS data for comparative analysis. In addition, there is increasing demand for relatively straightforward collections of comparable data on a variety of topics, for purposes of description, analysis of policy-relevant implications and synthesis. WFS helps to service these efforts in several ways. Standardized data tapes, with good documentation, are made available to comparative analysis researchers through the data archive, where countries have given permission for release (see Chapter 5). The

series of *Cross National Summaries* (see below) fulfils a role for comparative analysis which is similar to the role of First Country Reports in country analysis. As far as possible, WFS also acts as coordinator of the substantial world-wide efforts to carry out comparative analysis; this implies attempts to reduce duplication of research and to maintain an exhaustive list of comparative analysis projects (Appendix IV lists all relevant documents known to have appeared in 1980). In addition, WFS proposes to carry out a limited programme of comparative analysis in topic areas where WFS staff have particular expertise. Thus, 1980 saw the initial publications in a *Comparative Studies* series. This includes the *Cross National Summaries* as a subseries, but will also be used to ensure a wide dissemination of results from more elaborate comparative analyses carried out from both within and outside WFS.

4.4.1 CROSS NATIONAL SUMMARIES

The first issues of the *Cross National Summaries* subseries provide basic information, documentation and results of the World Fertility Survey for the 19 countries which had their First Country Reports and Standard Recode Tapes available at the beginning of 1980. Several of the *Cross National Summaries* are concerned solely with providing detailed and systematized information on the comparability of the field procedures, survey characteristics, questionnaire content and wording, and content of the First Country Reports. Such detailed appraisals constitute an essential reference base for anyone using WFS data for comparative analysis.

Other volumes of the *Cross National Summaries* present comparable results from as many surveys as possible. These volumes present basic data from the surveys over a wide range of specific topics. In addition to the tabular material, there is a brief accompanying text, which draws attention primarily to any non-comparability of the data and to any obvious interpretational pitfalls to which the tables may be subject: for example many summary indices are subject to compositional differences, which are often reduced by standardization. Finally, although these volumes are not intended to be analytic in their orientation, some brief highlighting of the major noteworthy differences and similarities is included.

Volumes on the following topics have gone to press in 1980 and most are now available (see Appendix VIII):

Characteristics of the Surveys
Comparability of Questionnaires
Comparability of First Country Report Tabulations
Background Characteristics Used in WFS Surveys
The Demographic Characteristics of Household Populations
Age at First Marriage
Knowledge of Contraceptive Methods

Contraceptive Practice
Urban-Rural Differentials in Contraceptive Use
Current Fertility
Children Ever Born
Breastfeeding
Fertility Preferences
Age at First Birth

During 1980, planning was begun on a second series of topics, to cover the following subjects:

Date Reporting
Sampling Errors
Birth Histories
Birth Intervals
Infant and Child Mortality
Union Formation and Dissolution
Infecundity and Childlessness
Sex Preferences
Contraception and Preferences
Differentials in Contraceptive Use
Differentials in Current Fertility
Differentials in Age at Marriage
Differentials in Breastfeeding

4.4.2 OTHER COMPARATIVE ANALYSIS WITHIN WFS

Although comparative analysis is not regarded as the major function of WFS, it is necessary, desirable and efficient for some work to take place within WFS. Naturally, such comparative analysis work has to be fitted in around other activities, and has only become feasible very recently. In addition to the contributions to the WFS Conference (see Appendix VIII), two overlapping synthetic assessments of data quality have been produced, one of which (Appendix VIII, CS 16) appeared as the first comparative study in the new series (as opposed to the *Cross National Summaries* subseries) and the other of which was given as a paper at the IUSSP/WFS/LSHTM Seminar on Maternity Histories in April 1980 (Appendix IV item 1). The results of a synthetic review of sampling procedures and sample designs, which contained important implications for the degree of clustering acceptable in survey designs, was presented at a meeting of the Royal Statistical Society (Appendix IV item 26). A paper reviewing the utilization of data collected through the Family Planning module within WFS was presented at the IUSSP sponsored seminar on the

Use of Survey Data for Evaluation of Family Planning Programmes in Bogotá (Appendix IV item 2). Several members of staff, among others, contributed to a special issue of the International Planned Parenthood Federation's *People*, which reviewed WFS findings to date (Appendix IV items 3, 5, 8).

4.4.3 UNITED NATIONS PROGRAMME FOR COMPARATIVE ANALYSIS OF WFS DATA

A United Nations Working Group on Comparative Analysis of WFS Data was organized in 1977 by the Population Division of the United Nations at the request and with the support of the UN Fund for Population Activities, in order to lay plans for participation by the United Nations system in the comparative analysis of WFS data. The working group consists of the Population Division, the five UN Regional Economic Commissions, three specialised agencies (ILO, UNESCO and WHO), WFS, IUSSP, UNFPA and USAID. At its second meeting in November 1978 the group agreed on a Minimum Research Programme of the Population Division and of the regional commissions, and by the end of 1980 considerable progress had been achieved in fulfilling the programme. The fourth meeting of the Working Group held in November 1980 considered nine analytical research papers from the UN Population Division, three from ECLA, one from ESCAP and three from ILO. These are listed in Appendix IV. WFS continues to maintain a very close working relationship with the Population Division and with other members of the Working Group and considerable mutual benefit is derived from the frequent interchanges of experience and information.

4.4.4 COLLABORATION WITH OTHER ORGANIZATIONS

1) IUSSP

During 1980, good working cooperation with IUSSP continued. The main link is with the Committee on Comparative Analysis of Fertility (CCAF) on which WFS is represented. During the year this Committee sponsored two seminars, of which the one on Analysis of Maternity Histories was co-sponsored by WFS (and by the London School of Hygiene and Tropical Medicine): several of the papers presented were based on WFS data. WFS is also represented on the Committee for the Analysis of Family Planning Programmes, and at least three papers at its Seminar on the Use of Survey Data for the Evaluation of Family Planning Programmes were based on comparative analyses of WFS data.

2) NAS Panel on Determinants of Fertility Change

WFS is collaborating very closely with the US National Academy of Sciences Panel which includes a WFS staff member. Several case studies are to be carried out utilizing data from individual WFS countries and at least three major comparative projects based on WFS data are currently beginning.

3) Other Organizations

Comparative analysis projects are also at the early stages in several institutions. These include the Population Council, and the Universities of Princeton, Michigan, Chicago, Hawaii, North Carolina, Wisconsin in the USA; the London School of Hygiene and Tropical Medicine and the University of Southampton in the UK; the Universities of Louvain and Brussels in Belgium; the Australian National University; and the University of Cairo and the UN Cairo Demographic Centre.

4.5 NEW DIRECTIONS IN ANALYSIS

At the time of the WFS Conference there was considerable discussion of the extent to which WFS data could be used to shed light on the social and economic factors which affect fertility. The general conclusion to emerge from these discussions was that, while the analysis of socio-economic factors had received attention in the current programme and the findings were useful in the context of development policy, there was still considerable scope for innovative approaches to the subject which would make fuller use of the data available.

In recognition of this conclusion the WFS, in consultation with the IUSSP, convened a working group which met in Belgrade, Yugoslavia, 11–13 September 1980, to discuss the analysis of WFS data with special reference to socio-economic factors. The working group consisted of Miloš Macura (WFS, Chairman), Shapan Adnan (Cambridge University), Paul Demeny (Population Council), Vilmar Faria (Centro Brasileiro de Análise e Planejamento), Gerry Rodgers (ILO) and Germán Rodríguez (WFS, rapporteur).

The working group considered a number of suggestions or options for research using WFS and related data, in the context of policy relevant analysis conducted at the national level in less developed countries. A number of issues, however, apply equally well to cross-national comparative analysis or research in more developed countries. The group's discussion centred on possible lines of enquiry using existing WFS and related data, but also noted some deficiencies of the available material and made explicit some implications regarding the design of future surveys. These two aspects of the discussion are summarized below.

The group felt that analytic use of existing data should continue, while giving added emphasis to the study of socio-economic factors. In this regard effort should be devoted to the development of indicators of social stratification using existing data, which could be used for analytic as well as descriptive purposes. The study of differentials should be pursued by linking social factors with the intermediate variables or mechanisms through which they affect fertility, taking advantage of the availability of WFS data on nuptiality, breastfeeding and contraception. It was also noted that social and economic factors such

as labour force participation could be pursued as subjects of interest in their own right. The group noted that a promising line of research consists of multi-level analysis combining data for individuals, households, communities, regions and countries. Multi-level data can be obtained by aggregation of individual level data as well as from other sources such as household or community surveys, censuses and economic macro-indicators.

The group also noted that the coverage of socio-economic factors in existing WFS instruments was inadequate and recommended a revision of the core questionnaire as well as the modules on economic and community level variables. This revision should be based on a thorough assessment of the experience accumulated to date. It was also pointed out that thought should be given to the development of follow-up surveys which would add a time perspective to the analysis. Such surveys should provide a more flexible approach to suit specific country needs, may require prior study of the social structure of the country, and may be complemented by community-level studies using an anthropological perspective. The WFS has started internal discussions on how best to implement these recommendations and is in the process of planning the required assessment and development work in collaboration and consultation with other interested agencies.

5 Archive

5.1 INTRODUCTION

The data archive has attained a more coherent existence this year and has now been separated from the computer operations section.
The data archive's activities can be summed up under these headings:

- protection
- validation
- standardization
- documentation
- distribution

The levels of *data protection* have been increased by the availability of fireproof storage and a separate magnetic tape store away from the main office. It has also been strengthened by systematizing and enhancing the documentation of magnetic tapes.
Data validation has been a major preoccupation this year. A new software system has been developed to ensure that standard recode files contain fewer inconsistencies before distribution.
New areas of *standardization* have been developed. Work on household member files has continued and a new section of extra standard variables has been added to the standard recode specification.
Work in *data documentation* and *distribution* has continued as in previous years. 276 data sets were issued during 1980. The archive has supplied data to well over 100 projects around the world.

5.2 TYPES OF DATA IN THE ARCHIVE

Recoded Individual Data
These files contain data relating to interviewed eligible women restructured to a rectangular format particularly suitable for the tables needed in the First Country Report. Until 1978, these recoded files existed in a number of styles but since then they have been produced to a common standard. These *standard recodes* (SR) are now the main form in which WFS distributes data The *old recodes* (RE) are in all cases now superseded.

Apart from standardization, these data are also submitted to a considerable degree of validation and cross-checking.

Raw Individual Data
Data are also available in a format which reflects the original questionnaire. This is more difficult to use than the SR files but is, of course, complete. Generally, little further validation is done on these data after they leave the original country except for problems and inconsistencies shown up during the production of the SR files.
These data occur in two forms, either by themselves (IN files) or combined with data from the household schedule (RD files, see below).

Household Data
The data from the household schedule are available in three formats:

- stand-alone household data straight from schedule (HH files);
- household data combined with individual data (RD files, see above);
- household characteristics only (HC files);
- semi-standardized household member data (HM files).

The main difference between the raw files (HH and RD) and the HM files is that the latter have a more standard order, naming and coding of variables. They are not, however, validated in the same way as SR files and may need some caution in use.

Other Files Based on Individual Data
For a few countries WFS headquarters holds one or other of the following:

- stand-alone marriage history data for all interviewed women (MH files)
- stand-alone birth history data (SC files);
- matched standard recode and household data (SRH files) for eligible women;
- community data, derived from a community level module (CM files).

These files are not yet in a format suitable for distribution.

5.3 CONTENTS OF THE ARCHIVE

This list shows the principal data sets available in London for each country which has already published its First Country Report. The existence of a data set is shown by an entry in the appropriate column. The entry itself indicates the current version number of the data set. See Section 5.4 for conditions of access.

	Standard Recode (SR)	Individual Raw Data (IN/RD)	Household (HH)	Semi-standard Household (HM)
Bangladesh	2	1	2	1
Colombia	1	2	2	1
Costa Rica	1	2	1	1
Dominican Rep.	2	3	1	1
Fiji	1	2	1	1
Guyana	3	5	1	
Indonesia	1	2	1	1
Jamaica	2	7	1	
Jordan	2	1	2	1
Kenya	1	1	1	
Korea, Rep. of	3	2	2	1
Lesotho	2	7	2	
Malaysia	1	3	1	1
Mexico	1	1	1	1
Nepal	1	3	3	1
Pakistan	2	7	3	2
Panama	1	1	1	1
Peru	1	3	2	1
Philippines	3	5	2	1
Sri Lanka	4	3	3	1
Thailand	3	2	1	1

5.4 CONDITIONS FOR RELEASE OF WFS DATA

All data collected through the fertility surveys carried out within the WFS programme are the property of the individual country concerned. The WFS has been accepted by the countries as the general custodian of the data in good faith. WFS policy is to encourage maximum utilization of the data for scientific analysis, while at the same time safeguarding against any possible misuse of the data in the interests of the participating countries. It is therefore necessary for WFS and the users to respect the wishes of the countries and to follow strictly the conditions laid down by them for the release and use of the data tapes. These conditions vary from country to country and are summarized below. In general they refer to data in the form of tapes or unpublished tabulations.

As a general rule authorization from the country concerned is required before releasing the data for any country-specific analysis. However, Fiji has given authorization for unrestricted access to its data, while on the other hand Turkey is not currently allowing its data tape to be released under any circumstances.
The three principal factors governing the release of the data are described below.

1. *Status of First Country Report*
   Countries do not generally agree to release their data until the First Country Report is published. Exceptionally they may do so subject to embargo on publication until the appearance of the First Country Report.

2. *Nature of studies proposed*
   There are two main categories of studies for which WFS data are normally requested -- country specific and comparative – and the corresponding conditions for release are different.

a) Country-specific studies
   Every individual or organization requiring access to the data for any country-specific analysis should obtain specific authorization for the use of data from the country concerned. Application for such permission may be made direct to the National Director of the survey (the WFS *Annual Report* contains the list of National Directors) with a copy to WFS headquarters, or may be made to WFS headquarters which will then apply to the country on behalf of the researcher. In either case, the request should be accompanied by a brief and clear description of the research planned. If a researcher requests data for use in more than one project, separate authorization is needed for each project. Direct and active participation of national researchers in the project is highly desirable but not always essential. Moreover, most countries tend to give priority to research work carried out by their nationals.

b) Cross-national comparative analysis
   In the case of comparative analysis, some countries have delegated the responsibility for data release to WFS, but this does not imply free and unrestricted access to the data from these countries. Those countries which had published their First Country Report by 1980, and for which data are available for comparative analysis, can be classified into three groups, based on the conditions for release.

Category A. Countries which have authorized WFS headquarters to release the data on their behalf:

Bangladesh	Lesotho
Colombia	Nepal
Costa Rica	Panama
Guyana	Peru
Jamaica	Sri Lanka
Kenya	

Category B. Countries which have authorized WFS to release the data under certain additional conditions. If these extra conditions are not met, then these countries fall into category C.

Jordan	(WFS collaboration required in the project work)
Korea, Rep.	(WFS collaboration required in the project work)
Pakistan	(Pakistan nationals only)

Category C. Countries which require specific authorization for each project:

Dominican Republic	Philippines
Indonesia	Thailand
Malaysia	Venezuela
Mexico	

3. *Conditions to be observed for the distribution of data by WFS*

Regardless of whether the research project is 'country specific' or 'comparative', every user is required by WFS to sign an agreement with respect to each country's data accessed for each project. The conditions for use of the data are set out in the agreement forms. No data will be distributed until a signed agreement has been received by the WFS headquarters; a copy of each agreement is then forwarded to the country concerned.

There are three standard requirements which apply in all cases:

(i) The data are to be used only for the research project described on the agreement form.

(ii) The data shall not be handed over to anyone else without prior approval of WFS.

(iii) Copies of the report arising from the research must be sent to the WFS headquarters for forwarding to the country. (Jordan and Nepal also require country approval prior to distribution or publication.)

Other minor conditions are made by certain countries.

5.5 COMPUTERIZATION OF ARCHIVE ADMINISTRATION

The administration of the WFS data archive has become increasingly complicated over the past year as more data sets have become available and as the number of projects using WFS data increases.

It was therefore decided to computerize all information concerning the archive, with the following objectives:

- to establish and maintain a common base of information sufficient for all aspects of WFS data administration;
- to integrate the maintenance of this data base with routine procedures for handling of computer tapes;
- to provide *ad hoc* enquiry and reporting facilities.

The system will include records of such items as:

- the arrival and departure of tapes;
- the contents of tapes;
- permissions for the use of data requested and granted;
- requests for data outstanding and fulfilled;
- details of projects using WFS data.

Periodic reports will show who is using what data for which research project, which projects are awaiting country permission for data release, etc.

The design phase for this system is complete and entry of the data has started. Work on the implementation will continue in 1981.

5.6 USE OF ARCHIVE DATA IN LONDON

Researchers come to London from time to time to use data in the WFS archive for a variety of reasons. For example, there may be inadequate computing facilities in the person's own country or the particular research project being undertaken may require close collaboration with a WFS staff member. An additional reason is that countries occasionally stipulate that their data must be used in London.

Subject to the permission of the country, the visitor is provided with relevant documentation about the data he or she wishes and is authorized to use, together with documentation on how to use the computer system and what software is available. A staff member is normally assigned to help the visitor in the initial familiarization with the computer system and later to answer questions as they arise.

From time to time researchers send requests to London for tabulations on WFS data. Wherever possible, the archive section responds to such requests by suggesting that the requestors obtain a copy of the data tape and produce the tabulations at their own

institutions. In a few cases during the past year it has not been possible for various reasons to distribute the necessary data tapes to such people and the tables have been run by WFS staff. However this service is not actively encouraged because there is insufficient person power in London to do the work; moreover such long distance requests usually take several rounds of letters, telephone calls, reruns and other inevitable delays before the desired tabulations are produced.

6 Other Studies

6.1 ASSESSMENT OF WFS EXPERIENCE

The accumulation of experience with some 40 surveys carried out all over the developing world under the co-ordination of a single technical agency provides a unique opportunity for the study of survey methodology with a view to the evaluation of the various options facing the organizer of surveys in developing countries. Many features of WFS surveys have been allowed to vary within the context of an essentially unvarying core of variables obtained in every country; in this sense the WFS can act as a laboratory of survey technique. The WFS staff has always considered that it has an obligation to the community of survey specialists to evaluate its own experience and make the conclusions available for feedback into future survey design.
A variety of activities in the countries and at headquarters contribute towards the above objectives.

6.1.1 TECHNICAL MONITORING

Since the early stages of the WFS project, detailed information has been collected on the characteristics of each survey. A selection of data from these files was published in the paper for Methodology Session M1 of the World Fertility Survey Conference (see Chapter 7 and Appendix VIII). Additional information on survey organization and on sample design appears in the papers for Methodology Sessions M5 and M7 respectively. At the same time countries are urged to report on the problems they encounter and the solutions they apply, so that their experience can be fed to future surveys.
The following countries have completed the Technical Monitoring Report: Bangladesh, Colombia, Dominican Republic, Fiji, Guyana, Jamaica, Mexico, Nepal, Pakistan, Philippines. Sri Lanka, Syria and Venezuela. Partially completed reports are available for Indonesia and Senegal. Thailand has completed the report for the Husbands Survey only.
Information on some aspects of Technical Monitoring is usually available in the First Country Report and one country (Trinidad and Tobago) has stated that this source will contain all relevant material.

6.1.2 QUALITY OF DATA

From the very beginning WFS has recognized the need to assess WFS experience and methodology, one important component of which is a critical evaluation of data quality.

As part of its analysis policy, WFS has initiated a systematic programme for a scientific and critical assessment of the demographic data from each survey. The work is essentially carried out by the national staff either in the country or in London during a specially organized evaluation workshop. (For details see Section 3.5.) Findings of such evaluations will be published in the WFS *Scientific Reports* series. So far, work on evaluation has been (or is being) carried out for data from 21 national surveys Bangladesh, Cameroon, Colombia, Dominican Republic, Fiji, Guyana, Haiti, Indonesia, Jamaica, Jordan, Kenya, Malaysia, Mexico, Nepal, Pakistan, Peru, Philippines, Senegal, Sri Lanka, Tunisia and Venezuela. Apart from alerting the analysts about the quality of the data, they also provide valuable material needed for the assessment of the WFS approach as a whole. As a first step in this regard, a comparative summary of the main results that are emerging from the evaluation of the data sets from the first few countries has been published in the *Comparative Studies* series as Report No. 16 (Appendix VIII CS16).

6.1.3 STUDY OF SAMPLING ERRORS AND SAMPLE DESIGN

During 1980 a detailed study was undertaken by WFS staff on sampling errors and sample design for those WFS surveys for which information was available. A paper was published (Appendix IV item 26) presenting the main sample design features for the first 35 countries and analysing the sampling error data for a subgroup of 12 countries. The analysis included an attempt to model the main features of the behaviour of sampling errors across variables, countries and subclasses, and to draw inferences for optimal sample design. This work is continuing and will be extended in coverage and in depth.

6.1.4 SURVEY COSTS

A start has been made on a renewed attempt by WFS staff to investigate survey costs (with primary emphasis on field costs) as a function of survey design characteristics, the principal objective being optimization of design. The greater part of this work is scheduled for 1981.

6.1.5 REVIEW OF FIELD PROCEDURES

Numerous variations in the method of structuring the field work operations have been used in different WFS surveys. A first attempt to describe these variations and to review their advantages and drawbacks was presented in the paper for Methodology Session M1 of the WFS Conference (Appendix VIII). This assessment goes beyond the criteria of cost and sampling error. The work is continuing.

6.1.6 TAPE-RECORDING OF INTERVIEWS

A special study of 220 tape recordings made during the WFS survey in Bangladesh was undertaken during the year in collaboration with Bangladeshis who took part in the

survey. The study has already thrown valuable light on numerous practical problems raised by the WFS interviews. Many of these inferences are specific to the Bangladesh questionnaire, which contains several unique features, but it is hoped to extend this type of study during 1981 to some of the other WFS surveys.

6.1.7 REVIEW OF EDITING AND CODING PROCEDURES

WFS standard procedures involve a coding operation which consists almost entirely of code transcription, and editing procedures which are performed in three wholly independent stages: in the field, manually in the office, and by machine. A start has been made on what is intended to be a thorough review of these procedures, drawing on evidence provided at the machine edit up-date (correction) stage and possibly involving a comparative experiment in one country.

6.2 SPECIAL FIELD STUDIES

A variety of supplementary field studies have been carried out by WFS at various times, some of them linked to the national surveys, others organized independently. Some of these have been completed, others are still in progress. This section summarizes the position on each of them at the end of 1980. The studies are grouped by type.[1]

6.2.1 RE-INTERVIEW OF A SAMPLE OF WOMEN

Sometimes termed post-enumeration surveys (PES), these were carried out as below. (More inclusive studies of which re-interview was only a part are shown under subsections 6.2.2 and 6.2.3.)

Country	Year of field work	Achieved sample (women)	Publication
Fiji	1974	371	Reports published in 1976 (App. VIII FCR) and 1979 (App. VIII OP 21)
Bangladesh	1976	332	No report planned
Philippines	1978	633	Report under preparation
Sudan	1979	378	Data processing in course

6.2.2 RE-INTERVIEW OF A SUBSAMPLE PLUS RECONCILIATION

A project on this basis was carried out in Indonesia. Field work in 1976; sample size, 497 women; report published in 1978 (App. VIII SR3).

[1] Excluded from this summary are the WFS pilot surveys and linguistic studies.

6.2.3 RESPONSE ERROR STUDIES

These studies involve all the procedures in subsections 6.2.1 and 6.2.2 above, together with a further feature: randomization of interviewer assignments at both rounds. Four projects of this kind have been set up, funded by the Canadian IDRC.

The project initially planned for Burma was stopped when the main Burma survey was suspended. The Dominican Republic was then brought into the programme as a replacement fourth country. The current list of countries is therefore as follows:

Country	Year of field work	Achieved sample (women)	Publication
Lesotho	1977	736	Preliminary reports published 1979 (App. VIII OAS4) and 1980 (App. VIII WFSC M6). Comprehensive report on Peru completed. Lesotho and Turkey reports planned 1981. Dominican Republic and comparative reports to follow.
Peru	1978	1198	
Turkey	1978	650	
Dominican Rep.	1980	1000 approx.	

6.2.4 HUSBANDS SURVEYS

In these studies a subsample of the husbands of interviewed women are interviewed on fertility questions and, in some cases, economic variables. In Thailand the husbands were interviewed before the wives; in the other countries, after.

Country	Year of field work	Achieved sample (husbands)	Publication
Thailand	1975	2967	Covered in First Country Report (Appendix VIII FCR)
Iran	1977	700 approx.	Data processing in course
Egypt	1980	2493	Data processing in course
Ivory Coast	1980	500 (planned)	

In Thailand and Egypt the husbands survey was the occasion for collection of extensive additional economic data. In the case of Egypt, the World Bank is supporting the project.

6.2.5 OTHER STUDIES

Bangladesh Tape-recording Study
Study of some 220 tape-recordings of interviews made in 1976 during the WFS survey in Bangladesh. The tapes have been transcribed and translated and analysis is in progress (see subsection 6.1.6).

Fakistan Pregnancy History Methodology Study
The unfortunate loss of a substantial number of questionnaires has necessitated the abandonment of this project.

Availability of Fertility Regulation Methods
A three-country study of family planning availability, carried out in 1976 in India (271 women), Panama (300 women) and Turkey (260 women). Report (App. VIII SR1) published in 1976.

7 WFS Conference

7.1 CONFERENCE ARRANGEMENTS

7.1.1 PLACE AND PURPOSE

The World Fertility Survey Conference was held at the Wembley Conference Centre, London, United Kingdom, from 7 to 11 July 1980.

The Conference had four objectives:

1. To give a public account of the findings of the WFS to date.
2. To offer ministers and senior officials concerned with population policies an opportunity to familiarize themselves with the significant findings of WFS surveys.
3. To encourage use of the data available and stimulate further analysis at the country level as well as on a comparative basis.
4. To consider the future of enquiries of the WFS kind.

7.1.2 OPENING CEREMONY

The Conference was opened by the Rt. Hon. Patrick Jenkin MP, Her Majesty's Secretary of State for Social Services. Mr. Neil Marten MP, Minister of State at the Foreign and Commonwealth Office, was also a Patron of the Conference and present at the Ceremony. Apart from Conference participants themselves, among those also honouring the occasion by their presence were the Rt. Hon. Lord Houghton of Sowerby, CH, Chairman of the British Parliamentary Group on Population and Development and other members of the Group, and representatives of a number of country missions in the United Kingdom.

The Chairman of the Opening Ceremony was Mr. Edmond Malinvaud, President of the ISI, who addressed the meeting. Other addresses were by Dr. Miloš Macura, WFS Project Director; Mr. Rafael Salas, UNFPA Executive Director; Mr. Sander Levin, USAID Assistant Administrator; and Dr. Mercedes Concepción, IUSSP President-elect.

7.1.3 TELEGRAM TO SIR MAURICE KENDALL

The following telegram was sent to Sir Maurice Kendall on behalf of participants in the Conference:

> 'The participants of the World Fertility Survey Conference, assembled at its last plenary session on 11 July 1980, express their greatest admiration for your leadership in establishing and developing the World Fertility Survey.
>
> The WFS has brought together in a massive cooperative endeavour the efforts of more than 60 countries, ensuring a leap forward in our knowledge of world fertility.

We wish to convey to you our profound appreciation for having made this achievement possible.

We all join in wishing you full recovery and an early return to professional activity.'

7.1.4 PROGRAMME

The Conference was organized in three types of session -- Plenary, Substantive Findings, and Methodology. The Substantive Findings and Methodology session series ran concurrently.

For each session, an organizer was appointed who (with one exception) was responsible for preparing and presenting the paper on which the discussion in the session was based. In addition, discussants (normally two in number) were appointed who led the discussion on the presented paper.

Summaries of each paper were produced in English, French and Spanish where the timing of the availability of the papers made this possible, and were distributed to participants with their copies of the papers themselves. All this material was reproduced in-house, with different cover colours according to the type of the session.

Each session also had a Chairman and a Rapporteur (the latter in all cases being a member of the WFS permanent staff).

The following material may be found in Appendices VII and VII:

Appendix VII: A list of sessions, with titles and names of those with allocated functions.

Appendix VIII: A list of the papers presented in the various sessions.

7.1.5 PARTICIPATION

There were, in total, 608 registered participants. Of these, 75 were students benefiting from the special student reduced registration fee.

The large majority of participants were from the demographic or a related professional field, with a substantial number of policy-makers. There were 37 participants from UN agencies. In general, at least two participants attended from each country taking part in the WFS. There were also two representatives of the People's Republic of China.

7.1.6 ORGANIZATION

Three committees were established to handle Conference matters: an Organizing Committee (Chairman: Sir Maurice Kendall), a Programme Committee (Chairman: Dr. M. Concepción), and an Executive Committee (Chairman: Sir Maurice Kendall; later Dr. M. Macura).

A great part of the administrative tasks of the Conference were performed by the WFS London Office; this included the production in-house of 800 copies of all Conference Papers and Summaries. In addition, Conference Services Ltd. was employed as an administrative agency for the Conference, and advised generally on conference procedures.

The languages of the Conference were English, French and Spanish. Simultaneous interpretation in all three languages was provided in all sessions; a tri-lingual glossary of terms was provided to all interpreters.

7.1.7 FUNDING

The major sources of funding for the Conference were UNFPA, USAID and UKODA. Contributions towards the expenses of the Conference were also made by IDRC (Canada), the Pathfinder Fund, and the Population Resource Center. The principal item of expenditure was the financing of participation by survey representatives from developing countries.

7.1.8 PUBLIC RELATIONS

Promotion and public relations work was carried out through the WFS Information Office. Valuable assistance, in relation in particular to contacts with the media, the preparation of releases and the arrangement of interviews, was given by Ms. Cynthia Green and Mr. Ward Rinehart, whose services were made available by the Population Crisis Committee and the Population Information Program respectively.
A list of press references relating to the Conference is included in Appendix XI.

7.1.9 RECORD OF PROCEEDINGS

The record of proceedings of the Conference is now in preparation and it is hoped that it will be published by mid-1981. Apart from general descriptive material including the list of participants, the publication will include invited papers, a record of the discussion, and the organizers' replies. It is estimated that the publication will run to 1700 pages and it is proposed to print it in three volumes – Plenary, Substantive Findings, and Methodology, with the general descriptive material appearing in the Plenary volume.

7.1.10 OTHER ACTIVITIES

Working Group on Policy Relevance of WFS and its Findings
This Working Group was established on the opening day. There were 26 members, with Dr. K.T. de Graft-Johnson as Chairman. The Group met at various times through the Conference and a report was presented in the final session of the Conference on the Future of the World Fertility Survey. A further report will be produced in due course. See also Section 8.1.

UN Working Group on Social Demography
A meeting of this Working Group, organized by the Economic Commission for Europe, was held during the Conference. Representatives from 18 countries (who were also participating in the Conference) attended and presented reports on progress.

IPPF

The International Planned Parenthood Federation (IPPF) held a film show during the lunch hour on three days and also maintained a publications desk in the concourse area.

Computer display

A graphics terminal connected to the WFS headquarters computer was sited in the concourse area. Information on country data was available on request through this facility.

RAPID

On two days, there was a presentation by the Futures Group of 'Resources for Awareness of Population in Development' (RAPID), a programme involving a multi-media presentation of the specific impact of varying population assumptions on the development plans of individual countries.

Bookstalls

The WFS bookstall in the main foyer displayed copies of all WFS publications, including the first issues in the new *Comparative Studies* (*Cross National Summaries*) series. Many orders were taken.

In addition, Drake's Books International, of Milton Keynes, organized a bookstall in the concourse area covering publications in the demographic field. Their catalogue included a special section on WFS publications.

Photographs and charts

Various photographs and charts illustrating WFS survey activities and results in various countries were on display around the concourse area.

7.2 SUMMARY OF CONFERENCE PAPERS AND DISCUSSIONS

This Section summarizes the substantive content of the Conference proceedings. References in parentheses are to the Conference paper numbers, as listed in Appendix VIII.

7.2.1 SUBSTANTIVE DEMOGRAPHIC FINDINGS

A. *The Intermediate Variables*

This section covers findings on nuptiality, lactation and contraceptive use. McDonald, Ruzicka and Caldwell (nuptiality and fertility – SF2 – the only paper devoted to nuptiality) documented with WFS data the well-known inverse relationship between cumulative fertility and age at marriage. The paper and later discussion amplified on this relationship with several additional observations: for one, women marrying later have their children in

more rapid succession, acting against the fundamental inverse relationship; secondly, in the WFS countries examined, women who marry in their early to mid-twenties — rather late by the standards of most developing societies — still attain a completed family size of four children on average. The consensus of the discussion was that later marriage will not by itself yield the low fertility rates set as national goals by many countries, a point also stressed by Chandrasekaran (P8) in his summary of policy implications. Nuptiality changes have, however, been essential to the fertility decline observed in many countries in recent decades, a fact documented in the papers prepared by Mauldin (fertility decline — P6) and by Cho *et al* (determinants of fertility — SF10) for other sessions.

Breastfeeding was the topic of the paper by Jain and Bongaarts (SF4). Several discussants emphasized that the WFS, by collecting comparable data on the extent and duration of breastfeeding in every survey, has created the opportunity for more extensive analysis on this topic, using data representing larger populations than heretofore has been possible. Jain and Bongaarts focused on substantive issues, but the discussion dealt equally with the methodological problems raised by this somewhat new area of demographic analysis and with the findings of one of the first cross-national analyses employing data from national samples. The paper presented findings which suggest that breastfeeding behaviour is a prime determinant of birth spacing patterns, lengthening the interval from five to ten months on average. The authors also examined the determinants of breastfeeding durations and reported that, in the countries analyzed, the duration of breastfeeding declines with education and urban residence. The finding, which stimulated much discussion, may help to explain the rise in fertility coincident with the onset of modernization and development evident in some countries (e.g. Kenya), a phenomenon which Mauldin (P6) referred to in his paper. It may also explain the positive relationship between education and fertility and between urban residence and fertility observed in some of the WFS surveys, as noted for example in the Rodríguez and Cleland paper (SF5) on socio-economic differentials in fertility. The case study on Pakistan, presented in another session by Chidambaram (SF9), provided a more thorough investigation of the relationships described by Jain and Bongaarts as well as the nuptiality dynamics reported by McDonald *et al* (SF2). The marital fertility rates calculated from the Pakistan survey are higher in urban than in rural areas, and analysis of breastfeeding practices suggests that they may explain, in part, this somewhat surprising differential. At the same time, marriage in Pakistan tends to occur at later ages in the urban areas — a circumstance which holds in the other countries examined by McDonald *et al* — so that overall fertility levels are slightly lower in urban areas.

Three of the papers gave main attention to contraceptive use. All were thoroughly cross-national in perspective. The authors indicated that the WFS data enabled more rigorous comparison across countries of contraceptive behaviour patterns and family planning programme experiences than possible with previous data available. Sadik's paper (SF8) on use of family planning services examined the determinants of contraceptive use, empha-

sizing demographic and socio-economic characteristics of the women. The number of living children and the desire for future births emerged as the most powerful determinants. The latter variable was given more intensive attention in the paper on desired family size and contraceptive use by Palmore and Concepción (SF7). These authors emphasized that, taking into account the problems of measuring fertility preferences (an issue of keen discussion following the presentation of the paper), the moderately strong relationship observed between the desire for another child and contraceptive use is reassuring confirmation of the existence of a genuine effect of preference on use.

The influence of the accessibility of family planning services on use was also considered by Sadik and was the main topic examined by Brackett (SF1). Acknowledging the difficulties of investigating this topic with cross-sectional survey data on individuals, Brackett argued that the importance of the issue nevertheless justified the attempt. His findings indicated that there was indeed a significant relationship between the convenience of obtaining services and contraceptive use, a conclusion which Sadik affirmed with less extensive analysis. This work elaborated on the overviews provided by Tabah (population trends – P1), Macura (contribution of the WFS to an understanding of the world population situation – P2), Concepción (family formation and contraception – P3) and Mauldin (fertility decline – P6) in earlier Plenary sessions and on the analysis of Cho *et al* in another substantive session (determinants of fertility – SF10). Each drew attention to declines in fertility in many developing countries, evident from WFS data and other sources. Each commented on the increased use of contraceptives for the spacing of births and for family limitation in the countries experiencing declines and suggested that active family planning programmes had been one major influence on the adoption of contraceptives. Brackett's and Sadik's analyses at the individual level demonstrated the likely existence of effects of programme effort on use. Because of the importance of such effects Chandrasekaran (P8) in his discussion of policy implications recommended further work on this subject.

In the discussion of both Brackett's and Sadik's papers, considerable attention was given to what makes family planning services 'accessible' or 'inaccessible'. Many speakers emphasized, sometimes on the basis of experiences in their own countries, that proximity was but one relevant factor; the quality of services provided within clinics or centres was no doubt also a determinant of their use. Furthermore, there were many costs – material and otherwise – associated with contraceptive use in addition to travel expenses and the money cost of services. It was observed that information on the quality of services and on the other costs of use is often not gathered in WFS surveys, though it was further argued that these factors were not easily measured in such surveys.

B. *Fertility Preferences; Social, Economic and Cultural Determinants of Fertility*

Westoff's paper (unwanted fertility – SF11), along with the papers by Concepción (P3)

and the UN Population Division (factors affecting fertility and fertility preferences – SF3), provided an overview of levels of desired fertility in the WFS data from the developing world. The modal number of children desired is four, suggesting that preferences form an obstacle to the goal of replacement-level fertility in many of these countries. Nevertheless, about one woman in four reported that her most recent child was not wanted, and over half said they did not want additional children. Westoff estimated that avoidance of the unwanted births would reduce birth rates by as much as one-quarter to one-third.

It was also argued that preference for a specific sex composition of children – in particular, a preference for a minimum number of sons – was a principal motivation for moderate or large families and for the continuation of childbearing beyond an 'ideal' number of children. Concepción noted that preferences for a balanced sex composition or the lack of strong sex preference was as apparent in the WFS data as preferences for sons. The UN Population Division paper examined this matter in more detail, concluding, first, that investigation of the effects of sex preferences on fertility was not at all straightforward and, second, that given the diversity of sex composition preferences across WFS countries (son preference evident in some Asian countries, preference for balanced sex composition in most countries, slight daughter preference in a few countries), it was necessary to examine this issue country by country, and perhaps even stratum by stratum within countries. One of the WFS countries where strong son preference is thought to exist is Pakistan, and in his summary in another session of the secondary analysis of the Pakistan Fertility Survey, Chidambaram (SF9) reported that the data did indeed show overwhelming son preference and that, moreover, there was evidence that sex composition of surviving children affected subsequent fertility in Pakistan.

Discussion of the effects of social, economic and cultural factors on fertility behaviour was initiated in the Plenary sessions with Demeny's discussion of Tabah's paper (P1) and was continued by Miró in her presentation on fertility and socio-economic factors (P6). Both Demeny and Miró argued forcefully that while, as a consequence of the WFS, our understanding of how the intermediate variables influenced fertility had been enriched, the role of social, economic and cultural factors in fertility behaviour had been relatively neglected in the study design and secondary analysis of WFS surveys. Spirited discussion of this issue followed as the Conference progressed. Discussants commented on the lack of attention given to factors such as family and kinship dynamics, household economics, community characteristics, and behaviour styles conditioned by membership in specific cultural or ethnic subgroups.

In this context, the analyses by the UN Population Division (SF3), by Rodríguez and Cleland (SF5) and by Cho *et al* (SF10) of socio-economic factors affecting marital fertility took on special interest. The authors concluded that, in general, women who lived in urban areas, who had completed primary school, and who had worked outside the home since marriage, tended to have fewer children than other women. The education effect

was powerful, although the level of education at which a noticeable fertility depressing impact was evident varied across the WFS countries. The Population Division recommended that this finding should be pursued further, in an effort to identify what factors determined the nature of the education effect itself. In the analysis of Rodríguez and Cleland, the effect of female employment outside the home not only emerged as a strong determinant of marital fertility but its effect persisted virtually undiminished when other socio-economic factors were taken into account. The authors commented on the surprising resilience of this effect, which stood in contrast to the effect on fertility of the husband's work status (self-employed, employed by family member, employed by non-relative) which seemed to have little influence on the wife's fertility once other variables were taken into account. The UN and the Rodríguez and Cleland papers reported effects of the husband's education which were additional to the effects of his wife's education on her fertility behaviour; assessment of the relative importance of the two factors was not easy. Throughout these papers exceptions to the general conclusions were noted. In fact, the authors argued that a consequence of their cross-national analyses was identification of empirical relationships in certain countries which, because of their anomalous character from a cross-national perspective, warranted further secondary analysis specific to the country. The need for sensitivity to diversity across countries which was evident in these analyses further emphasized the arguments of de Graft-Johnson in an earlier session (family formation – P4) that such sensitivity would be essential in the analysis of WFS data.

C. *Fertility in the Developed Countries*

The major part of the proceedings of the Conference focussed on the less developed countries. However, one paper (Leridon, on fertility in developed countries – P7) utilized WFS data from developed countries exclusively. In addition, the overview papers prepared by Talah (P1) and by Macura (P2) included descriptions of fertility trends in the developed world. Each author observed that fertility in most developed countries was presently unusually low – both by historical standards and by present international standards. Fertility is below replacement level in most developed countries. In many of these countries fertility reached its lowest level in the 1970s, the period most accessible for examination with the WFS survey data. Leridon identified three characteristics which typified the low fertility societies of the seventies: marked increases in rates of divorce, which show little sign of abatement in most countries; the decline in desired family sizes across cohorts, with aggregate desires among the younger cohorts in some countries implying less than replacement fertility; and the shift to contraceptive sterilization and the oral pill as methods of contraception.

Several discussants observed that the recent fertility changes in the developed world, which suggest that in many countries a stable fertility pattern was not in effect, conferred particular importance on the fertility preference information gathered in the surveys, as

these were essential for any efforts to understand recent and future fertility trends. Westoff, on the contrary, disputed the usefulness of the preference information in the prediction of future trends, arguing that in developed societies fertility preferences responded to changes in fertility behaviour, rather than the opposite causality assumed by some.

7.2.2 METHODOLOGICAL ISSUES

A. *Survey Organization and Data Collection*

Four papers dealt with survey organization and data collection: Vaessen, Sprehe and Yaşer on organizing an international survey (M5); Scott and Singh on data collection (M1); Verma on sampling (M7); and Rattenbury on data processing (M2).

Vaessen *et al* presented an overview of the main organizational problems encountered in the WFS programme, both at the international level and within countries, and considered in some detail the problems involved in the budgeting and timing of WFS surveys. Many discussants made a plea for more complete cost information, both for the evaluation of the WFS experience and for the planning of future surveys. This point was also made in other Methodology sessions and in the final Plenary session which closed the Conference.

A second issue frequently raised was the importance of using the WFS experience to develop within-country capabilities. There seemed to be no agreement on the success of the WFS in this respect: some delegates argued that the WFS relied too heavily on non-country consultants and advisers; however some country representatives testified that local expertise had gained considerably through the WFS experience. Furthermore, there seemed to be no consensus on how to balance the desire to build country capabilities against the desire to complete a sound survey expeditiously. Strong assertions that the WFS had not given adequate attention to the development of local capabilities were balanced by equally strong assertions that the technical assistance from outside the country was a major contributing factor in the success of particular surveys.

Scott and Singh (M1) discussed problems related more specifically to data collection. Details were given of WFS procedures and their variations between countries, with respect to survey planning and structure, recruitment and training of field workers, pre-testing, and the organization, implementation and quality control of fieldwork. Particular attention was given to the adaptation of the questionnaire to meet national requirements. Discussion in this session and others emphasized the logistical challenges faced in fielding a survey – for example, the recruitment of capable staff, and the timing and organization of the field period – with Conference delegates, many of whom had been involved in the fieldwork stage of their country surveys, describing their own difficulties.

Some of these issues were further discussed in Verma's paper (M7) on sampling in the WFS surveys. Once again issues of the relationship between household and individual surveys

and of the optimal way to organize the field period were paramount. The discussion of Verma's paper was of a more technical nature than others in the Conference. Several discussants emphasized, in quite general terms, the considerable accomplishment of the WFS in achieving probability samples, with essentially national coverage in most instances, in all surveys undertaken within the programme.

Rattenbury's paper (M2) described the difficulties in all stages of data processing, developing points also made by Vaessen *et al* (M5). The paper emphasized that expectations of the time required for data processing are typically quite unrealistic and must as a rule be inflated by an 'R-factor' – a 'realism factor'. It was evident from the discussion in this session and others that the 'data processing bottleneck' has frustrated most of those involved in WFS surveys. Many discussants urged that methods for speeding the processing of the data be more thoroughly investigated. On few subjects discussed at the Conference were the feelings of the delegates more uniformly and strongly held.

B. *Data Quality*

Evaluation of the quality of the WFS data was the subject of the paper by O'Muircheartaigh and Marckwardt on the assessment of the reliability of WFS data (M6) – but issues related to data quality were also touched upon by Brass in his paper on birth history analysis (M3) and by Hill in his paper on estimation of fertility trends (M8). Together, these three papers convey that data quality evaluation may usefully employ a variety of approaches: analysis of information from a post-enumeration survey (O'Muircheartaigh and Marckwardt); consistency checks within the WFS individual survey data (alluded to by Brass and illustrated by Hill); and comparisons with other sources of demographic data (Hill). As each author conceded, the approaches are complementary. O'Muircheartaigh and Marckwardt examined post-enumeration survey data from five WFS countries. The results indicate high reliability for 'factual' items as opposed to attitudinal items, and higher reliability for events nearer the survey date in time. Two points were made most frequently in the discussions. First, evaluation of the data, possibly more thorough than the work to date, is a necessity for those who rely on the estimates from the data; this view was usually voiced by delegates from the WFS countries who have been involved in the data collection and first-stage analysis. Second, there is by no means agreement on the proper techniques for evaluating the data; this point emerged most forcefully from the comments of statisticians and demographers among the delegates.

C. *Analysis Strategies*

Many papers contributed to the discussion of methods of analysis of the data. Four of the methodology sessions were aimed specifically at issues of data analysis: the two sessions already referred to organized by Brass and Hill, and two additional sessions, Little on statistical models (M4) and Hobcraft on comparative analysis strategies (M9).

Brass (M3) reviewed the main issues in birth history analysis, drawing on material presented at the April seminar in London on maternity history analysis, sponsored jointly by WFS, IUSSP, and the London School of Hygiene and Tropical Medicine. Brass emphasized that maternity history data – now in much greater abundance for developing societies thanks to the WFS programme – affords the researcher the opportunity to examine much more fully the complex aspects of reproductive dynamics. The enhanced opportunity comes with new pitfalls, however, and Brass singled out problems of selectivity and truncation in birth history data which the analyst must confront. He offered no straightforward means for resolving these problems. In the ensuing discussion Ryder argued forcefully that analysts have yet to reorient their thinking from the analytic framework appropriate to the type of data previously most available to demographers to analytic approaches which would take full advantage of riches of maternity history data. We were, he claimed, continuing to use techniques which were only slight modifications of traditional approaches. Later Hobcraft (M9) similarly urged more active development of mathematical models of demographic behaviour which might be tested with the data now available.

Little (M4) provided a brief description of a variety of uses of statistical models in the analysis of WFS data, emphasizing the flexibility of statistical models in quite differing analytic contexts. For example, in addition to the use of regression models in secondary data analysis, he urged use of statistical models in the analysis of post-enumeration survey data for the purpose of assessing data reliability (the task undertaken by O'Muircheartaigh and Marckwardt – M6). He also considered the incorporation of sampling weights in statistical analysis. The potential impact of sample design on statistical analysis of WFS data was raised by discussants in this and other sessions and there was some disagreement on the issue. In his paper on sample design (M7), Verma urged more willingness to depart from self-weighting samples and to use heavily clustered samples. In the context of Verma's recommendation, questions on the impact of design effects on statistical analysis and of how to incorporate design weights in analysis assume greater significance.

The overview provided by Tabah (P1), Macura (P2), Mauldin (P6) and others in the Plenary sessions highlighted the importance of estimating fertility trends using WFS data and, where possible, other data sources. In the technical paper prepared by Hill (M8), methods for estimating fertility trends were described and illustrated. Some of the methods may be applied using WFS data alone, others only in conjunction with data from other sources. Hill emphasized that detection of fertility trends and alertness to data errors went hand in hand. The analyst's task was to determine, with as much certainty as possible, when apparent trends are real and when they are data artifacts, and the methods described in the paper were intended to enable maximum use for this purpose of the data available from WFS and similar surveys.

Most of the Conference papers included cross-national analysis of WFS data. Hobcraft's paper for the final Methodology session on comparative analysis strategies (M9) outlined

a set of analytic approaches to WFS data and argued that exploitation of WFS data for comparative analysis had hardly begun. This paper, as well as the various discussions on comparative analysis, were especially optimistic in tone. While the difficulties of making comparisons between societies which differ markedly from each other by many indices was conceded by everyone, many delegates seemed convinced that the WFS data offered an unusua ly firm footing for such comparisons. Hobcraft went further and argued for the possibility of locating relatively invariant regularities in fertility behaviour through cross-national analysis of the WFS data. This would be a step towards the specification and testing of more complex models of fertility behaviour than are presently employed in demographic research.

7.2.3 FUTURE WFS WORK

The statements of session organizers and discussants throughout the Conference implied certain directions which future WFS work might explore. These themes were re-voiced in the final session of the Conference on 'The Future of the WFS'.

Freedman (P9) offered his own assessment that the WFS has been 'a remarkable success on balance in meeting most, if not all, of its goals' and then proposed a set of activities for the WFS to continue or initiate. These included an archival function, technical assistance in data analysis, further evaluation of the quality of the fertility data gathered, further training and research, and a smaller number of additional surveys. The invited discussants – Gille and Joseph – each provided a different weighting of the importance of future WFS activities. However, the set of activities encompassed in the recommendations of all three speakers differed very little.

From the wide-ranging and lengthy discussion which followed, this small set of themes may be selected for emphasis:

- Fertility surveys are of continuing importance to many of the participant countries, and some wish to conduct further surveys in collaboration with the WFS.
- Future WFS work must be oriented to the fullest extent possible to developing country capabilities, through whatever means appropriate.
- Methods of collecting and processing fertility survey data which are as time- and resource-efficient as possible need to be developed.
- The validity of the data gathered must be more thoroughly examined than heretofore, if possible.
- Further analysis and data collection should be more fully informed by a recognition of the influence of social, economic and cultural factors on fertility decisions, in particular factors not directly measured by the set of individual socio-economic characteristics utilized in the analysis to date.

8 Meetings, Information and Publications

8.1 MEETINGS

At Appendix VI is a calendar of meetings attended by WFS staff during 1980. Reference to certain of the meetings is made in Chapters 3, 4 and 7. Brief reports on some of the remainder follow.

Joint Conference of African Planners, Statisticians and Demographers
At the invitation of the Executive Secretary of the Economic Commission fo Africa, Chris Scott attended this Conference and presented a progress report on the World Fertility Survey. The Conference was held at Addis Ababa, 24 March–2 April.

Seminar on the Analysis of Maternity Histories
This seminar was held at the Centre for Population Studies in London, 9–11 April, and was sponsored by the Committee on Comparative Analysis of Fertility of the IUSSP, the Centre for Population Studies of the London School of Hygiene and Tropical Medicine, and the World Fertility Survey. The theme of the seminar was the methods which should and can be used in the analysis of data from maternity histories, with particular emphasis on the WFS data. WFS staff and participants of the WFS evaluation workshop from Guyana, Indonesia, Jordan, Malaysia and Philippines attended this successful seminar. WFS staff contributed two papers: 'An Assessment of the Quality of WFS Demographic Data' by V.C. Chidambaram, John Cleland, Noreen Goldman and Shea Rutstein, and 'Methodological Issues in Life Table Analysis of Birth Histories' by John Hobcraft and Germán Rodríguez.

Annual Meeting of the Population Association of America 1980
John Cleland of WFS staff participated in the meeting held in Denver, Colorado, 10–12 April, and presented a paper entitled, 'Some Issues of Survey Methodology and Data Quality: The WFS Experience' which was co-authored with V.C. Chidambaram and Vijay Verma. Another paper, 'Estimating Fertility Trends from Retrospective Birth Histories: Sensitivity to Imputation of Missing Dates' by V.C. Chidambaram and Thomas W. Pullum was presented by Thomas Pullum at the meeting.

NAS Panel on Fertility Determinants
The panel held two meetings during the year; 17–18 March in Washington and 24–25

July in Michigan. V.C. Chidambaram is a member of the panel. The work plan of the panel includes preparation of a monograph on 'A Framework for Fertility Analysis' and a comprehensive report summarizing past and current research on fertility determinants. In addition, in depth analytical country studies are planned for 8–10 countries and all of these studies will be making extensive use of WFS data along with other sources. Finally, the panel has also launched two major comparative projects using WFS data: a comparative analysis of socio-economic factors affecting fertility, and application of a socio-economic framework to the comparative analysis of WFS data. WFS continues to collaborate closely with the work of the panel.

NAS Panel on Pakistan

A meeting of the Pakistan panel of the Committee on Population and Demography of the National Academy of Sciences was held at the WFS Professional Centre in London, 14–15 July. Iqbal Alam of WFS staff participated as a member of the panel.

Committee on Comparative Analysis of Fertility, IUSSP

The Committee met twice during the year, during April in Bad Homburg, Germany, and during July in London. Germán Rodríguez attended as a co-opted member of the Committee and John Hobcraft as WFS liaison officer in his capacity as Chief of the Comparative Analysis Section in WFS. Apart from its work programme, the Committee also prepared a statement on Activities of WFS for consideration by the IUSSP.

UN Working Group on Social Demography

An informal meeting of the Working Group was held in London on 10 July, during the WFS Conference. Experts from 18 countries participated in the meeting including three which are not expected to be covered in the ECE/WFS Comparative Study. WFS was represented by V.C. Chidambaram and Roderick Little. The main purpose of the meeting was to exchange reports on the progress of the surveys in the countries and of the work on the Comparative Study at ECE. The ECE Secretariat has received data tapes from 14 surveys: Belgium, Czechoslovakia, Denmark, Finland, Hungary, Israel, Italy, Japan, Netherlands, Norway, Poland, Spain, UK and USA. It is expected that by the end of 1980, the bulk of the comparative tables should be ready for all countries except Portugal and possibly Yugoslavia. The drafting of the main report is expected to be completed by the end of 1981.

Working Group on the Policy Relevance of WFS and Its Findings

This working group, consisting of 26 experts from both developing and developed countries, was formed during the WFS Conference in July. The group met under the Chairmanship of Dr. K.T. de Graft-Johnson (Ghana) with Prof. R.L. Cliquet (Belgium) as Rapporteur.

The group considered experience gained so far by administrators and scholars concerning the methods and procedures relating to analysis and utilization of WFS data for national policy purposes. A summary report on the deliberations of the Group with recommendations was presented to the WFS Conference at the final plenary session on 11 July. A more detailed report is being prepared.

Andean Seminar

The WFS was represented by Enrique Carrasco at an organizers' meeting held 18–21 August in Lima, Peru, for the January 1981 Seminar of the Dynamics of Fertility in the Andean Region, which will be sponsored by the Asociación Multidisciplinaria de Investigación y Docencia en Población (AMIDEP), the Oficina Nacional de Estadística del Perú (ONE), CELADE and CCRP. Financial support will be provided by the Ford and Rockefeller Foundations.

Five participants from each of the six Andean Countries (Venezuela, Colombia, Ecuador, Peru, Bolivia and Chile) will develop research topics on fertility. Among the data sources are the WFS surveys carried out in four of the six countries.

Seminar on Analysis of Family Planning Programmes

A seminar on Analysis of Family Planning Programmes was organized by the relevant IUSSP Committee at Bogotá during October. V.C. Chidambaram participated in the seminar and presented a paper entitled 'Role of WFS Data in the Analysis of Family Planning Programmes', prepared jointly with Lauralee Mastropoalo. The Committee at its meeting in Bogotá accepted a work plan for assessing the extent to which WFS data, particularly from the Family Planning module, can be used to evaluate family planning programmes and for revising the WFS Module for use in future surveys of the WFS type. WFS will actively collaborate with the Committee's work and V.C. Chidambaram was co-opted as a member of the Committee.

8.2 INFORMATION AND PUBLICATIONS

Appendix VIII lists WFS publications and First Country Reports available at the end of the year. Publications appearing during the year were as follows:

Annual Report for 1979	
First Country Reports	– Jordan, Kenya (Volume 1), Turkey, Venezuela (Volume 2)
Summaries of Country Reports	– English – Costa Rica, Guyana, Jamaica, Jordan, Kenya, Mexico, Peru, Turkey

Summaries, *cont.*	French	– Costa Rica, Guadeloupe and Martinique, Guyana, Mexico, Peru, Philippines
	Spanish	– Bangladesh, Costa Rica, Jordan, Mexico, Philippines
Basic Documentation	– English	– No. 11 (Data Processing Guidelines)
	French	– Nos. 8–10
	Spanish	– Nos. 3, 4, 8–10
	Arabic	– Nos. 3 and 8
Technical Bulletins	– Nos. 4, 6, 7 and 9	
Scientific Reports	– Nos. 6–11, 13–16 (of which Nos. 9, 10, 13, 15 and 16 are Illustrative Analyses)	
Comparative Studies	– Nos. 1–4, 6–8, 10–12, 15 and 16 (of which all but No. 16 are cross-national summaries)	
Occasional Papers	– Nos. 19 (French and Spanish versions), 21 and 22	

The WFS mailing list (which is subject to continuing review) consists of some 3,500 addresses. It includes national statistical office staff and other relevant government officers, researchers and students at demographic centres and relevant university departments, libraries, United Nations Headquarters, Regional Commission and UNDP staff, USAID headquarters and mission staff, and WFS Depository Libraries. At present, there are 166 WFS Depository Libraries (Appendix IX): 22 in Africa, 36 in Asia and Oceania, 38 in Europe, 21 in Latin America and the Caribbean, 9 in the Middle East, and 40 in Canada and USA. An additional list exists consisting of 390 editors of all the major and a considerable number of smaller population/statistical and related newssheets and journals. There is a list of 400 names for the mailing of the ISI allocation of the individual First Country Reports. In addition to the publications mailed to the established lists, some 10,000 copies of publications were sent out on request: the corresponding figures for 1978 and 1979 were 5,000 and 8,000 respectively. The major computerized information systems such as Johns Hopkins POPINFORM and CELADE's DOCPAL provide valuable assistance in making WFS reports and publications widely available.

Appendix XI lists references to WFS and other relevant material appearing in journals, newspapers, etc. which were noticed during the year.

The WFS Conference in July provided a major focus for publicizing the work of WFS. This is described in more detail in Chapter 7.

9 Personnel

9.1 WFS PROFESSIONAL CENTRE, LONDON (31 December 1980)

Project Director	Sir Maurice Kendall (retired 15.5.80)	(UK)
	Dr. Miloš Macura	(Yugoslavia)

Administration Division

Deputy Director	Mr. Y. Yaşer	(Turkey)
Chief, General Services Section	Ms. C. Linzey	(UK)
Chief, Information Section	Mr. D. Whitelegge	(UK)

Data Collection and Development Division

Deputy Director	Dr. C. Scott	(UK)
Asst. Deputy Director and Chief, Current Operations Section	Mr. M. Vaessen	(Netherlands)

Data Processing Division

Deputy Director	Ms. J. Rattenbury	(UK)
Asst. Deputy Director and Chief, Data Archives	Mr. B. Rowe	(UK)

Data Analysis Division

Deputy Director	Mr. V.C. Chidambaram	(India)
Asst. Deputy Director and Chief, Research and Development Section	Dr. G. Rodríguez	(Chile)
Chief, National Analysis Section	Mr. J. Cleland	(UK)
Chief, Comparative Analysis Section	Mr. J. Hobcraft	(UK)

Professional Staff

Mr. A. Ahmad	(Pakistan)	Mr. J. Otto	(USA)
Dr. I. Alam	(Pakistan)	Mr. M. Ozsever	(Turkey)
Dr. K. Balasubramanian	(India)	Mr. M. Pasaba	(Philippines)
Mr. M. Baraket	(Tunisia)	Mr. M. Pearce	(UK)
Mr. E. Carrasco	(Chile)	Dr. L. Pineda	(Colombia)
Dr. J. Casterline	(USA)	Dr. S. Rutstein	(USA)
Mr. T. Croft	(UK)	Mr. Y. Sahinkaya	(Turkey)
Mr. B. Demissie	(Ethiopia)	Dr. S. Singh	(Guyana)
Ms. A.T. Dinh	(France)	Dr. D.P. Smith	(USA)
Dr. S. Farid	(Egypt)	Mr. E. Soulas	(France)
Mr. B. Ferry*	(France)	Mr. A. Sunter	(Canada)
Dr. R. Hanenberg	(USA)	Mr. R. Thompson	(UK)
Mr. H. Jemai	(Tunisia)	Ms. J. Verrall	(UK)
Dr. R. Lightbourne	(Jamaica)	Mr. S. Wallace	(USA)
Mr. J. McDonald	(USA)	Mr. A. Westlake	(UK)

Notes

The following professional staff joined the WFS during 1980:

Analysis Division	Mr. J. Hobcraft
	Mr. J. McDonald
Data Processing Division	Mr. R. Thompson

The following professional staff left the WFS during 1980:

Ms. R. Ahmad	(Bangladesh)	July
Ms. B. Harris	(USA)	February
Mr. M. Kabir	(Bangladesh)	July
Dr. M. Khalil	(Egypt)	June
Dr. R. Little	(UK)	July
Dr. A. MacDonald	(Surinam)	May
Dr. V. Verma	(India)	August

The following served as Resident Advisers in the countries shown for varying periods during the year:

Mr. M. Farag	(Sudan)
Mr. A. Feuerstein	(Senegal)
Mr. F. Notzon	(Morocco)
Ms. L. Werner	(Kenya)
Mr. Y. Zoughlami	(Mauritania)

*On secondment from ORSTOM.

The following served as Consultants for varying periods during the year:

Mr. A. Aziz	(Jordan)
Mr. B. Barrère	(France)
Ms. H. Booth	(UK)
Prof. R. Freedman	(USA)
Dr. N. Goldman	(USA)
Dr. J. Harewood	(Trinidad and Tobago)
Ms. Y. Jemai	(France)
Dr. M. Khalil	(Egypt)
Ms. L. Mastropoalo	(USA)
Dr. J. McCarthy	(USA)
Dr. C. O'Muircheartaigh	(Ireland)
Prof. T. Pullum	(USA)
Dr. H. Rashad	(Egypt)
Mr. J. Ring	(UK)
Ms. P. Rodríguez	(Chile)
Mr. J. Steele	(UK)
Dr. J. Trussell	(USA)
Prof. C. Westoff	(USA)
Mr. W. Wynne	(USA)

9.2 ISI PERMANENT OFFICE

Staff associated with the WFS programme at the Permanent Office of the ISI in Voorburg are as follows (31 December 1980):

Director	*Mr. E. Lunenberg	(Netherlands)
Deputy Director Finance and Coordinator of WFS Affairs	Mr. C. Hendriks	(Netherlands)
Contracts	Mr. R. Henwick	(UK)
General Administrative Affairs	Mr. D. Smith	(UK)
Publications	Ms. K. Wirtz	(Netherlands)
Personnel Affairs	*Mr. J. van Werkhoven	(Netherlands)
Financial Information	Mr. H. van Klaveren	(Netherlands)
Accounts	*Mr. G. Rutteman	(Netherlands)
General Services	*Mr. G. Mast	(Netherlands)

*Part-time only for WFS.

9.3 PROJECT OFFICERS

United Nations Fund for Population Activities	E. Wibmer
United States Agency for International Development	R. Cornelius
United Kingdom Overseas Development Administration	C. Walker

9.4 UN LIAISON STAFF

The UN Liaison Officers, or Technical Advisers, appointed to the WFS programme continued to provide valuable support. At the end of the year, Dr. R.O. Carleton was the UN Liaison Officer at UN Headquarters, New York, Dr. J.R. Rele for Asia and the Pacific, based in Bangkok and Dr. A.M. Marckwardt for Latin America, based in Santiago.

9.5 CARIBBEAN COORDINATION OFFICE

This office, which was established in 1974 under Professor Jack Harewood to coordinate WFS activities in the Caribbean area, was formally closed down during the year, in view of the advanced state of progress of the surveys in the countries concerned.

9.6 VISITORS

At Appendix XII is a list of visitors to the WFS Professional Centre in London.

Appendix I

PARTICIPATION OF DEVELOPING COUNTRIES IN THE WFS PROGRAMME

Country	National Director/ Survey Director (SD)	National Executive Agency(ies)	WFS Staff Co-ordinator	Pop. (millions)*	Languages used in the Questionnaire
Africa					
Benin	E. Amoussou S. Adjahoutonon (SD)	Institut National de la Statistique et de l'Analyse Economique	M. Baraket	3.6	Fon, Dendi, Goun, Bariba, Adja, Yoruba Ditamari
Cameroon		Direction de la Statistique et de la Comptabilité Nationale	C. Scott	8.5	English, French, Pidgin A and B, Fulfulde, Ewondo, Bassa, Duala, Gomala, Bamun, Matakan, Medumba, Kaka, Dschang
Ghana	S.K. Kwafo J.Y. Owusu (SD)	Central Bureau of Statistics and the Ghana National Family Planning Secretariat	Y. Sahinkaya	11.7	English, Asante-Twi Dagbani, Dangbe, Ewe, Fante, Ga, Kasem, Hausa, Nzema
Ivory Coast	J.K. Amissah M. Diallo (SD)	Direction de la Statistique	H. Jemai	8.0	French, Attié, Baoulé, Bété, Dioula, Gouro, Guéré, Koulango, Moss Senoufo, Yacouba
Kenya	Parmeet Singh J. Kekovole (SD)	Central Bureau of Statistics	J. Cleland	15.9	English, Akaba, Kalenjin, Kikuyu, Kisii, Kiswahili, Luhya, Luo, Meru, Mijikenda
Lesotho	L.T. Tuoane A.M. Mpiti (SD)	Bureau of Statistics	K. Balasubramanian	1.3	Sesotho
Mauritania	Isselmou Ould Mohamed Cheikh Ould Sidi Abderrahmane (SD)	Direction de la Statistique et de la Comptabilité Nationale	R. Hanenberg	1.6	Arabic, Hassania, Poular, Wolof, Soninké
Morocco	A. Alaoui M. Ouakrim (SD)	Ministère de la Santé Publique	H. Jemai	21.0	Arabic
Nigeria	F.J. Falodun B. Morah (SD)	National Population Bureau	J. Cleland	77.1	English, Hausa, Yoruba, Ibo, Fulfulde, Kanuri, Ibibio

**Source: 1980 World Population Data Sheet of the Population Bureau Inc.*

Modules	Sample size (Individual Interview)	Date of Survey Design Visit	Commencement of Field Work (Individual Survey)	State of Survey as of 31 December 1980
Abortion (in part), Factors other than Contraception.	5,000	June 1979	October 1981	Preparatory Stage.
Community-Level, Factors other than Contraception, General Mortality.	8,219	May 1976	January 1978	Tabulations nearly completed.
Factors other than Contraception, Family Planning (in part), Abortion (in part).	6,114	August 1977	February 1979	Field work completed. Machine Editing in progress.
Community-Level, Factors other than Contraception, Husbands Survey.	6,000	January 1979	August 1980	Field work in progress.
Community-Level, Factors other than Contraception, Family Planning (in part)	8,100	August 1975	August 1977	Report produced June 1980. Further analysis is planned.
Community-Level, Factors other than Contraception, General Mortality.	3,603	January 1976	August 1977	Tabulations completed. Report writing in progress
Factors other than Contraception, General Mortality.	5,000	April 1979	February 1981	Pre-test in progress.
Family Planning, Fertility Regulation, General Mortality.	7,000	September 1978	April 1980	Field work completed. Machine editing in progress.
Factors other than Contraception (in part), Family Planning (in part).	11,000	January 1980	September 1981	Preparatory stage

Country	National Director/ Survey Director (SD)	National Executive Agency(ies)	WFS Staff Co-ordinator	Pop. (millions)	Languages used in the Questionnaire
Senegal	I.L. Diop L. Gueye (SD)	Direction de la Statistique	R. Hanenberg	5.7	Wolof, Poular, Mandinka, Serer
Sudan (North)	O.A. El-Tay A. Modawi (SD)	Department of Statistics	S. Farid	17.9	Arabic, Bejawi, Dongli, Nubian
Tanzania	J.J. Mpogolo	Bureau of Statistics	Y. Sahinkaya	18.6	--
Tunisia	M. B'Chir M. Ayad (SD)	Office National du Planning Familial et de la Population	H. Jemai	6.5	Arabic
Asia & Oceania					
Bangladesh	Col. A.F. Matin	Ministry of Health Population Control and Family Planning	I. Alam	90.6	Bengali, English
Burma	U Soe Myint U Thein Han (SD)	Department of Immigration and Manpower Services and Ministry of Home and Religious Affairs	V.C. Chidambaram	34.4	Burmese
Fiji	R.N. Lodhia	Bureau of Statistics	J. Cleland	0.6	Fijian, Hindi, English
Hong Kong (Associate Status)	C.G. Greenfield	Census and Statistics Department	V.C. Chidambaram	4.8	–
Indonesia	S. Suharto B. Sungkono (SD)	Central Bureau of Statistics	J. Casterline	144.3	Bahasa Sundanese, Javanese, Maduranese, Balinese } Oral only
Iran	S. Tamrazian	Iran Statistical Centre	N. Ozsever	38.5	Persian
Korea Rep. of	Dai Young Kim E.H. Choe (SD)	Bureau of Statistics & Korean Institute for Family Planning	D.P. Smith	38.2	Korean
Malaysia	Nor Laily Aziz	Department of Statistics and National Family Planning Board	V.C. Chidambaram	14.0	Malay, English } official Chinese, Tamil } unoffic

Modules	Sample size (Individual Interview)	Date of Survey Design Visit	Commencement of Field Work (Individual Survey)	State of Survey as of 31 December 1980
Community-Level, Factors other than Contraception, General Mortality	3,986	June 1977	May 1978	Tabulations completed. Report in preparation.
Abortion (in part), Community-Level. Factors other than Contraception.	3,144	June 1977	December 1978	Machine editing in progress.
–	6,000	–	–	Project under Consideration by Government.
Abortion, Factors other than Contraception. Family Planning (in part).	4,118	May 1977	May 1978	Tabulations in progress.
Abortion, Community-Level, Factors other than Contraception. Fertility Regulation.	6,513	January 1975	December 1975	First Country Report published in March 1979
None	8,000	September 1977	–	Survey suspended.
Not applicable but some module type questions were included.	4,928	July 1973	February 1974	First Country Report published 1976.
–	–	–	1976	Report published.
Abortion (in part), Family Planning, Fertility Regulation.	9,155	June 1975	March 1976	First Country Report published in January 1979. Further analysis in progress.
Fertility Regulation, Husbands Survey.	4,878	July 1976	May 1977	Tabulations in progress
Abortion, Community-Level, Economic (in part), Family Planning, Fertility Regulation (in part), General Mortality.	5,430	February 1974	September 1974	First Country Report published in 1978. Further analysis in progress.
Abortion, Community-Level, Economic (in part), Family Planning, Fertility Regulation.	6,316	April 1974	August 1974	First Country Report published in 1977. Further analysis in progress.

Country	National Director/ Survey Director (SD)	National Executive Agency(ies)	WFS Staff Co-ordinator	Pop. (millions)	Languages used in the Questionnaire
Nepal	B.R. Pande J. Tuladhar (SD)	Nepal Family Planning/Maternal & Child Health Project in the Ministry of Health	I. Alam	14.0	Nepali Bhojpuri Mathal
Pakistan	K. Siddiqui	Training Research & Evaluation Centre of the Population Council of Pakistan	I. Alam	86.5	Urdu, Pushto, Punjabi, Sindhi, Baluchi
Philippines	T. Mijares and M. Concepción (Co-Dirs.)	National Census and Statistics Organization	J. Casterline	47.7	English, Tagalog, Cebuano, Ilocano Hiligaynon, Bicol Samar-Leyte, Pampango, Panga
Sri Lanka	W.A.A.S. Peiris D. Fernando (SD)	Ministry of Plan Implementation and Department of Census and Statistics	J. Cleland	14.8	Sinhalese, Tamil, English
Thailand	Anuri Wanglee and N. Dibavalya (Co-Dirs.)	National Economic & Social Development Board, National Statistical Office and Institute of Population Studies	D. Smith	47.3	Thai
Caribbean					
Guadeloupe and Martinique (Associate Status)	Y. Charbit	Institut National d'Etudes Démographiques	V.C. Chidambaram	0.6	French, Creole
Guyana	B.O. Bowman	Bureau of Statistics	S. Singh (J. Harewood: Regional Co-ordinator)	0.9	English (Caribbe version of WFS C Questionnaire)
Haiti	J. Vilgrain D. Moise (SD)	Institut Haitien de Statistique	H. Jemai	5.8	Creole
Jamaica	C. McFarlane	Department of Statistics	R. Lightbourne (J. Harewood: Regional Co-ordinator	2.2	English (Caribbea version of WFS C Questionnaire)

Modules	Sample size (Individual Interview)	Date of Survey Design Visit	Commencement of Field Work (Individual Survey)	State of Survey as of 31 December 1980
bortion (in part), ontraception (in part), amily Planning, ertility Regulation.	5,940	September 1975	April 1976	First Country Report published in August 1977. Further analysis in progress.
bortion (in part), Family lanning, Fertility Regulation.	4,996	July 1974	May 1975	First Country Report published in October 1976. Further analysis in progress.
bortion, actors other than ontraception, amily Planning, Fertility egulation, ommunity-Level.	9,268	September 1976	March 1978	First Country Report published December 1979.
bortion (in part), Family lanning (in part), Fertility egulation.	6,812	January 1975	August 1975	First Country Report published in June 1978. Further analysis in progress.
ommunity-Level, conomic, Husbands rvey.	3,778 (plus 3,500 husbands of currently married women)	June 1974	March 1975	First Country Report published in October 1977. Further analysis in progress.
one	Guadeloupe 1,400 Martinique 1,400	–	Guadeloupe October 1975 Martinique January 1976	First Country Report published in 1980.
ertility Regulation.	4,642	October 1974	May 1975	First Country Report published in September 1979. Further analysis in progress.
bortion (in part), actors other than ontraception.	3,365	March 1975	July 1977	Tabulations completed. Report writing in progress.
conomic, ertility Regulation.	3,096	October 1974	November 1975	First Country Report published in December 1979. Further analysis in progress.

Country	National Director/ Survey Director (SD)	National Executive Agency(ies)	WFS Staff Co-ordinator	Pop. (millions)	Languages used in the Questionnaire
Trinidad and Tobago	L. Pujadas L. Hewitt (SD)	Central Statistical Office	S. Singh (J. Harewood: Regional Co-ordinator)	1.2	English (Caribbean version of WFS Co Questionnaire)
Europe					
Portugal	G Costa J.J. Pais Morais (SD)	National Institute of Statistics	M. Vaessen	9.9	Portuguese
Latin America					
Colombia	G. López-Escobar E. Prada (SD)	Corporación Centro Regional de Población Dept. Administrativo Nacional de Estadística	G. Rodríguez	26.7	Spanish
Costa Rica	R. Sánchez Bolaños V.R. de Ortega and E. Cordero (Co-SDs)	Dirección General de Estadística	G. Rodríguez	2.2	Spanish
Dominican Republic	L. González Fabra	Consejo Nacional de Población y Familia	M. Vaessen	5.4	Spanish
Ecuador	G. Acosta P. Merlo (SD)	Instituto Nacional de Estadística y Censos	E. Carrasco	8.0	Spanish Quechua
Mexico	L.E. Rosas-Landa C. Welti (SD)	Dirección General de Estadística	S. Rutstein	68.2	Spanish
Panama	J.A. Barahona S. F. Mascarín (SD)	Oficina de Estudios de Población	G. Rodríguez	1.9	Spanish
Paraguay	J. Díaz de Bedoya David Vera (SD)	Dirección de Estadística and Ministerio de Salud Pública	E. Carrasco	3.3	Spanish Guaraní
Peru	G. Fernández de Valdez Y. Céspedes (SD)	Instituto Nacional de Estadística	S. Rutstein	17.6	Spanish Ancash Quechua, Ayacucho Quechu Cuzco Quechua, Aymara

lodules	Sample size (Individual Interview)	Date of Survey Design Visit	Commencement of Field Work (Individual Survey)	State of Survey as of 31 December 1980
bortion (in part), conomic, ertility Regulation, amily Planning.	4,355	March 1976	March 1977	Tabulation completed. Report writing completed. Further analysis is planned.
conomic (in part).	5,561	December 1978	November 1979	Machine Editing in progress.
bortion (in part), Family lanning, Fertility Regulation, actors other than Contra-eption (in part).	5,378	May 1975	May 1976	First Country Report published in April 1978. Further analysis in progress.
amily Planning (in part), ertility Regulation.	3,935	September 1975	July 1976	First Country Report published in October 1978. Further analysis in progress.
amily Planning (in part), ertility Regulation, eneral Mortality (in part)	3,115	August 1974	April 1975	First Country Report published in November 1976. Further analysis in progress.
ommunity-Level, conomic, ertility Regulation	7,000	October 1977	August 1979	Field work completed. Machine editing finished. Recoding and tabulations in progress.
bortion (in part), ommunity-Level, amily Planning, General ortality (in part).	7,310	June 1975	July 1976	First Country Report published in February 1979. Further analysis in progress.
bortion, Family Planning n part), Fertility Regulation.	3,701	October 1974	December 1975	First Country Report published in March 1978. Further analysis in progress.
amily Planning, ertility Regulation.	4,622	February 1978	February 1979	Publication of First Country Report expected Jan. 1981.
bortion (in part), actors other than ontraception (in part), ertility Regulation, General ortality (in part).	5,640	August 1976	July 1977	First Country Report published in May 1979. Further analysis in progress.

Country	National Director/ Survey Director (SD)	National Executive Agency(ies)	WFS Staff Co-ordinator	Pop. (millions)	Languages used in the Questionnaire
Venezuela	H. Martínez C. de Quinteros (SD)	Direccíon General de Estadística	S. Rutstein	13.9	Spanish
Middle East					
Egypt	Gen. G. Askar M.H. El-Guindy (SD)	Central Agency for Public Mobilisation and Statistics	S. Farid	42.1	Arabic
Jordan*	B.N. Shrydeh F. El-Hiyari	Department of Statistics	S. Farid	3.2	Arabic
Syria	M.N. El-Hallak	Central Bureau of Statistics and Centre for Population Studies	I. Alam	8.6	Arabic
Turkey	M. Coruh S. Uner (SD)	Institute of Population Studies, Hacettepe University	D. Smith	45.5	Turkish
Yemen A.R.	Y. El-Kaizal A.S. Saif (SD)	Department of Statistics, Central Planning Organization	M. Baraket	5.6	Arabic

*East Bank only.

Modules	Sample size (Individual interview)	Date of Survey Design Visit	Commencement of Field Work (Individual Survey)	State of Survey as of 31 December 1980
Family Planning, Fertility Regulation.	4,361	June–July 1976	March 1977	First Country Report published in Nov. 1980.
Abortion (in part), Community-Level, Fertility Regulation, Family Planning, Husbands survey, Factors other than Contraception (in part).	10,000	February 1978	February 1980	Field work completed. Machine Editing in progress.
Abortion, Community-Level, Mortality, Factors other than Contraception (in part), Fertility Regulation, Family Planning (in part).	3,612	October 1975	June 1976	First Country Report published in April 1980. Further analysis in progress.
Abortion, Community-Level, Factors other than Contraception, Fertility Regulation, General Mortality.	4,487	February 1977	June 1978	Tabulations in progress.
Abortion, Economic, Family Planning, Fertility Regulation (modified).	4,431	August 1976	September 1978	First Country Report published in November 1980.
Factors other than Contraception, General Mortality.	5,000	August 1977	September 1979	Tabulations in progress.

Appendix II

PARTICIPATION OF DEVELOPED COUNTRIES IN THE WFS PROGRAMME

Country	Sample Size	Executive Agency	Timing of Survey
Belgium (Flemish part only)	4,900	Population and Family Study Centre, Dept. of Public Health and the Family, Brussels	1975/76
Bulgaria	6,000	Scientific Research Institute of Statistics, Sofia	1976
Czechoslovakia	3,000	Federal Statistical Office, Prague	1977
Denmark	6,000	Danish National Institute of Social Research, Copenhagen	1976
Finland	6,100	Population Research Institute, Helsinki	1977
France	3,600 women 800 males	Institut National d'Etudes Démographiques, Paris, and Institut National de la Statistique et des Etudes Economiques	1977/78
Hungary	4,800	Hungarian Central Statistical Office, Budapest	1977
Israel	6,000	The Hebrew University, Jerusalem	1973/74
Italy	7,000	Statistical Institute, Rome	1979
Japan	2,344	Dept. of Statistics and Information, Ministry of Health and Welfare, Tokyo	1974
Netherlands (10 marriage cohorts only)	4,522	Netherlands Interuniversity Demographic Institute, Voorburg	1975
Norway	5,100	Central Bureau of Statistics, Oslo	1977/78
Poland	10,000	Central Statistical Office, Warsaw	1977
Romania	10,000	Population Commission of Romania, Bucharest	1978
Spain	6,500	Instituto Nacional de Estadística, Madrid	1977

Country	Sample Size	Executive Agency	Timing of Survey
Sweden	5,000	Central Bureau of Statistics	1981
Switzerland	1,800	University of Zurich	1980
U.K.	6,589	Office of Population Censuses and Surveys, London	1976
U.S.A.	10,000	National Center for Health Statistics, Washington, DC	1976
Yugoslavia	7,500	Federal Institute of Statistics, Belgrade	1976

Appendix III

COUNTRY SECOND STAGE ANALYSIS PROJECTS

A Projects initiated by the country whether funded *via* WFS or by other means.

B Projects initiated by WFS with the concurrence of the country for the purpose of illustrative analysis, technical bulletins or other methodological work.

C Projects initiated or carried out by staff of organizations (mainly universities) outside the country.

D Work done by university students (usually nationals of the country) leading to a thesis for a Masters or Ph.D. degree.

Projects which have been published or mimeographed in their final form are marked with an asterisk.

	Status	Author or Organization	Topic or Title
Bangladesh			
1	D*	Alauddin, M.	'Rural Development and Family Planning Behaviour in Bangladesh Villages'. PhD. Thesis, University of Michigan.
2	A/B	Ali, Nawab, Casterline, J. and Mastropaolo, L.	Analysis of Tape-Recorded Interviews.
3	D*	Bashir-ud-din-Ahmad	'Differential Fertility in Bangladesh'. M.A. Thesis, Australian National University.
4	B*	Brass, W.	Screening Procedures for Detecting Errors in Maternity History Data.
5	D*	Chowdhury, A.M.R.	Link between Nutrition and Fertility.
6	C*	Hogan, D.P.	'Fertility Levels, Trends and Differentials in Bangladesh 1966–1975'. Community and Family Study Center, University of Chicago.
7	A*	Hossain, M. and Ali, Nawab M.	Regional Nuptiality Pattern in Bangladesh.
8	D	Huda, S.	Analysis of Community Level, Fertility and Mortality Data. Differential Fertility in Bangladesh – A Regional Analysis.
9	A/B*	Kabir, M.	Evaluation of Adult Mortality Trends from Data on Marital Status.

	Status	Author or Organization	Topic or Title
10	A/B*	Kabir, M.	Age Pattern of Marriage in Bangladesh.
11	A/B*	Kabir, M.	Differentials and Trends in Infant and Child Mortality.
12	A*	Rahim, A.	Determinants of Contraceptive Use in Bangladesh.
13	D*	Shahidullah, M.	Differential Nuptiality Patterns in Bangladesh. (Regional Marriage Patterns and Socio-economic Characteristics of Married Couples). Thesis, Australian National University.
14	A*	Sohail, M.	Differentials in Cumulative Fertility in Bangladesh.
15	D	Rhul, A.	Factors Differentiating Fertility and Fertility Orientation in Bangladesh (1969–1976).
16	D	Zaman, Wasin-Alimuz	Determinants and Differentials of Fertility in Bangladesh.
17	C	Ahmed, M.	a) Levels and Trends of Infant and Child Mortality in Bangladesh. b) Factors Affecting Fertility in Bangladesh. c) Errors in the BFS data.
18	C	Edmonston, B.	Relationship of Infant and Child Mortality with a) Age of mother b) Birth order c) Birth interval. The influence of demographic factors within the context of family and community variables.
19	D	Matin, K.A.	Impact of Education on Fertility.
20	D	Mitra, S.N.	Infant and Childhood Mortality in Bangladesh: Levels and Differentials.
21	A	Ali, Nawab	Sex Preferences and Sex Composition of Living Children and Their Relationships to Infant Mortality and Birth Control.
22	A	Mitra, S.N.	The Unmet Need for Birth Control.
Cameroon			
1	A	Bioumla, A.	Evaluation of Cameroon Fertility Survey Data.

	Status	Author or Organization	Topic or Title
Colombia			
1	A*	Hernández, A.G. and Florez, C.E.N. (CCRP)	'Fertility Trends and Differentials in Colombia'. Corporación Centro Regional de Población (CCRP), Feb. 1978.
2	B*	Hobcraft, J.N.	'Evaluating Fertility Levels and Trends for Colombia: An Illustrative Analysis'. *WFS Scientific Reports*, No. 15, 1980.
3	C	Rosenzweig, M.R. and Schulz, T.P.	Family Planning and Health Programme Effects on Fertility and Mortality: Explanations for Colombia Fertility Decline.
4	B*	Somoza, J.	'Infant and Child Mortality in Colombia: An Illustrative Analysis'. *WFS Scientific Reports*, No. 10, 1980.
5	B*	Rodríguez, G. and Hobcraft, J.N.	'Illustrative Analysis: Life Table Analysis of Birth Intervals in Colombia'. *WFS Scientific Reports*, No. 16, 1980.
6	A*	Pierret, C. and Ochoa, L.H. (C.C.R.P.)	Comparison with Earlier Studies.
7	A*	Estrada A. and Ochoa, L.H. (C.C.R.P.)	Knowledge and Use of Contraception.
8	D*	Hernández, A., Florez, C.E. and Pierret, C. (C.C.R.P.) and Goldman, N.	'An Analysis of Nuptiality Data in the Colombia National Fertility Survey'. *WFS Scientific Reports*, No. 11, 1980.
9	B*	Hobcraft, J.N. and Rodríguez, G.	'Methodological Issues in Life Table Analysis of Birth Intervals'. Paper presented at Analysis of Maternity Histories Seminar, London, 1980.
10	B*	Rodríguez, G. and Trussell, J.	'Maximum Likelihood Estimates of the Parameters of Coale's Model Nuptiality Schedule from Survey Data'. *WFS Technical Bulletins* No. 7, 1980.
11	A	Baldion, E. (C.C.R.P.)	Infant Mortality and Fertility in Colombia.
12	A*	Estrada, A., López-Escobar, G. and Ochoa, L.H. (C.C.R.P.)	'Changes in the Patterns of Family Planning in Colombia between 1968 and 1978'. Paper presented at IUSSP seminar, Bogotá, Oct. 1980.
13	A*	Pierret, C. (C.C.R.P.)	'Comparison of Family Planning Data obtained from Surveys and Service Statistics'. Paper presented at IUSSP seminar, Bogotá, Oct. 1980.

	Status	Author or Organization	Topic or Title
14	A	Gomez, E. (C.C.R.P.)	Female Work and Family Formation in Colombia.
15	A	Prada, E. (C.C.R.P.)	Patterns of Fertility Decline in Latin America, with specific reference to Colombia.
16	A*	Ochoa, L.H. (C.C.R.P.)	'Prevalence of Contraceptive Use in Colombia: Determinant Factors and Policy Implications'. Paper presented at IUSSP seminar, Bogotá, Oct. 1980.
17	D	Staples-Robertson, J.	Fertility, Contraception and Women's Economic Status.
18	D	Richardson, P.	Household Structure.
19	C	Kiermeyer, S.	Differentials in Infant Mortality. Rates and Levels of Mortality and Fertility.
Costa Rica			
1	A*	Behm, H. and Guzmán, J.M.	'Socio-economic Differentials in the Decline of Fertility in Costa Rica, 1960–70'. Notas de Población, CELADE, 1979.
2	A*	Gómez, M.B.	'Female Sterilization in Costa Rica'. Workshop on Methodological Aspects of Demographic Analysis of Sterilization. Honolulu, September 1979.
3	A*	Guzmán, J.M. and Segovia, M.C.	'Foetal Mortality in Costa Rica'. Notas de Población, No. 19, CELADE, 1979.
4	A*	Guzmán, J.M.	'Evaluation of Birth History Data in the Costa Rica National Fertility Survey 1976'. CELADE, Series C, No. 1011, San José, 1980.
5	A	Rodríguez, V. and Rosero, L.	Fertility Levels, Trends and Differentials in Costa Rica: A Comparative Analysis of Three Surveys.
6	A	Rodríguez, V.	Indirect Estimates of Fertility and Infant Mortality.
7	C	Stycos, J. M.	Social and Psychological Factors Affecting Fertility.
Dominican Republic			
1	A*	Bartlema, J.	'Fertility in the Dominican Republic Estimated from National Fertility Survey Data', CELADE, Series A, no. 157, Chile, 1978.

	Status	Author or Organization	Topic or Title
2	C*	Bocaz, A.	'A Bilogistic Model to Summarize Cohort Nuptiality Experience'. Notas de Población, VIII, no. 19 CELADE, Costa Rica, 1979.
3	C*	Guzmán, J.M.	'Estimation of Mortality from the National Fertility Survey'. CELADE Series C. No. 1007, Costa Rica, 1978.
4	A*	Guzmán, J.M.	'Evaluation of the Dominican Republic National Fertility Survey, 1975'. *WFS Scientific Reports*, No. 14, 1980.
5	A*	Guzmán, J.M. and Duval, M.	Fertility and Contraception.
6	C*	Weekes-Vagliani, W.	'Women in Development – At the Right Time for the Right Reasons'. OECD Development Centre Studies, Paris, 1980.
Fiji			
1	C	Allen, E.	A Dynamic Model of Component Fertility, Integrating the Spacing, Timing and Number of Children Born to a Woman.
2	C	Hoefnagel, E.R.	Impact of Background Variables in the Determination of Fertility.
3	C*	Ogawa, H.	'Application of Multiple Classification Analysis to Survey Data'. Regional Workshop on Techniques of Analysis of World Fertility Survey Data. Asian Population Studies Series, No. 44, Dec. 1978.
4	C*	Ogawa, H.	'Own-Children Estimates of Fertility'. As above.
5	B*	Potter, J.E.	'Methods of Detecting Errors in WFS Data: An Application to the Fiji Fertility Survey'. Paper presented at IUSSP Meeting, Mexico City, 1977.
6	B*	Srikantan, K.S.	'Evaluation from Dual Responses of the Quality of Fertility Survey Data: Comparison of the main and post-enumeration surveys of the Fiji Fertility Survey'. *WFS Occasional Papers*, No. 21, 1979.
7	B*	Srinivasan, K.	'Birth Interval Analysis in Fertility Surveys'. *WFS Scientific Reports*, No. 7, 1980.

	Status	Author or Organization	Topic or Title
8	C*	Weekes-Vagliani, W.	'Women in Development – At the Right Time for the Right Reasons'. OECE Development Centre Studies, Paris, 1980.
Guadeloupe and Martinique			
1	C*	Charbit, Y.	'Union Patterns and Family Structure in Guadeloupe and Martinique'. Paper presented at Caribbean Workshop on the Analysis of Data on Unions and Partners, Barbados, Oct. 1979.
2	C*	Charbit, Y. and Leridon, H.	Union Patterns and Fertility in Guadeloupe and Martinique: A Comparison of Various Demographic Methods.
3	C	Charbit, Y. and Leridon, H.	Evaluation of Fertility Data of the Guadeloupe and Martinique Survey.
4	C*	Brouard, N.	A Factor Analysis and Typology of the Survey on Fertility and Contraception in Martinique.
Guyana			
1	C	Abdulah, N.	Contraceptive Practice and its Impact on Fertility.
2	A*	Balkaran, S.B.	Evaluation of the Guyana Fertility Survey 1975.
3	D	Balkaran, S.B.	Analysis of Fertility.
4	A	Ebanks, G.E.	Infant and Child Mortality and their Relationship to Fertility.
5	C	Harewood, J.	Analysis of Data on Unions and Partners.
6	A/B	Lightbourne, R.E.	Socio-Economic Factors Affecting Fertility Preferences.
7	A/B	Singh, S. and Harvey, G.	Socio-Economic Factors and Fertility.
8	A/B	Abdulah, N. and Singh, S.	Female Labour Force Participation and Fertility.
9	D*	Singh, J.	Selected Aspects of Guyanese Fertility Education, Mating and Race.

	Status	Author or Organization	Topic or Title
Haiti			
1	B	Tardieu, C.	Evaluation of Haiti Fertility Survey Data.
Indonesia			
1	A	Achmad, S.I.	The Effect of Education on Fertility Behaviour of Women in Java and Bali. Ph.D. dissertation, Florida State University, 1980.
2	A	Soeradji, Budi	Pattern of Age at Marriage, CBS, 1980.
3	A*	Freedman, R., Khoo, S.E. and Supraptilah, B.	Modern Contraceptive Use in Indonesia: A Challenge to Conventional Wisdom.
4	A*	Soeradji, Budi, and Hadmadji, H.	Contraceptive Use in Java-Bali: A Multivariate Analysis of the Determinants of Contraceptive Use.
5	A	Soeradji, Budi, and Hadmadji, H.	Regional Differentials of Age at Marriage. To be published by Demographic Institute, Faculty of Economics, University of Indonesia, 1981.
6	A	Singarimbun, Masri	Analysis of the Socio-Economic and Regional Differentials of Modern Contraceptive Adoption in Indonesia.
7	A	Nam, C.	Life Table Analysis of Nuptiality and/or Birth Intervals.
8	A*	Sinquefield, J.C. and Sungkono, B.	'Fertility and Family Planning Trends in Java and Bali': *International Family Planning Perspectives*. Vol. 5, No. 2, July 1979.
9	A*	Supraptilah, B.	Evaluation of Data.
10	D*	Pudjastoeti, Sri	Factors Affecting Marital Stability and Fertility in Indonesia. MSc Thesis, Florida State University, 1979.
11	A*	Central Bureau of Statistics	'Proceedings of the Seminar on Findings of the Indonesia Fertility Survey 1976'. CBS, 1980.
12	A	Mamas, G.M. and Palmore, J.A.	Matching and Comparison of SUPAS II and SUPAS III Data.
13	B*	MacDonald, A.L., Simpson, P.M. and Whitfield, A.M.	'An Assessment of the Reliability of the Indonesian Fertility Survey Data'. *WFS Scientific Reports*, No. 3, 1978.

	Status	Author or Organization	Topic or Title
14	A	Mamas, G.M. and Palmore, J.A.	Age at Marriage, Number of Times Married and Fertility.
15	A	Hadmadji, H.	The Unmet Need for Birth Control.
Jamaica			
1	C	Abdulah, N.	Contraceptive Practice and its Impact on Fertility.
2	C	Harewood, J.	Additional Country Report Covering Module on Cost and Benefits of Children and other Topics not Included in the First Report.
3	C	Harewood, J.	Analysis of Union Status and Partners.
4	A/B	Lightbourne, R.	Socio-Economic Factors Affecting Fertility Preferences.
5	B	Singh, S.	Evaluation of Fertility and Nuptiality.
6	A	Ebanks, G.E.	Infant and Child Mortality and their Relationship to Fertility.
7	C	Abdulah, N. and Singh, S.	Female Labour Force Participation and Fertility.
Jordan			
1	A*	Abdul-Aziz, A.	Analysis of Birth Intervals
2	C*	Brass, W., Hill, A., Blacker, J. and Al-Ma'ayta, A.R.	Analysis of Household Survey Data.
3	A*	Abdul-Aziz, A.	Evaluation of Data.
4	D*	Abdul-Aziz, A.	'Fertility and Mortality in Jordan. An Analysis of Results from the 1976 Household Survey'. MPh. Thesis, Cairo Demographic Centre, 1979.
5	D*	Al-Ma'ayta, A.R.	'A Study of Mortality Estimation'. MSc. Thesis, London School of Hygiene and Tropical Medicine, 1980.
6	A	El-Atoum, Shafiq	Childhood Mortality in the Districts of Balqa-Amman.
7	A	Abu-Jaber, K., El-Asad, S., Sahawneh, F. and Abu Nawar, A.M.	Levels and Trends of Fertility and Mortality in Jordan.

	Status	Author or Organization	Topic or Title
8	A	Abu Nawar, A.M.	Socio-Economic Determinants of Fertility in Jordan.
9	A	El-Hiyari, F.	Fertility Preferences in Jordan.
10	A	Farid, S.	Changing Nuptiality Patterns in Jordan.
11	A	Hammouda, A.A.	Socio-Economic Determinants of an Impact of Contraceptive Use on Fertility in Jordan.
12	A*	El-Asad, Shuja and Khalifa, A.M.	'Family Structure in Relation to Fertility in Jordan'. Department of Statistics, Amman, 1977.
13	A	Al-Araby, M.	Family Structure and Fertility in Jordan.
Kenya			
1	A*	Henin, R.	'Evaluation of Birth Histories: A Case Study of Kenya'. Paper presented at Analysis of Maternity Histories Seminar, London, April 1980.
2	A	Henin, R.	Relationship between Nuptiality and Fertility.
3	A*	Mosley, W.H., Werner, L. and Becker, S.	The Dynamics of Birth Spacing and Marital Fertility in Kenya.
4	A	Mosley, W.H.	Comparison of Survey Data on Contraception with Service Statistics and Assessment of Demand Supply Factors.
5	A*	Mott, F.	Infant Mortality in Kenya: Evidence from the Kenya Fertility Survey.
6	D	Sabiti, K.	Analysis of Fertility.
7	A*	Smock, A.	The Relationship between Education and Fertility in Kenya.
8	A	Werner, L.	Comparison of Fertility and Demographic Survey (KFS v. NDS) data, by individual matching of records.
9	A	Werner, L.	Community Level Analysis.
10	A*	Dow, T.E. and Werner, L.	Continuity and Change in Metropolitan and Rural Attitudes towards Family Size and Family Planning in Kenya between 1966/1967 and 1977/1978.
11	A	Central Bureau of Statistics	The Implications of the Kenya Fertility Survey Findings for Government Policy and Programmes.

	Status	Author or Organization	Topic or Title
12	B	WFS	Analysis of Factors other than Contraception Affecting Fertility.
Korea, Republic of			
1	A*	Lee, Hoon Koo and Ahn, Chung Si	Socio-Demographic and Psychological Characteristics of Women with a High Birth Risk.
2	A*	Kim, Young Ja	Analysis of Birth Intervals and Fertility in Korea.
3	A*	Kim, Nam Il and Choi, Byoung Mohk	A Multivariate Analysis of Preferences for the Number and Sex of Children and Contraceptive Use in Korea.
4	A*	Koo, Sung Yeal and Lee, Sook Min	Determinants of Excess Fertility and its Impact on the Economic Activity of Korean Women.
5	A*	Kim, Son Ung	Factors Affecting Induced Abortion Behaviour Among Married Women in Korea.
6	A*	Kim, Ock Kyung and Choe, Ehn Hyun	Abortion and Births Averted in Korea.
7	A*	Kwon, Tai Hwan	Socio-Economic Factors Affecting Fertility in Korea.
8	A	Park, Heung Soo	Analysis of Problem Groups in Family Planning and Factors Affecting them.
9	A*	Park, Jae Young, Hyun, Moon Kil and Jeon, Tai Yun	Biological and Socio-Economic Factor Affecting Recent Korean Infant Mortality.
10	A*	Park, Sung Hyun and Shin, Han P.	A Study of the Influence of Economic Development and Social Change on Fertility.
11	A*	Kim, Mo Im	Nuptiality and its Implication as a Measure of Beyond Family Planning.
12	A*	Kong, Jeong Ja	Exposure to Family Planning and Family Planning Acceptance.
13	A*	Lee, Sea Baick, Choi, Soon and Kim, Hong Suk	A Study of the Impact of Community Level Characteristics on Family Planning and Fertility Behaviour in Korea.
14	D	Choe, Ehn Hyun	Son Preference.
15	D	Kim, Tai Hun	Age at First Marriage and Fertility in Korea.

	Status	Author or Organization	Topic or Title
16	C*	Rindfuss, R., Bumpass, L., Palmore, J.A. and Han, Dae Woo	The Transformation of Korean Childspacing Practices.
17	D	Son, Hong	Fertility and Economic Development in Korea.
18	A	Park, Jae Young	Estimation of Levels of Fertility and Mortality and their Relation to Socio-Economic Variables in Korea.
19	A	Han, In Sook	Female Labour Force Participation and Fertility.
20	A	Lim, In Sook	Infant and Child Mortality.
21	A	Choi, Byoung Mohk	Child Spacing.
Malaysia			
1	A*	Mason, W. and Palan, V.T.	'Female Employment and Fertility in Peninsular Malaysia. Preliminary Results from MFFS 1974'. Paper presented at annual convention of American Sociological Association, Sept. 1978.
2	B*	Mason, W.	Impact of Community Level Factors on Fertility and Related Phenomena.
3	C*	Mason, K.O. and Palan, V.T.	Female Employment and Fertility in Peninsular Malaysia: The Maternal Role Incompatibility Hypothesis Reconsidered.
4	A*	Mohd. Yatim, M.	Evaluation of Fertility and Nuptiality Data.
5	D*	Tan Boon Ann	Differences in Fertility in Peninsular Malaysia: The Ethnic Factor. Ph.D. Thesis, University of Michigan.
6	A*	Tey Nai Peng and Idris Abdul Rahman	Factors Affecting Contraceptive Use in Peninsular Malaysia.
7	A	National Family Planning Board and Takeshita, Y.J.	Service Accessibility and Contraceptive Use.
8	D*	Kandiah, V.	Child Spacing in Peninsular Malaysia: 1967 and 1975.
9	C	Rindfuss R. and Hirschman, C.	Age at First Birth.

	Status	Author or Organization	Topic or Title
10	D*	Khairon, Sharif S.	'Factors Affecting Fertility'. MSc. Thesis, University of the Philippines.
11	A*	National Family Planning Board	'Proceedings of the Seminar on Malaysian Fertility and Family Survey, Population and Development'. NFPB.
12	A*	Nor Laily Aziz, Tan Boon Ann and Takeshita, Y.J.	'Utilization of the World Fertility Survey for Population Programme Planning: the Case of Malaysia'. Paper presented at IUSSP Seminar, Bogotá, Oct. 1980.
13	A	National Family Planning Board and Takeshita, Y.J.	Demographic and Socio-Economic Profiles of Non-Programme Contraceptors.
14	A	National Family Planning Board and Takeshita, Y.J.	Contraceptive Use Effectiveness Among Non-Programme Contraceptors.
15	A	National Family Planning Board	Analysis of Childlessness.
16	A	National Family Planning Board	Cost Benefit of Children.
17	A	National Family Planning Board	Analysis of Breastfeeding Patterns.
18	A	National Family Planning Board	The Effects of Infant Mortality on Fertility.
19	A	National Family Planning Board	Marital Patterns and Marital Instability.
20	A	Rahman, Aminah Abdul	The Unmet Need for Birth Control.
21	A	Leong, Lin Chee	Fertility Trends Using Birth History Data from Two Surveys.
22	D	Salleh, Majid	Economic Determinants of Fertility. Ph.D. Thesis, University of Hawaii.
Mexico			
1	D	Juarez, F.	'An Analysis of the Family Formation Process in Mexico'. Paper Presented at the 2nd National Congress in Demography. Mexico.

	Status	Author or Organization	Topic or Title
2	A*	Ordorica, M. and Potter, J.E.	An Evaluation of the Demographic Data Collected in the Mexican Fertility Survey.
3	A	Quilodran, J.	Levels and Trends of Fertility and Nuptiality since 1976.
4	A	Unikel, L.	Urban/Rural Differentials in Fertility and Nuptiality.
5	D	Welti, C.	Analysis of Community Level Data.
Nepal			
1	B*	Goldman, N., Coale, A. and Weinstein, M.	'The Quality of Data in the Nepal Fertility Survey'. *WFS Scientific Reports*, No. 6, 1979.
2	A	Thapa, S and Palmore, J.A.	Analysis of Birth Spacing.
3	A*	Regmi, G.	Differentials in Contraceptive Knowledge in Nepal.
4	A	Thapa, S. and Banister, J.	The Demographic Situation in Nepal.
5	A	Thapa, S.	Estimation of Fertility Levels and Trends by Application of Own-Children Techniques.
6	A	Thapa, S. and Luther, N.	Using Pearson Type III Curve to Estimate Missing Fertility in Retrospective Data.
7	A*	Thapa, S. and Retherford, R.D.	Infant Mortality Levels and Trends Based on Birth History Data.
8	A	Thapa, S.	Estimating Age Specific Fertility Rates.
9	A	Thapa, S.	Policy Implications of Nepal Fertility Survey.
10	A*	Nepal Family Planning and Maternal Child Health Project	'Proceedings of National Conference on Nepal Fertility Survey 1976'. Nepal FP & MCH Project, Kathmandu, Dec. 1979.
11	A	Regmi, G.	The Unmet Need for Birth Control.
Pakistan			
1	D	Akhtar, S.	Female Labour Force Participation.
2	A/B*	Kabir, M.	'Infant and Child Mortality Levels in Pakistan'. *Genus*. Vol. 34, No. 3–4, 1978.

	Status	Author or Organization	Topic or Title
3	D*	Karim, M.S.	'Nuptiality in Pakistan: Trends and Determinants'. Background Paper No. 2. WFS Conference, London, July 1980.
4	D*	Nizamuddin, M.	'Community and Programme Variables and their Effect on Fertility-Related Behaviour of Rural Pakistani Women'. Background Paper No. 6. WFS Conference, London, July 1980.
5	D	Sattar, Z.	Education and Fertility.
6	A*	Shah, N.M. and Shah, M.A.	'From Non-Use to Use: Prospects of Contraceptive Adoption in Pakistan'. Background Paper No. 4. WFS Conference, London, July 1980.
7	A*	Shah, N.	'Past and Current Contraceptive Use'. *Studies in Family Planning*, Vol. 5, May 1979.
8	D*	Shah, I.	'Breastfeeding and Fertility'. Background Paper No. 5, WFS Conference, London, July 1980.
9	A*	Syed, S.H.	'Female Status and Fertility in Pakistan'. *The Pakistan Development Review*, Vol. XVII, No. 4, 1978.
10	A/B*	Booth, H. and Alam, I.	'Fertility in Pakistan: Levels, Trends and Differentials'. Background Paper No. 1, WFS Conference, London, July 1980.
11	A/B*	Casterline, J.	'Fertility Differentials in Pakistan'. Background Paper No. 3, WFS Conference, London, July 1980.
12	A/B	Alam, I. and Cleland, J.	Trends and Differentials in Infant and Child Mortality.
13	B*	Chidambaram, V.C.	'Findings from Second Stage Analysis of Pakistan Fertility Survey Data'. Paper presented at WFS Conference, London, July 1980.
14	A	Yusuf, F. and Retherford, R.D.	'Urban-Rural Fertility Differentials in Pakistan'. *Journal of Bio-Social Sciences*. Forthcoming.
15	A	Sattar, Z.	'Rural-Urban Fertility Differentials: 1975'. *The Pakistan Development Review*, Autumn 1979.
16	D	Karim, M.S.	'Female Nuptiality and Fertility in Pakistan'. Ph.D. Thesis, Cornell University, 1980.
17	A	Shah, N.	The Relationship between Purdah and Fertility.
18	A	Shah, N.	Female Labour Force Participation.

	Status	Author or Organization	Topic or Title
19	A	Shah, N.	Various Socio-Economic Determinants of Family Size and Contraceptive Use.
20	B*	Booth, H.	'Evaluation of Pakistan Fertility Survey Data'.
21	D*	Nizamuddin, M.	'The Impact of Community and Programme Factors on the Fertility Behaviour of Rural Pakistani Women'. PhD. Thesis, University of Michigan, 1979.
22	D	Shah, I.	Fertility Determinants in Pakistan.
23	B*	Page, H., Lestaeghe, R. and Shah, I.	Breastfeeding and its Impact on Fertility.
24	A	Sattar, Z.	Child Spacing.
Panama			
1	B*	Westoff, C, McCarthy, J., Goldman, N. and Mascarín, F.	'Illustrative Analysis: Contraceptive Sterilization and Births Averted in Panama'. *WFS Scientific Reports*, No. 4, 1979.
2	C	Stycos, J.M. and Edmonston, B.	Influence of Community Level Variables and Factors other than Contraception on Mortality.
3	A*	Araica, H.	'The Decline of Fertility in Panama'. Mineo Report, Ministry of Planning and Economic Policy. Panama City, Jan. 1980.
4	A	Gougan, L.	Female Labour Force Participation and Fertility.
5	A	Guerra, F.	Relation between Infant Mortality and Fertility in Panama.
Peru			
1	A	Oficina Nacional de Estadística	Regional Trends and Differentials in Fertility and their Relationship to Contraceptive Use: A Comparison of 1977 and 1960/70 Surveys.
2	A*	Céspedes, Y.	Evaluation of Demographic Data.
3	A	Mostajo, P.	Attitudes Regarding Family Size and Contraceptive Use in Peru.
4	A	Ramos, H.	Maternal and Infant Services and Child Mortality.

	Status	Author or Organization	Topic or Title
5	A	Suarez, F.	The Effect of Family Formation on Labour Force Participation.
6	C*	Rodgers, G.B.	'Female Labour Force Participation in Peru: An Analysis Using the World Fertility Survey'. *World Employment Programme Research Paper*, No. 96.
7	B*	O'Muircheartaigh, C.O., Marckwardt, M. and Verma, V.K.	'Response Reliability in WFS Data'. *Bull. Int. Statist. Inst.*, 48, March 1979.
8	B*	O'Muircheartaigh, C.O. and Marckwardt, A.M.	'An Assessment of the Reliability of WFS Data'. Paper presented at WFS Conference. London, July 1980.
Philippines			
1	A*	Reyes, F.L.	Evaluation of Quality of Data.
2	A*	National Census and Statistical Office	'Proceedings of the National Seminar on the 1978 Republic of the Philippines Fertility Survey'. NCSO, Manda, Aug. 1980.
3	A	Engracia, L.I., Mortel, D.M. and Nartatez, L.B.	Impact of family planning on the birth rate in the Philippines.
4	A	Guzmán, E.A., Gonzaga, K.M., Engracia, L.T., Mortezo, Linda and Zafra, J.S.	Infant and child mortality: trends, correlates and impact.
5	A	Guzmán, E.A., Raymundo, Corazón-Mejia and Morada, H.B.	Family formation in the Philippines: data from the 1978 Republic of the Philippines Fertility Survey.
6	A	Cabigón, J.V., Baal, L.A. and Hufana, L.J.	The Timing and Spacing of Births: The Philippines Case.
7	A	Cabigón, J.V.	Factors Affecting Current Use and Non-use of Contraception.
8	A	Engracia, L.T. and Herrin, A.N.	Female Work Participation and Fertility in the Philippines.
9	A	Gonzales, M.C. and Reyes, F.L.	Demographic, Socio-economic and Cultural Correlates of Levels of Childbearing in the Philippines.
10	C	Pullum, T.W.	The Impact of Fertility Preferences Upon Use of Contraception: a Further Analysis of Philippines WFS Data.

	Status	Author or Organization	Topic or Title
11	D	Zablan, Z.C.	The Bio-Social Aspects of Human Reproduction: The Philippines Case.
12	D	Engracia, L.T.	Female Labour Force Participation and Fertility in the Philippines.
13	A	Reyes, F.L.	Child Spacing.
Senegal			
1	A	Gueye, L.	Evaluation of Senegal Fertility Survey Data.
Sri Lanka			
1	B*	Caldwell, J.C., Ruzicka, L.T. and Immerwahr, G.	Family Structure and Fertility.
2	C*	Camus, G.	Study of Fertility in Sri Lanka.
3	D	Goldberg, H.	Recent Changes in Fertility and Nuptiality.
4	A*	Meegama, A.N.	'Socio-economic Determinants of Infant and Child Mortality in Sri Lanka: An analysis of Post-War Experience'. *WFS Scientific Reports*, No. 8, 1980.
5	C*	Immerwahr, G.	Contraceptive Use in Sri Lanka.
6	C	Langford, C.	Investigation of Fertility Behaviour of the Estate Population.
7	B*	Pullum, T.W.	'Illustrative Analysis: Fertility Preferences in Sri Lanka'. *WFS Scientific Reports*, No. 9, 1980.
8	B*	Little, R.J.A. and Perera, S.	'Illustrative Analysis: Differentials in Cumulative Fertility in Sri Lanka – A Marriage Cohort Approach'. *WFS Scientific Reports*, No. 12, 1980.
9	B*	Alam, I. and Cleland, J.G.	An Analysis of Fertility Levels and Trends from the Sri Lanka Fertility Survey, 1975.
10	B*	Trussell, J.	'Illustrative Analysis: Age at First marriage in Sri Lanka and Thailand'. *WFS Scientific Reports*, No. 13, 1980.
11	C*	Ogawa, H. and Rele, J.R.	Age at Marriage and Cumulative Fertility in Sri Lanka.
12	C*	Akin, J. *et al.*	Breastfeeding Patterns and Determinants: a Case Study with Sri Lanka WFS Data.

	Status	Author or Organization	Topic or Title
13	C*	Ojelada, M.A.	Determinants of Fertility in Sri Lanka – An Analysis of WFS Data, 1975.
14	C*	Weekes-Vagliani, W.	'Women in Development – At the right time for the right reasons'. OECD Development Centre Studies, 1980.
15	D	Timaeus, I.M.	A comparison and evaluation of the sources of data on nuptiality in Sri Lanka.
16	A	Gemage, S. and Palmore, J.A.	Child Spacing.
17	C*	Standing, G.	'Analysing Women's Labour Force Activity with the WFS: Insights from Sri Lanka'. ILO Population and Labour Working Papers, No. 85, 1980.
18	A*	Wijeyesekara, M. and Wijemanne, E.L.	'Determinants of Fertility – Sri Lanka Case Study'. Marga Institute, Colombo, Oct. 1980.
19	C*	World Health Organization	'Health Related Aspects of Fertility in Sri Lanka. A Report Based on Data from the 1975 World Fertility Survey'. Paper presented at UN Working Group on Comparative Analysis of WFS Data, Geneva, Nov. 1980.
20	C	Dechering, W. and Palaniappan, V.	Decline of the Birth Rate on Tea Estates in Sri Lanka.
21	B*	Smith, D.	Illustrative Analysis: Marriage Dissolution and Remarriage in Sri Lanka and Thailand.
22	A	Gamage, S. and Palmore, J.A.	Fertility Preferences.
Thailand			
1	A*	Arnold, F. and Pejaranonda, C.	Economic Factors and Family Size Decisions in Thailand. SOFT Report No. 2.
2	A	Arnold, F. and Vibulsresth, S.	Sex Preference for Children and its Impact on Fertility and Family Planning.
3	D	Chayowan, N.	Community Level Factors and their Relationship to Fertility.
4	A	Debavalya, N.	Female Labour Force Participation and Fertility Differentials.
5	A*	Debavalya, N. and Knodel, J.	Fertility Transition in Thailand: A Comparative Analysis of Survey Data. SOFT Report No. 3.

	Status	Author or Organization	Topic or Title
6	A*	Hoonpanich, R.	Fertility Preferences and Contraceptive Use.
7	A*	Phananiramai, M.	The Effects of Education on Contraceptive Use.
8	A	Phananiramai, M. and Mason, A.	Population Change and Economic Development.
9	D	Pitaktepsombati, P.	Analysis of Fertility in Thailand.
10	D	Vibulsresth, S.	Effects of Infant and Child Mortality on Fertility.
11	A	Debavalya, N.	Patterns of Fertility Decline in Asia with special reference to the case of Thailand.
12	B*	Cleland, J., Little, R.J.A. and Pitaktepsombati, P.	'Illustrative Analysis: Socio-economic Determinants of Contraceptive Use in Thailand'. *WFS Scientific Reports*, No. 5, 1979.
13	B*	Trussell, J.	'Illustrative Analysis: Age at First Marriage in Sri Lanka and Thailand'. *WFS Scientific Reports*, No. 13, 1980.
14	A*	Limanonda, B.	Nuptiality Patterns in Thailand.
15	D	Limanonda, B.	Nuptiality Study.
16	A	Debavalya, N. and Knodel, J.	Factors Affecting Breast-Feeding.
17	A	Palmore, J.A. and Saengtienchay, C.	Women's Work History and Birth Spacing.
18	B*	Smith, D.	Illustrative Analysis: Marriage Dissolution and Remarriage in Sri Lanka and Thailand.
19	A*	Chananiramai, M.	A Micro-Economic Analysis of the Determinants of Fertility in Thailand. SOFT Report No. 6 (parts taken from an unpublished dissertation with the same title by the same author).
20	A	Chaumplak, M.	The Unmet Need for Birth Control.

Trinidad and Tobago

1	C	Abdulah, N.	Contraceptive Practice and its Impact on Fertility.
2	C	Ebanks, G.E.	Infant and Child Mortality and their Relationship to Fertility.

	Status	Author or Organization	Topic or Title
3	C	Harewood, J.	Analysis of Data on Unions and Partners.
4	C	Lightbourne, R.E.	Socio-economic Factors affecting Fertility Preferences.
5	C	Singh, S.	Socio-economic Factors and Fertility.
6	C	Abdulah, N. and Singh, S.	Female Labour Force Participation and Fertility.
Tunisia			
1	A	Jemai, H.	Evaluation of Tunisian Fertility Survey Data.
Venezuela			
1	A*	Gaslonde, S.	Analysis of Sexual Life History in the Last 12 Months.
2	A*	Vielma, G.	Evaluation of Demographic Data.

Appendix IV

COMPARATIVE ANALYSIS STUDIES

The following is a list of comparative analysis documents involving WFS data known to have appeared during 1980.

1. Chidambaram, V.C., Cleland, John G., Goldman, Noreen and Rutstein, Shea (1980). 'An Assessment of the Quality of WFS Demographic Data'. Paper presented at IUSSP Seminar on the Analysis of Maternity Histories, London, April.

2. Chidambaram, V.C. and Mastropoalo, Lauralee (1980). 'Some Problems in the Use of WFS Data for the Analysis of Family Planning Programmes'. Paper presented at IUSSP Seminar on the Use of Surveys for the Analysis of Family Planning Programmes, Bogotá, October.

3. Cleland, John G. and Rodríguez, Germán (1980). 'How Women's Work and Education Affects Family Size'. *People, Vol. 7*, No. 4, 17–18, October.

4. Concepción, Mercedes (1980). 'Lessons for Policy Makers'. *People, Vol. 7*, No. 4, 10–11, October.

5. Ferry, Benoît and Singh, Susheela (1980). 'Breastfeeding: A Vital Factor in Birth Intervals'. *People, Vol. 7*, No. 4, 19–20, October.

6. Goldman, N. and Westoff, C.F. (1980). 'Can Fertility be Estimated from Current Pregnancy Data?' *Population Studies, Vol. 34*, No. 3, 535–550, November.

7. Johnson-Acsádi, Gwendolyn and Weinberger, Mary Beth (1980). 'Factors Affecting Use and Non-Use of Contraception'. Paper presented at IUSSP Seminar on the Use of Surveys for the Analysis of Family Planning Programmes, Bogotá, October.

8. Lightbourne, Robert E. and Carrasco, Enrique (1980). 'Family Planning Realities in the Third World'. *People, Vol. 7*, No. 4, 12–13 October.

9. Nortman, Dorothy (1980). 'Empirical Patterns of Contraceptive Use'. Paper presented

at IUSSP Seminar on the Use of Surveys for the Analysis of Family Planning Programmes, Bogotá, October.

10. Rodgers, Gerry, Standing, Guy, Viry, David and Wéry, René (1980). 'Comparative Analysis of Women's Labour Force Participation with the World Fertility Survey: Some Preliminary Views'. International Labour Organization Working Paper.

11. Tsui, Amy, Hogan, Denis, Teachman, Jay and Welti-Chanes, C. 'Effects of Social Development and Contraceptive Availability on Recent Fertility'. Draft Report, University of Chicago.

12. CELADE (1980). 'Assessment of Fertility Levels and Trends'. Paper presented at UN Working Group on Comparative Analysis of World Fertility Survey Data, Geneva, November.

13. CELADE (1980). 'Fertility and Family Planning'. Paper presented at UN Working Group on Comparative Analysis of World Fertility Survey Data, Geneva, November.

14. CELADE (1980). 'Socio-Economic Differentials of Fertility'. Paper presented at UN Working Group on Comparative Analysis of World Fertility Survey Data, Geneva, November.

15. UN ESCAP (1980). 'Assessment of Fertility Levels and Trends'. Paper presented at UN Working Group on Comparative Analysis of World Fertility Survey Data, Geneva, November.

16. UN Population Division (1980). 'An Educational Coding System Constructed for Application in the UN Programme of Comparative Analysis of WFS Data'. Paper presented at UN Working Group on Comparative Analysis of World Fertility Survey Data, Geneva, November.

17. UN Population Division (1980). 'A Proposed Occupational Classification System for Women to be Used in the International Analysis of World Fertility Survey Data'. Paper presented at UN Working Group on Comparative Analysis of World Fertility Survey Data, Geneva, November.

18. UN Population Division (1980). 'Fertility Levels and Trends: An Assessment of WFS Data for Nineteen Countries'. Paper presented at UN Working Group on Comparative Analysis of World Fertility Survey Data, Geneva, November.

19. UN Population Division (1980). 'New Findings and Hypotheses Emerging from the Comparative Analysis of WFS Data for Developing Countries'. Paper presented at UN Working Group on Comparative Analysis of World Fertility Survey Data, Geneva, November.

20. UN Population Division (1980). 'Selected Factors Affecting Fertility and Fertility Preferences in Developing Countries: Evidence from the First Fifteen WFS Country Reports'. Paper presented at UN Working Group on Comparative Analysis of World Fertility Survey Data, Geneva, November.

21. UN Population Division (1980). 'Some Demographic Characteristics of Women's Work in Ten WFS Countries'. Paper presented at UN Working Group on Comparative Analysis of World Fertility Survey Data, Geneva, November.

22. UN Population Division (1980). 'Some Implications of Variations in Type and Duration of Work for the Analysis of WFS Data'. Paper presented at UN Working Group on Comparative Analysis of World Fertility Survey Data, Geneva, November.

23. UN Population Division (1980). 'Some Relationships Between Nuptiality and Fertility in Four Countries of the West Indies'. Paper presented at UN Working Group on Comparative Analysis of World Fertility Survey Data, Geneva, November.

24. UN Population Division (1980). 'Use and Non-Use of Contraceptives: A Comparative Analysis of WFS Results for Twenty Developing Countries'. Paper presented at UN Working Group on Comparative Analysis of World Fertility Survey Data, Geneva, November.

25. UN Population Division (1980). 'Use of Correspondence Analysis for the Analysis of Fertility Determinants: Application to four WFS Countries'. Paper presented at UN Working Group on Comparative Analysis of World Fertility Survey Data, Geneva, November.

26. Verma, Vijay, Scott, Chris and O'Muircheartaigh, Colm (1980). 'Sample Designs and Sampling Errors for the World Fertility Survey'. *Journal of the Royal Statistical Society: A, 143(3).*

27. Wéry, René and Viry, David (1980). 'A Discriminant Analysis of Employment Status in a Sample of Developing Countries Using the World Fertility Survey'. Draft International Labour Organisation Working Paper.

28. Westoff, Charles F. (1980). 'Unwanted Births: A New Perspective'. *People, Vol. 7*, No. 4, 15–16, October.

NOTE:
In addition to the above, other comparative analysis studies may be found listed in Appendix VIII to this Report as follows:
1. *WFS Cross National Summaries.*
2. *WFS Conference Papers* – P 2, 3, 4; SF 1, 2, 4, 5, 6(1), 7, 8, 10, 11; M 1, 7, 9.

Appendix V

WFS COMPUTER SYSTEM

1. *Computer hardware configuration at WFS headquarters*
   1 X HP3000 Series III processor with 1 Mbyte of primary storage
   3 X HP7920A 50 Mbyte disc drives
   4 X HP7925 120 Mbyte disc drives
   3 X HP7970 1600 bpi 9 track tape drives
   1 X HP2617A Line Printer
   13 X video terminals
   1 X graphics video terminal
   1 X hard copy terminal
   1 X graphics hard copy printer
   2 X Texas Instruments portable terminals

2. *Computer availability*
   The computer is used *via* on-line terminals and is available 24 hours a day, 7 days a week except for a short period each evening which is reserved for system back-up procedures.

3. *Main general purpose software in use on the WFS computer*

   Languages:
   BASIC, COBOL, FORTRAN, PASCAL, SPL (HP3000 assembler)

   Tabulation/Data Analysis Software:

BMDP-77	Release 1.0
COCENTS	Version 1.3
GLIM	Version 3
SPSS	Version 8

   WFS special purpose software:

CLUSTERS	(sampling errors)
FERTRATE	(fertility rate)
NUPTIALS	(estimates parameters for Coale/McNeil Nuptiality model)
COCGEN	(generator of COCENTS table specifications)

CONVDICT	(converts WFS machine readable dictionaries to SPSS data description or COCENTS load cards)
FORMAT, STRUCT	(card data format and structure checking)
UPDATE, SUPDATE	(data updating)
DEIR	(date edit, imputation recoding)

Miscellaneous:

GPGS	(graphics subroutines)

4. *Use of outside service bureaux*

Service bureau computers are used as necessary for the following:

- copying non-standard tapes
- testing software on IBM 360/370 machines with both OS and DOS operating systems
- solving of country CONCOR problems
- converting and testing software for ICL 1900 machines.

Appendix VI

CALENDAR OF MEETINGS – 1980

Date	Place	Sponsoring Agency	Title of meeting	WFS Attendance
30 January	Cardiff	David Owen Centre	Seminar on Work of WFS	(given by) J. Cleland
17 - 18 March	Washington DC	NAS	Panel on Fertility Determinants	V.C. Chidambaram
24 March – 2 April	Addis Ababa	ECA	First Joint Conference of African Planners, Statisticians and Demographers	C. Scott
8 April	London	ISI/WFS	Ad hoc Committee on Illustrative Analysis	V.C. Chidambaram C. Hendriks
9 – 11 April	London	IUSSP/LSHTM/WFS	Seminar on Analysis of Maternity Histories	Various
10 – 12 April	Denver	PAA	Annual Meeting	J. Cleland
14 – 17 April	Bad Homburg	IUSSP	Seminar on Determinants of Fertility Trends	G. Rodríguez
18 – 19 April	Bad Homburg	IUSSP	Committee on Comparative Analysis of Fertility	G. Rodríguez
1 – 4 May	Washington DC	IASSIST	Workshop	J. Rattenbury
7 – 8 May	Amman	Jordan ISI/WFS	Jordan National Meeting	V.C. Chidambaram S.M. Farid
9 – 13 June	Tunis	AMEP	Colloque de D.M. (Emploi)	M. Baraket
6 July	London	IUSSP	Committee on Comparative Analysis of Fertility	G. Rodríguez J. Hobcraft
7 – 11 July	London	ISI/WFS	World Fertility Survey Conference	All
10 July	London	UNECE	Working Group on Social Demography	V.C. Chidambaram R. Little
10 July	London	IUSSP	Committee on Comparative Analysis of Fertility	G. Rodríguez J. Hobcraft

Date	Place	Sponsoring Agency	Title of meeting	WFS Attendance
14–15 July	London	NAS Committee on Population and Demography	Panel on Pakistan	I. Alam
14–22 August	Edinburgh	IASC	COMPSTAT Conference 1980	L. Pineda A. Westlake
18–21 August	Lima	AMIDEP, ONE, CELADE, CCRP	Organizing Committee for Andean Seminar (January 1981)	E. Carrasco
18–22 August	Bangkok	UN ESCAP ISI/WFS	Regional Seminar on Multivariate Analysis of WFS data	J. Cleland
11–13 September	Belgrade	ISI/WFS	Working Group on Analysis of WFS data	M. Macura G. Rodríguez
16–19 September	Montreux	Hewlett Packard	HP International Users Meeting	M. Pearce
22–23 September	Bogotá	Colombia ISI/WFS	National Meeting on Second Stage Analysis	J. Hobcraft G. Rodríguez
24–26 September	Bogotá	NAS Committee on Population and Demography	Panel on Colombia	J. Hobcraft G. Rodríguez
28–31 October	Bogotá	IUSSP	Committee for the Analysis of Family Planning Programmes	V.C. Chidambaram
6–7 November	Istanbul	Turkey ISI/WFS	National Meeting on Turkish Fertility Survey	Y. Yaşer V.C. Chidambaram D. Smith
18–21 November	Geneva	UN	Working Group on Comparative Analysis of WFS data	J. Hobcraft

Date	Place	Sponsoring Agency	Title of meeting	WFS Attendance
11–13 December	Seoul ISI/WFS	Korea	In Country Seminar on the Findings of the 1975 KNFS/WFS Survey	V.C. Chidambaram D. Smith
15–18 December	Cairo	Institute of Statistical Studies and Research, Cairo University	Seminar on the Demography of Egypt	S.M. Farid J. Hobcraft
17–22 December	Cairo	Cairo Demographic Centre	Annual Seminar	S.M. Farid

Appendix VII

WFS CONFERENCE PROGRAMME

Nature and No. of Session		Subject of Session	Chairman	Organizer(s)	Discussant(s)	Rapporteur (WFS)
Plenary	1	Population trends and policies	F. Falodun (Nigeria)	L. Tabah (UN)	P. Demeny (Population Council)	J. Cleland
Plenary	2/3	Contribution of the WFS to an understanding of the world population situation and to population policies	C. Chandrasekharan (India)	M. Macura (WFS) M. Concepción (Philippines)	J. Holzer (Poland) Y. Takeshita (USA)	S. Farid
Plenary	4	Family formation in developing countries	N. Fisek (Turkey)	K.T. de Graft-Johnson (UNECA)	R. Henin (Population Council) H. Page (Belgium)	R. Ahmad
Plenary	5	Fertility and socio-economic factors in developing countries	S. Suharto (Indonesia)	C. Miró (Panama)	Gu Xingyan (China) J. Harewood (WFS - Caribbean) A. Khalifa (Egypt)	R. Hanenberg
Plenary	6	Fertility decline in developing countries post-1965: case studies	G. Askar (Egypt)	W. Mauldin (USA)	J. Rele (UNESCAP) L. Savane (CODESRIA)	K. Balasubramanian
Plenary	7	Factors affecting fertility in developed countries	J. Thompson (UK)	H. Leridon (France)	A. Klinger (Hungary) J. Berent (UNECE) C. Westoff (USA)	M. Baraket
Plenary	8	General summary of policy implications	Parmeet Singh (Kenya)	A. Coale (IUSSP)		J. Casterline
Plenary	9	Future of WFS	C. Miró (Panama)	R. Freedman (USA)	H. Gille (UNFPA) S. Joseph (USAID)	B. Rowe
Substantive Findings	1	Knowledge, availability and use of family planning methods	E. Naik (Pakistan)	J. Brackett (USAID)	J. Kantner (USA) K. Srinivasan (India)	M. Pasaba

Nature and No. of Session	Subject of Session	Chairman	Organizer(s)	Discussant(s)	Rapporteur (WFS)
Substantive Findings 2	Nuptiality and fertility	A. Matin (Bangladesh)	J. Caldwell (Australia) P. McDonald (Australia) L. Ruzicka (Australia)	G. Roberts (UN) L. Rosero (Costa Rica)	D. Smith
Substantive Findings 3	Selected factors affecting fertility and fertility preferences in developing countries	B. Shrydeh (Jordan)	UN Population Division	E. Berquó (Brazil) W. Borrie (Australia)	H. Jemai
Substantive Findings 4	Socio-biological factors in exposure to child-bearing	J. Bourgeois-Pichat (CICRED)	A. Jain (Population Council) J. Bongaarts (Population Council)	P. Cantrelle (ORSTOM) J. Menken (USA)	B. Ferry
Substantive Findings 5	Multifactor explanation of fertility levels	A. MacDonald (UN)	J. Cleland (WFS) G. Rodríguez (WFS)	A. Hermalin (USA) H. Zlotnik (US National Academy of Sciences)	J. Gibbs
Substantive Findings 6	Mortality	I.L. Diop (Senegal)	E. Arriaga (USA) G. Kpedekpo (UN)	J. Blacker (UK) S. Preston (USA)	I. Alam
Substantive Findings 7	Fertility preferences	D. Van de Kaa (Netherlands)	J. Palmore (USA)	C. Kagitcibasi (Turkey) P. Ohadike (UNECA)	R. Lightbourne
Substantive Findings 8	Use of family planning services	M. B'Chir (Tunisia)	N. Sadik (UNFPA)	S. Gaslonde (Venezuela) C. Wahren (IPPF)	E. Carrasco
Substantive Findings 9	Country case study – Pakistan	K. Siddiqui (Pakistan)	V.C. Chidambaram (WFS)	A. Razzaque (Pakistan) W. Seltzer (UN)	M. Kabir
Substantive Findings 10	Determinants of fertility change	H. Araica (Panama)	L-J. Cho (USA)	R. Easterlin (USA) K. Srikantan (Population Council)	J. McCarthy

Nature and No. of Session	Subject of Session	Chairman	Organizer(s)	Discussant(s)	Rapporteur (WFS)
Substantive 11 Findings	Unwanted fertility	L. Gonzalez Fabra (Dominican Rep.)	C. Westoff (USA)	M. Henriques (Brazil) S. Loza (Egypt)	M. Hodgson
Methodology 1	Data collection	R. Sánchez Bolaños (Costa Rica)	C. Scott (WFS)	M. Murthy (Asian Statistical Institute) J. Kekovole (Kenya)	J. Verrall
Methodology 2	Data processing	A. Conning (CELADE)	J. Rattenbury (WFS)	J. Hié (Cameroon) A. Packer (CELADE)	S. Wallace
Methodology 3	Methodology of birth history analysis	M. El-Badry (UN)	W. Brass (UK)	R. Lesthaeghe (Belgium) N. Ryder (USA)	J. Otto
Methodology 4	Multivariate analysis	D. Cox (UK)	R. Little (WFS)	W. Mason (USA) J. Trussell (USA)	J. McDonald
Methodology 5	Problems of organizing an international survey	G. López-Escobar (Colombia)	Y. Yaşer (WFS)	R. Chander (World Bank) F. Linder (USA)	Y. Sahinkaya
Methodology 6	Assessment of WFS data	B. Wells (USA)	M. Marckwardt (CELADE)	K.T. de Graft-Johnson (UNECA) I. Fellegi (Canada)	S. Rutstein
Methodology 7	Sampling for WFS surveys	J. Durbin (UK)	V. Verma (WFS)	L. Kish (USA) S. Zarkovich (Yugoslavia)	A. Sunter
Methodology 8	Estimation of fertility trends using WFS and other sources	E. Grebenik (UK)	K. Hill (US National Academy of Sciences)	J. Potter (USA) J. Somoza (CELADE)	N. Goldman
Methodology 9	Strategies for comparative analysis	G. Rodgers (ILO)	J. Hobcraft (WFS)	S. Hashmi (UN) T. Pullum (USA)	A. Westlake

Appendix VIII

WFS PUBLICATIONS, FIRST COUNTRY REPORTS AND OTHER ARTICLES AND STUDIES

Status as of 31 December 1980 (all in English only unless otherwise stated).

GENERAL BROCHURE:

English, French, Spanish, Arabic

PROGRESS REPORTS

The World Fertility Survey: The First Three Years, January 1972–January 1975
The World Fertility Survey: January 1975–December 1975
The World Fertility Survey: January 1976–December 1976
The World Fertility Survey: January 1977–December 1977
The World Fertility Survey: January 1978–December 1978
The World Fertility Survey: January 1979–December 1979

WFS BASIC DOCUMENTATION (BD)

1.	Core Questionnaires	(English, French, Spanish, Arabic)
2.	Survey Organization Manual	(English, French, Spanish, Arabic)
3.	Manual on Sample Design	(English, French, Spanish, Arabic)
4.	Training Manual	(English, French, Spanish, Arabic)
5.	Supervisors' Instructions	(English, French, Spanish, Arabic)
6.	Interviewers' Instructions	(English, French, Spanish, Arabic)
7.	Editing and Coding Manual	(English, French, Spanish, Arabic)
8.	Guidelines for Country Report No. 1	(English, French, Spanish, Arabic)
9.	Strategies for the Analysis of WFS Data	(English, French, Spanish)
10.	Modifications to the WFS Core Questionnaires and Related Documents	(English, French, Spanish)
11.	Data Processing Guidelines	(English)
–	Coding of Occupation. A Revision of Appendix 4 of the WFS Editing and Coding Manual	(English)

– Core Questionnaire for Husbands (working version only) (English, French, Spanish)

TECHNICAL BULLETINS (TB)

1.	Some Notes on Statistical Problems Likely to Arise in the Analysis of WFS Surveys	Sir Maurice Kendall
2.	Path Analysis and Model Building	M.G. Kendall and C. O'Muircheartaigh
3.	Standardization	T.W. Pullum
4.	Basic Fertility Measures from Retrospective Birth Histories	V. Verma
5.	Generalized Linear Models for Cross-Classified Data from the WFS	R.J.A. Little
6.	Life Table Analysis	D.P. Smith
7.	Maximum Likelihood Estimation of the Parameters of Coale's Model Nuptiality Schedule from Survey Data	G. Rodríguez and J. Trussell
9.	Linear Models for WFS Data	R.J.A. Little

SCIENTIFIC REPORTS (SR)

1.	Assessing the Availability of Fertility Regulation Methods: Report on a Methodological Study	Germán Rodríguez
2.	Language Problems in Demographic Field Work in Africa: The Case of the Cameroon Fertility Survey	Helen Ware
3.	An Assessment of the Reliability of the Indonesia Fertility Survey Data	A.L. MacDonald, P.M. Simpson and A.M. Whitfield
4.	Illustrative Analysis: Contraceptive Sterilization and Births Averted in Panama	Charles F. Westoff, James McCarthy, Noreen Goldman and Felix Mascarín
5.	Illustrative Analysis: Socio-Economic Determinants of Contraceptive Use in Thailand	J.G. Cleland, R.J.A. Little and P. Pitaktepsombati
6.	The Quality of Data in the Nepal Fertility Survey	Noreen Goldman, Ansley J. Coale and Maxine Weinstein
7.	Birth Interval Analysis in Fertility Surveys	K. Srinivasan

8.	Socio-Economic Determinants of Infant and Child Mortality in Sri Lanka: An Analysis of Post-War Experience	S.A. Meegama T.W. Pullum
9.	Illustrative Analysis: Fertility Preferences in Sri Lanka	J. Somoza
10.	Illustrative Analysis: Infant and Child Mortality in Colombia	C.E. Florez and N. Goldman
11.	An Analysis of Nuptiality Data in the Colombia National Fertility Survey	R.J.A. Little and S. Perera
12.	Illustrative Analysis: Socio-Economic Differentials in Cumulative Fertility in Sri Lanka. A Marriage Cohort Approach (in press)	J. Trussell
13.	Illustrative Analysis: Age at First Marriage in Sri Lanka and Thailand	J.M. Guzmán
14.	Evaluation of the Dominican Republic National Fertility Survey 1975	J. Hobcraft G. Rodríguez and J. Hobcraft
15.	Illustrative Analysis: Evaluating Fertility Levels and Trends in Colombia	D.P. Smith
16.	Illustrative Analysis: Life Table Analysis of Birth Intervals in Colombia	
17.	Illustrative Analysis: Marriage Dissolution and Remarriage in Sri Lanka and Thailand (finalized)	

COMPARATIVE STUDIES (CS)

Cross National Summaries

1.	Characteristics of the Surveys	S. Singh and P. Platridis
2.	Comparability of Questionnaires	S. Singh
3.	Comparability of First Country Report Tabulations	S. Singh
4.	Background Characteristics Used in WFS Surveys	S. Singh
5.	(To be written)	
6.	The Demographic Characteristics of Household Populations	M. Kabir
7.	Age At First Marriage	D.P. Smith
8.	Knowledge of Contraceptive Methods	M. Vaessen
9.	Contraceptive Practice (in press)	E. Carrasco
10.	Urban-Rural Differentials in Contraceptive Use	R. Lightbourne
11.	Current Fertility	R. Hanenberg
12.	Children Ever Born	M. Hodgson and J. Gibbs

13.	Breastfeeding (in press)	B. Ferry
14.	Family Size Preferences (in press)	A. MacDonald and R. Lightbourne
15.	Age at First Birth	J. Casterline and J. Trussell

Comparative Studies

16.	Some Aspects of WFS Data Quality: A Preliminary Assessment	V.C. Chidambaram, J.G. Cleland and Vijay Verma

OCCASIONAL PAPERS (OP)

1.	Fertility and Related Surveys	William G. Duncan
2.	The World Fertility Survey: Problems and Possibilities	J.C. Caldwell

WFS Inventory: Major Fertility and Related Surveys 1960–73:

3.	Asia	Samuel Baum, Kathleen Dopkowski, William G. Duncan and Peter Gardiner
4.	Africa	
5.	Latin America	
6.	Europe, North America and Australia	
7.	The Study of Fertility and Fertility Change in Tropical Africa	J.C. Caldwell
8.	Community-level Data in Fertility Surveys	Ronald Freedman
9.	Examples of Community-level Questionnaires	Ronald Freedman
10.	A Selected Bibliography of Works on Fertility	György T. Acsádi
11.	Economic Data for Fertility Analysis	Deborah S. Freedman (with Eva Mueller)
12.	Economic Modules for Use in Fertility Surveys in Less Developed Countries	Deborah S. Freedman and Eva Mueller
13.	Ideal Family Size	Helen Ware
14.	Modernism	David Goldberg
15.	The Fiji Fertility Survey: A Critical Commentary	M.A. Sahib, N.B. Navunisaravi, R. Chandra and J.G. Cleland
16.	The Fiji Fertility Survey: A Critical Commentary–Appendices	M.A. Sahib, *et al*

17.	Sampling Errors for Fertility Surveys	L. Kish, R.M. Groves and K.P. Krotki
18.	The Dominican Republic Fertility Survey: An Assessment	N. Ramírez, P. Tactuk, E. Hardy and M. Vaessen
19.*	WFS Modules: Abortion, Factors other than Contraception Affecting Fertility, Family Planning and General Mortality	WFS Central Staff
20.	The General Linear Model and Direct Standardization: A Comparison	Roderick J.A. Little and Thomas W. Pullum
21.	An Evaluation of the Fiji Fertility Survey Based on the Post-Enumeration Survey	K.S. Srikantan
22.	Regional Workshop on Techniques of Analysis of World Fertility Survey Data	

WFS CONFERENCE PAPERS (WFSC)

Plenary Sessions

P1.	Quelques traits de l'évolution démographique récente	Léon Tabah
P2.	Contribution of the WFS to an Understanding of the World Population Situation	Miloš Macura
P3.	Family Formation and Contraception in Selected Developing Countries: Policy Implications of WFS Findings	Mercedes B. Concepción
P4.	Family Formation in Developing Countries	K.T. de Graft-Johnson
P5.	The Potential of the WFS to Clarify the Socio-economic Factors of Fertility in Developing Countries	Carmen A. Miró
P6.	Fertility Decline in Developing Countries	W. Parker Mauldin
P7.	Les facteurs de la fecondité dans les pays dévéloppés	Henri Leridon
P8.	(No paper for this session)	
P9.	The Future of the World Fertility Survey	Ronald Freedman

Substantive Findings Sessions

SF1.	The Role of Family Planning Availability and Accessibility in Family Planning Use in Developing Countries	James W. Brackett

**In English, French and Spanish.*

SF2.	Inter-relationships between Nuptiality and Fertility: The Evidence from the World Fertility Survey	Peter F. McDonald, Lado T. Ruzicka and John C. Caldwell
SF3.	Selected Factors Affecting Fertility and Fertility Preferences in Developing Countries: Evidence from the First Fifteen WFS Country Reports	The Population Division of the United Nations
SF4.	Socio-biological Factors in Exposure to Childbearing: Breastfeeding and its Fertility Effect	Anrudh K. Jain and John Bongaarts
SF5.	Socio-economic Determinants of Marital Fertility in Twenty Countries: A Multivariate Analysis	Germán Rodríguez and John Cleland
SF6.1	*Paper No. 1* Direct Estimates of Infant Mortality Differentials from Birth Histories	Eduardo E. Arriaga
SF6.2	*Paper No. 2* Mortality	G.M.K. Kpedekpo
SF7.	Desired Family Size and Contraceptive Use	James A. Palmore and Mercedes B. Concepción
SF8.	Use of Family Planning Services	Nafis Sadik
SF9.	Findings from Second Stage Analysis of Pakistan Fertility Survey Data	V.C. Chidambaram
	Background Paper No. 1 Fertility in Pakistan: Levels, Trends, and Differentials	Heather Booth and Iqbal Alam
	Background Paper No. 2 Nuptiality in Pakistan: Trends and Determinants	Mehtab S. Karim
	Background Paper No. 3 Fertility Differentials in Pakistan	John Casterline
	Background Paper No. 4 From Non-Use to Use: Prospects of Contraceptive Adoption in Pakistan	Nasra M. Shah and Makhdoom A. Shah
	Background Paper No. 5 Breastfeeding and Fertility in Pakistan	Iqbal H. Shah
	Background Paper No. 6 Community and Programme Variables and their Effects on Fertility-related Behaviour of Rural Pakistani Women	M. Nizamuddin
SF10.	Determinants of Fertility: A Preliminary Analysis based on World Fertility Survey Data for Colombia, Indonesia, Japan, Korea and Sri Lanka	Lee-Jay Cho, Siew-ean Khoo, Andrew Mason and Peter C. Smith

SF11.	Unwanted Fertility in Six Developing Countries	Charles F. Westoff

Methodology Sessions

M1.	Problems of Data Collection in the World Fertility Survey	Chris Scott and Susheela Singh
M2.	Survey Data Processing – Expectations and Reality	Judith Rattenbury
M3.	Birth History Analysis	W. Brass
M4.	Statistical Models for World Fertility Survey Data	Roderick J.A. Little
M5.	Problems of Organizing an International Survey	Martin Vaessen, J. Timothy Sprehe and Yaşar Yaşer
M6.	An Assessment of the Reliability of WFS Data	C.A. O'Muircheartaigh and A.M. Marckwardt
M7.	Sampling for National Fertility Surveys	Vijay Verma
M8.	Methods for Estimating Fertility Trends using WFS and other Data	Kenneth H. Hill
M9.	Strategies for Comparative Analysis of WFS Data	John Hobcraft

SUMMARIES OF COUNTRY REPORTS (SCR)

1.	The Fiji Fertility Survey, 1974	(English, French, Spanish)
2.	The Dominican Republic Fertility Survey, 1975	(English, French, Spanish)
3.	The Pakistan Fertility Survey, 1976	(English, French, Spanish)
4.	The Malaysian Fertility and Family Survey, 1974	(English, French, Spanish)
5.	The Nepal Fertility Survey, 1976	(English, French, Spanish)
6.	The Survey of Fertility in Thailand, 1975	(English, French, Spanish)
7.	The Sri Lanka Fertility Survey, 1975	(English, French, Spanish)
8.	The Korean National Fertility Survey, 1974	(English, French, Spanish)
9.	The Colombian Fertility Survey, 1976	(English, French, Spanish)
10.	The Panama Fertility Survey, 1976	(English, French, Spanish)
11.	The Indonesia Fertility Survey, 1976	(English, French, Spanish)
12.	The Netherlands Survey on Fertility and Parenthood Motivation, 1975	(English)
13.	The Bangladesh Fertility Survey, 1975	(English, French, Spanish)
14.	The 1974 Japan National Fertility Survey	(English)
15.	Republic of the Philippines Fertility Survey, 1978	(English, French, Spanish)
16.	The Czechoslovak Fertility Survey, 1977	(English)
17.	The Mexico Fertility Survey, 1976–1977	(English, French, Spanish)
18.	The Guyana Fertility Survey, 1975	(English, French, Spanish)

19.	The 1976 Costa Rica Fertility Survey	(English, French, Spanish)
20.	The Jordan Fertility Survey, 1976	(English, Spanish)
21.	The Peru Fertility Survey, 1977	(English, French, Spanish)
22.	Guadeloupe and Martinique Fertility Survey, 1976	(French)
23.	Fertility Survey in Spain, 1977	(English, Spanish)
24.	The Flemish Survey on Family Development, 1975–1976	(English)
25.	The Hungarian Fertility Survey, 1977	(English)
26.	The Kenya Fertility Survey, 1978	(English)
27.	The Jamaica Fertility Survey, 1975–1976	(English)
28.	Turkish Fertility Survey, 1978	(English)

FIRST COUNTRY REPORTS (FCR)

Usually published by the respective country.
Individual requests for a hard copy version of the Report should be directed to the ISI Publications Office. As the Reports are bulky, a mailing/handling charge of US $10 will be made for each Report. Microfiche versions of the Reports are available free of charge. Please specify whether your order is for a hard copy or microfiche version.

Bangladesh Fertility Survey, 1975-1976: First Report. Ministry of Health & Population Control, Population Control & Family Planning Division, 1978. 29 cm., 111 p. descriptive text, 414 p. tables, 166 p. appendices. Available in English with glossary of main terms in French and Spanish.

Encuesta Nacional de Fecundidad Colombia, 1976: Resultados Generales. Bogotá, D.E., Colombia: Corporación Centro Regional de Población, 1977, 28.7 cm., 491 p., incl. 316 p. of tables. Available in Spanish with translation into English and French of key terms found in the tables.

Encuesta Nacional de Fecundidad, 1976, Costa Rica. San José, Costa Rica: Dirección General de Estadística y Censos, 1978. 27.5 cm., 370 p., incl. 197 p. of tables. Available in Spanish.

Fiji Fertility Survey, 1974: Principal Report. Suva, Fiji: Bureau of Statistics, 1976. 29.7 cm., 564 p., incl. 396 p. of tables. Available in English, with key terms of the tables translated into French and Spanish.

Encuesta Nacional de Fecundidad: Informe General. Santo Domingo, Dominican Republic: Consejo Nacional de Población y Familia, 1976. 27.6 cm., 609 p. Available in Spanish, with headings in English and French.

Indonesia Fertility Survey, 1976: Principal Report Vols. I and II. Jakarta, Indonesia: Central Bureau of Statistics and World Fertility Survey, 1978. 29.7 cm., Vol. I (descriptive text): 176 p., Vol. II (tables): 288 p. Available in English with glossary of main terms in French, Spanish and Bahasa Indonesia.

The Korean National Fertility Survey, 1974: First Country Report. Seoul, Korea: National Bureau of Statistics of the Economic Planning Board, 1977. 29.7 cm., 866 p., incl. 588 p. of tables. Available in English with glossary of main terms in French and Spanish.

Malaysia Fertility and Family Survey, 1974: First Country Report. Kuala Lumpur, Malaysia: Department of Statistics, 1977. 714 p., incl. 428 p. of tables. Available in English.

Nepal Fertility Survey, 1976: First Report. Kathmandu, Nepal: His Majesty's Government Ministry of Health, 1977. 29.7 cm., 347 p., incl. 154 p. of tables. Available in English, with list of key terms translated into French and Spanish.

Pakistan Fertility Survey: First Report. Islamabad, Pakistan: Population Planning Council of Pakistan, 1976. 23.5 cm., 314 p., incl. 122 p. of tables. Available in English.

Encuesta de Fecundidad: Informe General, Panamá, 1977. Panama City, Panama: Ministerio de Salud, Oficina de Estudios de Población, 1977. 27 cm., 494 p., incl. 296 p. of tables. Available in Spanish.

World Fertility Survey, Sri Lanka, 1975: First Report. Colombo, Sri Lanka: Department of Census and Statistics, Ministry of Plan Implementation, 1978. 29.7 cm., 714 p., incl. 437 p. of tables. Available in English, with key terms of the tables translated into French and Spanish.

The Survey of Fertility in Thailand: Country Report Vol. I and Vol. II. Bangkok, Thailand: Institute of Population Studies, and Population Survey Division, National Statistical Office, 1977. 28.3 cm., Vol. I: 202 p., Vol II: 542 p. of tables. Available in English.

Encuesta Nacional de Fecundidad del Perú, 1977 1978: Informe General. Lima: Dirección General de Censos, Encuestas y Demografía, 1979. 29 cm., 514 p., incl. tables. Available in Spanish.

Encuesta Mexicana de Fecundidad. Primer Informe Nacional Vols. I, II and III. Mexico: Dirección General de Estadística, 1979. 29.5 cm., Vol. I: 239 p. and 53 p. Appendices, Vol. II: 688 p., mainly tables, Vol. III: 425 p. (informe metodologico). Available in Spanish with glossary of main terms in English and French.

Republic of the Philippines Fertility Survey, 1978: First Report. National Census and Statistics Office, University of the Philippines Population Institute, Commission on Population, National Economic and Development Authority, 1979. 30.5 cm., 708 p., including 402 p. of tables. Available in English with glossary of main terms in French and Spanish.

Guyana Fertility Survey, 1975: Country Report Vol. I and Vol. II. Guyana: Statistical Bureau, Ministry of Economic Development, 1979. 29.6 cm., Vol. I: 135 p., incl. tables, Vol. II: 540 p. of tables. Available in English with glossary of main terms in French and Spanish.

Jamaica Fertility Survey, 1975–1976: Country Report Vol. I and Vol. II. Kingston, Jamaica: Department of Statistics, 1979. 29.6 cm., Vol. I: 173 p., incl. tables, Vol. II: 486 p. of tables. Available in English with glossary of main terms in French and Spanish.

Jordan Fertility Survey, 1976: Principal Report Vol. I and Vol. II. Amman, Hashemite Kingdom of Jordan, 1979. 29.6 cm., Vol. I: 185 p., incl. tables, Vol. II: 594 p. of tables. Available in English with glossary of main terms in French, Spanish and Arabic.

Hong Kong By-Census, 1976: Contribution to the WFS. Hong Kong: Census and Statistics Department, 1979. 29.7 cm., 117 p., incl. tables. Available in English.

Turkish Fertility Survey, 1978: First Report Vol. I: Methodology and Findings and Vol. II: Statistical Tables. Turkey: Hacettepe Institute of Population Studies, 1980. 29.8 cm., Vol. I: 229 p., incl. tables, Vol. II: 442 p. of tables. Available in English, with table titles translated into Turkish.

Kenya Fertility Survey, 1977–1978: First Report Vol. I. Nairobi, Kenya: Central Bureau of Statistics, Ministry of Economic Planning and Development, 1980. 29.7 cm., Vol. I: 272 p., incl. tables. Available in English.

Transition démographique et modernisation en Guadeloupe et en Martinique. Travaux et documents, cahier no 89, by Yves Charbit and Henri Leridon. France: Institut National d'Etudes Démographiques, 1980. 24 cm., 320 p., incl. tables. Available in French.

OTHER ARTICLES AND STUDIES (OAS)

1. Chidambaram, V.C., Cleland, J. and Verma, V. (1980). Some Issues of Survey Methodology and Data Quality: The WFS Experience. Paper presented at Annual Meeting of the Population Association of America, Denver, USA, 10–12 April.
2. Chidambaram, V.C. and Pullum, T.W. (1980). Estimating Fertility Trends from

Retrospective Birth Histories: Sensitivity to Imputation of Missing Dates. Paper presented at Annual Meeting of the Population Association of America, Denver, USA, 10–12 April.

3. Hobcraft, J. and Rodríguez, G. (1980). Methodological Issues in Life Table Analysis of Birth Histories. Paper presented at IUSSP Seminar on the Analysis of Maternity Histories, London, 9–11 April.

4. O'Muircheartaigh, C.A., Marckwardt, A.M. and Verma, V. (1980). Response Reliability in WFS Data. *Bulletin of the International Statistical Institute*, Vol. 48, Bk. 3.

Appendix IX

WFS DEPOSITORY LIBRARIES

Africa

1. The Librarian,
   UN Economic Commission
   for Africa,
   P.O. Box 3001,
   ADDIS ABABA,
   Ethiopia.

2. Director of Statistics,
   Central Statistics Division,
   Quadrangle,
   BANJUL,
   Gambia, West Africa.

3. The Population and Social
   Sciences Library,
   Institute of Statistical, Social
   and Economic Research,
   University of Ghana,
   P.O. Box 74,
   LEGON, Ghana.

4. La Bibliothèque,
   Centre Ivoirien de
   Recherches Economiques et
   Sociales,
   B.P. 28295,
   ABIDJAN,
   Côte d'Ivoire.

5. The Library,
   Central Bureau of Statistics,
   P.O. Box 30266,
   NAIROBI,
   Kenya.

6. The Library,
   IPPF Africa Regional Office,
   P.O. Box 30234,
   NAIROBI,
   Kenya.

7. Information and Documentation Service,
   Centre for African Family
   Studies,
   P.O. Box 60054,
   NAIROBI,
   Kenya.

8. The Library,
   National University of
   Lesotho,
   ROMA,
   Lesotho.

9. Reference Services
   Department,
   University of Liberia
   Libraries,
   University of Liberia,
   P.O. Box 9020,
   MONROVIA,
   Liberia.

10. The Library,
    University of Malawi,
    Chancellor College,
    P.O. Box 280,
    ZOMBA,
    Malawi.

11. Documents Section,
    University Library,
    University of Ife,
    ILE-IFE,
    Nigeria.

12. The Librarian,
    National Population Bureau,
    Private Mail Bag 12628,
    Babs Animashaun Rd.
    Suri-Lere,
    LAGOS,
    Nigeria.

13. The Librarian,
    Central Statistical Office,
    P.O. Box 8063,
    Causeway,
    SALISBURY,
    Zimbabwe.

14. Medical Library,
    University of Rhodesia,
    P.O. Box MP 45,
    Mount Pleasant,
    SALISBURY,
    Zimbabwe

15. The Librarian,
    UN Demographic Research
    and Training Unit,
    Fourah Bay College,
    University of Sierra Leone,
    FREETOWN,
    Sierra Leone.

16. The Librarian,
Department of Statistics,
Private Bag X44,
PRETORIA 0002,
Republic of South Africa.

17. University of Khartoum
Library,
P.O. Box 321,
University of Khartoum,
KHARTOUM,
Sudan.

18. The Library,
University of Dar es Salaam,
P.O. Box 35092,
DAR ES SALAAM,
Tanzania.

19. The Librarian,
Institute of Statistics and
Applied Economics,
Makerere University,
P.O. Box 7062,
KAMPALA,
Uganda.

20. Bibliothèque Centrale de
l'Université National,
Campus de Kinshasa,
B.P. 125,
KINSHASA XI,
Zaire.

21. La Bibliothèque de la Faculté
des Sciences Sociales,
B.P. 1825,
LUBUMBASHI,
Zaire.

22. The Librarian,
University of Zambia
Library,
P.O. Box 2379,
LUSAKA,
Zambia.

Asia and Oceania

1. The Library,
Department of Demography,
Australian National
University,
P.O. Box 4,
CANBERRA, A.C.T. 2600,
Australia.

2. The Library,
Institute of Economics,
RANGOON,
Burma.

3. The Library,
Bureau of Statistics,
P.O. Box 2221,
SUVA,
Fiji.

4. The Library,
Census and Statistics
Department,
Kai Tak Commercial
Building,
317 Des Voeux Road,
Central,
HONG KONG.

5. The Library
Institute for Social and
Economic Change,
BANGALORE 560 010
India.

6. The Library,
International Institute for
Population Studies,
Govandi Station Road,
Deonar,
BOMBAY 400 088,
India.

7. National Library,
Foreign Official Documents
Div., (F.O.D.),
Government of India,
Belvedere,
CALCUTTA 700027
India.

8. National Documentation
Centre,
The National Institute of
Health and Family Welfare,
Near DDA Flats,
Munirka,
NEW DELHI-110006,
India.

9. The Library,
Institute of Economic
Growth,
University of Delhi,
NEW DELHI-110007,
India.

10. World Health Organization,
SEARO Library,
Indraprastha Estate,
NEW DELHI-110002,
India.

11. The Librarian,
Gokhale Institute of Politics
and Economics,
POONA 411 004,
India.

12. The Library,
Population Studies Centre,
Sri Venkateswara University,
TIRUPATI-517502
(Andhra Pradesh),
India.

13. The Library,
Bureau of Economics and
Statistics,
Vikas Bhavan,
TRIVANDRUM, Kerala,
India.

14. The Librarian,
Bangladesh Institute of
Development Studies,
Adamjee Court,
Motijheel C/A,
DACCA 2,
Bangladesh.

15. The Library,
Population Institute,
Gadjah Mada University,
Bulaksumur H-5,
YOGYAKARTA,
Indonesia.

16. The Library,
Institute of Population Problems,
Ministry of Health and Welfare,
2-2, 1-chome, Kasumigaseki,
Chiyoda-ku,
TOKYO,
Japan.

17. Population Research Institute,
Nihon University
College of Economics,
3-2, Misaki-cho, 1-chome,
Chiyoda-ku,
TOKYO, 101,
Japan.

18. The Library,
Statistical Information Division,
Economic Planning Board,
Bureau of Statistics,
SEOUL,
Korea.

19. The Library,
Korean Institute for Family Planning,
115, Nokbun-dong,
Sudaemun-ku,
SEOUL,
Korea.

20. The Library,
Department of Statistics Malaysia,
Wisma Statistik, Jalan Young,
KUALA LUMPUR 10-01,
Malaysia.

21. The Library,
Faculty of Economics and Administration,
University of Malaya,
KUALA LUMPUR 22-11,
Malaysia.

22. National Family Planning Board Library,
P.O. Box 416,
KUALA LUMPUR 01-02,
Malaysia.

23. Reference Centre,
Secretariat of the Regional Org. for Inter-Governmental Cooperation and Co-ordination in Population and Family Planning in South East Asia, (IGCC),
P.O. Box 550,
KUALA LUMPUR,
Malaysia.

24. Tribhuvan University,
Central Library,
KIRTIPUR,
Nepal.

25. The Librarian,
South Pacific Commission,
P.O. Box D. 5,
NOUMEA CEDEX,
New Caledonia.

26. The Library,
Department of Statistics,
Private Bag,
WELLINGTON,
New Zealand.

27. Census and Registration Organization,
Interior Division,
16 Almarkaz Bldg.,
Civic Centre,
ISLAMABAD,
Pakistan.

28. The Library,
Pakistan Institute of Development Economics,
P.O. Box 1091,
ISLAMABAD,
Pakistan.

29. The Library,
Social Sciences Research Centre,
University of the Punjab,
NEW CAMPUS, Lahore,
Pakistan.

30. The Library,
Bureau of Statistics,
Post Office,
WARDS STRIP,
Papua New Guinea.

31. The Library,
Office of Population Studies,
University of San Carlos,
CEBU CITY,
Philippines.

32. Population Institute Library,
University of the Philippines,
Padre Faura, P.O. Box 479,
MANILA,
Philippines.

33. The Library,
Department of Statistics,
P.O. Box 3010,
SINGAPORE 1,
Singapore.

34. International Planned Parenthood Federation,
Indian Ocean Regional Office,
P.O. Box 772,
COLOMBO 7,
Sri Lanka.

35. The Library,
Marga Institute,
P.O. Box 601,
61 Isipathana Mawatha,
COLOMBO 5,
Sri Lanka.

36. The Clearing-House and Information Section, Reference Centre, ESCAP Population Division, United Nations Building, Sala Santitham, BANGKOK 2, Thailand.

37. The Librarian, Department of Economics, Fudan University, SHANGHAI, People's Republic of China.

38. The Librarian, Department of Economics Beijing University, BEIJING, People's Republic of China.

39. The Librarian, Department of Economics, Sun Yat Sen University, GUANGZHOU, People's Republic of China.

Europe

1. The Library, Austrian Central Statistical Office, Heldenplatz, Neue Burg, A-1014 VIENNA, Austria.

2. The Library, Centrum voor Bevolkings- en Gezinsstudiën, Manhattan Center, Kruisvaartenstraat 3, 1000 BRUSSELS, Belgium.

3. The Library, Scientific Research Institute of Statistics, 2 Volov Street, SOFIA 27, Bulgaria.

4. Federal Office of Statistics, VUSEI Information Centre, Sokolovská 142, 18600 PRAHA 8-KARLIN, Czechoslovakia.

5. The Library, Danmarks Statistik, Sejrøgade 11, DK-2100 COPENHAGEN Ø, Denmark.

6. The Library, The Population Research Institute, Kalevankatu 16, 00100 HELSINKI 10, Finland.

7. La Bibliothèque, Institut National d'Etudes Démographiques, 27 Rue du Commandeur, 75675 PARIS, Cedex 14, France.

8. Bibliothek des Institute für Weltwirtschaft an der Universität Kiel, Zentral-bibliothek der Wirtschafts-wissenschaften in der Bundesrepublik Deutschland, Postfach 4309, D-2300 KIEL 1, Fed. Rep. of Germany.

9. Statistisches Bundesamt, Bibliothek, Dokumentation Archiv, Postfach 55 28, D 6200 WIESBADEN 1, Fed. Rep. of Germany.

10. The Library, National Statistical Service of Greece, 14 16 Lycourgou Street, ATHENS, Greece.

11. Central Statistical Office, Library and Documentation Service, H-1525 BUDAPEST Pf. 10, II.Keleti Károly u. 5, Hungary.

12. The Librarian, Central Statistics Office, Earlsfort Terrace, DUBLIN, 2 Republic of Ireland.

13. Biblioteca, Dipartimento Statistico, Università Degli Studi di Firenze, Via Curtatone N. 1-CP 50123, FIRENZE, Italy.

14. Biblioteca, Instituto di Statistica, Via del Santo 22, I-35100-PADOVA, Italy.

15. Biblioteca, Instituto Centrale di Statistica, Via C. Balbo 16, 00100 ROMA, Italy.

16. Bibliothèque du STATEC, 19 21 Blvd. Royal, B.P. 304, LUXEMBOURG.

17. National Library of Malta, 36 Old Treasury Street, VALETTA, Malta.

18. Central Bureau voor de Statistiek, Bibliotheek en Documentatie, Prinses Beatrixlaan 428, 2270 AZ VOORBURG, Netherlands.

19. Vakgroep Planologie en Demografie,
Geografisch Instituut,
Rijksuniversiteit Groningen,
p/a Bibliotheek Geografisch Instituut,
Hoogbouw W.S.N.,
Universiteitscomplex
Paddepoel,
Postbus 800,
GRONINGEN,
Netherlands.

20. The Library,
Central Bureau of Statistics,
P.B. 8131, Oslo Dept.,
OSLO 1,
Norway.

21. Central Statistical Library,
al. Niepodlegości 208,
00-925 WARSAW,
Poland.

22. Biblioteca,
Instituto Nacional de Estatistica,
Avenida António José de Almeida 5-A-80,
1078 LISBOA Cedex,
Portugal.

23. Biblioteca de la Facultad de Economicas,
SANTIAGO DE COMPOSTELA,
Spain.

24. The Library,
Demographic Research Institute,
Viktoriagatan 13,
S-411 25 GÖTEBERG,
Sweden.

25. Statistiska centralbyrån
Biblioteket,
Fack
S-102 50 STOCKHOLM 27
Sweden.

26. The Library,
Bureau Fédéral de Statistique,
Hallwylstrasse 15,
3003 BERN,
Switzerland.

27. United Nations Library,
Processing Section,
Palais des Nations,
1211 GENEVA 10,
Switzerland.

28. The Library,
State Institute of Statistics,
Necatibey Caddesi No. 114,
ANKARA,
Turkey.

29. Documentation Center,
Institute of Population Studies,
Hacettepe University,
ANKARA,
Turkey.

30. The Librarian,
Main Library,
The Queen's University of Belfast,
BELFAST BT7 1LS,
Northern Ireland,
U.K.

31. The Library
Institute of Development Studies,
The University of Sussex,
Andrew Cohen Building,
Falmer,
BRIGHTON BN1 9RE,
U.K.

32. The British Library,
Serial Acquisition Section,
BOSTON SPA, Wetherby,
West Yorks LS 23 7BQ,
U.K.

33. The Technical Information Office,
David Owen Centre for Population Growth Studies,
University College,
P.O. Box 78,
CARDIFF CF1 1XL,
Wales,
U.K.

34. Glasgow University Library,
Hillhead Street,
GLASGOW G12 8QE,
Scotland,
U.K.

35. The Librarian,
London School of Hygiene and Tropical Medicine,
Keppel Street,
LONDON WC1E 7HT,
U.K.

36. The Library,
IPPF,
18–20 Lower Regent Street,
LONDON SW1Y 4PW,
U.K.

37. British Library of Political and Economic Science,
London School of Economics and Politics,
10, Portugal Street,
LONDON WC2A 2HD,
U.K.

38. National and University Library,
Acquisition – WFS Publications,
41000 ZAGREB,
Marulicév trg 21, pp. 550,
Yugoslavia.

Latin America and the Caribbean

1. Biblioteca y Hemeroteca,
Departamento Difusión
Estadística,
Instituto Nacional de Estadística y Censos,
Secretaría de Estado de
Programación y Coordinación
Económica,
Hipólito Yrigoyen 250 -
12° Piso,
BUENOS AIRES,
Argentina.

2. Institute of Social and
Economic Research,
(Eastern Caribbean),
University of the West
Indies,
P.O. Box 64,
BRIDGETOWN,
Barbados.

3. The Library,
DESEC,
Casilla 469,
LA PAZ,
Bolivia.

4. Biblioteca Central de IBGE,
Dept. de Estudos de Population (DESPO),
Rera Vicconde de Nitera,
1248-B-80,
2041 Manguezra,
RIO DE JANEIRO,
Brazil.

5. Centro Brasileiro de Análise
e Planejamento,
Alameda Campinas, 463,
13° ANDAR,
01404 SAO PAULO SP,
Brazil.

6. Centro Latinoamericano de
Demografía (CELADE)/
Latin American Population
Documentation System
(DOCPAL),
Avenida Dag Hammarskjold,
Casilla 91,
SANTIAGO,
Chile.

7. Corporación Centro
Regional de Población,
Centro de Documentación,
Carrera 6 No. 76-34,
BOGOTA, D.E.,
Colombia.

Proyecto de Demografía
CIDI,
Universidad Pontificia
Bolivariana,
Apartado Aéreo 1178,
MEDELLIN,
Colombia.

9. The Library,
Centro de Estudios
Demográficos,
Ave. 41 No. 2003 e/n 20 y 22,
Marianao 13,
HAVANA,
Cuba.

10. The Library,
Consejo Nacional de
Población, y Familia,
Secretaria de Estado de
Salud Publica,
Apartado Postal 1803,
SANTO DOMINGO,
Dominican Republic.

11. Centro Medico 'San José',
TAISHA (Morona-Santiago),
Ecuador.

12. The Library,
Ministry of Economic
Development,
Ministerial Building,
P.O. Box 542,
GEORGETOWN,
Guyana.

13. The Library,
Division d'Hygiène Familiale,
65 Turgaeu (3 Bebe),
PORT-AU-PRINCE,
Haiti.

14. Biblioteca Central,
Universidad Nacional
Autónoma de Honduras,
Ciudad Universitaria,
TEGUCIGALPA,
Honduras.

15. The Library,
Department of Statistics,
9 Swallowfield Road,
KINGSTON 5,
Jamaica.

16. Sección de Adquisiciones,
Biblioteca Daniel Casío Villegas
El Colegio de México, A.C.,
Apartado Postal 20-671,
MEXICO 20, D.F.,
Mexico.

17. Biblioteca,
Dirección de Estadística y
Censo,
Contraloría General de la
República,
Apartado 5213,
PANAMA 5,
Panama.

18. General Library,
University of Puerto Rico,
MAYAGUEZ,
Puerto Rico 00708.

19. The Library,
Central Statistical Office,
Textel Building,
1 Edward Street,
PORT OF SPAIN,
Trinidad and Tobago.

20. The Library,
Centro de Investigaciones en
Ciencias Sociales (CISOR),
Apartado 5894,
CARACAS 101,
Venezuela.

21. Gifts & Exchange Section,
Library of The University of
West Indies,
MONA KINGSTON 7,
Jamaica.

Middle East

1. The Library,
Department of Statistics
and Research,
Ministry of Finance,
NICOSIA,
Cyprus.

2. The Librarian,
Cairo Demographic Centre,
Geographical Society
Building,
1209, Qasr Al-Aini Street,
CAIRO,
Egypt.

3. The Library,
Central Bureau of Statistics,
P.O. Box 13015,
JERUSALEM,
Israel.

4. The Library,
The Hashemite Kingdom of
Jordan,
Department of Statistics,
P.O. Box 2015,
AMMAN,
Jordan.

5. Saab Medical Library,
American University of
Beirut,
BEIRUT,
Lebanon.

6. Director General,
Census and Statistics Dept.,
Ministry of Planning and
Scientific Research,
Shaira Damascus,
TRIPOLI,
Libyan Arab Republic.

7. Director,
National Statistical
Department,
Development Council,
Technical Secretariat,
P.O. Box 881,
MUSCAT,
Sultanate of Oman.

8. The Library,
Central Bureau of Statistics,
Office of the Prime Minister,
DAMASCUS,
Syrian Arab Republic.

9. Central Board of Statistics
Library,
P.O. Box 670 – Crater,
ADEN,
People's Dem. Rep. of
Yemen.

North America

Canada

1. The University of Alberta,
Population Research
Library,
Department of Sociology,
EDMONTON,
Alberta T6G 2H4.

2. Centre de Documentation,
Département de
Démographie,
Université de Montréal,
C.P. 6128, succursale 'A',
MONTREAL, P.Q. H3C
3J7.

3. Population Studies Centre,
Department of Sociology,
The University of Western
Ontario,
LONDON,
Ontario N6A 5C2.

4. University of Toronto
Library,
Serials Department,
TORONTO,
Ontario M5S 1A5.

5. Canada Institute for Scientific
and Technical Information,
National Research Council
of Canada,
OTTAWA, KIA OS2.

U.S.A.

6. The Library,
Population Research
Laboratory,
University of Southern
California,
LOS ANGELES, CA 90007.

7. International Documents
Librarian,
Government Documents
Department,
Stanford University
Libraries,
STANFORD, CA 94305.

8. Committee on Population
and Demography,
Assembly of Behavioral and
Social Sciences,
National Research Council,
2101 Constitution Avenue,
WASHINGTON D.C.
20418.

9. Documentation Branch,
International Statistical
Programs Center,
Bureau of the Census,
WASHINGTON D.C.
20233.

10. Library of Congress,
WASHINGTON D.C.
20540.

11. The Library,
Population Crisis Committee,
Suite 550,
1120, 19th Street N.W.,
WASHINGTON D.C. 20036.

12. Population Reference
Bureau Library,
1337 Connecticut Ave.
N.W.,
WASHINGTON D.C.
20036.

13. Center for the Study of
Population,
Florida State University,
659 Bellamy Building,
TALLAHASSEE, Florida
32306.

14. Sets Department,
University of Georgia
Libraries,
ATHENS, Georgia 30602.

15. Center for Disease Control,
Family Planning Evaluation
Division,
Building 1, Room 4403,
1600 Clifton Road,
ATLANTA, Georgia 30333.

16. East-West Population
Institute,
Resource Materials
Collection,
1777 East-West Road,
HONOLULU, Hawaii 96822.

17. The Library,
University of Chicago,
Community and Family
Study Center,
1411 East 60th Street,
CHICAGO, Illinois 60637.

18. Collection Development
Librarian,
The Center for Research
Libraries,
5721 Cottage Grove Avenue,
CHICAGO, Illinois 60637.

19. Population Center
Information Unit,
The Library, Room 3517,
The Johns Hopkins School of
Hygiene,
615 North Wolfe Street,
BALTIMORE, MD 21205.

20. Population Information
Program,
The Johns Hopkins
University,
624 North Broadway,
BALTIMORE, MD 21205.

21. Reference Room,
Office of International
Statistics,
National Center for Health
Statistics,
3700 East-West Highway,
HYATTSVILLE, MD
20782.

22. The Library,
Center for Population
Studies,
Harvard University,
665 Huntington Avenue,
BOSTON, Mass. 02115.

23. Center/Program in
Population Planning,
M4537 School of Public
Health,
University of Michigan,
ANN ARBOR, Michigan
48109.

24. University of Minnesota,
Center for Populatio
Studies,
Box 395, Mayo Memorial
Building,
420 Delaware Street, S.E.,
MINNEAPOLIS,
Minnesota 55455.

25. Serials Division,
Washington University
Libraries,
ST. LOUIS, Missouri 63130.

26. Princeton University,
Office of Population
Research Library,
21 Prospect Avenue,
PRINCETON, New Jersey
08540.

27. International Population
Program Research and
Reference Library,
Cornell University,
Uris Hall,
ITHACA, N.Y. 14850.

28. Documentation and
Publications Center,
International Planned Parent-
hood Federation, Western
Hemisphere Region,
105 Madison Avenue,
NEW YORK, N.Y. 10016.

29. Population Council Library,
1 Dag Hammarskjöld Plaza,
NEW YORK, N.Y. 10017.

30. U.N. Library,
United Nations,
NEW YORK, N.Y. 10017.

31. The Library,
Carolina Population Center,
University Square,
CHAPEL HILL, N.C.
27514.

The Library,
International Fertility
Research Program,
RESEARCH TRIANGLE
PARK, N.C. 27709.

33. The Library,
Population Studies Center,
University of Pennsylvania,
3718 Locust Walk – CR,
PHILADELPHIA, PA
19174.

34. The Demographic Library,
Population Studies and
Training Center,
Brown University,
PROVIDENCE,
Rhode Island 02912.

35. Population Research Center
Library,
University of Texas at
Austin,
1800 Main Building,
AUSTIN, Texas 78712

36. Population Studies Center,
Taylor Murphy Institute,
University of Virginia,
P.O. Box 6550,
CHARLOTTESVILLE, VA
22906.

37. The Library,
Center for Studies in
Demography and Ecology,
University of Washington,
SEATTLE, WA 98195.

38. University of Wisconsin,
The Library, Center for
Demography,
3216 Social Science
Building,
MADISON, Wisconsin
53706.

39. Gift and Exchange (Y),
G-72 Hillman Library,
University of Pittsburgh,
PITTSBURGH, PA 15260.

40. Economic Growth Center
Collection,
Yale University,
Box 1958 Yale Station,
NEW HAVEN, CT 06520.

Appendix X

COMMITTEES ETC. – MEMBERSHIP

PROGRAMME STEERING COMMITTEE

The Programme Steering Committee (PSC) provides overall substantive guidance and review of the WFS programme. The Committee consists of a chairman and four experts, serving in their individual capacities, appointed by ISI in consultation with IUSSP and the UN; and representatives of each of the following organizations: UN Population Division, UN Statistical Office, UN Fund for Population Activities, US Agency for International Development, UK Overseas Development Administration and IUSSP. At the end of 1980, the composition of the PSC was as follows:

Chairman	P.J. Bjerve (Norway)
Representatives:	
UN Population Division	L. Tabah R.O. Carleton (alternate)
UN Statistical Office	S. Goldberg W. Seltzer (alternate)
UN Fund for Population Activities	H. Gille N. Sadik (alternate)
US Agency for International Development	S. Joseph J.W. Brackett (alternate)
International Union for the Scientific Study of Population	A.J. Coale M. Livi-Bacci (alternate) B. Remiche (alternate)
UK Overseas Development Administration	Vacant C.D. Walker (alternate)
Individual Members	M. Concepción (Philippines) K.T. de Graft-Johnson (Ghana) F. Linder (USA) M. Macura (Yugoslavia)

AD HOC ADVISORY COMMITTEE ON ILLUSTRATIVE ANALYSIS

Chairman	A.J. Coale
Members	M. Concepción
	G. Johnson-Acsádi
	R.O. Carleton (alternate)
	H. Leridon

The following served as referees for individual papers

J. Bongaarts
L. Bumpass
N. Goldman
K. Hill
A. Jain
J. Knodel
J. Menken
J. Trussell

UNFPA/USAID EVALUATION MISSION

Chairman	T.E. Smith
Members	E. Berquó
	G. Bravo-Casas
	J. Knodel
	A. Ordoñez-Plaja
	H. Presser

Appendix XI

REFERENCES TO WFS

JANUARY 1980

East-West Population Institute Bulletin, 1980. (East-West Center, Honolulu, Hawaii). 'Analysis of Population Growth.' 'Papers of the East-West Population Institute.'

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Appendix XII

VISITORS TO WFS PROJECT HEADQUARTERS, LONDON (other than UN technical advisers, WFS resident representatives. consultants, members of the Evaluation Mission, and those from the main funding agencies)

A. Aliaga	Westinghouse Corporation, Maryland
J. Allman	Division d'Hygiène Familiale, Haiti
E. Arriaga	US Bureau of the Census, Washington D.C.
W. Azar	Sudan
F. Bak	WHO, Geneva
S. Baum	US Bureau of the Census
S. Becker	Cholera Research Laboratory, Bangladesh
P. Browne	UNDP, Mauritania
H. Burdett	Population Action Council
P. Cantrelle	ORSTOM, Paris
R. Chander	World Bank
C. Chandrasekaran	India
Cheikh Ould Sidi Abd.	Mauritania
A. Coale	Princeton University
S. Cochrane	World Bank
M. Concepción	Philippines/IUSSP
A. Conning	CELADE, Chile
Y. Courbage	UNDP/IHS, Haiti
W. Dechering	University of Leiden
R. Easterlin	University of Pennsylvania
N. Van Eck	University of Michigan
S. Van Eck	University of Michigan
B. Edmonston	Cornell University
S. El Atoum	Jordan
M. El-Guindy	Egypt
M. El-Jabi	Syria
N. Fisek	Turkey
W. Fornos	Population Action Council
V. González	Peru
C. Green	Population Crisis Committee, USA

Guo Qingwen	People's Republic of China
M.H. Henriques	Brazil
A. Hermalin	University of Michigan
L. Hewitt	Trinidad and Tobago
J.M. Hie	Cameroon
K. Hill	US National Academy of Sciences, Washington D.C.
S. Huzayyin	Cairo Demographic Centre
G. Immerwahr	USA
Ju Xiuzhen	People's Republic of China
G. Kalton	University of Michigan
A.R. Khan	UNESCAP, Thailand
Young Ja Kim	Johns Hopkins University
T. King	World Bank
L. Kish	University of Michigan
Tai Hwan Kwon	Seoul National University, Seoul
B. Lapham	US National Academy of Sciences, Washington D.C.
G. Laurent	ORSTOM, Paris
J. Lepkowski	USA
H. Leridon	INED, Paris
R. Lesthaeghe	Vrije Universiteit, Brussels
H. Lewis-Jones	UNFPA, Tanzania
Li Meilin	People's Republic of China
M. Lioy	Westinghouse Corporation, Maryland
Li Xiuzhen	People's Republic of China
C. Lloyd	UN Population Division, New York
W. Mason	University of Michigan
P. Mauldin	Rockefeller Foundation, New York
B.T. McCleary	University of Michigan
C. McFarlane	Jamaica
S.A. Meegama	Sri Lanka
C. Miró	Panama
A.M. Mpiti	Lesotho
M. Nashwati	Damascus, Syria
H. Nijhuis	Groningen State University, The Netherlands
M. Nizamuddin	Poplab, University of North Carolina
P. Ohadike	UNECA, Addis Ababa
J. Owusu	Ghana
A. Packer	CELADE, Santiago, Chile
J. Potter	El Colegio de México, Mexico

G. Pyatt	World Bank
B. Remiche	IUSSP
R. Retherford	East-West Center, Honolulu
F. Reyes	Philippines
W. Rinehart	Population Information Program, USA
G. Rojas	Colombia
A.R. Rukunuddin	Pakistan
G. Sadowsky	UN Population Division, New York
S. Samad	Pakistan
I. Shah	Vrije Universiteit, Brussels
N. Shah	East-West Center, Honolulu
B.N. Shrydeh	Dept. of Statistics, Jordan
K. Siddiqui	UNECE, Geneva
P. Singh	Kenya
G. Sips	Groningen State University, The Netherlands
J. Somoza	CELADE, Santiago, Chile
G. Standing	International Labour Office, Geneva
L. Suarez	Mexico
Tan Boon Ann	National Family Planning Board, Kuala Lumpur
M. Teitelbaum	Population Association of America, Washington D.C.
S. Thapa	East-West Center, Honolulu
A. Turner	US Bureau of the Census
S. Üner	Turkey
Wang Mingyuan	People's Republic of China
Wang Xiangying	People's Republic of China
Wang Zhengang	People's Republic of China
H. Ware	Australia
C. Welti	Mexico
M. Mohd. Yatim	Malaysia
F. Yusuf	Pakistan/Australia
Z. Zablan	ORSTOM/Philippines
K.C. Zachariah	World Bank