DEPARTMENT OF INTERNATIONAL ECONOMIC AND SOCIAL AFFAIRS
STATISTICAL OFFICE

ECONOMIC COMMISSION FOR AFRICA
and
INTERNATIONAL RESEARCH AND TRAINING
INSTITUTE FOR THE ADVANCEMENT OF WOMEN

TRAINING USERS AND PRODUCERS IN COMPILING STATISTICS AND INDICATORS ON WOMEN IND DEVELOPMENT - Syllabus and related materials from the subregional seminar held in Harare, 29 April to 7 May 1985

UNITED NATIONS
1986

TRAINING USERS AND PRODUCERS IN COMPILING STATISTICS AND INDICATORS ON WOMEN IN DEVELOPMENT*

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PREFACE

The United Nations International Decade for Women has brought the need for information about women's contribution to development into sharp focus and it is now widely recognized that existing statistical systems have often failed to provide adequate measures of women's productive as distinguished from their reproductive roles in society. Those who produce national statistics, usually the staff of a central statistical office, must be more sensitive to the need for improved statistics and indicators on women, while among users of those statistics such as members of women's bureaus, women's units of national political parties and non-governmental organizations there is need for greater skill and confidence in the interpretation and application of statistics and indicators to policy development and planning. Above all, an on-going dialogue between the producers and users of statistics and indicators on the situation of women is needed in order to improve the scope and quality of information available for full integration of women in national development policies and plans, and in planning, monitoring and evaluating development programmes.

In response to the need for improved information and for dialogue, the United Nations Economic Commission for Africa (ECA) and the United Nations International Research and Training Institute for the Advancement of Women (INSTRAW), in co-operation with the Statistical Office of the United Nations Secretariat, co-sponsored the Subregional Seminar on Improved Statistics and Indicators for Women in Development held in Harare, Zimbabwe, from 29 April through 7 May, 1985. The seminar was hosted by the Government of Zimbabwe through the Central Statistical Office (CSO) and the Ministry of Community Development and Women's Affairs (CD/WA). Additional support was provided by the United Nations Fund for Population Activities (UNFPA) and the United Nations Development Fund for Women (UNIFEM). The present document is based on the proceedings of the seminar.

Participants in the subregional seminar included thirty-eight delegates from twelve countries in eastern and southern Africa, representing both producers and users of statistics and indicators on women, plus six observers from the host country and eight from other international organizations. Delegates included both women (21) and men (17) - four women and eight men represented national central statistical offices, while seventeen women and nine men represented user organizations. All delegates and observers were invited to participate fully in the activities of the seminar. A secretariat of eight, plus three secretaries, was provided by the sponsoring organizations. Jeanne S. Newman (USA) served as Technical Co-ordinator of the workshop and drafted the present report, as consultant to INSTRAW and the Statistical Office of the United Nations Secretariat.1/

The objectives of the seminar were set out as follows:

(a) To facilitate a dialogue between producers and users of statistics and indicators on women on sources of data and applications;

(b) To familiarize participants with:

- sources of data on women;
- the resources of national statistical services;

1/ Ms Newman was granted leave to undertake this work through the courtesy of the University Research Corporation.

- a variety of indicators useful for planning, monitoring and evaluating policies, plans, and programmes for women in development, together with methods of calculation and presentation;
- current and potential applications of these indicators;
- user organizations;

(c) To provide participants with experience in calculating and presenting a representative set of indicators;

(d) To contribute to the on-going search for better ways of incorporating data on women into national statistical series and of using such data in policy and programme planning, monitoring, and evaluation.

Accordingly, the programme included lectures and discussants, participant panels, participatory discussion and programming exercises. As it was intended that the seminar facilitate an exchange of knowledge, experience, information and opinion, every effort was made to involve the delegates as active participants. Delegates served as panelists and as appointed discussants responding to presentations by the resource staff, in addition to participation in general discussion from the floor and in small group exercises. They were invited to participate as panelists or discussants for a particular topic based upon their specific professional interests, expertise and institutional responsibilities. In this way nearly all delegates were given an opportunity to make specific contributions to the seminar, in addition to general participation.

The exercises on demographic, educational, economic and health indicators drew on the 1984 United Nations/INSTRAW publication Compiling Social Indicators on the Situation of Women (Series F, No. 32, Sales No. E.84.XVII.2), copies of which had been sent to all delegates in advance, and on national materials on women in development gathered for the seminar. The emphasis of the exercises was on practical possibilities for indicator compilation, interpretation and effective presentation with the aim of influencing planning and policy development. Sessions on the use of micro-computers for development and use of data bases on women and for compiling indicators were also held. To help make both the complexity of the data collection activities of central statistical offices and the information needs of user organizations more vivid, the seminar visited a field office of the Zimbabwe Integrated Household Survey Programme and a women's development project identified by the Ministry of Community Development and Women's Affairs.

The seminar is expected to result primarily in action at the national level -- in improved dialogue between producers and users of statistics, in greater sensitivity and creativity on the part of producers in finding ways to provide more relevant information to users, and in greater skill and confidence on the part of users in obtaining, interpreting and applying statistics and indicators on women, whether provided by national statistical services or from research studies on particular topics. Participants also planned to brief their national delegations to the World Conference To Review and Appraise the Achievements of the United Nations Decade for Women: Equality, Development and Peace, held in Nairobi 15-26 July 1985, about the need for and importance of improved statistics and indicators

on the situation of women in development. The participants also recommended that the seminar sponsors continue to facilitate the exchange of information and seek appropriate channels to bring the concern for better statistics and indicators on women to the attention of the Conference of African Planners, Statisticians and Demographers, for their consideration and recommendations to Governments in the region.

The present document summarizes the materials considered and the discussion during the presentations, panels, general discussion and exercises. Drawing on the experiences and opinions expressed by users and producers in the subregion and reflecting their judgements concerning data needs, availability, and constraints, the present report is intended, first, to contribute to the on-going search for improved ways of obtaining and using information on women in development, and second, to offer a potentially useful model to those who may wish to conduct similar seminars in their own countries or in other regions, with appropriate adaptation to needs and circumstances in each.

The organization of the report follows that of the seminar programme and consists of the following major sections:

(a) A review of the demand for, uses of and sources of statistics and indicators on women;

(b) Presentation, discussion and computation of statistics and indicators of women's participation in the specific development fields of population structure and change, urbanization and migration, households and families, education and literacy, employment and economic activity, health, women's organization, and political activity;

(c) Discussion of national programmes for the collection and compilation of statistics on women and for their dissemination and use in national policy and planning; and

(d) Exercises to accompany the review of indicators in specific fields.

Complete information on the organization of and participation in the seminar is given in the annex.

Comments and requests for further information on the present document and on the work of the United Nations in this field are welcome. They should be addressed to the Director of the Statistical Office of the United Nations, New York, or the Director of the United Nations International Research and Training Institute for the Advancement of Women, Santo Domingo, Dominican Republic.

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A hyphen (-) between years, e.g. 1984-1985, indicates the full period involved, including the beginning and end years; a slash (/) indicates a financial year, school year or crop year, e.g. 1984/85.

A point (.) is used to indicate decimals.

The following symbols have been used in the tables:

Two dots (..) indicate that data are not available or are not separately reported;

A minus sign (-) before a number indicates a deficit or decrease, except as indicated;

A line (_____) indicates data to be filled in as part of the student exercises.

Details and percentages in tables and figures do not necessarily add to totals because of rounding.

Data contained in the exercises are for illustrative purposes only. For official data the sources cited in the tables should be consulted.

I. DEMAND FOR AND SOURCES OF STATISTICS AND INDICATORS ON WOMEN

(First day of the programme)

Following an introduction on the origins, purposes and organization of the workshop by the Director of the Zimbabwe Central Statistical Office, Mr. Gibson Mandishona, the initial day was devoted to a discussion of the demand for and sources of national statistics and indicators on women, under the following three topics:

(a) The demand for and application of statistics and indicators of women's situation;

(b) Basic sources for statistics and indicators on women; and

(c) The organization of statistical services and their interaction with users.

For each of these topics, a similar format was used. The subject was introduced in one or two 10 to 20-minute prepared presentations by resource staff. This introduction was followed by the comments of one or more invited discussants who had previously been identified from among the delegates, and then the invited comments were followed, time permitting, by general discussion. At the start of the afternoon session, the Technical Co-ordinator, Ms Jeanne Newman, summarized the main points in the morning session and gave an overview of the afternoon programme. This pattern of review and overview at the start of each session was used throughout the schedule.

A. Demand for and applications of statistics and indicators on women's situation

This topic was introduced by the representative of the International Training and Research Institute for th Advancement of Women, Ms Mervat Tellawy. She traced the development of international demand for improved statistics and indicators on women to assist nations in planning for women's full integration in social and economic development. A need for better information to highlight differentials in the situation of women and men was expressed early in the 1970s and the World Conference of the International Women's Year, held in Mexico in 1975, underscored this need in its Plan of Action. As a result, INSTRAW undertook the task of helping to increase knowledge in this area. In this effort the focus is on development issues and on the information on women needed to facilitate their contribution to development.

Accordingly INSTRAW and the Statistical Office of the United Nations Secretariat prepared two United Nations publications of special relevance to this task. The first, Compiling Social Indicators on the Situation of Women (United Nations publication, Sales No. E.84.XVII.2), is concerned primarily

with effective utilization of statistics currently available in many countries in order to develop reliable indicators on the situation of women from censuses, household surveys and registration systems. It suggests ways of generating basic indicators about women from these data using concepts and data collection methods currently in use.

The second publication, Improving Concepts and Methods for Statistics and Indicators of the Situation of Women (United Nations publication, Sales No. E.84.XVII.3), critically reviews the concepts and methods most widely used in on-going national data collection programme and suggests possible strategies for modifying existing international recommendations for these programmes in order to collect more adequate and unbiased statistics on women's roles in development. In addition, beginning with the Harare seminar, the first of its kind, INSTRAW is taking the lead in organizing meetings at international, regional and national levels to bring together both producers and users of information on women in development to consider how best to improve those statistics and indicators.

In the second half of the introduction, Mr. Wilfred Tichagwa (Zimbabwe), focussed on specific issues concerning information needs, demands and applications in countries. In Zimbabwe, for example, the Ministry of Community Development and Women's Affairs expressed its need for adequate statistics on women, and particularly rural women, beginning with a review of the situation in which women found themselves at independence, oppressed both by the white minority rulers and by traditional partriarchal society. Independence found a grossly underdeveloped population, largely rural and very poor, in which women were the most disadvantaged. To change this situation, the Ministry was created to foster self-help, self-reliance, and the full participation of women, and particularly rural women, in development. The Ministry has four major areas of activity:

(a) Promoting positive changes in the existing legal system, for example supporting recent successful efforts to establish 18 years as the legal age of majority for both women and men;

(b) Promoting income-generating projects at the community level;

(c) Promoting social development projects, for example pre-school programmes for 0 to 6 year-olds. These are intended to improve the physical and mental well-being of children and to prepare them for formal education while releasing time for their mothers to improve their own productivity. A second example is an adult literacy programme carried out in co-operation with the Ministry of Education;

(d) Infrastructure development, such as feeder roads, bridges, safe wells, club halls and Primary Health Care (PHC).

The Ministry needs adequate statistics and indicators for planning programmes and services in several areas, for example on:

(a) The number of 0 to 6 year-olds in particular areas in order to assess needs for and coverage of pre-school programmes;

(b) The number of women who are within walking distance of a PHC clinic or are served by each village health worker (VHW), or have access to a nearby supply of clear water, in order to assess the availability and accessibility of primary health care and plan for improved coverage; and

(c) The number of women in unregistered traditional marriages who may thus face inheritance problems if widowed.

There is also a pressing need for statistics at the community level. The Ministry's research unit, only two years old, has not yet been able to carry out much statistical analysis and indeed does not always know what data are already available through the Central Statistical Office or other statistical services. Their current use of statistics is weak but their potential demand for statistics is high.

Discussants for this topic were Ms Gladys Mulindi (Kenya) and Mr. F. Chatsalira (Malawi). In reviewing national experience, the need to try to mobilize and educate women at the grass roots for self-reliance and to improve living standards and the consequent need for information at the community level in order to assist local groups of women in project planning and evaluation was stressed. In Kenya, non-governmental organizations have assisted projects in energy, water, supply, nutrition, family planning, primary health care, agricultural production and income-generation. Often, however, participants in these projects do not have the information they need to gauge the market for the output of their products and consequently the projects may not be viable. Nor do non-governmental organizations have the necessary information about existing projects, national and community needs and trends to provide adequate advice. These NGOs are hopeful that the new Kenya Government programme to organize development at the district level will result in the greater availability of district-level data and thus improve their ability to assist their member groups.

In Malawi there is likewise a high demand for data on women for development planning. For example, data on illiteracy, which in Malawi is higher among women than among men, are used to plan and administer a national literacy programme. Moreover, in response to statistics on university enrolment there is now a concerted effort underway to increase women's enrolment in the scientific and technological disciplines.

B. Basic data sources

This topic was introduced by a representative of the Economic Commission for Africa, Mr. Toma J. Makannah. He described the three main sources of national data: censuses, sample surveys and administrative records. The current status of these data systems in the participating countries was reviewed and concrete illustrations provided of some of the tabulations about women's situation which data from these sources make possible, using census data as an example.

The national population census is a major source of data on women, provided that tabulations are produced for both sexes. Because the census covers the entire population, census statistics can also be reliably compiled for relatively small geographical areas and for specific sub-populations. Many African countries have now conducted two or three national censuses and have acquired considerable experience in this work. Moreover, all African countries have agreed to publish census tabulations by sex. However, as a national population census is taken only infrequently, usually every 10 years, is expensive to conduct and is a time-consuming process, the level of detail on particular topics must be limited and the data may be obsolete well before the next census. Therefore, sample surveys are the key both to inter-censal data and to more detailed information on specific topics.

In Africa, the Economic Commission for Africa and the Statistical Office of the United Nations Secretariat are assisting countries to develop systematic national household survey programmes. Under the African National Household Survey Capability Programme, national statistical services are assisted in organizing their survey programmes so as to make use of a permanent, well-trained field staff to investigate a series of topics such as agriculture, labour force, household expenditures and nutrition, using, for example, systematic rotation. Such programmes are yielding a wealth of detailed information on important development issues, most of which should be available separately for each sex. Because information is obtained only from a sample of the population, however, these data are not usually available for small areas, although rural and urban breakdowns are generally possible.

All Government ministries maintain administrative records, as do parastatals, private firms, universities and research institutes, and these are often important sources of data, again provided that the records are maintained separately by sex.

Small-scale studies and those studies using anthropological and other non-traditional data collection methods are also available to supplement information from the three major sources.

Finally, it should be noted that although the three major data sources have different advantages and disadvantages, they are complementary. Accordingly, it is important that in so far as possible they use common concepts, definitions and classifications so that the analyst can use data from more than one source with confidence that the data are generally compatible.

User organizations should take an active role in suggesting topics to include in censuses and surveys but as these are costly undertakings and there are competing interests among potential users of data, those requesting additional information on women must be very clear about the ways in which such data are to be used.

These three major sources of data also have certain short-comings for obtaining information on women. Sex-based stereotypes and cultural preconceptions may affect survey design and questionnaire formulation. For example, the assumption that most women are not in the labour force has

influenced the way in which questions on economic activity are worded, so surveys fail to record much of the very considerable amount of economic work most women do. There are also biases in the collection, processing, compilation and tabulation of data. Female births and deaths or participation in the labour force are frequently under-reported, older ages are often ascribed to very young married women, and tabulations on the labour force, especially by occupation and industry, are frequently published only for males or are not tabulated by sex. International efforts are underway to try to refine the more troublesome concepts such as household head and economic activity in order to eliminate bias in so far as possible. The African National Household Survey Capability Programme is a mechanism to obtain better data on women and particularly on women's economic activities and their role in the informal sector.

Additional discussion on this topic followed four themes:

(a) Problems with existing concepts and data collection methodologies for national data;

(b) The importance of detailed small-area data and innovative ways to obtain it;

(c) The need for special studies to supplement traditional, national sources; and

(d) The need for dialogue between producers and users of national data and the responsibility of producers to disseminate information rapidly and widely.

These themes recurred throughout the programme.

On problems with existing concepts and methodologies, the following points were noted:

(a) It may be difficult to obtain information on the informal sector from either censuses or surveys for activities which are illegal;

(b) It is important in survey design to identify the appropriate respondent, that is the most important person in the household to answer a given set of questions;

(c) There may be a continuing sex bias in the assignment of the two sexes to the categories "own-account worker" and "unpaid family worker". For example a woman independently produces yarn and her husband weaves that yarn into cloth and he is counted as an own-account worker and she his helper, though both meet the definition of "own-account worker";

(d) There are problems with the concept of household and household head in many countries. Countries define these in different ways and no one way appears to be universal. A classification of household types has been proposed for Europe and typologies relevant to other regions are needed.

On small area data and ways to obtain it, the following points were noted:

(a) The need for small area information should be re-emphasized and national experience considered. For example, a pilot village register scheme is being tested in two regions in Tanzania to improve administrative record systems at the village level. For each cell of 10 households a register is maintained by a designated member of one of the households, containing information on persons by sex and age, school enrolment, adult participation in village life, housing and sanitary conditions, number of 25-year-olds with "Road-to-Health" charts, child nutrition status, births, deaths, moves. Quarterly summaries from each of the 10 household cells provide the village leaders with periodic village profiles. A compilation is to be made annually at the regional level. As the scheme is still in the pilot stage, however, no evaluation has yet been made of either the accuracy of the data or the cost of the system;

(b) Geographical boundaries of administrative districts often differ from ministry to ministry, making the use of district-level administrative statistics from more than one ministry difficult;

(c) Competition for financial resources makes it difficult to amass all the data, particularly small area data, which users want, but users are not always aware of what is already available.

On the topic of special research studies, the usefulness of small, specialized, detailed studies to learn about such issues as agricultural decision-making within the household and the need to be creative in developing appropriate methodologies for these studies were stressed.

The need for interaction between producers and users of statistics and indicators on women and for producers to take the initiative in disseminating the results of surveys widely and rapidly was also reiterated. For example, users in Botswana played a key role in helping to design the 1981 census. Because of user demand for housing information there, the census became one of population and housing and not of population alone.

C. Organization of statistical services and their interaction with users

Mr. David Mzite (Zimbabwe) introduced this topic. Questions to be addressed in this field included:

(a) Given the many competing and changing demands of user organizations for information, what is the best way of meeting them?

(b) Who should be supported to produce these data -- the ministries themselves? the central statistical office? and

(c) To what extent should CSO activities be decentralized to meet user needs more effectively?

Taking the example of Zimbabwe, prior to independence the CSO had not concerned itself with data on the population as a whole. The focus had been on males working in the formal sector. Consequently, for 80 per cent of the population there were virtually no data and what little there were, were out of date, having been gathered in 1969. The CSO itself was highly centralized. At independence, therefore, the immediate question was how best to organize to obtain the essential baseline data on the entire population as quickly as possible. In 1981 a national committee was set up to design the questionnaire for a national census, but as most ministries had no information for planning, they all wanted detailed data in their areas of responsibility at once. As this would have been impossible, it was decided instead to conduct a simple one-page census of general demographic and housing characteristics immediately, and then search for other means of obtaining more detailed information in these and other areas.

Late in 1981 a co-ordinating body from all the ministries was set up to look at the areas where information was required, to identify a set of key indicators, and to establish priorities for data collection. The CSO decided to participate in the African National Household Survey Capability Programme and in 1982 set up a permanent survey unit with field offices and established a schedule of surveys in accordance with the priorities identified. Because information on agriculture, and particularly on peasant agriculture, is a high priority, agricultural surveys are to be carried out annually. In 1981 a manpower survey and in 1983/84 a demographic and socio-economic survey were carried out, and an income, consumption and expenditure survey was underway in 1984/85. Other topics to follow are: labour force (1985/86), literacy (1985/86), and intercensal demographic survey (1986/87). Most of the information women need will eventually be covered, but the CSO must first build its own capability for conducting decentralized surveys, learning from experience about how many surveys they can handle in a year and how quickly they can get the data out.

To carry out this ambitious programme the CSO is organized into two divisions: first, the Economic Statistics Division, which provides information on national accounts, agricultural production, prices and finance; and second, the Social and Popuplation Statistics Division, with responsibility for censuses, surveys, vital registration and the like. Data collection is decentralized to field offices. Because resources are limited, the CSO and the ministries have developed a co-operative strategy for surveys on energy use, water and sanitation, contraceptive prevalence and health/nutrition status. The relevant ministries channel resources to the CSO for data collection, while data processing, analysis and publication are carried out by the ministries themselves with assistance as appropriate from the CSO. The CSO maintains a copy of the data and is building up a national data base. At the moment, there are no special problems at the data collection level but there are delays in data processing through the government computer center, which must serve all departments.

In the Zimbabwe example, it was also noted that the pre-independence vital registration system, which had never covered the entire population, is now in serious difficulties. Although the CSO realizes its importance, particularly to the Ministry of Health, they cannot give its restructuring priority as yet.

It is not always easy for the CSO to know who, beyond the government ministries, the relevant users are, nor to know what data the users want nor how the data will be used. Moreover, users change and their needs and demands change. A mechanism for on-going dialogue is essential. To facilitate this dialogue Zimbabwe expects to hold a large conference of producers and users of data in 1986.

From the standpoint of users of statistics and indicators on women, provision for a number of user needs are within the purview of a CSO. These include:

(a) Basic background information on women's situation;

(b) Key policy-relevant indicators on women;

(c) Timely statistics;

(d) Data at the small area or community level;

(e) An inventory of what data on women are available;

In addition, mechanisms to obtain statistics on phenomena which are not part of the regular national data collection programme are needed.

Users must be aware of factors affecting the availability of these statistics from the CSO, factors such as limited resources, competing demands, burdensome workloads, the strength and organization of statistical infrastructure of a country and the extent of its centralization or decentralization. However, users must also become sophisticated enough about their needs and the potential uses of existing data to take the initiative, not simply waiting passively until the CSO produces its own report. The critical importance of developing mechanisms to facilitate co-ordination and an on-going dialogue at all stages - data collection design, analysis, tabulation and use - must be emphasized. Because the sources of data on women are varied, as are the users, it is important that the CSO play a strong role in this co-ordination. A good example is Zimbabwe's experience in using a co-ordinating committee to select survey topics and their timing. Women's groups should be an important part of such committees.

Discussants for this topic were Ms Susan Yoyo (Zambia) and Mr. D. O. Ahawo (Kenya). Mechanisms currently being used in countries to facilitate communication between producers and users of statistics on women were reviewed in the discussion.

In Zambia, for example, the United Independence Party's (UNIP) strategy is to improve national policies affecting women through co-operation in gathering and analyzing information on women among the Central Statistical Office (CSO), the Research Bureau of UNIP and a wide variety of operating agencies. Because the CSO must respond to a variety of demands with limited staff and resources, the Party established its own Research Bureau, to supplement information available from the CSO with the results of special analyses of existing data and of other technical research relevant to policy-making. Technical assistance to the Research Bureau of UNIP is

provided by the CSO. In 1983, on the recommendation of the Women's Affairs Committee, which advises the Central Committee on policy issues affecting women, data analysis and technical research on women in development were added to the Bureau's research agenda.

To supplement its own limited staff, the Research Bureau developed a strategy to involve the operating agencies of government, parastatals, trade unions, and other non-governmental organizations in participative research on issues of significance to women. A liason committee of the participating organizations meets with Research Bureau and CSO staff to agree on the type of information needed and on the specific data to be collected from each institution. Each agency also designates a liaison person who is responsible for collecting the desired information from her/his own institution and for forwarding it to the professional staff of the Research Bureau for analysis. The Women's Affairs Committee then uses the research results in advising the Central Committee of UNIP on the relevant policies and plans. Although there have been some problems, particularly in data quality control, the response has been overwhelmingly positive.

The Kenya Central Bureau of Statistics has an on-going programme to provide policy-makers, planners and the public with continuous social and economic information about the population. Current efforts are being made to decentralize both development planning and the collection and analysis of the data on which that planning must be based.

The Social Statistics Section of the CBS has a programme of continuous and ad hoc household surveys on a variety of subjects, including the situation of women and children. Specific attention to statistics on women began in 1977 with the publication of Women in Kenya, and that attention has continued. In 1984 CBS published the volume entitled Situation Analysis of Women and Children in Kenya, and it is now producing two volumes of data on women at the provincial level. A country profile was prepared for the 1985 Nairobi conference on the United Nations Decade for Women.

Currently, with the government decision to make development planning a responsibility of district planning officers who know their districts' situation well, the CBS is trying to prepare a statistical report for each of the 42 districts. In these reports it expects to include district-level information on women's situation. In working on these reports CBS had to go to the grass roots to determine what information is needed.

Overall, although large amounts of data are produced in Kenya, users are becoming more sophisticated and it is not always easy for CBS to know what tabulations will be most useful. Better dialogue, perhaps a roundtable of producers and users at all levels, is needed. In addition, because of the volume of data CBS is slower in producing reports than is desirable. It may be that data processing and analysis should also be decentralized, using micro-computers.

Five issues were considered in the discussion:

(a) What mechanisms can ensure input by users into decisions on what data a central statistical office should gather and tabulate?

(b) What difficulties does a CSO have in identifying who the relevant users are?

(c) What mechanisms can ensure that information on women is given priority in the on-going CSO data collection programme?

(d) What special problems are there in obtaining adequate information on women in the rural and non-formal sectors?

(e) What difficulties are associated with involving the ministries and other user organizations in data collection?

With respect to the last issue, (e), two problems were underscored: first, the often uneven quality of the data collected by users who are inexperienced in statistics, and second the frequent resistance of ministries and operating agencies to any change in the way they have always maintained their records. Since there is some justification for this resistance, in any given situation the trade-offs between continuity and responsiveness to change must be negotiated. With respect to data quality, it was suggested that liaison persons in each co-operating ministry or agency be trained in elementary statistics and that strong links be maintained between these persons and the CSO.

II. STATISTICS AND INDICATORS IN SPECIFIC DEVELOPMENT FIELDS

(Second through fifth days of the programme)

Having considered during the initial day the demand for and sources of statistics and indicators on women, participants turned their attention for the next four days to the identification, definition, calculation, interpretation and presentation of specific development statistics and indicators. To introduce discussion of these indicators the conceptual framework which had been presented during the introductory session was reviewed in more detail and basic principles for calculating and presenting indicators were outlined. Following these presentations and general discussion, specific statistical series were described, discussed and calculated in five broad development areas: (a) population structure and change, (b) education and literacy, (c) economic activity, (d) health and nutrition, and (e) organization and political participation.

The format for these four days stressed delegate participation. Each topic within these specific development areas was introduced by a presentation from one or two members of the resource team or by a panel of participant presenters. Resource team presentations were followed in most instances by brief comments from designated discussants. Opportunity was also provided for general discussion for each topic or groups of topics. Finally, for each broad development area participants were divided into four small working groups, each with a resource staff member as facilitator, to undertake a series of exercises in extracting, interpreting and presenting statistics and indicators on women's situation from commonly available data. These exercises are presented in a separate section below.

The objectives of these exercises were as follows:

(a) Through examination of data collection instruments and published tabulations, to provide participants with experience in identifying those indicators which might usefully be extracted from an existing data set;

(b) To provide participants with experience in calculating illustrative statistics and indicators of women's situation;

(c) Through exercises in interpreting statistics calculated from tabulations, to sensitize participants to the importance of understanding how data are collected and what the limitations and levels of uncertainty are in the statistics and indicators calculated from these data;

(d) Through the construction of tables, graphs and charts, to familiarize participants with several ways of presenting statistics and indicators for effective communication with policy-makers and planners.

Each participant was furnished an inexpensive hand calculator to use in completing the exercises. Exercises on a given topic were handed out the day before that topic was discussed. Participants were assigned to groups simply

by counting off around the table. Because country delegates were seated together, this procedure ensured that the groups were of approximately of equal size and were heterogeneous with respect to country and to professional experience. In each of the groups, experienced statisticians assisted their colleagues with less quantitative experience in extracting statistics and indicators and in performing calculations, while those whose expertise lay more in policy development and programme planning took the lead in interpretation and presentation. Only one and one-half hours had been allowed each day (days 2-5) for these small group exercises, and since several exercises had been prepared for each of the four areas (population, education, economic activity, health), participants were not expected to complete every exercise. They were encouraged instead to take home those they had not finished for later completion.

A. Basic principles for calculating and presenting indicators

1. A conceptual framework for construction of development indicators

In introducing the consideration of specific indicators, Mr. Mandishona (Zimbabwe) began by tracing the growth of interest in devising a measure which, unlike the macro-economist's GNP on GDP, would give emphasis to the social dimensions of development. He stressed that a desirable system of development indicators must reflect the nation's development goals and should be structured so as to permit disaggregation by:

(a) Geographical levels (national, regional, local);

(b) Subject-matter dimensions (social, economic, political);

(c) Social groups sub-systems (ethnic, socio-economic);

(d) Population classifications (age, sex, location).

Indicators should point to progress toward or retreat from desired socio-economic goals and should provide signals for action.

He reviewed a number of problems with present social indicator systems. The first problem lies in the ad hoc nature of most systems. Not having arisen from an adequate theory of social structure and change, most are lists of specific indicators developed in response to requests for particular information. Other problems include poor statistical terminology and inadequate data, structural problems, a large informal and non-monetarized sector complicating collection and analysis of data, problems of measurement and scaling, and so on. In general, objective are preferable to subjective indicators, and simple indicators to composite. In the social indicator movement there is as yet no "total progress" indicator comparable to gross domestic product as an overall economic indicator.

The improvement of data systems and the information base is an integral part of general development and should itself be monitored in any system of development indicators. The system should also include indicators of population, education, health and nutrition, housing, income, expenditure, consumption and the national economy. In accordance with the goals enunciated in the Lagos Plan of Action, the system should monitor progress toward distributive social justice, the provision of basic needs, and growth in GDP. To these ends high priority should be given to monitoring the following:

(a) Short-term economic performance;

(b) Agricultural productivity;

(c) Human resource development (health, employment, education and manpower);

(d) Women's participation in the economy.

A list of specific indicators which might be included in a system to monitor these key sectors was introduced. In it indicators were grouped into five categories: basic needs, population participation, national security, economic performance and population phenomena. The importance of presenting these indicators separately for rural and urban populations was stressed.

In subsequent discussion this categorization of indicators was referred to several times. Several participants noted that the suggested measures appeared to have an urban bias. Others also suggested that the focus of the category on population participation was on participation outside the home and did not address the problems of rural women. In rural areas, participation involves decision-making within the household about what to do, when to do it, and who should do it. Males usually make these decisions even when they no longer reside in the rural areas. There appeared to be general agreement that although it was unlikely that a definitive list could be developed, countries should develop their own framework based on a coherent view of the country's developed goals, as the presentation had emphasized. The listing presented in that paper was a useful place to begin.

2. Principles for developing indicators of the situation of women

This topic was introduced by Ms Grace Bediako and the Co-ordinator, Ms Newman. The seminar reviewed three major objectives in the selection of indicators on the situation of women:

(a) To show differentials between women and men;

(b) To show how these differentials change over time; and

(c) To monitor the impact of certain policies on these differentials.

In developing and interpreting a set of indicators, once the subject to be monitored has been decided on a number of questions must be addressed, including the following:

(a) What type of indicator is to be calculated?

(i) Numbers, e.g., the number of persons falling into a given category. This is an absolute not a relative measure and therefore does not measure differentials;

(ii) Proportions, e.g., the number of persons in a given category as a proportion of all persons. When multiplied by 100, a proportion becomes a percentage of the total;

(iii) Ratios, e.g., the number of persons in a given category divided by the number of persons in another category;

(iv) Rates, e.g., the number of persons in a given category as a proportion of all persons who could be in (i.e., who are at risk for) that category;

The numerator in each case may be the same but the denominator will differ, and it is the denominator which is key to interpretation of the statistics;

(b) What framework will be used for comparisons? Will the basis of analysis be the population as a whole or some subgroup based on other characteristics such as age, marital status or educational attainment?

(c) How can one decide whether female/male differentials are significant? Standard statistical tests for differences between group means, medians or percentages are used to determine the significance of differentials between women and men;

(d) What are the reasons for these differentials? The answer to this question generally lies outside the indicator itself. It is often necessary to carry out a separate in-depth study to determine the reasons for differentials.

The Co-ordinator stressed that, from all the possible indicators one could list, the specific set chosen for monitoring should consist of those most relevant to that country's situation, i.e., those reflecting its most critical national problems, those most likely to change during that country's development, and those likely to have differential impacts on the women and men of the country. For this reason, although most countries will seek information on the same broad development areas, they will differ in the specific set of statistics and indicators selected for monitoring.

She suggested a number of principles for constructing indicators on women in development:

(a) Use existing national data series whereever possible, noting their deficiencies and supplementing them with special studies where feasible;

(b) Construct indicators of broad applicability;

(c) Develop indicators which are both valid and reliable measures for the phenomena of interest;

(d) Develop indicators which reflect women's participation in all aspects of development;

(e) Develop indicators which describe women's situation relative to that of men;

(f) Develop indicators which are easily interpreted and are signals to action;

(g) As no single indicator can capture women's many roles, avoid composite indexes. They are hard to interpret and may obscure important differentials;

(h) Present statistics and indicators in simple tables and graphically where possible.

B. Population

1. Population composition and growth

The Co-ordinator introduced the discussion of indicators of population structure and change by noting that the situation of women can not be considered apart from the general social and economic conditions prevailing in the country. Some countries have large populations, others have small. Some are densely populated, others have widely scattered populations. Some have highly mobile populations, whether in the form of labour mobility, refugee flight, or nomadic circulation; some are more settled. In Africa, although all countries are primarily rural, most are urbanizing rapidly. All African countries have young populations and high dependency ratios, i.e., the ratio of those under age 15 and over age 64 to those of working ages (15-64). Many are culturally, ethnically and religiously diverse. These demographic variations affect the situation of women in different and sometimes unexpected ways.

The distribution of the population by age and sex defines a pool of potential candidates for life stage and gender-defined activities. Accordingly, indicators describing this distribution are fundamental. Of these the most basic is the sex ratio, i.e., the number of males for each 100 females in the population. The usual range is between 90 and 103 males per 100 females, but this differs by age and usually by rural/urban residence. Where it is very low, as in Botswana where it was only 85 in the 1981 census, this is rarely due to mortality differentials but rather to the semi-permanent or temporary out-migration of young males seeking employment elsewhere.

The Co-ordinator briefly described the age distribution characteristic of countries in different stages of demographic development. Countries with high fertility and mortality have age distributions shaped like a pyramid, with each successively younger cohort larger than the preceding. Countries with low fertility and mortality regimes and therefore with lower rates of growth have age distributions shaped like a gradually tapering column. Transition from high fertility and mortality regimes to low is reflected in a bulging, tree-shaped distribution.

Grouping the population into broad age groups within which most are at approximately similar life stages provides a convenient way to summarize the age distribution. Age groupings commonly used are:

- Infants and young children: aged 0-4;
- Children: aged 5-14;
- Youth: aged 15-24;
- Adults: aged 25-44 and 45-59;
- Elderly: aged 60 and over.

Within each country, modified and more detailed groupings are often required for work in specific fields.

Because of the higher female expectation of life at birth in nearly all countries, the male age distribution is generally shifted somewhat toward the younger ages relative to that of women. Sex ratios in the individual 5 or 10 year age groups are subject to large errors due to age mis-reporting and are highly variable.

One useful indicator of the overall age distribution is the dependency ratio. This is the sum of those under 5 and age 65 and over, divided by those of working age, i.e., 15-64. Although not everyone under 5 or over 64 is dependent and not everyone 15-64 is able to work, this ratio serves as a rough indicator of how many persons each active adult must support. The child/woman ratio provides similar information. It is defined as the number of children under age 5 divided by the number of women of reproductive age and points to the average childcare burden of each woman.

The Co-ordinator noted that the specific demographic processes of birth, death and movement of people are responsible for the age and sex distribution of a population and its increase or decrease. Although these are to be considered in later sessions, she briefly described the calculation of several measures of fertility and of mortality. She pointed out that such measures differ primarily in their choice of denominator to reflect as adequately as possible those "at risk" for the births or deaths included in the numerator. Fertility, for example, may be measured as:

(a) Crude birth rate: number of births in a given year divided by total mid-year population (x 1000);

(b) General fertility rate: number of births in a given year divided by mid-year female population aged 15-49 (x 1000);

(c) Age-specific fertility rates: Number of births in a given year to women of a specific age group divided by mid-year number of women of that age group (x 1000).

Because populations at different levels of social and economic development have characteristic patterns of fertility and mortality, crude birth and death rates (CBR and CDR) can serve as rough general indicators of women's situation, as can the difference between these two, the crude rate of natural increase (CRNI).

The Co-ordinator closed by warning that cross-national comparisons may not always be valid because countries frequently use age groups which differ from the now-classic 5-year groups. Moreover, countries differ in degrees of age mis-reporting and under-reporting of certain age and sex groups. In Africa it is often the women who are not reported or whose ages are unknown. In the USA, the Bureau of the Census appears to be unable to find and count all the young black males, who show up in later censuses, after they have reached age 25.

The discussant for this presentation, Mr. Harish Bundhoo (Mauritius), made the following points:

(a) Decreasing dependency burden is not necessarily a positive indicator for development if many of the larger numbers in the working ages do not have employment and if the country cannot afford the increased costs of old age pensions;

(b) Because of higher rural-urban migration of young males, the age-sex distribution in urban areas is affected more by migration than by fertility and mortality.

(c) Since changes in the age structure with development tend to favour women, unless those women have greater access to economic activity the society will face increasing need to care for widows;

(d) Finally, the interpretation of indicators is not always obvious. In many areas female participation in the labour force is increasing but this does not necessarily imply that women's situation is improving. In countries with high unemployment, if female labour costs are low, as they usually are, women often move from the household to the industrial sector. Wages and working conditions may deteriorate for women while men remain unemployed.

2. Population distribution, migration and urbanization

Mr. Makannah (Economic Commission of Africa) introduced the discussion of statistics and indicators of population mobility and distribution by emphasizing that these indicators must be selected to help

Africa deal with the two major issues of distribution:

(a) A very uneven population distribution across the continent; and

(b) A rapidly increasing urban population, even while the bulk of the population is rural. Urban population growth is the result of both high fertility and migration.

It is particularly important to improve statistics on the levels, trends, causes and consequences for women of migration and urbanization. First, basic indicators are needed, currently and over time, on the urbanization of women, including:

(a) Proportion of the urban population who are women, by age;

(b) Proportion of urban migrants who are women, by age;

(c) Sizes of the cities to which people are moving, by sex.

Beyond these basic statistics, indicators are also needed to help identify the proximate causes and consequences of urbanization, in order to guide policy and action. To what extent are cities growing as a result of migration? Of fertility? To answer this statistics are needed on:

(a) Percentage of migrants in each city, by duration of residence, sex and age;

(b) Fertility of women in urban areas, by length of urban residence and age.

Are the cities able to provide facilities and services to their residents and particularly to women? To answer this, statistics are needed by size of city on:

(a) Unemployment by sex among young school leavers;

(b) Employment of migrants by sex;

(c) Among employed women the percentage employed in cities and in given industries;

(d) The proportion of urban households which are headed by women, among migrants and non-migrants;

(e) The proportion of urban women who have access to hospitals, schools, credit, and the like.

What are the consequences of urban migration to the sending regions, i.e., the areas of origin? Statistics on rural as well as urban population are needed on:

(a) The age and sex distribution;

(b) Fertility, by age;

(c) Unemployment of school leavers, by sex;

(d) Employment and industry, by sex;

(e) Access to social and economic facilities and services, by sex;

(f) Proportion of households with women heads.

Other questions could be addressed. What are the consequences of labour mobility to other countries? What happens to production of goods and services when men leave the country? To family formation and social relationships? Indicators are the first step in understanding the causes and consequences of migration and urbanization.

The first discussant for this topic was Ms. Celestina Ssewankambo (Zambia). She reviewed issues of population mobility and distribution in Zambia. She pointed out that during colonial days migration and urbanization were primarily male phenomena. As a result sex ratios were very uneven in rural and urban areas. This situation has changed in recent years so that by 1980 urban sex ratios were close to unity. Indeed, in some urban areas the numbers of women exceed those of men. Ms. Ssewankambo suggested that the increased female urban migration evident in Zambia may be due to improvements in female education and consequently in employment opportunities for women in urban areas.

At 35 per cent of the total population, Zambia has relatively high levels of urbanization and the population is very unevenly distributed. Fully 22 per cent of the population lives in the copperbelt, almost all of which is urbanized, while another 4 per cent lives in Lusaka. Urban populations are currently growing at a rate of 6.7 per cent per year, a rate which is slightly more than 2 percentage points lower than it was at independence. This slow-down in the rate of urban growth is the result of deliberate public policy. To encourage people to return to rural areas, the government has instituted programmes to disperse industries to rural areas and to stimulate the growth of district centres.

Ms N. Mbere (Botswana) reported on a 1980 survey which showed that many of the women who migrate to urban areas end up in low wage employment as domestics or work in the informal sector at activities such as beer brewing which are not economically viable. Rural women also migrate as agricultural labourers. They too are easily exploited. They usually receive low wages, are not entitled to other benefits and are dismissed when they become pregnant. The survey also found that because of male labour migration, more than 40 per cent of households are headed by women. Many of these women have

little access to land, labour, credit or other economic resources. Rural-to-urban migrants reported moving in stages: from rural areas to small towns to larger towns and then to cities. Government has now instituted policies to encourage them to remain in the smaller and medium-sized towns.

In the general discussion, the following points were made:

(a) In several countries there is concern to slow down rates of urban growth and many countries have instituted policies to encourage people to remain in rural and less populated areas. Those administering these programmes need information at the district and community levels. In Kenya, for example, each district has a Women's Development Committee, two members of which also serve on the District Development Committee. They need information on women at the district level;

(b) Where international migration is important, it may be useful to tabulate the labour force by migrant/non-migrant status. An example of this approach was given during the discussion by Mr. Francis Hloaele for Lesotho. They tabulate women in the labour force as follows:

Total number of women in the labour force:

- Currently working:
  In Lesotho
  Outside Lesotho

- Job seekers:
  Residents
  Returned migrants

and so on;

(c) Producers of statistics were reminded that indicators can sometimes be misleading. Users do not know how reliable a given indicator is, nor which indicators are best for making comparisons. It is up to producers of statistics to specify their limitations and to explain the concepts underlying the statistics;

(d) Participants also remarked that the line between producers and users was often blurred. Many agencies collect data in their own spheres of activity; others receive data tabulations from the CSO. In either case, when agency personnel compute proportions and other statistics from these data, they are producing their own indicators. They may need help from the CSO in doing this, or special short-term training in statistics;

(e) Finally, some participants questioned the applicability of the framework presented earlier by to the situation in rural areas. They wondered whether many of the indicators suggested in that paper were not based on essentially modern and/or urban sector concepts, and pleaded for the development of indicators which are more relevant to the rural population.

3. Household composition, families and fertility

The Co-ordinator introduced the discussion of statistics and indicators describing household composition, families and fertility. She began the consideration of these topics by recognizing that the family has been and still is the fundamental institution and organizing principle of African society and that most families live in households. Thus, marital status and position in the family and household remain critical variables in determining a woman's social status and her access to resources.

She noted that there is a wide variation across the region in the definition of a household, as there are differences in the structure of households. Each country must develop a specific definition for statistical purposes appropriate to its own situation and then must make that definition very clear to users of statistics within and outside the country. Although most women in Africa are married and most live in households with male heads, an increasing number of women in the region are themselves heads of households. Some have never married and others are separated, widowed or divorced. Still others, because of extensive male labour migration or polygamy, are de facto heads. As in the rest of the world these are often the poorest, most disadvantaged households. Data on female heads have been unreliable because both survey interviewers and respondents tend to assign headship to any available male. However special studies in Tanzania and Zambia suggest that female-headed households may constitute upwards of 20 per cent of all households.

Age at marriage is an important indicator of women's situation because of its close association with fertility and age of childbearing. Available data make it clear that both mothers and babies are at greatest risk of death when the mother is very young, that is less than age 20, or relatively old, that is, aged 35 and over, or when pregnancies are too closely spaced, i.e., less than 2 years, or when the mother has had many births, i.e., 5 or more. Early marriage, by increasing the length of time a woman is at risk of pregnancy, increases her chances of bearing children before she has reached her 20th birthday and of producing 5 or more children, thereby increasing the risks of mortality to herself and the children she will bear.

Although family sizes are somewhat lower in urban than in rural areas, particularly among educated women, African women and men continue to value high fertility. Crude annual birth rates are generally between 40 and 50 per 1000 population and African women average a total of 6-8 births. Because of very high infant and young child mortality rates, however, family sizes are somewhat lower than this fertility implies. About 1 in 3 children die before their fifth birthday and African families average approximately four surviving children. Educated women are more likely to achieve their desired family size through somewhat lower fertility and considerably lower infant and child mortality but the differences in family sizes are not large.

The age pattern of fertility however is shifting during development as African women remain in school longer, take employment before marriage, and marry later. Accordingly, as development proceeds, the proportion of a

women's lifetime fertility occuring before age 25 is decreasing. Moreover, as child survival rates improve and the knowledge and practice of modern methods of child spacing spread, the percentage of lifetime fertility occuring at ages 35 and over also is decreasing. Relatively more women are able to achieve their desired family size by concentrating their fertility within the optimal childbearing ages - a development which itself contributes to improved child survival rates and reduced maternal mortality.

The Co-ordinator listed a number of important indicators of women's situation in the family and household. Each of the indicators should be obtained separately for rural and urban areas where feasible:

(a) Households:

- average household size
- percentage of households with children under age 5, age 15
- percentage with a female head
- percentage with absent male head;

(b) Nuptuality:

- legal age of marriage for women and men (where legal age of marriage for women is older than customary practice, it may be difficult to obtain accurate data on ages of married women)
- percentage distribution of women and men by current marital status
- ages by which 50 per cent of women and 50 per cent of men have ever been married
- average difference in age between wives and husbands (this suggests the likelihood of a woman's becoming a widow)
- percentage of women in polygamous unions;

(c) Fertility:

- Crude birth rate (CBR) - number of births in a given year divided by the estimated mid-year population (x 1000)
- General fertility rate (GFR) - number of births in a given year divided by the estimated mid-year population of women aged 15-49 (x 1000)
- Age-specific fertility rates (ASFR) - number of births in a given year to women of a given age group, divided by the mid-year number of women of that age group (x 1000)

- Total fertility rate (TFR) - the sum of age-specific fertility rates, used to approximate the total number of births a woman may be expected to have if she follows the age pattern of fertility existing at a given year;

(c) Fertility:

- Gross reproduction rate (GRR) - similar to TFR but computed on the basis of female births alone, i.e. the average number of daughters per woman

- Net reproduction rate (NRR) - GRR adjusted by female mortality rates from birth to the average age of childbearing. The NRR is therefore an indicator of the average number of daughters who are likely to survive to childbearing age. The difference between GRR and NRR is due to the level of female mortality in that society. Thus when multiplied by two the NRR may be taken as an approximate indicator of surviving family size.

- Percentage distribution of lifetime fertility by age:
  percentage under age 20
  percentage aged 20-34
  percentage aged 35 and over

- Mean age at childbearing - the number of births in a given year weighted by the age of the women giving birth, summed, and divided by the total number of births.

The discussant for this topic was Ms. Gwen Lesetedi (Botswana), who presented some results of the 1981 census in her country. Questions on fertility were asked of all women aged 12-49. Between 1971 and 1981 fertility appeared to have risen somewhat - in 1971 the CBR was estimated at 44.5 per 1000 while in 1981 it was estimated at 47.2. Differences in the age pattern of fertility were observed. Most of the births were to women aged 20-29. However, in 1981 the total fertility of women aged 45-49 averaged 6.4 births. Fertility was lower in urban than in rural areas, and declined with increasing education. Many births occurred outside of marriage - more than 50 per cent of births to women under age 30 were among the unmarried. A household in the 1981 census was defined as those cooking together and living under the same roof. Because of high labour mobility to South Africa, 45.2 per cent of the urban households were headed by women and rates of female headship were still higher in the rural areas, where 83 per cent of the population resides. Household size averaged 4.3 persons in the cities and 5.8 in the country.

The points made in subsequent discussion focussed on three issues: (a) improved communication and co-operation among producers and users of statistics; (b) usefulness of statistics and indicators compiled from existing data series; and (c) comments on specific demographic indicators.

On the issue of improved communication and co-operation the following points were made:

(a) Producers of statistics should also indicate their limitations;

(b) It is not enough for producers to note data limitations. The need for improved accuracy and reliability must be addressed by pressing for policies and improved resource allocation to build a more effective statistical service;

(c) Users sometimes request information without knowing how they will use it - or how to use it. Better dialogue between producers and users is essential, as is training for users;

(d) Many users are undertaking their own surveys and asking for help after the fact. CSOs should be prepared to assist users define what they need to know before they undertake their own surveys. The Mauritius statistical office, for example, is now working with the ministries to place a statistician at least part-time within each Ministry.

On the issue of usefulness of indicators from existing statistical series the following points were made:

(a) The first thing needed is to make what women do visible. It is important therefore for users to work with producers to obtain gender-based tabulations of existing statistical series;

(b) Indicators must be selected to help answer questions and solve problems. The central statistical office and vital registration system can provide baseline population information, for example, but to understand the reasons for some phenomena, e.g. high fertility, and to develop policy, it is necessary to do additional research;

(c) Asking the right questions is the first step to solving problems. When a problem is understood, it is possible to define what information is needed and see what is already available. The focus should be on the problem, not on how much can be squeezed out of existing data;

(d) Statistics can reveal improvements as well as problems. Time series data are important in monitoring progress and in evaluating policies and programmes;

(e) Sometimes actions do not need large amounts of data. Policy decisions can be taken from knowledge gleaned from field workers and other sources.

On specific demographic indicators, the following points were made:

(a) The term "dependency burden" may be misleading, as some children work while some adults are dependent. It is merely an indicator of age-structure, not "dependency" per se;

(b) The problems of urbanization in developing countries are those of poverty, not merely the increasing number of people in cities. Dispersal of urban poverty back to the rural areas does not end poverty;

(c) Teen-age pregnancies are increasingly a social change during development as old constraints crumble. It is important to monitor changes in age-specific fertility.

At the next session following the discussion, participants broke into four small working groups to begin the initial set of exercises on calculating, presenting and interpreting statistics and indicators relevant to women and development. The first set of exercises (see the "Exercises" section of the present report) dealt with population structure and change, geographical mobility and urbanization, marital status, household size and composition, and the age structure of fertility. During this working session and those over the next several days, demonstrations were also provided to each of the working groups on the calculation and presentation of statistics and indicators from the United Nations Statistical Office women's data base, using a micro-computer and a spreadsheet programme.

C. Education, training and literacy

The third day of the seminar was devoted to a discussion of indicators of women's access to education, training, and literacy. Topics discussed included school enrolment and achievement, curricula, vocational/technical training, literacy and adult education. As with the previous day's discussion of demographic indicators, each topic was introduced by one of the resource staff, followed by comments from one or more participant discussants and then general discussion. During the final 90 minutes of the day, the four smaller groups reconvened to work on exercises in compiling and interpreting educational statistics.

1. School enrolment and achievement

Mr. Makannah introduced the discussion of school enrolment and achievement by pointing out that the field of social statistics had actually begun with indicators of education. These indicators are intended to give an overall picture of the state of education in the country. From there it is possible to measure the extent to which various sectors of the population have access to education and to some extent the quality of education.

Most regular educational systems are structured into the following levels: primary education, usually for children aged 6-11 years; secondary, usually for those 12-17 years; and post-secondary certificate, diploma or degree programmes. The situation of the regular educational system in a country can be described by the following measures:

(a) Crude enrolment ratio (CER) - total full-time enrolment at all three levels per 100 population, i.e., the percentage of the total population who are enrolled in regular educational programmes;

(b) Gross enrolment ratio (GER) - total full-time enrolment at a given level divided by the estimated population eligible for that level. This is a refinement of the crude ratio, limiting both numerator and denominator at each level. The denominator for a given grade level is taken to be the total number of persons within the age range "normally" found at that level. Thus the primary level GER is calculated by dividing the number of primary school pupils by the total number of persons 6-11 years old, where 6-11 is the usual age of enrolment. This is a ratio, not a percentage, because primary school pupils may in fact be either older or younger than the "normal" ages;

(c) Percentage female enrolment - the percentage of those enrolled at a given level who are female.

Mr. Makannah illustrated these indicators with figures from the 1982 UNESCO Statistical Yearbook for several of the countries represented at the seminar (see Table 1). These countries demonstrated considerable variation in enrolment ratios. Botswana, Lesotho and Tanzania were among those with primary GERs close to the UNESCO standard, i.e., between 80 and 100, while others had GERs ranging between 40 and 60. Secondary GERs were much lower, from 3 per 100 to a maximum of only 23 per 100, against a standard of 60. Countries vary too in the percentage of enrollment who are female. At the primary level, females exceed 50 per cent in Tanzania but make up only between 20 and 40 per cent in the other countries reviewed. At the secondary level, percentage female drops sharply from the first level overall and from year to year within the secondary level.

The discussant for this topic was Ms Abaynesh Makonnen (Ethiopia). She reported that Ethiopia has had difficulty in obtaining reliable information until recently. In 1980 they initiated an on-going National Household Survey Programme, and they have recently completed their first population and housing census. They expect that denominators for rates will be much more reliable in the future. The Central Statistical Office has also had problems in obtaining reliable numerators from administrative records. The figures are not always properly compiled by the Ministries and the CSO does not have the necessary status and power to require improvements. Data are not compiled separately for rural and urban areas and data on drop-outs and on enrolment in vocational/technical programmes are not compiled.

The data they have, however, show that female enrolment in grades 1-12 in 1981/82 constituted 35.1 percent of the total. This represents some progress since 1974, when the comparable figure was 31.5 per cent. The proportion of women with higher skills and of women in the professions was also low. Ms. Makonnan attributed low rates of school attendance to early marriage, pointing out that 53 per cent of the 15-19 year old women and a full 84 per cent of 20-24 year-old women were married. They are looking to this seminar to help them identify what is needed and strategies which could help them obtain the data.

Table 1

Selected enrolment indicators

Country, level and year	Age group	Gross enrolment ratio (100)	Percentage female
Botswana			
Primary			
1975	6-12	80	55
Secondary	13-18		
1980		22	
1981		23	52
Ethiopia			
Primary	7-12		
1976		24	
1980		43	22
1981		46	
Secondary	13-18		
1975		6	
1980		11	36
1981		12	35
Post-secondary			
1981	13		
1982	13		
Malawi			
Primary	6-10		
1975		56	40
1980		59	41
Secondary	14-17		
1975		4	27
1980		4	29
1981		4	

In the discussion the following points were made:

(a) There is a serious problem with GER because numerator and denominator do not refer to the same populations. Increases in GER may only indicate that there are a number of repeaters. As there is no way to solve this problem since it is inherent in the measure, users must be aware of its limitations;

(b) If women are to have greater access to education, policies must address traditional attitudes toward early marriage for women;

(c) Where teenage pregnancies are high, many girls drop out and do not return to school after giving birth;

(d) Some countries do not have a policy of universal secondary education, so places are not available. Places for women in the science streams are particularly limited;

(e) Many schools and universities have limited residential facilities for girls and women.

1. Indicators of access to appropriate curricula

The Co-ordinator resumed presentation of issues on women's access to education, pointing out that one year of school completed at a given grade level, or one non-formal course attended by women and men, may not represent the same educational experience. Programmes offered to women and men are often very different in content and orientation and are frequently taught by teachers with different levels of experience and qualification. To understand the full pattern of educational opportunities, it is also necessary, therefore, to look at the kinds of institutions, programmes and curricula available to or taken advantage of by each sex.

In much of the region single sex secondary and post-secondary institutions are the norm and scientific and technical subjects are often found only in educational institutions or programmes for boys and men. She gave the following illustrations from 1973-1978 Kenya data:

(a) Despite the fact that 80-90 per cent of women in rural areas are engaged in producing, processing and/or marketing food, access to technical education in agriculture was very limited. At the Bankura Institute of Agriculture in 1973 there were only 30 places for girls compared to 270 for boys;

(b) In 1976, of the approximately 4,300 secondary school places, 30 per cent were for girls. However, girls were offered only 17 per cent of the places in science programmes;

(c) In 1978 no secondary vocational-technical schools admitted women;

(d) Also in 1978, of the 21 secondary schools offering advanced mathematics, 15 schools were for boys but only 3 were for girls while another 3 were co-educational.

Because Kenya has had a well-functioning Central Statistical Office for sometime, such data are more readily available for that country, but the picture is much the same in most countries in the region.

Data from Sudan for 1974 provide another example. Of the 974 secondary schools, the following distribution by type of secondary school and sex was reported:

	Number of schools		
	Female	Male	Total
General	250	609	859
Academic, higher	32	67	99
Commercial	0	3	3
Technical	0	11	11
Agricultural	0	2	2
Total	282	692	974

Even when technical programmes are offered to girls and women, the proportion electing to enroll is small. In part this is the result of the absence of strong science and mathematics programmes for girls in the lower grades. Kenya has found it difficult to fill all the places available to girls in science, especially in physics. In Chad and Togo, few girls enter vocational-technical schools because few meet the minimum entrance requirements. And among those enrolling in such schools, few girls graduate equipped with the kind of technical skills needed for modern rural development or with an adequate foundation in math and science for higher technical training. Some illustrations are:

(a) Lesotho 1979: 58 per cent of those enrolled in vocational-technical schools were girls but most were studying domestic arts, bookkeeping and typing;

(b) Sudan 1973/74: 16 per cent of those enrolled in higher specialized institutes were girls. They constituted only 8 per cent of those enrolled in agriculture, business, engineering and architecture, combined, but 74 per cent of those enrolled in nursing, secretarial studies and teaching.

Many other examples could be given.

The same pattern usually is found at the university level. In Ghana in the mid-1970s, women constituted only 7 per cent of the enrolment at the University of Science and Technology at Kumasi and 20 per cent of those were enrolled in the Faculty of Arts. Of the remainder, many were in teacher training. In contrast, at the universities at Legon and Cape Coast, women constituted 15 per cent of the total enrolment, approximately twice their share of enrollment at Kumasi. Nevertheless, access to university training can permit a greater range of opportunity if women are ready to take advantage of it. Again in Sudan, at the University of Khartoum women were enrolled in the combined science faculties (agriculture, engineering, medicine, science, verterinary sciences, pharmacy) approximately in proportion to their total enrolment. Although their share of total enrolment was only about 10 per cent fully 8.5 per cent of the science places were filled by women.

Efforts in recent years to make curricula more relevant to the vocational needs of African students may introduce even greater gender differentiation. For example, Ghana in the mid-1970s introduced a new junior secondary school curriculum. It offered home science and pre-nursing to girls, with electives in beauty culture, tailoring, dressmaking and catering. Boys were offered an agricultural sciences programme, with electives in woodworking, masonry, technical drawing, automotive practice. Were such programmes to reflect the traditional African labour pattern in practice, most women would be offered agricultural and business courses.

Data on enrolment by programme content and sex come from administration records. Three different types of statistics are useful, along with female/male ratios and percentage change over time for each:

(a) Enrolment rates in programmes of different kinds by sex. Note, however, that it is often difficult to select an appropriate denominator for these rates;

(b) Percentage distribution of enrolment in programmes of different kinds, by sex;

(c) Number of programmes of different kinds available to each sex.

The discussant for this topic was Mr. Samson D. Gumbo (Zimbabwe), who stressed the importance of developing curricula relevant to the real needs of rural women. Current curricula have been imported from developed western countries by those who themselves have been trained by a western-oriented educational system. Most parents see a relevant curriculum as one leading to a white collar job in an urban area, and despite their rhetoric about education for development, few politicians and educators forego a classical western education for their children. Yet for the majority, such a curriculum results in education for unemployment and frustration. Upon leaving school, most are not equipped for urban white collar jobs and few such jobs are available. Increasingly, the rural areas are seen as the province of unemployed men and of women and children.

However, to develop curricula relevant to rural development for both women and men it will be necessary to address problems of both skills and attitudes. Before independence few women had enrolled in courses meant for men but now a number of women are going into agriculture. None the less current technical curricula have been conceived as technical education for men, with content and components designed for men. It is not being fair to women to simply ask them to join in the same curriculum. Enrolment statistics should be used to monitor the participation of women and men in technical-vocational programmes, but that will not provide information about the relevance of those programmes to women's participation in rural development.

During the discussion, current efforts to re-orient educational curricula to encourage girls to study math, science and technical subjects in Tanzania, Kenya, Ethiopia, Zambia, Malawi, and Zimbabwe were discussed. The following points were also raised:

(a) Educational statistics cannot be considered in isolation from the development context. The national development strategy chosen and the educational system must work in combination;

(b) Education for women is both a health and development issue. The more education a woman has the higher the chances of survival for her children and the better they do in school;

(c) In an attempt to make education for women relevant to their felt needs, it is important not to create separate programmes which marginalize women, channeling them away from training in key development skills;

(d) To increase the proportion of girls and women entering scientific and technical fields, it is necessary to start at any early age, in the home and in primary schools, to change expectations and develop skills;

(e) Career counseling is critically important in opening new fields to women;

(f) Career schemes still require western academic credentials. When jobs are advertised, employers look upon graduates of technical schools as unqualified. Government must take the lead here;

(g) It is important to remember that indicators themselves do not suggest interventions. They are needed for monitoring and for evaluating the impact of policies and programmes. Although a single indicator may be inadequate to measure everything about education, it can be a place to begin. Improvement in the adequacy of educational indicators is a function of close dialogue between producers and users.

3. Indicators of literacy and adult education

Mr. Makannah introduced the discussion of literacy by reminding participants of the international definition: a literate person is one who can with understanding read and write a simple sentence on everyday life. Economists consider literacy one of the best indicators of socio-economic development. Common indicators on literacy include:

(a) Percentage of the population above a given age who are literate. Age 15 is most commonly used as the minimum age;

(b) Age-specific literacy rates;

(c) Female/male ratios of percentage literate.

The range in the region is wide. Some illustrative statistics were presented, as follows:

Country	Year	Age group	Total	Percentage literate Female	Male	F/M ratio
Tanzania	1978	15+	78	70	78	0.90
Zimbabwe	1980	15+	69	61	77	0.79
Ethiopia*	1980	10+	35	Not available		
Somalia	1980	15+	6	3	11	0.27

*This figure is subject to revision as a result of the recent census.

The Co-ordinator then turned to the subject of women's access to adult education, that is, education outside the regular education programme, a topic closely related to literacy, as one often serves as a vehicle for the other. She noted that, given low enrolment rates, developing countries face a large and growing problem of out-of-school youth and young adults inadequately trained for employment in agriculture, business, industry, and government, who swell the ranks of the un- and under-employed. These young people require vocational training. Most governments and many non-governmental organizations have instituted programmes of vocational training for school leavers and extension services in rural areas. Consequently, the availability and content of such programmes provide another important set of indicators of women's access to education.

Data describing these courses come from administrative records and are often fragmentary because these courses are established under many different auspices, many of them ad hoc and ephemeral. Certain regularities have emerged from a series of ECA and World Bank case studies, however. Programmes for women generally are of two types. The first, often combined with literacy programmes, focuses on homemaking, nutrition and health. While valuable, these rarely lead to gainful employment. The second includes such topics as hairdressing, dressmaking and the less skilled commercial subjects. While they do result in increased employability and earning capacity, the occupations are marginal. They do not help women qualify for participation in modern agriculture or achieve self-sufficiency and decreasing dependency. Courses for men focus on farm management and industrial innovation. There is an additional problem emerging as more employers are offering on-the-job training and/or apprenticeship programmes. Women cannot qualify for these programmes unless they already have acquired the minimum skills necessary to get the job in the first place and to qualify for advancement.

Useful indicators of access to out-of-school vocational and technical programmes include:

(a) Number of courses offered, by type and sex of participants;

(b) Number and percentage distribution of those attending, by type of course and sex of participants;

(c) Female/male ratios of the above.

The discussant on the subjects of literacy and out-of-school education was Ms Elizabeth Minde (Tanzania). She underscored the importance of programmes which teach specific knowledge and skills as well as literacy. She noted that statistics on relative female and male literacy and access to training programmes can not get at the reasons behind the patterns observed. For example, very often residential facilities for women are not available at training centres.

During the discussion efforts underway to improve women's access to literacy, education and training programmes in Kenya, Zimbabwe, Ethiopia, Botswana, Zambia and Malawi were described by participants from those countries and a number of problems pointed out. On women's access to training, the points raised included the following:

(a) Literacy, education and training are human rights and indicators of the extent of development of any society;

(b) Literacy:

(i) Countries need to know how many are illiterate, who they are, where they are distributed, how successful literacy programmes are, who is taking advantage of them, and so on;

(ii) Data are needed on the application of literacy skills: how many school drop-outs are still literate? How many of those trained through literacy programmes lapse into illiteracy through lack of on-going opportunities to use their skills?

(c) Regular education:

(i) Drop-off in enrolment ratios by grade may be the result of the absence of facilities, not lack of interest. Statistics on places as well as enrolment are needed;

(ii) Enrolment figures are affected by seasonal factors. This must be allowed for in data collection.

(d) Vocational-technical programmes:

(i) Data are needed to improve knowledge of women's access to relevant vocational and technical training, so that informed intervention is possible;

(ii) Unless education and training are geared toward science and technology, research indicates that later job opportunities are unavailable except at the lowest levels;

(iii) Men often assume that women cannot be away from home to participate in out-of-school courses. There is need to educate men on this;

(iv) In countries where government is the main employer and certificates or other credentials are required, out-of-school training may not lead to employment or advancement. This leads to frustration as there is no economic return from these new skills. The answer to this must come from government itself.

On the issue of collaboration between central statistical offices and administrative departments, the following points were made:

(a) Because central statistical offices generally have evolved from colonial structures, they have been dominated by men, often with a narrowly mathematical and statistical viewpoint. Wider participation in designing data collection activities is needed;

(b) Simple statistical skills can be taught in primary and secondary schools to broaden the ability of administrative officers to understand and interpret statistics and indicators;

(c) Establishment of small units which are outposts of the central statistical office in the different ministries is a useful way of improving administrative records and of co-ordinating research. Monthly meetings of these staff with central statistical office staff help to co-ordinate their efforts. Since many ministries offer their own training courses, it should be possible to compile information on these courses through such meetings;

(d) Improvement in these data must come from the administrative departments themselves. Ways must be found to facilitate the collaboration of the central statistical office and the administrative departments in improving administrative records and in highlighting women's access to these programmes.

Participants emphasized that it is critically important that the Conference of African Planners, Statisticians and Demographers be made aware of the need for information on women in central statistical office and administrative departmental data collection activities.

In the next session, participants reconvened in their small working groups to undertake the exercises on education and literacy.

D. Economic activity

On the fourth day of the seminar, participants considered a variety of indicators of women's economic activity - labour force participation, employment in formal and informal sectors, occupation, time use, and access to credit and other economic resources and services. Special attention was given to the opportunities and needs of women in rural areas. Although the general schedule followed that of the previous days, the format included two panels drawn from participants, observers and resource staff.

1. Concepts and definitions

The Co-ordinator introduced the day's topic with a review of currently accepted concepts and definitions of economic activity. She noted that development economists have recently come to recognize that improvement in the productivity of Africa's small farmers and businesses is critical for the region's development. As these are the very sectors in which women's economic activities are concentrated, programmes designed to improve the productivity of the small farmer and trader may be targeted inappropriately or have unexpectedly negative consequences if they are not based on adequate information about women's activities.

Data on the labour force come from national censuses, special manpower surveys carried out on a household or enterprise basis, and surveys taken for other purposes, such as the World Fertility Survey, which also ask about employment and occupation. However, it is now recognized that existing statistical systems using the labour force concept of economic activity have failed fully to capture on women's productive roles in African society. The shortcomings of existing data on the female labour force arise from a number of factors, some of which have already been mentioned, and these will discussed more fully by later speakers. Three of the most significant of these are:

(a) A definition of the labour force which is based on culturally biased assumptions, derived from western experience, about the sexual division of labour and economic relationships within the household;

(b) The practical difficulties of measuring part-time and multiple activities and production for own use as well as for exchange, particularly in the household setting;

(c) The costs for tabulation by sex of existing statistical series and for the collection of additional data.

Although different concepts and definitions of the economically active and greater sensitivity to sex biases in data collection and presentation are needed, she maintained that better exploitation of data from existing systems can highlight women's activities while identifying data gaps and conceptual inadequacies.

The Co-ordinator then traced the history and evolution of the concept of the labour force and its measurment from the 1920s, when the First and Second International Conferences of Labour Statisticians (ICLS) adopted the first set of international recommendations in this field. Since that time there have been a number of modifications in the definition of labour force participation and in the terminology to be employed in data collection. Most of these have been designed to facilitate differentiation among the employed, the underemployed and the unemployed. However, the most recent modification, at the 1982 meeting of the ICLS, calls for the inclusion in the labour force - whether as an employee, unpaid family worker, or as self-employed - of anyone who can satisfy the requirement of a minimum of one hour's productive work during the reference week. She observed that this definition must be very carefully applied if distinctions among the employed, under-employed and unemployed are not again to be obscured.

Participants were urged to read the seminar background documents (these are listed in section VII of the annex to the present document) for a more thorough presentation of issues associated with statistics and indicators of women's economic participation. Important concepts and definitions discussed and illustrated there include:

(a) Activity status
- Economically active, i.e. in the labour force
  - Employed, i.e. currently working
  - Unemployed, i.e. not currently working but looking or available for work
- Not economically active

(b) Status in employment
- Employer
- Own-account worker
- Employee
- Unpaid family worker
- Member of producers' co-operative

(c) Occupation

(d) Industry (branch of economic activity)

(e) Sector of employment.

Useful indicators of women's labour force participation include:

(a) Number and percentage economically active, by sex

(b) Female/male ratio of percentage economically active

(c) Female share of the labour force, i.e. percentage female

(d) Age-specific participation rates

(e) Distribution by status in employment

(f) Distribution by occupation

(g) Occupational segregation

(h) Distribution by industry

(i) Segregation by industry

(j) Rural and urban differentials in economic activity measures.

Finally she noted that some observers have suggested using a "partial activity rate" in order to monitor women's participation in the modern wage economy. This is defined as the percentage of women of particular age groups employed in certain specified modern occupational categories. However, this measure requires occupational and industry data which are rarely available in the region. Moreover, since this measure would exclude the majority of African women, its use would frustrate the policy objective of making women's labour statistically visible, so as to strengthen their claim on the national resources they need to improve productivity.

2. Labour force participation

Ms Misrak Elias (Eastern and Southern Africa Management Institute) served as chair of a panel on labor force participation, employment (in both formal and informal sectors) and occupation. Panelists included Ms Grace Bediako (consultant to the United Nations Secretariat), Ms Elsa Teferi (Ethiopia), Ms Celestina Ssewankambo (Zambia), Mr. F. Chatsalira (Malawi), Mr. D. Ahawo (Kenya).

Ms Elias gave a brief description of the Women in Development programme at the Eastern and Southern Africa Management Institute in Tanzania. Established in 1980 by the Economic Commission for Africa and supported by several international agencies, the programme is designed to train and sensitize planners and managers in the region to women's contributions to

economic development and to the impact of development programmes on women. The focus of the programme is on women but the courses are for men as well as women. Among other topics, attention is given to methods of conducting needed research to clarify and measure women's economic activity.

Ms Bediako, the first panelist, pointed out that occupational data by sex are needed to monitor changes in job segregation by sex. Since broad categories are not very useful for this, an occupational coding scheme at the greatest feasible level of detail is required. The United Nations publication distributed at the meeting, Compiling Social Indicators on the Situation of Women, shows the first two levels of the International Standard Classification of Occupations but more detailed breakdowns are useful. She illustrated the importance of the more detailed breakdowns by noting that although in one country women made up 43 per cent of all professional and technical workers, at a more detailed level they ranged from 1.4 per cent of airline pilots to 97 per cent of registered nurses, showing a high degree of occupational segregation at the detailed level.

Suggested indicators of occupational segregation include:

(a) Numbers by sex in various occupations, at as detailed a level as feasible;

(b) Percentage distribution by occupation: females (males) in a given occupation as a percentage of all employed females (males);

(c) Female share of a given occupation: females (males) in a given occupation as a percentage of all employed females (males).

(d) A segregation index of occupational distributions: sum of the differences between the percentages of male and female labour force in each occupation divided by 2. This indicates the percentage of men or women who would need to change jobs to equalize the occupational distribution.

These indicators tell whether women are disproportionately found in certain occupational sectors but they do not explain these distributions. Some of the differences observed may be the result of differences in educational and training opportunities for girls and boys. Others may be due to gender bias in hiring and promotion. Still others may arise from the perceived incompatability of certain occupations with women's family responsibilities. Research will be necessary to determine the specific factors responsible for specific observed patterns.

Turning to country experience, panelist Ms Teferi described some of the changes in women's economic activity in Ethiopia in recent years. Data on labour force participation come from two establishment surveys, one in 1970 and a second in 1981. They refer primarily to urban unemployment. Two major shifts during the period are evident: prior to the revolution, 81 percent of employed women worked in the private sector but by 1981, 91.5 per cent of working women were employed in the public sector. During this period there has also been a shift of women into agriculture. Table 2 illustrates shifts in occupation and industry between 1970 and 1981.

Table 2

Shifts in women's employment: percentage distribution of women by industry and occupation, Ethiopia, 1970 and 1981

Industry	1970	1981
Services/manufacturing	86.5	51.0
Agriculture	1.3	20.8
Trade/transportation	11.8	19.5
Finance/insurance	--	4.2
Construction/electronics, etc.	0.1	2.5
Other	0.3	2.0
All employed women	100.0	100.0
Occupation		
Production	43.0	47.6
Service	36.5	16.0
Clerical	9.1	20.9
Professional	7.6	2.1
Management	1.9	1.1
Other	1.9	12.3
All employed women	100.0	100.0

Since 1970 establishment surveys have covered only those employing 50 or more workers but most women work in household and small-scale establishments employing 2-3 workers, so women's employment and occupations in the informal sector are not well documented. Ms. Teferi urged that additional efforts be made to collect data on small-scale activities through small surveys and improved administrative records.

Panelist Ms Ssewankambo reviewed data on female economic activity in Zambia. Data come from three sources: the 1980 population census, annual establishment surveys in June or December and a 1983 detailed manpower

survey. According to the 1980 census, women constituted only 35.5 per cent of a total labour force of 1,767,300. Moreover the rural and urban distribution of the labour force differed by sex: 73 per cent of the female labour force resided in rural areas while 81 per cent of the male labour force resided in urban areas. (See table 3.)

Data from annual establishment surveys show that most women are employed in community, social and personal services occupations, and in the traditionally female professions of teaching and nursing. Between 1975 and 1980, however, the number of women employed in agriculture and forestry doubled, from 1100 to 2300. When occupational data from the 1983 manpower survey are analyzed by sex, they show that females have now joined many occupations which were previously male. She also noted that there appears to be little difference in earnings between women and men. She reported that a disproportionate number of working women report themselves as unmarried. It is possible that many of these are in fact married but report themselves as single to reduce tax liabilities. Once again, this illustrates the need to go behind the statistics themselves for full understanding.

Panelist Mr. Chatsalira reported that although small, the number of women employed in the modern sector in Malawi was increasing. Most are employed in teaching, clerical, sales and service occupations. The number of professionals is very small. Quoting from a study by David Hirschmann, published by ECA, he reported that the great majority of women in 1981 worked in agriculture at all levels: owners, employers, managers and full-time or casual employees, as follows:

(a) 3.6 per cent full-time workers on own holdings, in subsistence and significant cash cropping;

(b) 85.0 per cent full-time workers on own holdings, in subsistence and marginal cash cropping;

(c) 1.0 per cent full-time workers at low wages on estate farms;

(d) 5.5 per cent seasonal and part-time workers on small or medium-sized farms;

(e) 4.9 per cent other.

A new government policy to encourage female access to agricultural credit has resulted in up to 28 per cent female participation in such programmes.

Table 3

Rural and urban distribution of labour force, each sex, Zambia, 1981
(percentage)

	Women	Men	Total
Rural	73	19	38
Urban	27	81	62
Total	100	100	100

Panelist Mr. Ahawo described Kenya's extensive system of labour statistics. In addition to population census data and a manpower survey conducted in 1981-82, Kenya carries out an annual survey of establishments employing 50 or more workers. They have also undertaken a survey of the informal sector. To facilitate analysis they have developed a national occupational classification system. Data from establishment surveys from 1975 to 1983 indicate only a modest increase in women's labour force participation during the period. Salaried female employment increased only from 16 to 18 per cent, unsalaried from 23 to 29 per cent during this period.

Mr. Ahawo also noted a number of problems with labour force data. First among these is the continuing issue of defining the economically active. By counting only those at work or actively looking for work, discouraged workers are omitted. Moreover, by confining the establishment survey to those employing 50 or more and to urban areas, most unpaid family workers as well as employees of small-scale industries are omitted. The quasi-legal character of much non-formal economic activity makes it difficult to obtain accurate information. Finally he noted the importance of changing perceptions as the economy undergoes evolution. Many men are now in so-called female occupations and many women are entering formerly male occupations, in some cases constituting up to 40 per cent of workers in these occupations.

The discussion which followed the panel presentations focused on the need for better information about nomadic women, on women employed in agriculture and the informal sector, and on the special problems and opportunities of women employed in the formal sector. Concepts requiring clarification or redefinition were considered and data and research needs identified, as follows:

(a) On nomadic women, there is virtually no information on their activities, needs and special problems. Research is urgently needed;

(b) On women in agriculture:

(i) There is often no association between the levels of income women receive and their activities in agriculture, nor is there a necessary association between land ownership and farming activities. Men usually own the land and often control the farm's income while the women actually farm the land;

(ii) There is need for improved data collection on economic activities in rural areas. Information is needed on property ownership or other collateral and access to credit. Ways also need to be developed to measure individual contributions to household production. Although expensive, periodic censuses of agriculture should be undertaken;

(c) On women in the informal sector:

(i) It is important to refine the concept of informal activity and to devote resources to its measurement. This concern was stressed by participants from many of the countries;

(ii) Informal activity plays an important role in building skills and amassing capital to enter the formal sector. Linkages between the informal and formal sectors should be researched;

(iii) Obstacles to success in the informal sector include lack of credit, low skills, limited access to raw materials, inadequate assessment of the market and competition from the often more efficient formal sector;

(iv) An ILO study of the informal sector in Botswana found important gender differences. Men tended to engage in mechanical/technical activities with higher profit potential, while women worked largely in beer brewing and food service activities. Even when men undertook so-called women's activities, they tended to be more aggressive, to work longer hours, and to derive better incomes. Botswana is now investigating the possibility of special benefit programmes for "small-scale industries", i.e. those employing fewer than 10 workers;

(d) On women in the formal sector:

(i) Public sector employment provides equal wages to women and men, but frequently the opportunities for advancement are not equal. Detailed occupational breakdowns would help to monitor this, but we also need indicators of female advancement on the job;

(ii) Many were not willing to accept the concept of jobs which are "incompatible" with women's family responsibilities. Information is needed on marital instability and special needs of women engaging in non-traditionally female occupations;

(iii) It is important to remember that what is a "female" occupation is culturally defined; in Uganda women engage in construction, in Ghana they do not;

(iv) Sex bias is often evident in the categorization of workers in a household enterprise. Where both husband and wife carry on related economic activities (e.g. spinning by wife, weaving by husband), the man is categorized as an own-account worker and his wife is usually counted as an unpaid family worker. Using gender-free definitions, both would be counted as own-account workers;

(e) On data and research needs and methods (beyond those already mentioned):

(i) It may be difficult to operationalize the shift in definition of unpaid family workers who are economically active from those working at least one-third time to those working one hour per week or more. It is not always easy to know when one is at

work. The borderline between work and household chores or work and leisure activity is often ambiguous. Research is necessary to clarify and delimit economic activities under the new definition;

(ii) At what age does work begin? What about the work of children? It may be necessary to set subregional and national standards to supplement international recommendations. Perhaps two sets of some tables will need to be published: those incorporating local/national standards and those using subregional or international standards;

(iii) Results from specialized surveys can help develop new questions on economic activity for the more routine census and other data collection programmes. Essential dimensions might include:

- type of principal, secondary, tertiary activities
- location of each activity
- whether full-time, part-time, casual
- length of time spent at each
- number of days worked last week
- status in employment: own-account, employer, manager, employee, member of producers' co-operative
- whether paid or unpaid (is a pay slip given?)
- amount received;

(iv) Several producers of statistics indicated a new appreciation of how users can be of assistance:

- in designing questionnaires and other data collection instruments
- in developing the tabulation programme;

(v) Producers also indicated that they will take more initiative in involving users also but they also expect their fellow participants from the user side to take the initiative in requesting the information they need.

3. Time-use studies

This session concluded with a description by the representative of the Statistical Office of the United Nations Secretariat of data collection programmes for recording and analyzing individuals' allocation of time. Known as time-budget or time-use studies, these chart out the pattern of activities during a 24-hour day, usually at different times of the year where seasonality is an important factor.

Three methods have been used:

(a) Observation, either continuously over a long period of time or at randomly designated times;

(b) Verbal recall of the events of the previous day;

(c) Records kept by subjects of their activities and the time spent in each.

A number of small anthropological studies of this type have been carried out in Africa, but only three national level studies have been undertaken in the region as they are difficult and costly. Botswana has had two and the Ivory Coast one such study. Nevertheless, their utility is great, as they cover aspects of behaviour not otherwise easily available. All activities are recorded. Selection and aggregation are left to the researcher for further analysis. These studies have two major uses: to learn about the range of activities in a pilot study in order to design a standard labour force survey, and to broaden a country's ability to measure its subsistence production and other productive activities not easily measured.

Some of the difficulties which must be noted and overcome in carrying out time-allocation studies include:

(a) The problem of selecting a typical day: In Botswana one study observed the subject once a month, on a randomly selected day, for a 12-month period. The second study made observations 4 times per year. In the Ivory Coast urban subjects were observed for one week once a year, rural subjects four times per year for one week;

(b) The coding scheme for such a wealth of data;

(c) The effect on the people being observed: With sufficient familiarity, this effect tends to wear off. Accordingly one should build in extra observation days where feasible;

(d) Training of observers/interviewers and length of time of the interview;

(e) Subjects who do not go by clock time: Reference events - sunrise, noon, call to prayer, etc. - may be used.

Among other findings, these studies illuminate the economic costs and value of children to their parents and help to explain differentials in school attendance. They also show that women and girls tend to work longer hours than men and boys and highlight the important roles women play in agriculture, animal husbandry and trade. Table 4 shows data from the 1979 Ivory Coast time allocation study illustrating the relative working hours of women and men.

Table 4

Contribution of women and men aged 15 and over to different sectors of economic activity, Ivory Coast, rural areas, first quarter 1979

	Activities	Average time per day (hours and minutes) Male	Female	Share of total work hours, each sex (percentage) Male	Female
1.	Market economic activities	2:31	1:25	61	39
2.	Subsistence economic activities	0:49	1:45	29	71
1+2	Total	3:20	3:10	48	52
3.	Domestic work	0:35	3:38	13	87
1+2+3	Productive work burden	3:56	6:48	34	66

4. Economic activity in rural areas

The next session was devoted to consideration of women's economic activity in rural areas. Mr. Kuezi-Nke (ECA/Zambia), chaired a panel of participants and observers. Panelists included Mr. D. Alonzo (FAO) Ms A. Makonnen (Ethiopia), Ms H. Terefe (Ethiopia), Ms R. Nkomo (Zimbabwe), Ms C. Ssewankambo (Zambia), Ms B. Madsen (Zimbabwe), Ms G. Mulindi (Kenya).

The session opened with the presentation by the representative of FAO, Mr. Alonzo, of portions of his paper on statistics and indicators on the role of women in agriculture and rural development. He presented a series of indicators which have been found to be useful in five key policy areas: labour force participation and economic activity; access to land, water and other natural resources; access to inputs, markets, agricultural information and services; people's participation; and access to education and training. (A full listing of suggested indicators is given in that paper.)

Indicators of rural labour force participation include:

(a) Women in agriculture as percentage of economically active female population;

(b) Percentage distribution by employment status (own-account worker, unpaid worker, agricultural employee, etc.) of women economically active in agriculture;

(c) Women as percentage of landless agricultural workers;

(d) Percentage of landless rural households headed by women;

(e) Female as percentage of male median weekly or monthly wage of agricultural labour, by type of work;

(f) Rural unemployment and underemployment by sex;

(g) Women agricultural traders as percentage of all agricultural traders.

He noted that there are many problems in the standard concepts and the development of an adequate set of indicators is a slow process, requiring dialogue between producers and users. It is particularly important that better approaches to village level statistics and to farm data be developed.

Panelists Ms Makonnen and Ms Terefe described efforts in Ethiopia to obtain data on the economic activities of the rural population. As part of the National Integrated Household Sample Survey Program, the rural labour force is surveyed quarterly, using the farmers' associations as the primary sampling unit. A special module has also been developed for nomadic populations. In these surveys respondents are asked about both current (previous week) and usual (previous three months) activities. The same definitions are used in urban and rural areas. Because of enumerator bias and the defects in concepts and definitions already noted by others, thorough enumerator training and supervision are required. Enumerators must be trained to ask additional follow-up questions where appropriate. Ninety-six per cent of rural economically active women are in agriculture. Most economically active rural women are counted as unpaid family workers while men appear as own-account workers. Since children are economically and socially useful to women, early marriage and high parity are encouraged.

Panelist Ms Nkomo described the role of women in the resettlement programme which Zimbabwe has undertaken since independence. Since the programme began, 32,000 household heads have been resettled. Five per cent of these are women, primarily divorced and widowed. If a woman qualifies, she has access to a land permit and to credit, extension services and marketing services. Few women own oxen. Because they must hire draft power, they must usually wait until the animal's owner has finished, which tends to hold them back. These women usually settle near relatives for help.

She pointed out that it is important to make return visits to see how women are faring under the resettlement scheme. The traditional sexual division of labour does not change in these new settlements but a change in life style has occurred - the land is economically more viable. $400 per household is the income target and it may go higher. She expects women's status to improve eventually. Relatively few, either women or men, participate in non-agricultural activities. A major survey of these areas is expected to begin in June 1985.

Panelist Ms Ssewankambo reported that in the agricultural provinces of Zambia, 14.5 per cent of the households are headed by women. Women and men generally grow different crops, with women focussing on food crops. Information on returns from crop sales by sex are unavailable. Credit is freely available to both women and men and many participate in co-operatives.

Panelist Ms Madsen discussed the problem of rural women's access to credit. Most women do not have collateral nor do they know how to go about approaching financial institutions for credit. One way to overcome the problem of collateral is to use the income-generating potential of a women's co-operative, not the individual household, as the basis for guaranteeing a loan. To make sure that women know how to seek credit, a manual for the rural extension agent can be useful. Zambia's co-operative credit scheme and its Agricultural Finance Company have earmarked funds for small-scale women farmers. The Village Industrial Service has a revolving fund to make loans to small-scale industries begun by female entrepreneurs. It is a difficult problem but where women's access to credit takes priority, ways are being found.

Panelist Ms Mulindi reported that in Kenya almost all women in the rural areas work on their own family holdings and noted that this was true for only 20 per cent of the men. Most women are counted in labour force statistics as helpers, i.e. unpaid family workers on their husband's farm.

In the discussion which followed, several references were made to the need for conceptual clarity and improved measurement of women's activities at rural and village levels. Several participants indicated progress in or plans for carrying out rural agricultural labour force surveys to gather the kinds of information recommended by Mr. Alonzo. Others re-emphasized the importance of squeezing more information out of existing data. It was pointed out by the participant from Lesotho that the effects on women of labour migration to South Africa were seen most dramatically in the rural areas. Accordingly, the government has set up rural labour funds to assist women left behind.

Finally, participants were reminded once again of the need to get behind the statistics and indicators to understand what is really going on by an example offered by one participant. Since colonial days in her country, as in much of Africa, men have been responsible for cash cropping while women have traditionally grown the food for local consumption in fields reserved for this purpose. However, in one region, despite the fact that women had continued to provide much of the agricultural labour, Ministry of Agriculture statistics showed that production of maize, the key cash crop, had become increasingly

important while production of food crops, and particularly of ground nuts, had declined steadily for more than 20 years. To find out what was happening to cropping patterns and to the traditional division of labour and income in the region, ministry staff had talked separately to women and men and found that as the price of maize had increased, the men had taken over land traditionally used by women for food crops to expand maize production. Meanwhile, the decrease in land available for production of food crops, together with the additional time women were required to devote to the expanded maize fields, meant that the women were having to purchase of food for their families, at increasingly higher prices. But, since the men continued to control all income from the sale of cash crops, the extra cash from the additional maize production was not available to the women to buy that food and nutritional status was showing some deterioriation. Without this kind of detailed investigation, going behind the statistics, it would not have been possible to understand the true situation of women in that region, nor begin to plan for effective intervention.

At the next session, participants reassembled in small groups to work on exercises to develop and interpret statistics and indicators of women's economic activity.

E. Health and health services

The morning session of the fifth day of the seminar was devoted to a discussion of indicators of health. Once again, each of the sub-topics was introduced by a member of the resource staff, followed by comments from participant discussants and general discussion. During the last 90 minutes of the morning session, participants returned to their working groups to carry out a series of exercises on health and health services statistics.

The Co-ordinator began the consideration of health indicators by pointing out that the World Health Organization defines health as a state of complete physical, mental and social well-being, but because we do not know how to measure such an ideal state, we continue to describe health in terms of the absence of disease, disability and pre-mature death. The availability and accessibility of health services are described in terms of access to those persons and facilities who treat our illnesses.

She noted that there are at least six major purposes for which women's health statistics and indicators are sought:

(a) Identify the special health problems and service needs of women;

(b) Plan service delivery programmes to meet those needs to manage and deliver those services in a cost-effective manner;

(c) Manage and deliver those services in a cost-effective manner;

(d) Monitor the absolute and relative availability, accessibility and coverage of health services for all women and particular sub-groups;

(e) Monitor changes in health status and in access to services over time;

(f) Assess the impact of health services and specific programmes on the health of women.

Statistics and indicators are needed by a variety of health data users, each with different data needs, including policy makers, health and women's programme planners and managers, health service delivery personnel and their supervisors, donor agencies, outside evaluators, and so on. The operating principle in developing a system of health status and health service indicators must be to ensure that information is available for decision-making where and when the decisions must be made. Although routine service statistics are the basic indicators for managing and monitoring service delivery, these must be supplemented for policy and programme development by information from other sources such as censuses, civil registration systems, morbidity surveys and special studies.

1. Health status

Referring to table 5, below, the Co-ordinator pointed out that health status indicators are developed from statistics on births, deaths, disease and disability. Obtained from a variety of sources, the data are usually tabulated by age (or age of women giving birth), sex and rural and urban residence. Where feasible, these data are also tabulated by specific disease or cause of death and by a variety of socio-demographic characteristics, both of individuals and of households. She then turned to a detailed discussion of the three general categories of health status indicators: those associated with fertility, those with mortality, and those with the incidence and prevalence of disease, i.e. morbidity.

(a) Fertility indicators

There is a paradox in considering fertility statistics as indicators of women's health status. On the one hand there is a positive association between health and fertility, as women who are very ill are often unable to conceive or to bear a live child. On the other hand, women who have many or closely spaced births or who become pregnant at the very young or very old reproductive ages tend to be at higher risk of mortality themselves, and so are their children. If that ambiguity is kept in mind, fertility statistics can be useful indicators of women's overall health situation.

Sources and problems

Fertility data come from demographic surveys and from birth registration systems. In some cases indicators may be derived from service statistics and in others may be estimated from census data.

Underreporting of both births and infant deaths, poor age reporting, poor coverage of vital registration systems and poor statistical coverage of births outside the health systems (the great majority) are common limitations of fertility data in most developing countries.

Table 5

Potential sources of data on health and health services

Statistical series	Population census	Household surveys	Focus groups	Registration systems	Administrative records (public works, health, insurance, education, etc.)
A. Health status					
1. Births:					
by maternal characteristics			Demographic		Birth registration
by characteristics of child (sex, birth weight, outcome)			Demographic		Service statistics
by characteristics of the delivery		Demographic			Service statistics
2. Deaths					
(a) Infant/child: by age, sex, cause		Demographic		Death registration	Service statistics
(b) maternal: by age, parity, cause				Death registration	Service statistics
(c) other: by age, sex, cause	2 censuses			Death registration	Service statistics
3. Disease, disability: by age, sex, cause		Morbidity, nutrition, immunisation (EPI)		Notifiable disease reporting system Surveillance system (EPI)	Service statistics Insurance claims

Table 5 (continued)

Statistical series	Population census	Household surveys	Focus groups	Registration systems	Administrative records (public works, health, insurance, education, etc.
B. Health services					
1. Availability:	Census for population base				Administative records: - personnel, training - facilities - programs - drugs, supplies, etc.
2. Accessibility: by sex, age, other characteristics	Census for population base: by small area	KAP (health, family planning, nutrition)	KAP		Administrative records: - as above, by location
3. Utilization/coverage: by age, sex, residence health problem/ reasons	Census for population base: by small area	Utilization consumption, (health, family planning	KAP	Clinic registration, insurance enrollment, water/ sewer hookups	Service statistics insurance claims, water consumed, sewerage treated
4. Expenditures		Utilization, household expenditure			Records of receipts, insurance claims paid
5. Costs					Budgets, expenditure records
6. Effectiveness: - Quality - Health status - Availability - Utilization/ coverage	As above	As above	KAP	As above	As above
7. Cost/effectiveness	As above	As above		As above	As above

Indicators

The fertility indicators discussed in the previous session on population are: crude birth rate, general fertility rate, total fertility rate, gross reproduction rate and net reproduction rate.

Indicators of high risk births are:

(a) Proportion of births to teen-agers and to older women, i.e. proportion of births to women under age 20 and ages 35 and over;

(b) Proportion of high parity births, i.e. births of parity 5 and over;

(c) Proportion of births at less than 24 months after the previous birth;

(d) Proportion of low-weight births, i.e. births of less than 2500 grams (an indicator of pre-maturity);

(e) Proportion of births not attended by trained personnel.

An indicator of protection against high risk pregnancy is percentage using contraceptives, by method.

(b) Mortality indicators

The Co-ordinator began the discussion of mortality indicators by pointing out that the fact that we die is not in itself a particular indicator of the prevalence of ill health. However, when relatively more people die at earlier ages in some populations than in others, when people die from particular causes which need not result in death given proper preventive or curative care, or when the expected sex differences in age-specific mortality narrow or are reversed, then mortality statistics become indicators of health status.

She described the general age pattern of mortality by sex and age observed in all human populations, noting that although societies at different economic levels may show different levels of mortality, the general shape of the mortality curve by age is similar in all societies. It begins high, falls off rapidly during pre-school years, and remains low until the late teens when it gradually begins to climb again, accelerating after the 40s and 50s to the point where eventually it reaches 100 per cent.

The shape of the mortality curve is similar for women and men, but the sexes commonly differ in levels of mortality. Females are usually at a lower risk of death at all ages. Accordingly, a relatively high level of the mortality curve, or any departure from the normal shape of that curve, or a female curve which crosses that of the male all signal the presence of serious health problems in a population and call for investigation into the reasons why particular groups are at an abnormal risk of death. Alternatively, these may signal deficiencies in the mortality data available by sex and age.

Sources and problems

Mortality data come from demographic surveys, civil registration systems, service statistics, verbal autopsies and censuses.

Underreporting of deaths at all ages, but particularly of infants, underreporting of female deaths at all ages, mis-representing of ages, poor coverage by the registration system unreliable cause of death data are major limitations of mortality data in most developing countries.

Indicators

Indicators of death (mortality) rates include:

(a) Crude death rate (CDR): deaths per 1000 mid-year population;

(b) Infant mortality rate (IMR): deaths of children under 1 year per 1000 births during that year;

(c) Child mortality rate (CMR): deaths of children aged 1-4 per 1000 births during previous 4 years;

(d) Age-specific mortality rate (ASMR): deaths in a given age group per 1000 total mid-year population of that age group;

(e) Relative female mortality:

(i) Female/male ratios of mortality rates;

(ii) Female share of mortality: percentage of deaths of given age which are female;

(f) Survival:

(i) Percentage of births who survive to age 5 (or conversely percentage of births who die before age 5), by sex;

(ii) Female/male ratio of percentages who survive to age 5;

(g) Maternal mortality: Female deaths associated with childbearing per 1000 women age 15-49 (or female deaths at age 15-49 per 1000 women aged 15-49);

(h) Expectation of life at birth (or at some other age), by sex: average number of years left to live at birth (or at the reference age), given the currently prevailing sex and age specific pattern of mortality. This is a summary measure of overall mortality pattern. It is useful but fairly complicated to calculate.

(c) Morbidity indicators

The Co-ordinator briefly reviewed the differences between the pattern of diseases in industrial countries and that in developing countries. Developing country populations carry a heavy burden of illnesses, many from causes which were once prevalent in the developing countries: communicable diseases such as measles or polio, parasitic diseases such as malaria or hookworm, diarrheal diseases often associated with sanitary practices, and respiratory disease. She suggested that much of this disease burden was the result of poverty and the slow pace of economic development, noting that even in poor countries few of the elite suffer severely from such diseases. She also pointed out the special problem in developing countries of a synergism between infectious disease and malnutrition, each contributing to the other and often setting the young child under 5 on a downward spiral to chronic illness, undernutrition and even death. For that reason, indicators of nutritional status are of major importance in monitoring health. Moreover, since female undernutrition during pregnancy is a major cause of prematurity, which in turn is a major cause of infant death, female nutritional status is an important indicator both of women's health and of that of their children.

Sources and problems

Morbidity data come most commonly from service statistics. For certain particular diseases, they may also come from special registration systems, surveillance systems or reports of "notifiable" diseases such as cholera. Occasionally morbidity or nutrition surveys, either stand-alone or as modules in other household survey programmes, provide very useful data. Where countries have systems of social insurance, data on insurance claims may provide morbidity data.

It is difficult to monitor morbidity levels in the population, as the numbers reported by most statistical services represent only those who have used health services or otherwise come to the attention of the authorities. Sources are also subject to limitations from underreporting, age-misreporting, and the like.

Indicators

Useful indicators of morbidity include:

(a) Diseases (total and by cause, by sex):

(i) incidence: number of events per 1000 population, per year

(ii) prevalence: number with specific condition per 1000 population;

(b) Disability (total and by cause, by sex):

(i) temporary: number of days lost from normal activity per year per person

(ii) permanent: number of permanently disabled per 1000 population;

(c) Nutritional status:

(i) weight for age, by sex (up to 5 years of age)

(ii) proportion of under 5s below 80 per cent , 80-89 per cent, 90-99 per cent of standard weight for age

(iii) weight for height, by sex

(iv) proportion "wasted", i.e. below 80 per cent (severe), 80-89 per cent (moderate), 90-99 per cent (mild) of standard weight for height, by sex

(v) height for age, by sex

(vi) proportion "stunted", i.e. below 80 per cent (severe), 80-89 per cent (moderate), 90-99 per cent (mild) of standard height for age by sex

(vii) proportion of women with nutritional anemia

(viii) per capita consumption of calories, by sex

(ix) proportion of population below norm for consumption of calories, by sex

(x) proportion of population below norm for consumption of animal protein, by sex.

The discussant for this topic was Ms I. P. Mafethe (Zimbabwe), who underscored the key role of nutrition in health. Despite a major effort in Zimbabwe to extend primary health services to the rural areas, the effect will be small unless there is adequate nutrition in the home. In rural Zimbabwe as in most of Africa, it is women who are responsible for providing food for the family and who are therefore key to good family nutrition. When resources are limited, women try to ensure that the children are adequately fed, often by reducing their own intake to a minimum, Since they must continue to till the land and carry a heavy load of other work, their health suffers. To affect significant change in this situation, men as well as the women must be educated to the importance of good nutrition for women and children and to their own responsibility for nutrition in the decisions they make about the allocation of family resources.

2. Health services

Turning to indicators of health services, the Co-ordinator noted that for a number of reasons, including the high cost of the western model of medical care, the nature of common health problems, which are primarily either preventable or easily treated at home if the caretaker knows what to do, and cultural preferences for traditional healers and birth attendants, most of the

countries in the region are experimenting with a multi- leveled health care system, combining western medicine with certain aspects of traditional care. At the apex of the health care pyramid is usually the university teaching hospital, with its super-specialties, research and training. It serves as the specialty referral centre for the entire population. Below this are general or community hospitals and maternity hospitals, providing the next level of in-patient care and referral services for the community. At a still lower level of sophistication and serving a smaller area are the health centres and polyclinics. Geographically and medically more limited still are the local clinics, and finally at the base of the health system pyramid are the various kinds of village health posts and dispensaries. Virtually all African countries are now training new cadres of staff to work at the local clinic and village level, and are training traditional birth attendants in safe methods of delivery and referral of difficult cases. Many are also encouraging health system staff to co-operate with traditional healers where appropriate and are investigating the use and effectiveness of traditional herbal remedies.

Referring again to table 5, the Co-ordinator indicated that however the particular national system is structured, there are six dimensions which must be considered if the country is to develop appropriate policies and programmes for the effective and equitable provisions of health care to women and men: availability, accessibility (physical, financial, social/cultural), utilization (coverage achieved), quality, effectiveness, cost-effectiveness.

Indicators of availability come primarily from administrative records of the ministries of health and education, supplemented by population censuses and manpower surveys. Some common indicators are based on health personnel by type per 1000 population, including:

(a) Midwives per 1000 women 15 to 49 years;
(b) Nurses, physicians per 1000 population;
(c) Hospitals beds, other facilities per 1000 population.

Data on geographical accessibility come from administrative records for small areas plus the censuses for socio-cultural and financial accessibility. Data come from household utilization and KAP (knowledge, attitude, practice) surveys for inicators on health, nutrition and family planning.

Some useful indicators of accessibility include:

(a) Proportion of population in areas with inadequate availability of medical personnel (i.e. less than average, less than some norm);

(b) Proportion of population in areas with inadequate number of health facilities including hospital beds;

(c) Proportion within x kilometers of nearest health facility;

(d) Proportion with access to safe water;

(e) Proportion with access to sanitary waste disposal.

Data for indicators of utilization (coverage achieved) come from service statistics, utilization surveys, consumption and expenditure surveys and KAP surveys.

Some useful indicators include:

(a) Per capita number of visits to different types of practitioners or facilities, by sex and age;

(b) Percentage of population by sex and age visiting different types of practitioners or facilities;

(c) Percentage of deliveries attended by trained personnel;

(d) Percentage of deliveries in hospital, maternity or health centres;

(e) Percentage of eligible women using family planning;

(f) Percentage of children aged 5-14 immunized against specific diseases, by age and sex;

(g) Percentage of children fully immunized.

As the quality of health services is difficult to measure, the total per capita level of expenditure for health services overall or for a particular service for the entire population or for particular sub-groups is often taken as a proxy.

Data come from administrative records or receipts, insurance claims paid and from household surveys of income and expenditure. Indicators include series on per capita expenditures for particular services by particular sub-groups.

Effectiveness is measured by changes in indicators of health status and of health care availability, accessibility, coverage achieved and expenditure levels. These require time-series data from the sources mentioned above.

Sources for indicators of costs are administrative records, including budgets and agency expenditure records. In combination with measures of effectiveness discussed above, indicators of cost-effectiveness can be developed showing cost per service, classified by effectiveness and by coverage achieved.

Discussants for this topic were Mr. S. E. Chikwana (Zimbabwe), Ms I. P. Mafethe (Zimbabwe) and Mr. Cletus P. B. Mkai (Tanzania).

Mr. Chikwana recounted the efforts made since independence in Zimbabwe to reduce the gross imbalance in health services between urban and rural populations and described some of the constraints and achievements in implementing this objective. Although many problems remain, significant

progress has been made. Goals and achievements include:

(a) Improvement of availability and accessibility of health centres so there is one health centre for every 5,000-10,000 population and within 8 kilometers or 1 hour walking time of each household. To achieve this a target for construction of 326 new health centres and upgrading existing clinics and centres in 5 years has been set. To date 210 new centres have been constructed, each staffed with 2 medical assistants and 3 aides;

(b) Free health care for families earning less than $150 Z. per year;

(c) More trained personnel, especially village health workers (VHWs);

(d) Access to safe water and sanitary waste disposal for all households;

(e) Full immunization for all children under 9 years of age. By 1982 24 per cent had been fully immunized;

(f) Adequate nutritional status for all children;

(g) Integrated maternal and child health services, including child-bearing.

Key indicators in 1982 were estimated at:

(a) Crude birth rate (CBR), 49 per 1000;

(b) Crude death rate (CDR), 15 per 1000;

(c) Infant mortality rate (IMR), 60 per 1000;

(d) Maternal mortality, 130 per 100,000.

Continuing problems include the shortage of trained personnel, a reluctance of many health workers to accept postings in rural areas, and an inadequate health information system for assessing needs and planning, monitoring and evaluating services. To address the latter, in 1984 Zimbabwe established a pilot health information system, now being tested in two districts.

Ms Mafethe pointed out the importance of knowing about the availability of health workers at the district and community level if planning for services to the rural population is to be adequate. She illustrated the level of information needed with a table showing the distribution of village health workers at the district level in Zimbabwe. (See table 6 below.) From such data, targets can be set and progress toward VHW per population goals monitored.

Mr. Mkai discussed the usefulness of a household survey programme which contains a health module for generating morbidity and service utilization

Table 6

Distribution of village, health workers,
by district, Zimbabwe, 1985

District	Population	Families	Villages	Persons per village	Families per village	Village health workers: Previous estimate	Village health workers: Current estimate	Number trained
MANICALAND								
Buhera: 400	168,000	32,762	204	809	161	418	408	98
Chinianimani	56,000	10,492	105	667	100	159	210	82
Chipinge	139,000	26,311	175	1 006	150	263	310	93
Kutare	129,000	21,262	169	994	126	250	250	93
Kutaza	92,000	22,612	162	796	140	183	225	96
Nyanga: 400	70,000	17,076	154	584	603	174	198	82
Rusape	147,000	22,905	163	1,160	141	292	310	92
						1 321	1 918	636
MASHONALAND CENTRAL								
Bindura	29,000	6,579	58	672	112	56	65	
Centenary	15,000	4,787	53	566	90	75	75	
Concession	57,000	15,265	78	1,141	196	113	156	
Guruve	71,000	14,559	112	884	130	141	160	
Mt. Darwin	60,000	15,055	95	1,032	158	158	190	
Rushinga	47,000	8,316	83	964	100	157	138	
Shamva	36,000	7,602	69	740	110	71	75	
						771	859	
MASHONALAND EAST								
Goromonzi	57,000	8,461	60	1,100	141	114	114	93
Marondera	50,000	6,561	53	906	124	99	99	74
Modzi	68,000	13,516	84	1,012	161	224	198	74
Murewa	109,000	23,771	138	1,022	172	217	276	79
U M P	63,000	14,354	90	944	159	175	180	75
Mutako	71,000	12,723	114	947	112	178	158	81
Seka	29,000	4,902	48	979	102	57	57	67
Wedza	43,000	7,796	72	764	108	86	90	62
						1 150	1 172	605

Table 6 (continued)

District	Population	Families	Villages	Persons per village	Families per village	Village health workers: Previous estimate	Village health workers: Current estimate	Number trained
MASHONALAND WEST								
Chegutu	60,000	11,357	112	607	101	117	120	100
Chinhoyi	66,000	14,321	102	725	140	131	130	85
Kadoma	22,000	4,873	39	744	125	40	40	73
Ngezi	27,000	8,222	78	628	105	53	78	65
Kariba	10,000	1,409	26	538	54	50	60	45
Karai	97,000	20,277	114	1,044	178	194	204	69
						539	632	435
MATEBELELAND NORTH								
Binga	47,000	10,532	97	856	109	188	188	76
Hwange	38,000	8,876	84	643	106	96	96	76
Inyathi	27,000	4,151	54	741	77	54		
Lupane	63,000	12,442	130	887	96	156	136	83
Nkayi	87,000	14,858	151	940	98	217	210	83
Tsholotsho	86,000	10,349	114	1,079	91	214	214	85
						925	1 124	477
MATEBELELAND SOUTH								
Beitbridge	52,000	5,204	54	963	96	104	104	82
Gsigodini	37,000	6,291	59	1,017	107	167	98	96
Filabusi	44,000	6,237	61	869	102	87	88	58
Guanda	84,000	12,196	103	951	118	173	188	79
Kezi	75,000	9,653	91	879	106	150	198	81
Plumtree	121,000	15,042	908	106	240	240	218	78
						817	894	474

Table 6 (continued)

District	Population	Families	Villages	Persons per village	Families per village	Village health workers: Previous estimate	Village health workers: Current estimate	Number trained
MIDLANDS								
Charter	97,000	22,559	136	1,118	166	193	193	76
Gokwe	227,000	46,951	232	1,159	202	477	477	85
Gwaru	47,000	7,691	69	841	111	93	93	86
???	110,000	14,346	121	1,008	120	218	218	72
???	151,000	27,224	193	1,031	142	301	320	82
???	42,000	6,640	44	1,000	151	84	88	88
???	42,000	7,857	54	1,019	146	83	83	76
????	? 6,000	11,430	83	1,036	138	110	166	92
						1 559	1 638	657
VICTORIA								
Bikita	135,000	21,876	131	1,023	167	266	262	85
Chibi	138,000	32,683	156	885	210	275	275	87
Chiredzi	63,000	10,438	107	664	98	125	125	95
Gufu	177,000	26,551	228	1,048	116	350	300	105
Masvinge	117,000	18,614	196	638	95	231	210	103
Zaks	138,000	36,218	214	1,033	179	276	276	87
						1,705	1,630	650

data. In Tanzania such a module has yielded the following information:

(a) Proportion ill during the previous week:

(i) Approximately 9 per cent of both sexes

(ii) By age (percentage of each age group):

less than 1 year	14
1-4	14
5-14	6
15-64	9
65+	22

(b) Distribution of illness by symptoms (percentage distribution):

fever	28
diarrhea	16
cough	6
malaria	2
measles	2
colds	2
other	44

(c) Place of treatment (percentage distribution):

	Female	Male
health facility	72	55
home	9	23
other	3	3
none	16	19

(d) Distance from facility by place of treatment (percentage distribution):

Distance (km)	Health facility	Home
5	70	30
6 and above	30	70

(e) Maternal and child care:

(i) 8 per cent of women's visits are for ante-natal care. Once a woman began ante-natal care, she tended to go more than once;

(ii) 9 per cent of births are registered. This suggests that the pilot birth registration scheme is not working well.

He pointed out, however, that the data showing only 9 per cent utilizing traditional healers is suspect, as respondents may be giving answers they think the interviewer wants.

In the general discussion, the following points were made:

(a) On health statistics:

(i) It is essential to develop health indicators more relevant to the rural areas than the infant and maternal mortality rates;

(ii) Ratios such as the physician/population ratio indicate availability but not access. To know whether women and girls have access to health providers, one must have utilization data;

(iii) A health information module of the household survey programme should consider including questions on the following:

- Source of water
- Type of waste disposal
- Food consumption and nutritional status
- Maternal and child health, and child-spacing knowledge, attitude, practice
- Incidence, prevalence of infectious diseases
- Incidence, prevalence of special local diseases
- Treatment of common diseases
- Availability, use of essential drugs
- Mental health
- Dental health;

(iv) Budgetary figures can provide important information about the priorities given to health and to particular services such as maternal and child health and child-spacing services;

(v) Confusion often results when several different sets of figures purporting to measure the same thing are published. It is important to pin-point the agency which is responsible for producing official estimates and other agencies should use these. Where that agency has not yet published official figures, it was suggested that figures from other sources be labeled "provisional";

(vi) The United Nations Statistical Office and WHO might consider preparing a simple manual on health indicators, including terminology, formulas, methods of calculation, interpretation and use, and limitations;

(b) On policy impact of health data in other sectors:

(i) Health statistics are important inputs into policy in other areas. For example, data on infant mortality and the interaction of undernutrition and communicable diseases, when combined with agricultural data showing that a change in traditional cropping patterns was reducing the per capita amount of maize available below the amount needed to maintain an adequate nutrition led to a change in agricultural policy in Zimbabwe. In another example, health data are used by the Ministry of Lands in planning for water and sanitation in Zimbabwe;

(ii) Specific disease information can point to problems within the jurisdiction of Ministries other than Health. Inter-ministerial communication and co-operation is essential for improving health. For example, in some areas goiter is an important female-related disease which is easily prevented by iodized salt, but the decision to treat salt lies outside the Ministry of Health.

In the following session, participants reconvened in their small working groups to complete the exercises on health status and health service indicators.

E. Women's organization

The afternoon session of the fifth day was devoted to consideration of indicators of women's organization and participation in political activities. Following a review of the morning session and an overview of this session, the representatives of INSTRAW and ECA/ATRCW, Ms Tallawy and Ms Hafkin, introduced the subject. The representative of INSTRAW began by describing some of the activities undertaken by international organizations to facilitate the participation of women in development. Within the United Nations system, INSTRAW, in co-operation with the International Labour Office, will conduct a series of regional studies of the participation of women in economic activities. A global analytical summary with projections to the year 2000 is planned.*/ Issues to be addressed include size and geographical distribution of the female population, levels and trends in female labour force participation by age, economic sector, occupation, status in employment, hours of work, employment, unemployment and other characteristics. The objectives are to facilitate development of policies to ensure equality of opportunity and treatment, to promote equality of opportunity and of treatment of the women worker, to promote the measurement of women's economic contribution to development, and to stimulate a re-orientation of development planning and strategies to include explicit consideration of women's participation in development.

A second project is underway, in co-operation with the Economic Commission for Latin America and the Caribbean, to assess the adequacy of questions currently being used in household survey programmes in eliciting information on women's economic roles in the household and labour market. The objective is to develop specific suggestions for improved data collection and to test these in the field.

INSTRAW is also assisting countries in establishing women's organizations and in preparing training materials for distribution to women's organizations to help them identify what information they need. There is a need to strengthen women's organizations through ensuring qualified staff and adequate information. Some are also setting up research groups.

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*/ Published as Women in Economic Activity: A Global Statistical Survey (1950-2000) (ILO and INSTRAW, Santo Domingo, 1985).

Many organizations outside the United Nations system are also active. The objectives are the same: to help women to carry out their roles in development more effectively. Methods are becoming more scientific and research-based. Organizations are tackling the broad economic issues facing developing societies and their work is practical and down to earth. Many are producing directories or rosters of active women, organizations, resources, and so on.

These activities and groups will come together at the Nairobi conference, but it will be up to the national delegations to take the next step, to define what women's organizations need next. Ms Tallawy urged participants to communicate their concerns for active liaison with CSOs, for more adequate information and for more financial and human resources in CSO and women's organizations in order to obtain and use this information.

The representative of ECA/ATRCW reminded participants of the variety of women's organizations active at the national level. One goal of the Decade for Women was to promote the establishment within the government of each country of a "national machinery" for the integration of women in development. These were to operate as part of the national planning and budgeting process. Some countries, such as Zimbabwe and Mauritius, have established a separate Ministry. Other, such as Kenya, Botswana or Malawi, have established units or departments within a Ministry.

A second way women have organized is through a wing of the national political party or other mass organizations. Zambia provides an example of this approach. The women's wing of UNIP, the national party, plays a key role. Other examples include Ethiopia and Somalia. Non-governmental women's organizations (NGOs) of many different types constitute the third way in which women have organized to improve their participation in development. In Kenya, Maendelelo ya Wanawake serves as a very effective umbrella organization for scores of smaller NGOs and for many development projects.

ECA/ATRCW is making information available to these organizations in a number of ways. It has issued a Directory of National Machineries, Directory of Resources for Training for Women, Guide to Sources of Fund Raising and Guide to Project Development and Implementation. Many countries have produced similar publications at the national level.

It is important to identify the kinds of information which would be most useful to grassroots women's organizations and to be imaginative and creative in seeing how national women's organizations can assist local community groups. She pointed out that one of the objectives of the seminar's field trip was to stimulate participants' thinking about the kinds of statistics and indicators which would be concretely useful to community projects themselves, and to those who would assist them. (See the site visit review in the Annex.) How might they be assisted by better data in project design and proposal development, in project monitoring and evaluation, and in planning future activities? What data do they need to collect themselves as distinct from what they can obtain from a CSO or from a national women's organization? Women's organizations might undertake a survey on attitudes of men toward

women's participation in literacy and income-generating campaigns, or a time-budget study which could lead to a project in appropriate technology. On the other hand, the CSO could provide information on female income, literacy, health, and the like. There is need for an applied research unit within the national women's organization to supplement the activities of the CSO.

She also underscored Ms Tallawy's remarks about the importance of the Nairobi Conference, urging participants to contact their delegates about the need to strengthen material on statistics and indicators in the Forward-looking Strategies.

Discussants included Mrs. Gladys Mulindi (Kenya), Ms Godisang Mookodi (Botswana) and Ms Kelemework Tekle (Ethiopia).

Ms Mulindi noted that in Kenya there are more than 50,000 women's groups of more than 15 members recorded in the Women's Bureau and a directory is available. There are also many smaller groups but the numbers are unknown. Maendeleo ya Wanawake listed about 300,000 members in December 1984. An umbrella group for NGOs, Maendeleo caters for grass roots level women. National and non-political, it was founded in 1952 and more than 50 per cent of NGO women's groups are members. Along with the national executive committee, national chairman and central office, Maendeleo has representation at provincial, district, sub-location, location and village levels. There is a small paid staff but most activities are carried out through volunteers. The organization complements the development activities of the government. Programmes include literacy, maternal and child health/family planning, home economics, income-generation, leadership training, energy, water and sanitation, and so on. Some programmes are funded by external donors.

Ms Mookodi described the mission of the Women's Affairs Unit of the Ministry of Home Affairs in Botswana. The Ministry is to integrate women in every aspect of the development of the country and works with other Ministries, with women's organizations and with unorganized women. The unit, founded in 1981, is relatively new, and very small. There is also an interministerial committee to advise the several Ministries on policies affecting women. Several of the larger women's NGOs (such as YWCA, Botswana Council of Women) are registered with the Ministry of Home Affairs, but there are many smaller groups which are not registered. No directory of women's groups is yet available, nor do they have a mechanism to survey the many informal groups. Although they have held two district-level seminars to try to reach local women's groups, the invitations did not reach the latter, but they are still trying.

Ms Hafkin suggested in response that the unit design a questionnaire about women's groups and send it out with community development officers and extension personnel, with some incentive for them to identify such groups in the areas they serve. If funds are needed to publish a Directory, application may be made to the Voluntary Fund through the UNDP.

Ms Tekle described the role REWA, a party organization, is playing in integrating women in development. Established in 1980, it is organized at the commune, province, district, region and central levels. Activities include skill training, literacy, development projects, cooperatives, public

service (forestry, roads, etc.), cultural activities, study groups. Of 9.4 million women in the country aged 15 and over in 1984, 55 per cent were members of REWA. 321,197 women have been elected to work on REWA programmes, 100,000 of them full time. As a result of the literacy programme, 51 per cent of women are now literate. There is an urgent need for better statistics and for training in the generation and use of statistics and indicators.

In the discussion which followed, participants described the organization, structure, and activities of their national women's agencies. In Kenya, the Women's Bureau is in the Department of Social Services. Women are represented on each of the District Development Committees and there are 25 workers who co-ordinate programmes in the field. They have received assistance from donor organizations in research, training and the establishment of an Information Unit within the Women's Bureau. Uganda has a National Council of Women to co-ordinate the activities of the many women's NGOs. Somalia's ruling party has a women's wing which works with other women's organizations. It reaches down to the village level.

In Tanzania, the Secretary-General of the national women's organization is a member of the National Executive Committee of the Party, which is the highest policy-making body in the country. Women participate in other organizations, including co-operatives, the National Co-operative Union of Tanzania, the YWCA and other religious organizations. In Zambia the Women's League of UNIP has been active since the time of the liberation struggle. It is a mass organization, mobilizing women for political, social and economic activities. A General Council meets every five years; the National Council meets annually. There is a National Executive Committee and chairmen at every level from province to rural communities. They have an active research bureau. When they need information, they may conduct their own study. They also work closely with the CSO and NGOs. They seek assistance from international donors for training, research, and publication of materials.

The problem of co-ordinating the work of NGOs with the national women's organization was a recurrent theme. Registration and reporting requirements and/or consultative councils are two common mechanisms for co-ordination, but these have not been wholly satisfactory in the view of several participants. Finally, many stressed the importance of remaining sensitive and responsive to the needs and perspectives of rural women in organizing and mobilizing their participation in development activities.

G. Indicators of women's political participation

The representative of the United Nations Statistical Office, Ms Vanek, introduced the discussion of the measurement of women's political participation. She noted that although political participation can be a key indicator of the full participation of women in the decisions of the society, few statistics are available for the field. She suggested the following

statistics and indicators:

(a) Women in government, at each level:

(i) Numbers of women and men in ministerial positions, by type of Ministry

(ii) Numbers of women and men who are members of national, provincial legislatures (appointed, elected)

(iii) Numbers of women and men in the judicial system

(iv) Numbers of women and men among civil servants; proportion professional, managerial;

(b) Women in non-governmental but political structures:

(i) Numbers of women and men in political parties

(ii) Numbers of women and men in trade unions

(iii) Number and type of women's organizations;

(c) Women's and men's voting.

Sources of data on political participation include government parliamentary records, government personnel data, registration of voters, membership lists of trade unions and other organizations. Voting behaviour is difficult to obtain data on because of the use of secret ballots. Data may come from sample surveys before the election and from exit polls.

Ms Vanek illustrated indicators of political participation by an analysis of the limited data available for countries in the subregion on women's membership in national legislature 1975-1985. These data show low levels of participation and little change over time (percentages):

Kenya	1974:	2	1983:	2
Malawi	1985:	5	1983:	9
Zambia	1978:	4	1983:	3
Zimbabwe	1981:	7	1984:	8
China	1975:	23	1983:	21
USSR	1974:	32	1984:	32
USA		-	1983:	4

Ms Tallawy underscored Ms Vanek's presentation, pointing out that it is not only in the seminar subregion that parliamentary participation is not high. There are no women serving on the International Court of Justice, the United Nations Commission on Human Rights, or the Joint Inspection Unit of the United Nations.

During the general discussion, the importance of having committed women in high places was illustrated by an account of how a shift in Zimbabwe's personnel policies had come about. Two lines of evidence showing the effective exclusion of women from decision-making have had tremendous impact. The first comes from the Ministry of Community Development and Women's Affairs which has developed figures showing that only 9 per cent of the lower and 5 per cent of the upper legislative body are women. There is also a feeling that the number of women MP's is declining. At the local authority level, five years ago the first woman member of the Public Service Commission went through the Civil Service records and found that although women occupied 44.2 per cent of the salaried posts, they made up only 9 per cent of the senior officers. A strongly worded memo to all Ministries from the Public Service Commission suggesting that people may have been passed over has increased consciousness of the need to provide opportunities in government for women at senior levels.

In Malawi, the League of Malawi Women has promoted political participation as well as rural development. They have achieved some gains in the number of women, both elected and appointed, in the legislature.

Several participants noted the still more difficult problem of encouraging rural women to stand for election to political office or to office in farmers' co-ops or other organizations.

The discussion closed on a note of caution. In interpreting statistics on female voters it is important to remember that although women's votes have been counted for a long time, women are rarely part of the decision-making cadre. Voting per se is not a good indicator of full participation. It is also important to remember that lists of registered voters are often inflated.

III. NEEDS AND PROSPECTS FOR IMPROVING STATISTICS AND INDICATORS ON WOMEN IN DEVELOPMENT

(Seventh day of the programme) */

A. National programmes

During the second session of the final day of the seminar attention was given to national programmes to improve statistics and indicators of women's integration into development. Three kinds of national programmes were considered:

(a) Programmes to develop national data bases on women;

(b) Programmes for dissemination of statistics and indicators to user organizations and the general public; and

(c) Programmes to improve the utilization of statistics and indicators on women in policy development and programme planning, monitoring and evaluation.

1. Data base development and dissemination

The representative of the United Nations Statistical Office, Ms Vanek, introduced the discussion of data base development and dissemination of statistics, using the data base developed at the Statistical Office as an illustration of what might be done at a national level. There are five steps in creating a data base:

(a) Review data developed by other organizations and available literature for ideas about what indicators to include;

(b) Specify what variables one wants to measure;

(c) Decide how best to present these variables as indicators of women's situation: percentage of total, percentage of women, female/male ratio, etc.;

(d) Where feasible, use measures that facilitate international comparison; and

(e) Wherever possible, use rural/urban breakdowns.

Since the objective is to make data more accessible to users, it is important to see that the output from these data bases is widely disseminated. In June 1985, the United Nations will issue a document prepared by the Statistical Office for the Nairobi Conference, entitled "Selected statistics and indicators on the status of women," using data from the

*/ The sixth day of the programme was devoted to field visits, which are discussed in section V of the annex.

Statistical Office data base in six fields:

(a) Population composition, distribution and change;

(b) Education, training and literacy;

(c) Economic activity;

(d) Households, marital status and fertility;

(e) Health and nutrition;

(f) Political participation.

Eventually these data will be available on disketes for use by interested countries.

The representative of INSTRAW underscored the importance of data base development and dissemination of information. It is particularly important to have national data on rural women. She informed participants that INSTRAW and the ILO were also completing a publication for Nairobi, on women in the labour force. She pointed out that dissemination is a special responsibility in the Africa region, where communication is difficult.

Discussants for these two topics were Mr. Cletus Mkai (Tanzania) and Mr. D. Ahawo (Kenya). Mr. Mkai recounted his country's experience in developing a data base and an information dissemination programme. They proceeded in six steps, similar to those described by Ms Vanek:

(a) Review of publications and the experience of others, notably Botswana and Kenya;

(b) Meeting of CSO staff with users, especially users who collect data;

(c) Review of sources of data;

(d) Development of a strategy to sensitize data collection systems to gather data on women;

(e) Workshops to decide on which indicators to include, followed by consultation with users to refine the list. Users included:

(i) planners in the sectoral Ministries, who wanted better social indicators;

(ii) other analysts who do research or lecture in social statistics;

(iii) parastatals;

(f) Workshop to present recommendations, which included:

(i) publish annually and give a 5-year series;

(ii) disaggregate by region, age, sex, plus other relevant characteristics;

(iii) Assignment of statistical officers to produce readible, well-written statistical reports:

- first drafts of selected chapters to be written by other resource persons;
- reports to be sent to users for review;
- editorial workshop to discuss draft before final report is issued;

(iv) Content and style of publications:

- if statistical terminology is used, add definitions;
- stress that these are indicators, not absolute values;
- use graphs and charts with text underneath; use few elaborate tables.

Mr. Ahawo noted that the growing concern for social justice has added new responsibilities to statistical offices. They must develop a barometer for measuring social justice. With the decentralization of planning in Kenya to the district level, the challenge is to localize statistical information on women in each district in order to incorporate women into district development plans. In addition to publishing three volumes on women in Kenya, they intend to hold a national workshop similar to the present one to promote dialogue between producers and users.

Ms Vanek remarked in closing that women are a new group of users and they must establish their credibility with CSOs. The more women can show that their demands for data are based on research or on a wide review of opinion, the more attention that demand is likely to receive. Users must also recognize that CSOs face many competing demands. The CSO, for its part, needs to stay in contact with users and find new ways to meet user needs. Flexibility, openness and a willingness to continue the dialogue are called for on both sides.

2. Statistics and indicators in programme and policy planning

Ms Elias introduced the subject of programme and policy planning by describing the training programme which she directs at the Eastern and Southern Africa Management Institute (ESAMI), entitled "Developmental planning, management, and women". The objectives of the programme are to:

(a) Increase the awareness on the part of planners, economists, and experts in development policy, both men and women, about the role of women in development;

(b) Provide participants with tools and skills which will make their work in planning, management and evaluation more effective.

The strategy developed at ESAMI focusses on women's participation as a development issue and includes both men and women, so that women's contribution to development becomes more than a concern of women alone. Moreover, the result of the sharing and dialogue during the course is a plan of action, oriented toward influencing policy. Such a plan is developed by each country participant group. Since 1981, 107 individuals (80 women, 27 men) from 14 countries have participated in the course.

The results of this five-year programme have been positive on the whole, inluding:

(a) More men are aware of women's participation as a development issue;

(b) A series of action plans are at various stages of implementation (for example, statistical and data collection instruments at the district level in Kenya have been modified to indicate beneficiaries and participants in development programmes);

(c) More commitment at a personal level;

(d) Improved technical competence;

(e) An increasing number of female participants have sought further training;

(f) Increased awareness within ESAMI of women's roles as a development issue.

At ESAMI they are alert to ways in which their training programmes may influence policy, such as:

(a) Increasing the number of women professionals;

(b) Encouraging participation of women in:

- regular management training programmes
- special seminars for women managers;

(c) Developing more awareness on the part of women professionals of women's roles in development;

(d) Including sessions on women and work within the regular management programmes;

(e) Inspiring other management programmes to address topics of importance to women managers, entrepreneurs, etc.;

(f) Developing a dialogue between researchers and planners so that research leads to changes in policy.

In the discussion a number of questions were asked about how to measure the impact of programmes such as that of ESAMI. Many felt that while participants from their countries have personally benefitted from the programme, it has not yet had wide impact on policy development. However, such a programme may be a useful first step.

B. Conclusions

The seminar Co-ordinator opened the final session with a review of the accomplishments of the workshop relative to the objectives initially set for it. These were:

(a) To facilitate a dialogue between producers and users about demand for and sources and applications of statistics and indicators on women in development;

(b) To familiarize participants with ways in which data, statistics and indicators of women's situation are currently being collected, compiled and used in the region;

(c) To provide experience in calculating, presenting and interpreting a representative set of statistics and indicators on women;

(d) To contribute to an on-going search for better ways of incorporating data on women into national statistical series and of using such data in policy and programme planning.

She noted that during the meeting many producers of statistics shared information on their accomplishments and problems in trying to provide accurate and timely statistics to serve national needs for policy development and for planning, monitoring and evaluation. Users discussed their needs for data, some of the ways in which those needs have been met, and their frustrations in trying to get certain kinds of information, pointing to the gaps yet to be filled.

In the closing session, the time had come to consider the future. This session would review some of the most important of the unmet data needs discussed and consider the prospects for development of adequate statistics and indicators on women in the sub-region. To help guide the closing discussion, each of six panel members had been asked to summarize some of the important points made during the earlier sessions and to make suggestions for the future.

Maintaining that existing data series could provide sufficient information for planning, monitoring and evaluating women's participation in development provided planners were prepared to take women seriously, panelist Ms. Makonnen (Ethiopia) stressed the importance of making the demand for statistics on women unmistakably clear. She urged that participants contact statisticians in their home countries and lobby to have the Conference of African Planners, Statisticians and Demographers address the need for better

data on women. They should be urged to support the position that statistics on women constitute a deliberate and distinct component of statistical reporting and that planning for national development should include explicit attention to women. She also reminded producers that in as much as many errors of bias and misinterpretation originate in the field work, instruction programmes and manuals for interviewers should be very carefully prepared.

Panelist Ms Mbere (Botswana) stressed the importance of small-scale and special surveys to supplement national data programmes. Such data are particularly important in understanding the needs of the informal sector and of the rural population, especially at the district or community levels. Small-scale surveys can help to decentralize data collection and may even involve village people in participatory research. In these efforts, it is important to remain flexible and open to new research methods. Ms. Mbere reported success in Botswana in using video to compare the performance of traditional birth attendants and modern midwives and to assess training needs. Addressing the need for information dissemination, she noted that effective dissemination of results started in pre-project consultations and was made more likely by on-going consultation during the research, so that others become involved in the outcome while the study is still underway.

Panelist Ms Mzelethe (Zimbabwe) stressed the interaction of small studies with the population census and other national data systems. For example, small-scale research can be guided by the census in designing the study and constructing a sampling frame, while the census can be improved by the results of individual research projects. Administrative statistics, too, need much improvement and can benefit from special studies. For any given purpose it is important to decide which activities can best be carried out by the CSO and which are best left to administrative departments, other user organizations or universities and research institutes. There is also need for a centralized repository where results can be received and information co-ordinated. Ms. Mzelethe reminded participants that although better statistics and indicators are necessary, they will not in themselves bring about improvement in the situation of women in the household and society. Such improvement calls for changes in social and political attitudes and behaviour.

Panelist Ms Yoyo (Zambia) expressed appreciation for the efforts of CSOs. She reminded participants that CSOs face heavy and sometimes conflicting demands and are frequently overburdened, and suggested that there be on-going dialogue to develop additional ways of collecting data on women. This is not to suggest that the national statistical series need not include information on women but rather to stress the importance of the research initiatives of women's organizations in assisting women to become more effective participants in all aspects of development, not merely the social and cultural aspects.

Panelist Mr. Mkai (Tanzania) expressed optimism at the prospects for an improved data base on women. Even now, useful data come from national censuses, and national household survey programmes are becoming more sophisticated in obtaining information about household members. Many are keen to strengthen administrative statistics, although that is more difficult. He suggested that the participants begin seminars similar to this one in their

own countries, with discussion and data analysis directed toward areas of national policy interest. He closed by pointing out that "today's participants may be tommorrow's policy makers."

Panelist Mr. Tichagwa (Zimbabwe) urged that each user organization be encouraged to make the collection of information on women an important part of its activities. He also stressed the importance of feeding back statistics and information to the grass roots level.

In the ensuing discussion the following points were made:

(a) On followup national seminars:

(i) It is important to followup the subregional seminar with in-country workshops and seminars. Perhaps a questionnaire could go to each Ministry to find out what information is available and how its programme impacts upon women;

(ii) In-country seminars must not preach to the already converted. This is not a struggle between women and men. Even the most stubborn men are beginning to see that they can not afford a development strategy where 50 per cent of those of working age are not considered productive. Women <u>are</u> participating in development but demographers and planners need to be made aware of the unrecorded work which women are doing and develop policies and programmes to make that work more efficient. It is important that men participate in in-country seminars;

(iii) In conducting a seminar such as the present one, one might consider organizing the format around a series of problems to solve. The exercises would be directed toward using available data in the solution of the particular problem posed. For example, let us say the question is, "How do we find out about levels of income which women in income-generating projects receive?" The exercises would focus on what information is available, how to design a study to obtain other data, how to compile a set of relevant indicators, and the policy implications of the findings;

(iv) It would be useful to have additional indicators on health and nutrition in future seminars. Perhaps "average number of months of breast-feeding" would prove to be a useful indicator of risk of high maternal and child mortality. Perhaps indicators on cooking-fuel consumption or feeding patterns could be developed;

(b) On other follow-up activities:

(i) Perhaps the United Nations could sponsor a Statistical Decade for 1986-1995, to improve techniques and develop a better set of social and economic indicators;

(ii) Some machinery for co-ordination is essential if data generated by a variety of agencies are to be fully utilized;

(iii) Umbrella women's organizations can help local women by assisting them to determine the feasibility of proposed income-generating projects. Successful projects can be stepping-stones to a better life for rural women;

(c) On specific tabulations:

(i) There is a trade-off between developing relevant country-specific indicators and using indicators which are comparable across countries. Perhaps two sets of tabulations for selected indicators may be necessary;

(ii) Users must be very clear about the information they request from the CSO and be realistic about the feasibility of the statistics wanted.

Exercises

I. POPULATION

A. Population structure and change

1. Complete exercise table 1. For the growth rate, use the first method of computing an annual growth rate described below.

2. Discuss the uses and limitations for national planning of the following indicators from the table: (a) the dependency ratio, (b) the child/woman ratio.

_____

_____

_____

_____

3. Discuss the implications for national planning of the following indicators from the table: (a) the median age of this population, (b) the annual rate of growth of this population.

_____

_____

_____

_____

(a) How to estimate an annual rate of growth

There are several ways one can estimate an annual rate of growth. Formulas for three different methods are given below, in order of increasing computational difficulty and accuracy. The first formula simply computes the total percentage growth over a period of time and divides by the number of years in the period. The second assumes that the population base is larger each year. It adds the new people at the end of each year, then multiplies by the annual rate of growth. This is identical to the way a bank figures interest on savings when they compound the interest once a year. The third formula also assumes that the population base is growing but it adds the new people continuously, not just once a year.

Exercise table 1. Population structure and change: Population by age and sex and sex ratios, 1967, Tanzania

Age group	Male	Female	Total	Sex ratio (males/100 females)	Female share (%)	Cumulative total
0-4	1 090 990	1 114 911	2 205 901	97.9	50.5	2 205 901
5-9	976 427	968 180	1 944 607	100.9	49.8	4 150 508
10-14	657 147	590 866	1 248 013	111.2	47.3	5 398 521
15-19	512 657	570 595	1 083 252	89.8	52.1	6 481 773
20-24	378 435	542 974	921 409	69.7	58.9	7 403 182
25-29	461 270	572 000	1 033 270	80.6	55.4	8 436 452
30-34	358 608	401 795	760 403	89.3	52.8	9 196 855
35-39	341 101	334 742	675 843	----	----	9 872 698
40-44	221 936	236 334	458 270	----	----	10 330 968
45-49	252 613	231 284	483 897	----	----	10 814 865
50-54	178 102	183 571	361 673	----	----	11 176 538
55-59	108 992	102 632	211 624	----	----	11 388 162
60-64	110 566	117 424	227 990	----	----	11 616 152
65+	364 027	320 161	684 188	----	----	12 300 340
Unknown	3 141	2 604	5 745	----	----	12 306 085
Total	6 016 012	6 290 073	12 306 085	----	----	----

Source: Tanzania, Bureau of Statistics, 1967 Population Census, vol. 3, Demographic Statistics (Dar es Salaam, 1970).

Total less than age 15:_____ = _____ %
Total aged 60 and over:_____ = _____ %
Total aged 65 and over:_____ = _____ %
Total dependent population:_____ = _____ %
Total working age population:_____ = _____ %
"Dependency ratio":_____ = _____ %

Children under age 5:_____
Women aged 15-49:_____
Child/woman ratio:_____

Median age:_____

Annual rate of growth calculation:

	Male	Female	Total
1967	6 016 012	6 290 073	12 306 085
1968	8 595 951	8 931 613	17 527 564
Growth	----	----	----
Annual growth rate			----
Years to double			----

This is the formula for exponential growth. In the formulas, P_1 = population at the beginning of the period, P_2 = population at the end, n = number of years, r = annual rate of growth.

1. Average annual rate of growth: $r = (P_2 - P_1)/nP_1$

2. Annual growth rate, Compound interest formula: $P_2/P_1 = (1 + r)^n$

3. Annual growth rate, exponential growth formula: $P_2/P_1 = e^{rn}$.

(b) How to estimate years to double the population

From the exponential growth formula it is easy to compute the number of years it will take for the population to double, assuming the annual rate of growth is known and you have an estimate of r. In this case $e^{rn} = 2$, and r is known. Since the natural logarithm of 2 = 0.69, to solve for n (the years to double) divide 69 by r. That is, n = 69/r. For example, Kenya's estimated annual growth is 4 per cent. The estimated doubling time = 69/4 or 17.25 years.

B. Distribution of the population by marital status

1. Complete exercise table 2.

2. Describe the differences shown by the table in the age pattern of marriage for women and men.

3. Discuss the implications for policy and programme planning of these differences.

Exercise table 2. Distribution of population by marital status: Total population 10 years old and over, by marital status, age and sex 1967, Tanzania

Sex and age group	Total	Single	Married	Widowed	Separated/ divorced
Total	8 149 596	2 516 725	4 891 741	399 618	329 846
Males	3 945 325	1 576 298	2 180 658	60 003	121 042
10-14	657 138	652 802	2 514	679	287
15-19	512 653	476 411	33 824	639	1 134
20-24	378 423	214 336	154 931	1 710	6 194
25-29	461 251	113 174	331 624	2 736	13 160
30-34	358 604	43 200	297 261	2 827	14 658
35-39	341 101	25 630	297 567	3 358	14 298
40-44	221 935	12 908	194 362	2 840	11 194
45-49	252 606	11 199	224 972	4 635	11 636
50-54	178 105	7 520	154 867	4 732	10 365
55-59	108 969	4 161	94 867	3 404	6 445
60-64	110 561	4 025	93 680	4 875	7 631
65+	363 979	10 932	300 189	27 568	24 040
Females	4 204 271	940 427	2 711 083	339 615	208 804
10-14	590 850	570 725	18 121	824	597
15-19	570 587	271 995	284 398	2 595	11 204
20-24	542 979	49 255	465 555	5 060	21 804
25-29	572 009	18 167	520 426	8 164	24 979
30-34	401 789	7 773	361 416	11 541	20 711
35-39	334 726	4 810	296 099	15 153	18 621
40-44	236 324	3 399	197 603	18 899	16 117
45-49	231 273	2 933	182 305	28 444	17 498
50-54	183 567	2 474	125 966	36 479	18 403
55-59	102 628	1 340	65 006	25 773	10 476
60-64	117 425	2 055	65 101	37 527	12 589
65+	320 114	5 501	129 087	149 156	35 805

Source: Tanzania, Bureau of Statistics, 1967 Population Census, vol. 3, Demographic Statistics (Dar es Salaam, 1970), table 203.

Percentage single, ages 20-24 and 45-49, by sex:

	Aged 20-24		Aged 45-49	
	Number	Percentage	Number	Percentage
Males	----	----	----	----
Females	----	----	----	----
Female/male ratio		----		----

C. Household size

1. Complete exercise table 3, calculating the cumulative percentage distribution of households by household size and estimating household size at the upper limit of the third quartile (Q3), that is, the size below which 75 per cent of the households fall.

2. Complete exercise figure 1 on the cumulative percentage distribution.

3. How might this information be used for planning?

Exercise table 3. Household size:
Population and households by household size, 1969, Zambia

Persons per household	Households Number	Households Cumulative Number	Households Cumulative Percentage	
1	107 322	107 322	12.3	
				Size at quartile 1 = 1.95 persons
2	130 008	237 330	27.2	
3	128 001	365 331	41.8	
				Median size = 3.59 persons
4	120 589	485 920	55.6	
5	102 603	588 523	----	
				Size at quartile 3 = 5.__ persons
6	86 421	674 944	----	
7	62 871	737 815	----	
8	58 851	796 666	----	
9	22 582	819 248	----	
10 and over	54 045	873 293	100.0	
Total	873 293	873 293	100.0	

Source: Zambia, Central Statistical Office, Census of Population and Housing, Final Report, Vol. 1 - Total Zambia (Lusaka, 1973), table 6.

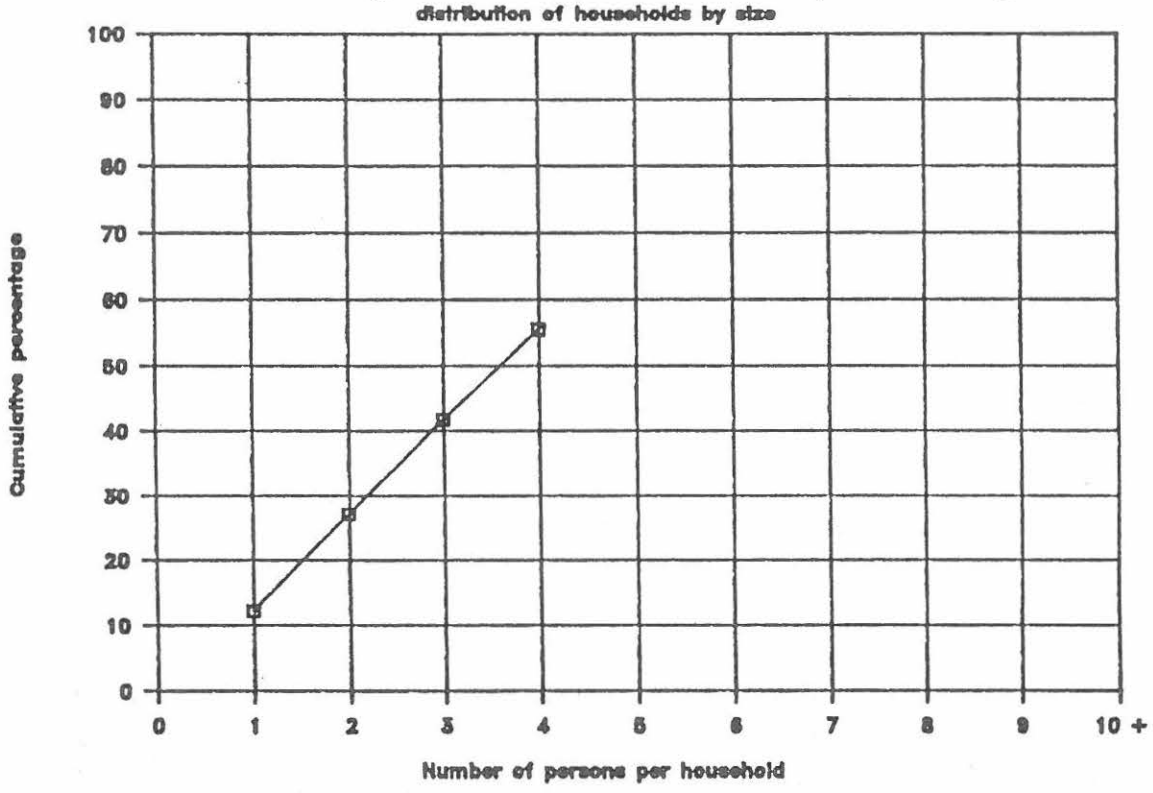
Calculation of median household size:

873293/2 = 436646.5; 436646.5 - 365331.0 = 71315.5
71315.5/120589.0 = 0.59; Median size = 3.59 persons

Calculation of household size at first and third quartiles:

873293/4 = 218323.25;
Q1: 218323.25 - 107322.00 = 111001.25;
111001.25/130008.00 = .85 Q1 = 1.85 persons
Q3: 218323.25 * 3 = 654969.75; 654969.75 - 588523 = 66446.75
66446.75/86421.00 = 0.77 Q3 = 5.__ persons

Exercise figure 1. Cumulative percentage



D. Heads of households by sex and urban/rural residence

1. Complete exercise table 4.

2. Discuss some of the reasons why many believe the proportion of household heads who are women is underestimated.

3. How might one account for the differences between rural and urban areas in the proportion of households headed by women? What special problems might rural female-household heads face? How might they differ from those faced by urban female-household heads?

Exercise table 4. Heads of households, by sex and urban/rural residence, 1973, Sudan

	Number	Percentage	Female/male ratio
Total	2 288 277	100.0	
Male	1 781 491	----	
Female	506 786	22.1	0.28
Urban	472 746	100.0	
Male	393 340	83.2	
Female	79 406	16.8	0.20
Rural	1 815 531	100.0	
Male	1 388 151	76.5	
Female	427 380	----	----

Source: Sudan, Ministry of National Planning, Second Population Census, 1973, Volume 1: Socio-Economic Characteristics (Khartoum, 1977), table 24. Heads of households were enumerated as reported by household members. Data refer to settled population only.

E. Geographical mobility among women and men, by size of place

1. Complete exercise table 5.

2. Circle the peak age of mobility for women and for men in each type of settlement and for all movers, regardless of where they live.

3. Do you agree with those who say that geographical mobility is primarily a male phenomenon? What are the reasons for your answer?

4. At what ages and in which types of settlements are there more female than male movers? Do you think this is merely because there are more females than males at these ages? What else would you need to know to answer this?

Exercise table 5. Geographical mobility among women and men, by size of place: Movers by size of present locality of residence, sex and age, Botswana, 1981

Age group	Urban (>5000)			Town (1000-5000)			Village (<1000)			Total		
	Female	Male	Percentage female	Female	Male	Percentage female	Female	Male	Percentage female	Female	Male	Percentage female
0-4	1 854	1 753	51.4	1 894	1 841	50.7	4 323	4 237	50.5	8 071	7 831	50.8
5-9	2 236	1 748	56.1	2 258	1 853	54.9	6 798	6 806	50.0	11 292	10 407	52.0
10-14	2 401	1 357	----	2 441	1 583	----	7 884	8 518	----	12 726	11 458	----
15-19	4 118	2 928	----	3 842	2 328	----	5 567	5 483	----	13 527	10 739	----
20-24	3 799	4 013	----	3 343	2 599	----	4 086	3 712	----	11 228	10 324	----
25-34	3 321	4 489	----	3 540	3 584	----	4 956	5 511	----	11 817	13 584	----
35-44	1 308	2 035	39.1	1 525	1 967	43.7	2 877	3 616	44.3	5 710	7 618	42.8
45-54	774	977	44.2	954	1 172	44.9	2 208	2 517	46.7	3 936	4 606	45.8
55-64	534	492	50.0	654	751	46.5	1 593	1 764	47.4	2 781	3 007	48.0
65+	527	329	61.6	649	570	53.2	1 938	1 917	50.3	3 114	2 816	52.5
Unknown	156	229	40.5	129	188	40.7	513	558	47.9	298	975	45.0
Total	21 028	20 350	----	21 229	18 436	----	42 743	44 639	----	84 500	83 365	----

Source: Botswana, 1981 Population Census.

F. Age distribution of fertility

1. Complete exercise table 6A, calculating the percentage change in the age-specific fertility rate in Lesotho between 1967-1971 and 1972-1976.

2. Would you say there has been much change in these rates during the decade 1967-1976? At which age do there appear to be the greatest differences between the two sets of rates? Why or why not do you think such large differences in those age groups are likely to be significant?

3. Complete exercise table 6B, calculating the percentage of total lifetime fertility added during each age group.

4. From these data would you say that the age distribution of fertility has changed very much over the decade 1968-1977?

5. Examine exercise figure 2A. Health authorities tell us that the lowest risk pregnancies occur in women between ages 20 and 35. What does this pie chart suggest about programme needs?

6. Complete exercise figure 2B of children ever born by age of mother for the 1967/69 survey. At which age has fertility risen most steeply over the decade 1968-1977?

Exercise table 6: Age distribution of fertility, Lesotho 1967-1977

A. Age-specific fertility rates

Age group	Age-specific fertility rates (live births per 1000 women, annually)		Percentage change
	1967-1971	1972-1976	
15-19	82	103	----
20-24	244	261	+7
25-29	259	252	-3
30-34	216	233	+8
35-39	167	173	+4
40-44	108	95	----
45-49	(27)	27	----
Total fertility rate	5.52	5.72	+4

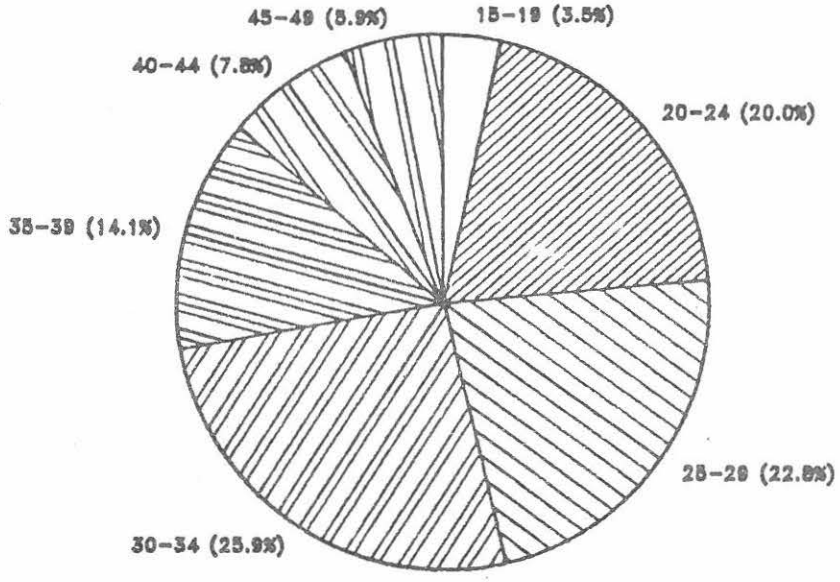
B. Mean number of children ever born by age of women

Age group	1967/69 survey			1977 survey		
	Mean number of children ever born per woman	Mean additional number of children born per woman	Percentage	Mean number of children ever born per woman	Mean additional number of children born per woman	Percentage
15-19	0.12	0.12	3	0.19	0.19	3
20-24	1.08	0.96	20	1.27	1.08	20
25-29	2.44	1.36	----	2.50	1.23	----
30-34	3.63	1.19	----	3.90	1.40	----
35-39	4.36	0.73	15	4.66	0.76	14
40-44	4.76	0.40	8	5.08	0.42	8
45-49	4.78	0.02	----	5.40	0.32	----
Lifetime		4.78	100		5.40	100

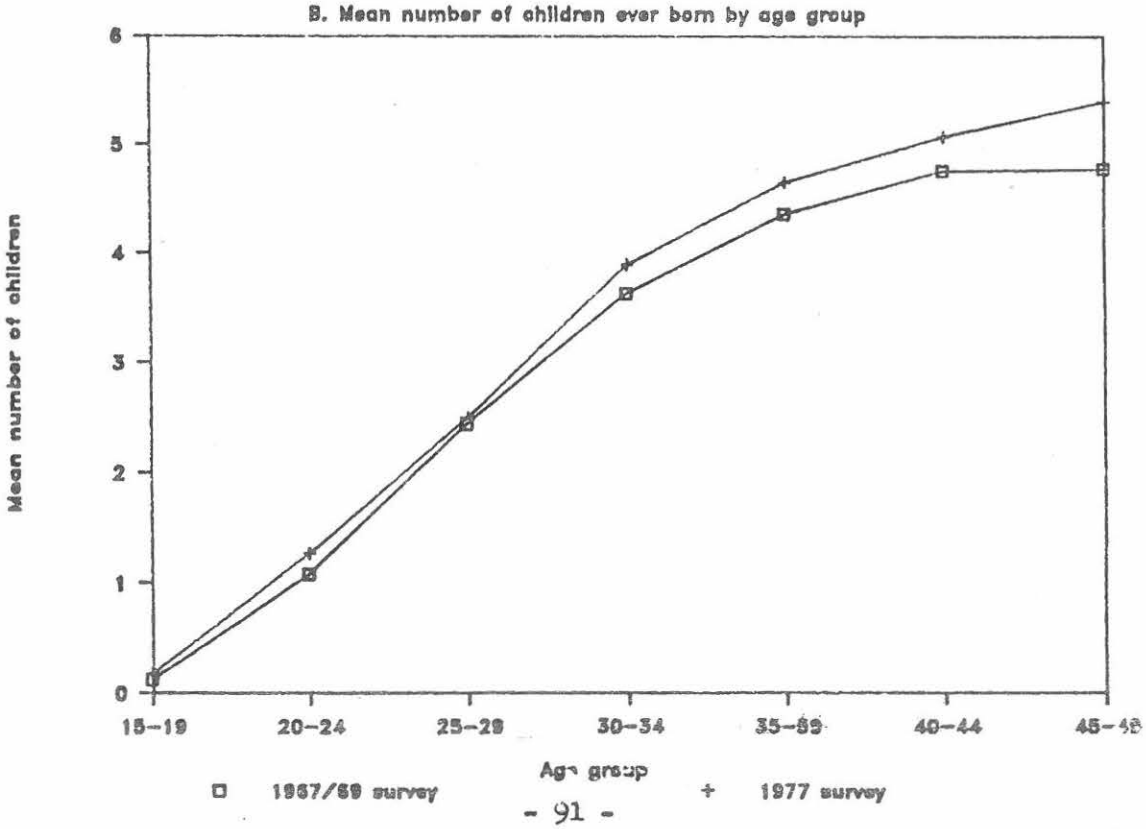
Source: Ian Timaeus and K.Balasubramanian, Evaluation of the Lesotho Fertility Survey, 1977, Scientific Reports No.58 (London, World Fertility Survey, August 1984), pp.24-25.

Exercise figure 2. Age distribution of fertility, Lesotho

A. Lifetime percentage distribution



B. Mean number of children ever born by age group



A. Literacy of women and men

Exercise table 7 shows percentage literate by selected age groups and by sex for several sub-Saharan African countries.

1. Select two or three countries of interest and for each country plot the percentage literate by age for women and men on exercise figure 3.

2. Using data in table 7, compute female/male ratios of percentage literate for each age group for at least two countries:

Country: _____

Age group	Percentage literate		Female/ male ratio
	Female	Male	
10-14	_____	_____	_____
15-24	_____	_____	_____
25-34	_____	_____	_____
35+	_____	_____	_____

Country: _____

Age group	Female	Male	Female/ male ratio
10-14	_____	_____	_____
15-24	_____	_____	_____
25-34	_____	_____	_____
35+	_____	_____	_____

3. Do you think these indicators suggest any trends in literacy over time? Discuss.

_____

_____

_____

_____

4. How might information on literacy be used in programme planning?

_____

_____

_____

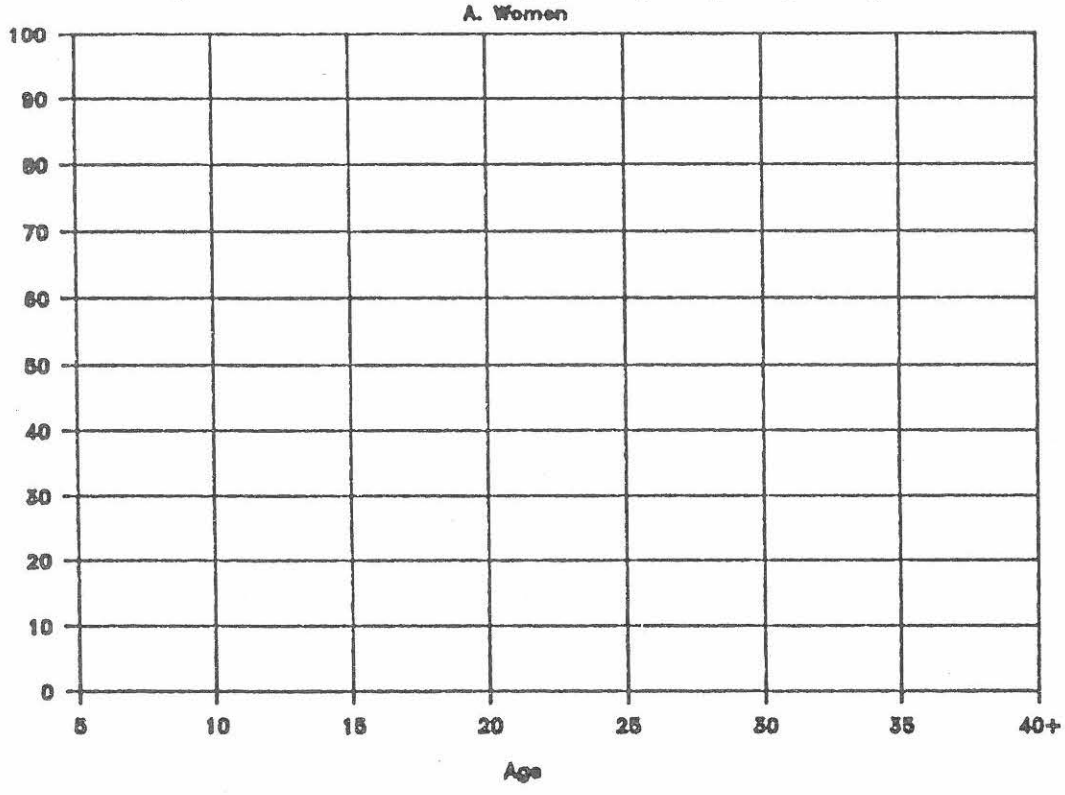
Exercise table 7. Percentage literate by sex and age group

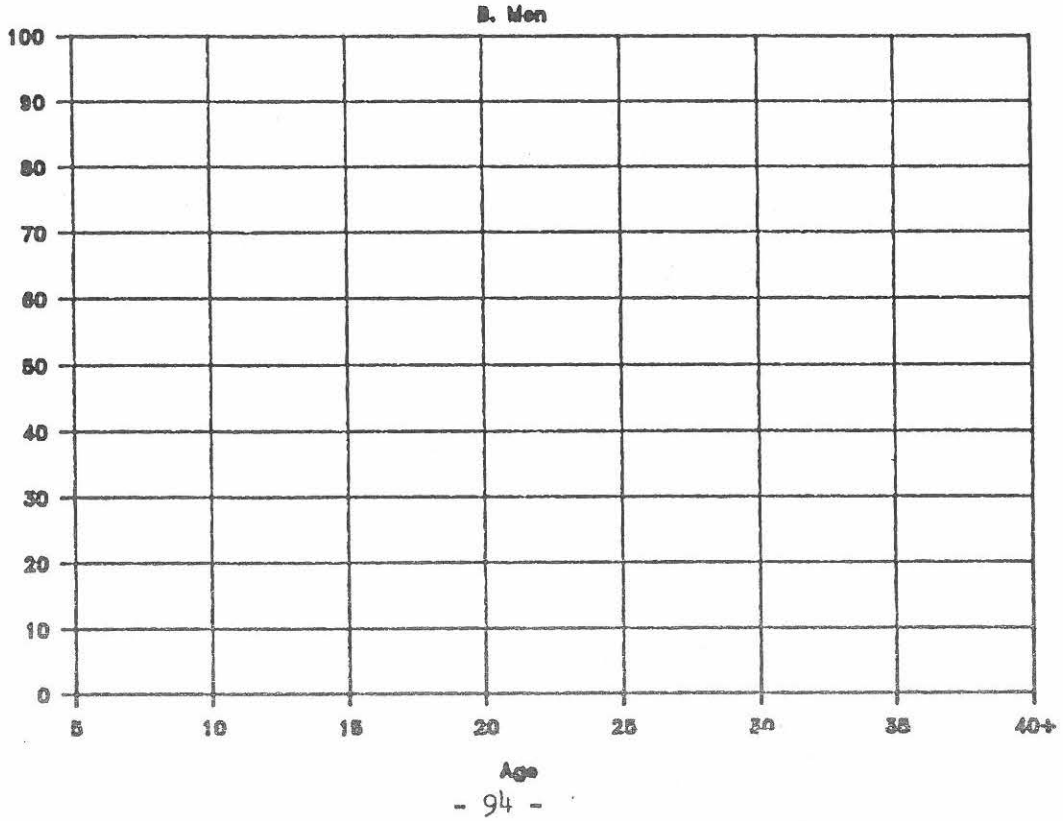
Region and country	Year	Female				Male			
		10-14	15-24	25-34	35 and over	10-14	15-24	25-34	35 and over
SAHEL WEST AFRICA									
Burkina Faso	1975	11.0	6.7	2.6	1.0	20.7	22.3	15.1	8.9
Cape Verde	1960	28.8	24.4	17.4	14.0	41.4	45.9	39.5	42.6
Mali	1960-61	4.7	1.5 a/	0.5 b/	0.0 c/	9.7	5.5 a/	4.6 b/	2.7 c/
COASTAL WEST AFRICA									
Benin	1961	..	3.9	1.5	0.6	..	14.5	7.1	4.8
Ghana	1971	..	39.6	14.3	5.0	..	68.6	46.6	22.7
Ivory Coast	1975	40.0	21.5	5.5	2.3	60.4	43.7	21.8	10.1
Liberia	1974	24.0	19.4	6.9	4.7	32.7	51.7	30.7	14.2
Sierra Leone	1963	13.4	5.6	3.1	4.1	24.2	22.1	14.0	9.6
Togo	1970	31.8 d/	16.8	5.5	2.1	60.5 d/	48.4	28.0	14.1
CENTRAL AFRICA									
Cameroon	1976	71.1	56.1	24.2	7.3	78.5	76.1	56.7	29.2
EASTERN AFRICA									
Ethiopia e/	1970	1.8	0.4	0.1	0.1	11.9	11.4	8.7	6.3
Mauritius	1962	62.0 f/	65.5 g/	49.5	38.0	67.2 f/	80.1 g/	70.1	65.3
Seychelles	1960	..	60.4	52.5	40.3	..	48.8	48.5	35.5
Sudan	1973	44.9	27.5	9.8	4.0	64.9	55.2	41.8	30.6
Tanzania	1967	42.5	29.4	13.9	4.9	56.3	60.3	49.3	29.4
SOUTHERN AFRICA									
Botswana	1964	49.7	52.5	39.8	21.1	32.7	39.3	33.9	23.6
Lesotho	1966	63.9	89.1	81.3	49.7	30.2	53.4	49.7	36.8
Mozambique	1970	20.9	11.7	6.1	4.3	26.9	24.9	20.0	12.4
Zambia	1969	75.6	60.3	33.2	13.7	79.4	82.5	70.3	43.9

a/ Aged 15-19.
b/ Aged 20-39.
c/ Aged 40 and over.
d/ Aged 12-14.
e/ Rural areas only.
g/ Aged 13-24.

Source: USA, Bureau of the Census, Women of the World. Sub-Saharan Africa, by Jeanne S. Newman, WID-2 (Washington, D.C., 1985), table 4.4.

Exercise figure 3. Literate (%), by age group and sex





B. School enrolment by grade/form

Even in Zimbabwe, where school enrolment of girls is relatively high, there are important differences in the school enrolment patterns of boys and girls. Exercise table 8 shows 1979 school enrolment in Zimbabwe by grade or form, separately for each sex and for all pupils. An "apparent enrolment rate" has been calculated for each grade/form, for primary and for secondary school.

1. Why do you think the Ministry calls these rates "apparent"? Another term than "apparent rate" might be

_____

2. Complete the table by calculating the female/male ratio of the "apparent enrolment rates" for each grade/form, for primary and for secondary school. Why do these ratios differ slightly from the female/male ratios of the numbers enrolled?

_____

_____

_____

3. Finish plotting these "apparent enrolment rates" separately for each sex on exercise figure 4. On the same graph plot the female/male ratio of these "rates". At which primary grade(s) are girls at greatest relative

disadvantage? _____ At which secondary form(s)?_____

4. Discuss the differences in school enrolment patterns of boys and girls. What are the policy implications suggested by these indicators, for all children? For girls in particular?

_____

_____

_____

_____

_____

_____

_____

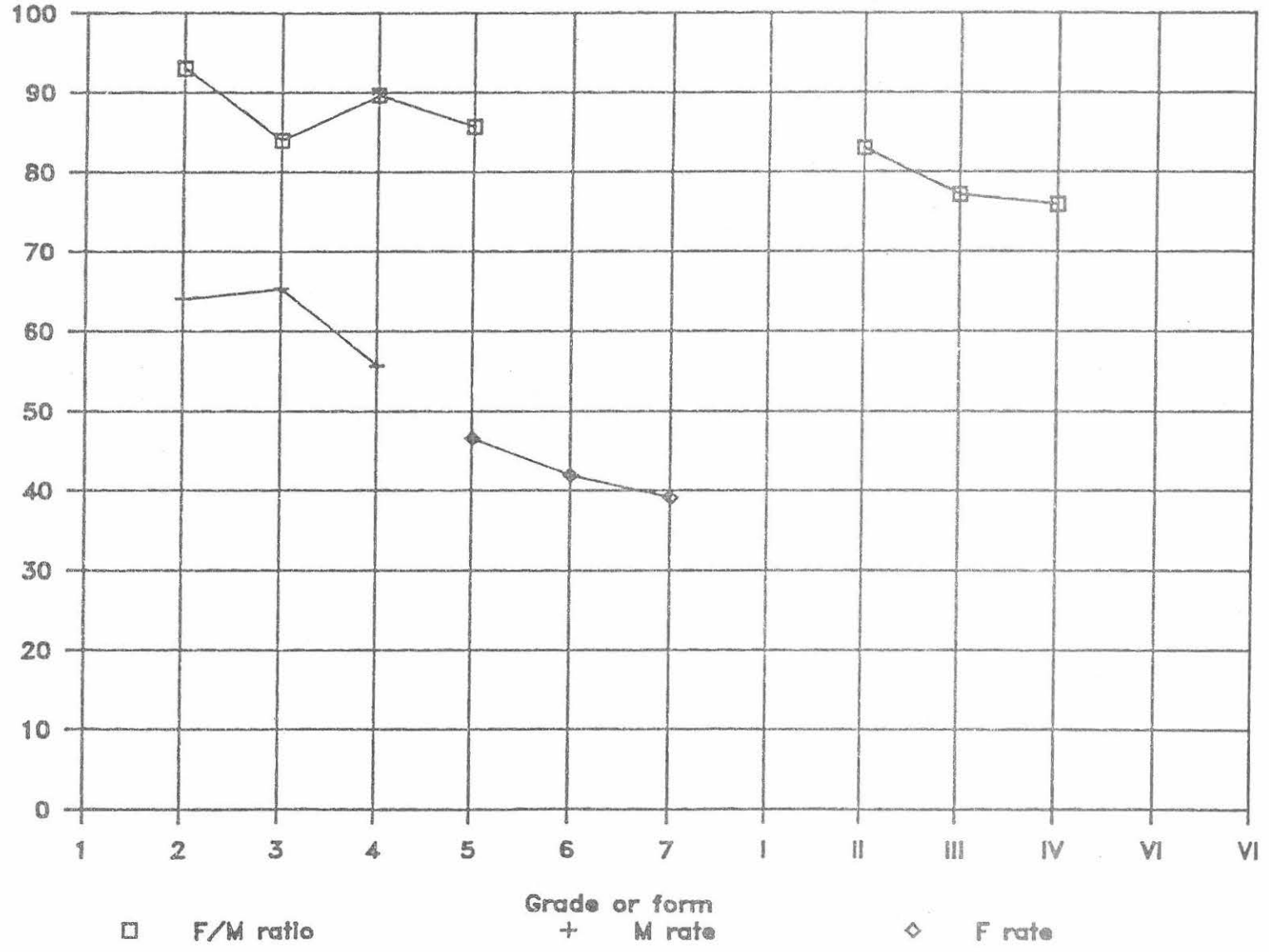
Exercise table 8. Apparent school enrolment, Zimbabwe, June 1979

Population				School population and apparent enrolment rate						Female enrolment relative to male		
											Female/male ratios	
Age	Male	Female	Total		Male enrolment	Apparent rate	Female enrolment	Apparent rate	Total enrolment	Apparent rate	Percentage enrolment female	Enrolment	Rate
7	118 760	115 376	234 136	Grade 1	87 067	73.3	83 058	72.0	170 125	72.7	48.8	95.4	98.2
8	113 392	110 416	223 808	Grade 2	72 532	64.0	67 476	61.1	140 008	62.6	48.2	93.0	95.5
9	108 409	105 030	213 439	Grade 3	70 777	65.3	59 393	56.1	130 170	60.7	45.6	83.9	85.9
10	103 812	101 609	205 421	Grade 4	57 848	55.7	51 829	51.0	109 677	53.4	47.3	89.6	91.6
11	99 595	97 738	197 333	Grade 5	53 241	53.5	45 560	46.6	98 801	50.1	46.1	85.6	----
12	95 443	93 997	189 440	Grade 6	49 073	51.4	39 355	41.9	88 428	46.7	44.5	80.2	----
13	91 195	90 201	181 396	Grade 7	47 147	51.7	35 230	39.1	82 377	45.4	42.8	74.7	----
Total 7-13	730 606	714 367	1 444 973	Total primary	437 685	59.9	381 901	53.4	819 586	56.7	46.6	87.3	----
14	86 955	86 475	173 430	Form I	9 804	11.3	8 645	10.0	18 449	10.7	46.9	88.2	----
15	82 979	82 993	165 972	Form II	8 823	10.6	7 315	8.8	16 138	9.7	45.3	82.9	----
16	79 206	79 715	158 921	Form III	7 750	9.8	5 975	7.5	13 725	8.7	43.5	77.1	----
17	75 614	76 531	152 145	Form IV	6 975	9.2	5 295	6.9	12 270	8.1	43.2	75.9	----
18	72 214	73 403	145 617	Form IV.L	2 625	3.6	1 936	2.6	4 561	3.1	42.4	73.8	----
19	68 987	70 358	139 345	Form IV.U	694	1.0	378	0.5	1 072	0.8	35.3	54.5	59.0
Total 14-19	465 955	469 475	935 430	Total secondary	36 671	7.9	29 544	6.3	66 215	7.1	44.6	80.6	----

Source: Zimbabwe, Ministry of Education.

Exercise figure 4. Apparent enrolment rates, by

class and sex, and female/male ratio, Zimbabwe, June 1979



C. Enrolment in secondary and vocational/technical Schools

When historical data are available we can monitor changes in women's access to non-vocational secondary schooling and to vocational/technical schooling over time.

1. Complete exercise table 9 by computing the percentage of non-vocational secondary students who were girls for each year, 1974 through 1983, in Botswana. For each column compute both absolute change and percentage change. What does this table suggest about the employment of women as secondary school teachers over the past decade? What does it suggest about the enrolment of girls in secondary schooling in Botswana? How does the educational situation of girls in Botswana compare with that in your own country?

2. Compare exercise table 10 on enrolment in vocational/technical schools with table 9 on non-vocational secondary school enrolment. In what ways are the trends similar? In what ways different? What do you think these tables suggest about the preparation of women for employment in the modern sector? What are the policy implications of these data?

Exercise table 9. Teachers and students in Government secondary schools (non-vocational), by sex and percentage female, Botswana, 1974-1983

Year	Teachers			Students		
	Male	Female	Percentage female	Male	Female	Percentage female
1974	244	106	30.3	3 654	3 481	48.2
1975	266	131	33.0	4 321	4 113	----
1976	297	148	33.4	4 744	4 814	----
1977	289	154	34.8	5 046	5 173	----
1978	317	188	37.2	5 400	5 736	----
1979	365	205	36.0	5 868	6 307	----
1980	397	237	37.4	6 420	7 004	----
1981	395	271	40.7	6 889	7 459	----
1982	..	..	..	7 066	7 434	----
1983	420	299	41.6	7 397	7 730	----
Change 1974-1983	----	----	11.3	----	----	----
Percentage change	----	----	37.3	----	----	----

Source: Botswana, Ministry of Education, Education Statistics Unit.

Exercise table 10. Teachers and students in vocational and technical training, by sex and percentage female, Botswana, 1974-1981

Year	Teachers			Students		
	Male	Female	Percentage female	Male	Female	Percentage female
1974	141	48	25.3	906	622	40.7
1975	173	69	28.5	1 046	653	38.4
1976	152	64	29.6	1 023	699	40.6
1977	164	69	29.6	1 020	734	41.8
1978	265	75	22.1	1 082	508	31.9
1979	..	..	..	1 409	697	33.1
1980	125	102	44.9	1 349	451	25.1
1981	..	..	..	1 171	623	34.7
Change 1974-1980/81	-16	54	19.6	265	1	-6.0
Percentage change	-11.3	112.5	77.4	29.2	0.1	-14.7

Source: Botswana, Ministry of Education, Education Statistics Unit.

D. Educational "tracking"

Even when girls are enrolled at secondary or higher levels, "tracking" tends to direct them into preparation for different (and often lower paying and lower prestige) occupations. In a world where technical skills are the key to participation in the modern sector, women will continue to be at a disadvantage if they have not had adequate training in such skills. Exercise tables 11-13 illustrate this tracking at each of three different kinds of institutions.

1. How might you use data like these for programme planning?

2. At what educational level do you think efforts should be concentrated to improve women's preparation for employment in the modern sector?

Exercise table 11. Number of fifth form science and art streams available, Kenya, 1976

Programme	Type of secondary school			
	Girls school	Boys school	Mixed	Total
Arts a/	26	28	12	66
Science b/	13	64	22	99
Total	39	92	34	165

a/ Arts streams average 35 places.
b/ Science streams average 30 places.

Source: Kenya, Central Bureau of Statistics, Women in Kenya 1978 (Nairobi), p.30.

Exercise table 12. Vocational school enrolment, by course and sex, Botswana, 1983

Trades	Female	Male	Total	Percentage female
Industrial, mechanical	53	1 848	1 901	2.9
Agricultural and farming	84	250	334	25.1
Health	483	92	575	84.0

Source: Botswana, Ministry of Education, Education Statistics (Nairobi).

Exercise table 13. Female post-graduate enrolment, by faculty, University of Nairobi, Kenya, 1976/77, 1977/78

Faculty	1976/77		1977/78	
	Females		Females	
	Number	Percentage	Number	Percentage
Agriculture	7	7	22	13
Architecture/Design	3	6	2	5
Arts	41	34	56	35
Commerce	1	4	3	8
Education	21	26	37	31
Engineering	-	-	-	-
Law	2	22	3	20
Medicine	6	12	11	16
Science	4	7	15	9
Veterinary medicine	4	19	4	21

Source: Kenya, Central Bureau of Statistics, Women in Kenya 1978 (Nairobi), p. 35.

III. ECONOMIC ACTIVITY

A. Deriving labour force indicators from questionnaires

A. Economic activity status

Exercise tables 14 and 15 are taken from 1981 census data for Botswana. They describe different aspects of the economic activity of women and men.

1. Examine both tables. Are the number of employees roughly comparable in the two tables?

2. Calculate for table 15 the participation rate for males and females in rural and urban areas. Analyze the difference in activity status between men and women and between urban and rural areas.

Exercise table 14. Estimated number of employees by sex and economic activity, Botswana, August 1983

	Male	Female	Total
Agriculture	3 870	648	4 518
Mining and quarrying	6 734	487	7 221
Manufacturing	7 593	2 203	9 796
Electricity and water	1 862	58	1 920
Construction	9 200	350	9 550
Commerce	9 024	6 231	15 255
Transport and communications	3 474	425	3 899
Finance and business services	4 346	1 609	5 955
Community and social services	2 178	1 328	3 506
Education	706	859	1 565
Sub-total (private and parastatal)	48 987	14 198	63 185
Central Government	18 700	11 400	30 100
Local Government	5 039	2 169	7 208
Total	72 726	27 767	100 493

Source: Botswana, Central Statistical Office, Employment Survey, 1983.

Exercise table 15. Type of economic activity, population aged 15-64 years, by sex and urban/rural residence

Economic activity status	Urban		Rural		Total	
	Males	Females	Males	Females	Males	Females
Employee	39 986	17 957	41 062	8 787	81 048	26 744
Self-employed	1 679	1 205	3 349	2 080	5 028	3 285
Periodic piece-work	472	214	3 371	1 718	3 843	1 932
Family agriculture	961	2 343	58 592	54 684	59 553	57 027
Actively looking for work	4 251	5 280	9 662	11 573	13 913	16 853
Economically inactive	10 048	23 754	24 502	104 857	34 550	128 611
Total	57 397	50 753	140 538	183 699	197 935	234 452

Source: Botswana, 1981 Population Census.

B. Presenting economic indicators

Exercise figure 5 and exercise table 16 show two ways of presenting the number of employees by sex and occupation.

1. Discuss the advantages and disadvantages of each presentation.

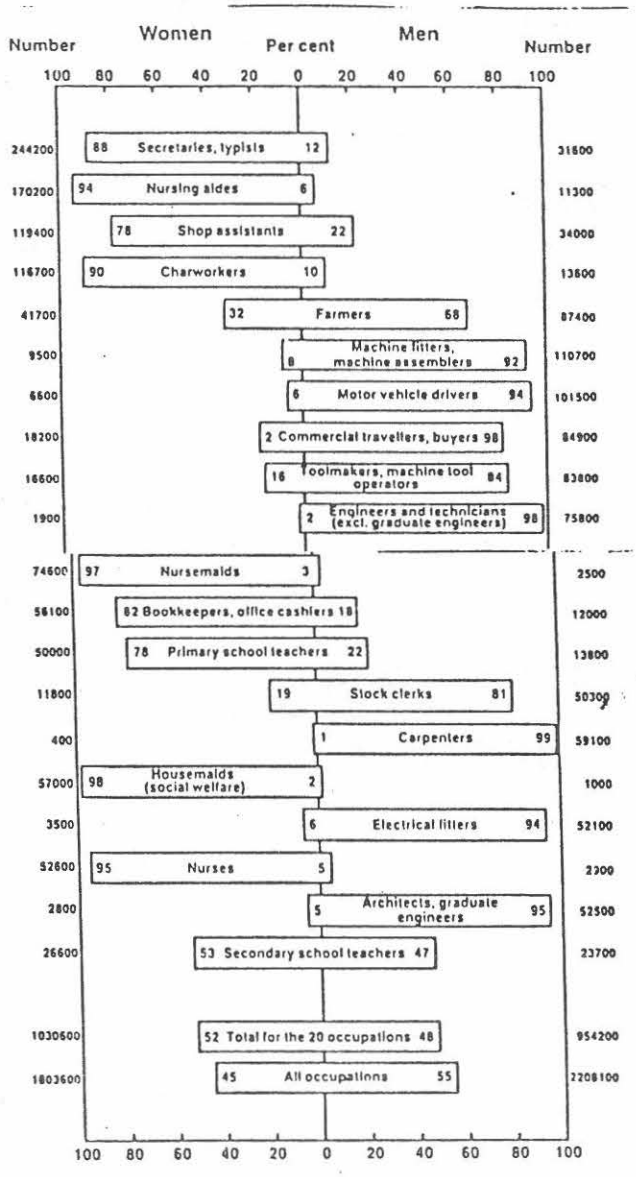
2. Select five occupations from the Kenya figures and construct bar diagrams separately for the employment of men and women in the public and private sectors.

Exercise table 16. Sex distribution of wage employment of Kenya citizens, by occupational group and sector, 1976

Occupational group	Public		Private	
	Males	Females	Males	Females
Casual employees	25 937	3 336	62 965	26 176
Unskilled workers	120 932	11 574	232 777	35 518
Skilled manual workers	31 376	5 153	49 632	1 966
Technicians and supervisors	6 180	255	5 758	325
Shop assistants, sales personnel	253	40	5 114	38
Clerical workers	26 262	2 480	18 504	2 078
Secretarial workers	450	5 108	730	4 771
Middle level executives	6 944	641	7 201	473
General managers	885	14	2 293	88
Teachers	63 464	32 123	2 157	654
Architects, engineers, and surveyors	894	5	488	9
Medical, dental, veterinary	1 646	1 523	117	144
Agronomists	330	21	37	0
Statisticians and mathematicians	126	6	50	16
Other scientists	341	28	47	3
Lawyers and jurists	139	9	39	7
Accountants	248	7	374	18
Economists	67	1	8	0
Other professions	1 789	109	1 754	226
Total	288 263	62 433	390 045	72 510

Source: Kenya, Ministry of Finance and Planning Central Bureau of Statistics, Women in Kenya, 1978, based on the Labour Enumeration Survey, 1976.

Exercise figure 5. The 20 most popular occupations in Sweden 1980, listed by size, percentage each sex



Note: Half of all those gainfully employed worked in the 20 most popular occupations in 1980 - 60 per cent of all women and 40 per cent of all men. The 9 most popular occupations among men are included in these. The 10th most popular occupation for women is kitchen assistant (44,600 women and 4,100 men).

Source: Statistics Sweden, Women and Men in Sweden (Stockholm, 1985) pp. 38-39.

Exercise tables 17 and 18 provide information on the economically active population in rural Ethiopia in 1970.

1. Which are the most important items of information in these tables?

2. What indicators of women's economic activity may be derived from this information?

3. What do you think might be an effective way of presenting these indicators?

Exercise table 17. Total rural population, population aged 10 years and over and economically active population, by sex (000s)

	Males	Females	Total
Total population	11 245.6	10 781.4	22 027.0
Population aged 10+	7 523.2	7 105.2	14 628.4
Size of labour force	7 034.2	2 337.6	9 371.8
Participation rate (percentage)	93.5	32.9	64.1

Source: Ethiopia, Central Statistical Office, Tables of Demographic Data, Vol.II, parts 1 and 2, (1978) and The Demography of Ethiopia (1974).

Exercise table 18. Percentage distribution of economically active population by status, sex and region, 1970, rural areas

Region	Employer		Own-account worker		Employee		Unpaid family worker		Others economically active		Total	
	Males	Females	Males	Females	Males	Females	Males	Females	Males	Females	Males	Females
Arssi	2.7	0.6	56.9	13.3	4.6	2.2	35.8	83.4	----	----	100.0	100.0
Bale	1.0	0.3	64.1	17.9	2.4	1.1	32.5	80.7	----	----	100.0	100.0
Eritrea	..	..	..	..	..	..	..	..	..	..	..	..
Gamo Gofa	0.3	0.2	70.2	24.6	1.7	3.5	27.8	71.6	----	----	100.0	100.0
Gojjam	1.4	0.1	56.0	14.2	5.5	4.8	36.8	80.9	0.3	----	100.0	100.0
Gonder	4.3	0.6	48.3	18.4	6.2	9.3	41.2	71.7	----	----	100.0	100.0
Hararge	0.7	..	64.7	27.4	2.0	41.9	32.6	30.7	----	----	100.0	100.0
Illubabor	0.8	0.2	74.5	6.4	1.8	0.5	22.8	92.9	0.1	----	100.0	100.0
Kefa	1.1	0.5	69.8	9.4	3.0	2.4	26.1	87.7	----	----	100.0	100.0
Shewa	2.6	0.2	56.9	10.5	5.4	3.2	35.1	86.1	----	----	100.0	100.0
Sidamo	0.2	0.8	68.5	65.7	0.9	3.2	30.4	29.9	0.2	0.4	100.0	100.0
Tigrai	2.8	0.5	49.1	21.8	7.6	13.7	39.7	62.4	0.8	1.6	100.0	100.0
Wollega	1.6	..	60.6	7.2	4.3	1.8	33.5	91.0	----	----	100.0	100.0
Wollo	3.7	1.1	52.4	19.8	8.0	16.5	35.5	62.5	0.4	0.1	100.0	100.0
Total	2.1	0.4	58.8	13.4	4.7	5.1	34.4	81.1	1.8	2.1	100.0	100.0

Source: Ethiopia, Central Statistical Office, Tables of Demographic Data, Vol.II, parts 1 and 2, (1974) and The Demography of Ethiopia (1974).

A. Mortality by age and sex

Exercise tables 19 and 20 present data from Botswana for 1981. Table 19 shows the composition of the population by age and sex. Table 20 shows numbers of deaths and the death rates using these same age group and sex group classifications, as well as three indicators comparing female and male deaths: percentage female, female/male ratio of deaths, and female/male ratio of death rates.

1. Complete table 20, calculating the three indicators. Which of the three indicators do you think would be most useful in helping a health planner identify those ages of special vulnerability for girls and women relative to men? For boys and men relative to women?

2. Exercise figure 6 shows female/male ratios of death rates by age group, using data from table 20 for ages 0-44. Plot the female/male ratios for ages 45 and over onto the same graph. Which line do you think provides a better visual description of the female risk of dying relative to the male by age? In what age group are males at greatest risk relative to females?

Exercise table 19. Population by sex and age group, Botswana, 1981

Age group	Female	Male	Total
0	21 289	21 413	42 702
1-2	29 458	29 418	58 876
3-4	35 337	35 238	70 575
5-9	74 653	74 301	148 954
10-14	61 018	58 709	119 727
15-19	49 485	42 972	92 457
20-24	45 739	32 646	78 385
25-29	36 075	26 498	62 573
30-34	25 817	20 327	46 144
35-39	20 618	16 826	37 444
40-44	18 089	15 600	33 689
45-49	15 642	13 575	29 217
50-54	12 792	11 424	24 216
55-59	11 827	10 090	21 917
60-64	8 644	8 477	17 121
65+	31 440	25 590	57 030
Total	497 923	443 104	941 027

Source: Botswana, 1981, Population Census.

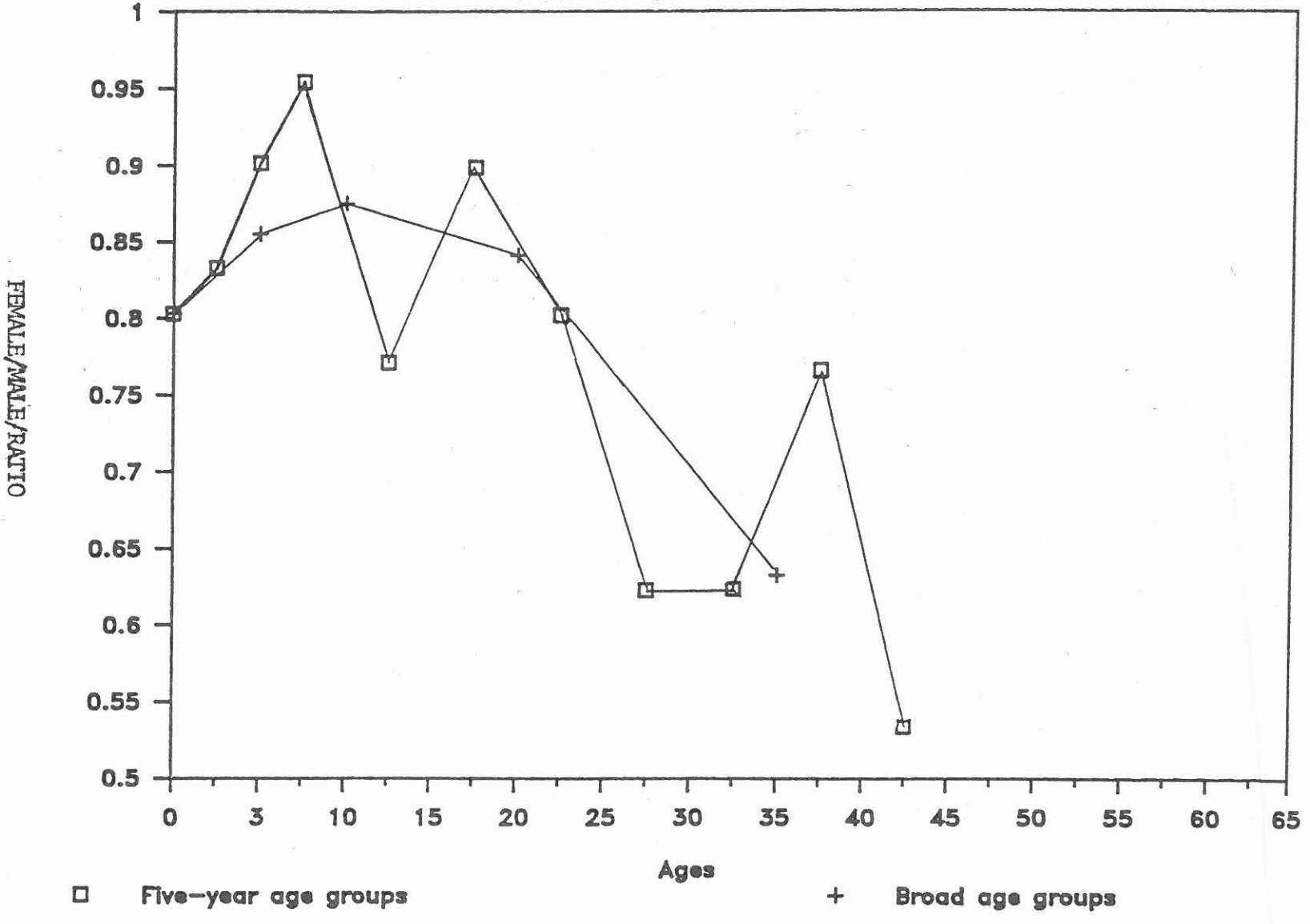
Exercise table 20. Deaths and death rates per 1000 population, by sex and age group: Percentage female, female/male ratios of deaths and death rates

Age group		Deaths					Percentage female	Female/male ratios: of deaths	of rates
		Female		Male		Total			
		Number	Rate	Number	Rate				
1		2	3	4	5	6 (2+4)	7 (2/6)*100	8 (2/4)	9 (3/5)
0	0	1 136	53.4	1 415	66.1	2 551	44.5	0.803	0.808
1-2		453	15.4	544	18.5	997	45.4	0.833	0.832
3-4		229	6.5	254	7.2	483	47.4	0.902	0.903
	1-4	(682)	(10.5)	(798)	(12.3)	(1 480)	(46.1)	(0.855)	(0.854)
5-9		209	2.8	219	2.9	428	48.8	0.954	0.966
10-14		128	2.1	166	2.8	294	43.5	0.771	0.750
	5-14	(337)	(2.5)	(385)	(2.9)	(722)	(46.7)	(0.875)	(0.862)
15-19		124	2.5	138	3.2	262	47.3	0.899	0.781
20-24		162	3.5	202	6.2	364	44.5	0.802	0.565
	15-24	(286)	(3.0)	(340)	(4.5)	(626)	(45.7)	(0.841)	(0.667)
25-29		147	4.1	236	8.9	383	38.4	0.623	0.461
30-34		133	5.2	213	10.5	346	38.4	0.624	0.495
35-39		134	6.5	175	10.4	309	43.4	0.766	0.625
40-44		103	5.7	193	12.4	296	34.8	0.534	0.460
	25-44	(517)	(5.1)	(817)	(10.3)	(1 334)	(38.8)	(0.633)	(0.495)
45-49		120	----	189	----	309	----	----	----
50-54		122	----	194	----	316	----	----	----
55-59		141	----	183	----	324	----	----	----
	45-59	(383)	(9.5)	(566)	(16.1)	(949)	(40.4)	(0.677)	(0.590)
60-64		113	----	224	----	337	----	----	----
65+		960	----	1 229	----	2 189	----	----	----
	60+	(1 073)	(26.8)	(1 453)	(42.7)	(2 526)	(42.5)	(0.738)	(0.628)
Total		4 414	----	5 774	----	10 188	----	----	----

Source: Botswana, 1981, Population Census.

Exercise figure 6. Female/male ratio of death rates,

by age group, Botswana, 1981



B. Infant mortality and child survival

Exercise table 21 presents mortality rates and percentage of children dying before their fifth birthday for several countries in sub-Saharan Africa for which reliable estimates are available.

1. Complete the table, calculating female/male ratios for each indicator. Which ratio would you expect to show greater variability? Why?

2. Calculate the medians for each of the six indicators.

Exercise table 21. Infant mortality and child survival

Country	Year	Infant mortality rates			Percentage of children dying before their fifth birthday		
		Female	Male	Female/male ratio	Female	Male	Female/male ratio
EASTERN AFRICA							
Burundi	1970-71	132	147	0.90	26.5	27.4	0.97
Kenya	1977	78	87	0.90	13.3	15.4	0.86
Mauritius	1980	31	35	0.89	..	..	..
Rwanda	1977	120	135	0.89	24.2	27.4	----
Seychelles a/	1975	28	32	0.88	4.9	5.2	----
Somalia b/	1974-78	144	176	----	..	..	..
Uganda	1969	111	129	----	19.1	21.2	----
SOUTHERN AFRICA							
Botswana	1964-71	91	103	----	13.9	16.6	----
Swaziland	1966-76	146	165	----	..	..	..
Median		----	----	----	----	----	----

a/ Refers to averages of yearly rates: Infant mortality 1975 to 1980, child mortality 1971 to 1975.
b/ Refers only to settled population in the Cenadir, Bay, Lower Shebelle areas.

Source: US Census Bureau Women in Development data base.

C. Life expectancy at birth by sex

Exercise table 22 presents life expectancies at birth and female/male ratios of life expectancy for a number of countries in sub-Saharan Africa.

1. Complete the column giving female/male ratios.

2. Identify those countries with an estimate dated between 1965 and 1974. What was the median expectation of life in 1970 for countries for which such estimates are available?

Exercise table 22. Expectation of life at birth for women and men and female/male ratio of life expectancies

Country	Year	Women	Men	Female/ male ratio
Western Africa				
The Gambia	1973	34.3	32.2	1.07
Ghana	1970	50.2	46.9	1.07
Liberia	1970-71	48.6	45.6	1.07
Mali	1960-61	35.7	33.7	1.06
Mauritania a/	1965	36.0	32.0	1.13
Niger	1960	40.1	37.0	1.08
Nigeria	1971-73	43.0	39.5	1.09
Senegal	1970-71	44.2	43.0	1.03
Sierra-Leone	1974	35.9	33.0	1.09
Togo	1961	42.7	41.8	1.02
Burkina Faso b/	1960-61	31.9	33.0	0.97
Central Africa				
Cameroon	1976	45.5	43.1	1.06
Chad	1964	35.0	29.0	1.21
Eastern Africa				
Burundi	1970-71	43.1	40.5	----
Kenya	1977	55.8	51.2	----
Mauritius	1971-73	65.3	60.7	----
Rwanda	1970	42.0	38.0	----
Seychelles	1974-48	71.1	64.6	----
Uganda	1969	46.9	45.8	----
Zambia	1969	46.5 c/	43.0 d/	----
Southern Africa				
Botswana	1964-71	58.3	52.3	----
Swaziland	1966-76	49.5	42.9	----

a/ Rural area only. b/ Rural and semi-urban. c/ Range: 45.0-47.5. d/ Range: 41.8-44.3.

Source: USA, Bureau of the Census, Women in Development data base.

D. Nutritional status

1. Part A of Exercise table 23 shows numbers and percentage distributions of rural Kenyan children under age 5 by two different measures of nutritional status: weight-for height and height-for age. Weight-for-height responds fairly rapidly to short-term calorie deprivation while height-for-age is a longer-term measure of chronic undernutrition. Would you expect to see a relationship between these two measures in a population of children? Does such a relationship appear in these data? Do you think both indicators are needed to describe nutritional status adequately? What is an important common limitation?

2. The upper panel of part B of table 23 shows the nutritional status of the same population of children by age. At what age do you think children are at greatest risk of serious illness or death due to malnutrition, as an underlying if not the major cause?

3. The lower panel of part B of table 23 shows nutritional status by sex. Complete the table by calculating the female/male ratio for each nutritional status. What can you say about the relative nutritional status of girls and boys under age 5 in this population? Data are not available by sex and age combined; however, if you assume that the female/male ratio of nutritional status is similar for all ages under 5, which age and sex group of children is at highest risk? Excluding infant mortality, much of which is due to other causes, are these data consistent with the age and sex distribution of mortality in health status exercise A?

Exercise table 23. Nutritional status

A. Children under 5 years by weight-for-height and height-for-age

Weight-for-height	Height-for-age: 100 per cent of standard		99-90 per cent (marginally stunted)		less than 90 percent (stunted)		Total	
	Number	Per cent	Number	Per cent	Number	Per cent	Number	Per cent
>90 per cent of standard (normal)	675	12.7	2 632	49.5	1 083	20.3	4 390	82.5
90-80 per cent (marginally wasted)	164	3.1	438	8.2	170	3.2	772	14.5
<80 per cent (wasted)	59	1.1	77	1.4	24	0.5	160	3.0
Total	898	16.9	3 147	59.1	1 277	24.0	5 322	100.0

B. Percentage distribution of children by nutritional status, by age and sex.

	Total	Nutritional status: Normal	Stunted only	Wasted only	Stunted and wasted
Age (months)					
3-11	100.0	75.2	22.3	2.3	0.1
12-23	100.0	51.6	38.2	7.3	2.9
24-35	100.0	48.2	48.1	2.7	1.1
36-47	100.0	59.7	37.7	2.1	0.4
48-60	100.0	62.2	34.0	2.9	0.9
Female	100.0	60.1	36.6	3.3	0.9
Male	100.0	56.8	38.2	3.6	1.3
Female/male ratio	----	----	----	----	----

Source: Kenya, Central Bureau of Statistics, Third Rural Child Nutritional Survey, 1982 (Nairobi, 1983), p.79.

E. National health services availability

Exercise table 24 presents data on the numbers of physicians, nurses and mid-wives, and hospital facilities and beds for countries of eastern and southern Africa. In exercise table 25, national-level indicators of health services availability are given, computed from table 24.

1. Complete table 25, calculating indicators of availability of nurses/mid-wives and beds.

2. Compute medians for each of the six indicators of table 25, for the countries of eastern and southern Africa:

	Population per physician	Physicians per 10,000 population	Population per nurse	Nurses per 10,000 population	Population per bed	Beds per 10,000 population
Median:	_____	_____	2300	_____	_____	_____

3. Which country has the highest number of physicians per 10,000 population? _____ The lowest? _____

4. Do these countries also rank among the five highest and five lowest in nurses per population? _____ In beds per population? _____

5. What do you conclude about the availability of medical resources in the region? In your country relative to the region?

_____

_____

_____

_____

_____

_____

_____

_____

_____

Exercise table 24. Health services statistics

Geographical area	Population (000s)	Physicians	Nurses/midwives		Facilities with beds	
			Qualified	Assistants	Establishments	Beds
World	4 134 667	3 342 587	5 708 025	1 856 877	..	..
Africa a/	394 457	64 890	133 583	118 106	..	..
Northern	99 846	46 417	35 431	57 939	..	..
Western	122 532	8 188	59 889	20 282	..	..
Central	49 745	3 233	9 759	21 413	..	..
Eastern	119 897	6 859	27 242	17 957	..	..
Burundi	3 680	61	262	417	108	1 121
Comoros	291	19	86	79	30	610
Djibouti	111	64	158	115	11	1 050
Ethiopia	28 925	396	1 488	..	84	6 746
Kenya	14 500	1 270	1 320	4 250	65	17 896
Madagascar	8 520	784	825	2 668	891	19 902
Malawi	5 526	116	397	1 040	324	9 617
Mauritius	909	376	1 586	173	35	3 220
Mozambique	9 678	285	2 006	372	588	11 041
Reunion	480	304	1 133	598	11	2 642
Rwanda	4 455	120	389	516	201	7 162
Seychelles	58	21	124	10	7	300
Somalia	3 003	193	998	..	..	5 163
Tanzania	15 985	1 003	5 875	1 794	2 422	34 589
Uganda	12 350	436	1 197	3 982	420	18 156
Zambia	4 896	472	2 490	..	758	20 030
Zimbabwe	6 530	919	6 908	1 943	..	17 393
Southern	2 437	193	1 262	515		
Botswana	690	72	277	267	21	2 137
Lesotho	1 250	67	295	38	88	2 564
Swaziland	497	54	690	210	33	1 717

Source: World Health Statistics Annual, Health Personnel and Hospital Establishments (World Health Organization, 1980). Data relate to various years in the period 1973 to 1978.

a/ South Africa not included.

Exercise table 25. Health services indicators

Geographical area	Population per physician	Physicians per 10,000 population	Population per nurse/midwife	Nurses/midwives per 10,000 population	Population per bed	Beds per 10,000 population
World	1 237	8.08	547	18.30	..	..
Africa a/	6 079	1.65	1 567	6.38	..	..
Northern	2 151	4.65	1 069	9.35	..	..
Western	14 965	0.67	1 528	6.54	..	..
Central	15 387	0.65	1 596	6.27	..	..
Eastern	17 480	0.57	2 653	3.77	..	..
Burundi	45 432	0.22	5 420	1.85	872	11.47
Comoros	15 316	0.65	1 764	5.67	475	21.03
Djibouti	1 734	5.77	407	24.59	106	94.59
Ethiopia	73 043	0.14	19 439 b/	0.51 b/	3 307	3.02
Kenya	11 417	0.88	2 603	3.84	810	12.34
Madagascar	10 867	0.92	2 439	4.10	427	23.43
Malawi	47 638	0.21	3 846	2.60	575	17.40
Mauritius	2 418	4.14	517	19.35	282	35.42
Mozambique	33 958	0.29	4 070	2.46	877	11.41
Reunion	1 579	6.33	277	36.06	182	55.04
Rwanda	37 125	0.27	4 923	2.03	622	16.08
Seychelles	2 762	3.62	433	23.10	193	51.72
Somalia	15 560	0.64	3 009 b/	3.32 b/	582	17.19
Tanzania 1/	15 937	0.63	2 084	4.80	----	----
Uganda	28 326	0.35	2 385	4.19	----	----
Zambia	10 373	0.96	1 966 b/	5.90 b/	----	----
Zimbabwe	7 106	1.41	738	13.55	----	----
Southern	12 627	0.79	1 371	7.29	..	..
Botswana	9 583	1.04	----	----	----	----
Lesotho	18 657	0.54	----	----	----	----
Swaziland	9 204	1.09	----	----	----	----

Source: Calculated from table 24.

a/ South Africa not included.
b/ Qualified only.

F. Women's utilization of health services

1. The statistics below are based on exercise table 26. Which are appropriate indicators of women's utilization of health services?

2. What do they suggest for programme priorities?

Botswana, second quarter, 1984

Population	1,013,382	Children under 5	185,387
Total visits	451,326	First well-child visits	8,512
Visits per person	0.45	Repeat well-child visits	365,601
- Per person per year	1.78	Total well-child visits	374,113
Women, 15 - 49	227,186 a/		
Estimated births	11,944 b/	Ratio: first-well child visits to total well-child visits	0.02
First ante-natal visits	7,185	Ratio: total well-child visits to all children 5	2.02
Ratio: first ante-natal visits to estimated births	0.60	- per year	8.07
Post-natal visits	3,312	Ratio: first well-child visit to estimated births	0.71
Ratio: post-natal to first ante-natal visits	0.46		

a/ Projected from 1981 to 1984 at an annual growth rate of 2.5 per cent.

b/ Number of live births per 1,000 women aged 15-49 in Botswana per year estimated at 210.3. Estimated live births in the second quarter 1984 thus equals (210.3/4) (227,186/1000) = 11,944.

Exercise table 26. Out-patient and preventive health services, second quarter, 1984, Botswana

Facility type	Number of visits	Injections and dressings	Family Planning	Ante-natal care		Post-natal care	Well-child care	
				New	Repeat		New	Repeat
Hospitals	118 548	93 146	3 933	1 557	9 645	706	774	13 572
Health centers	22 795	14 747	1 494	335	2 381	252	356	16 815
Clinics	218 293	165 232	23 571	3 708	23 986	1 977	4 951	199 256
Health posts	91 726	36 540	6 721	1 585	7 704	377	2 431	135 958
Total	451 362	309 665	35 719	7 185	43 716	3 312	8 512	365 601

Annex

Organization of the Harare Seminar

I. OPENING AND CLOSING

In the opening session the Honourable Teurai Ropa Nhongo, Minister of Community Development and Women's Affairs, Zimbabwe, greeted participants and introduced the theme of the seminar. He stated that in developing strategies for effective utilization of the nation's human resources, it is essential to have complete and accurate information on women's contribution to national growth and development, on the important impediments to their full participation in that development, and on the impact of development in turn upon women. Although data on women's situation are often inadequate, the problem is not always lack of data per se - to develop appropriate human resource policies and plans, those data must be translated into meaningful statistics and indicators. This seminar, by improving the abililty of countries to produce and make use of such statistics and indicators, will have an impact not only on the participation of women in development but also on the pace of development itself.

The representative of the United Nations Development Programme and United Nations Fund for Population Activities greeted the participants and reiterated the support of the United Nations system for women and development activities, stressing that the partipation of women in development is a matter of economic necessity, not simply one of distributive justice. The representatives of the International Research and Training Institute for the Advancement of Women and the Economic Commission for Africa/African Training and Research Centre for Women also greeted the participants and described the hopes and objectives of the organizers in calling the seminar.

Mr. Gibson Mandishona, Director of the Central Statistical Office of Zimbabwe (CSO), reviewed the origin of the seminar and the steps leading to its convening in Harare. He reminded participants that indicators are policy-relevant statistics which serve as broad guidelines and show whether the nation is retreating or progressing towards its multiple objectives. Mr. Mandishona called for the development of an adequate conceptual framework to guide the preparation and use of statistics and indicators for national development, suggesting the compilation of five groups of indicators on both women and men: basic needs, popular participation in national life, national security, economic performance, and population phenomena.

At the seminar closing, following remarks on behalf of the sponsoring organizations by their representatives, Mrs. Angela Makwavarara, Ministry of Community Development and Women's Affairs, Zimbabwe, congratulated the participants and organizers of the seminar for bringing the issues discussed to the attention of policy makers and the public. She urged participants to exchange documents produced for Nairobi and to keep each other informed about their efforts and achievements in improving information on women. Speaking

for the Minister of Economic Development, Zimbabwe, Mr. Mandishona reviewed the accomplishments of the seminar and pointed to gaps in information and priority areas for further work. The CSO plays a critical role but its resources are limited. Others need to supplement the CSO's activities in developing information about women for planning and monitoring policies and programmes. Mr. Mandishona suggested a series of national follow-up seminars and noted that Zimbabwe is now planning to hold such a seminar in 1986. At the conclusion of his remarks, Mr. Mandishona declared the ECA/INSTRAW Subregional Seminar on Improved Statistics and Indicators for Women in Development closed.

II. PARTICIPATION

National delegations

BOTSWANA

Ms Gwen Ntenda Lesetedi
Central Statistics Office

Mrs. N. Mbere
Applied Research Unit
Ministry of Local
Government and Lands

Ms Godisang B. Mookodi
Women's Affairs Unit
Ministry of Home Affairs

ETHIOPIA

Ms Abaynesh Makonnen
Central Statistics Office

Ms Kelemework Tekle
Coffee Marketing Corporation

Ms Hirut Terefe
Addis Ababa University

Ms Elsa Teferi
Office of the National Committee
for Central Planning

KENYA

Mr. D. O. Ahawo
Central Bureau of Statistics

Ms Mary Mbeo
Women's Bureau

Ms Gladys Mulindi
Maendeleo ya Wanaweka

LESOTHO

Mr. Francis M. Hloaele
Department of Youth and
Women's Affairs
Prime Minister's Office

MADAGASCAR

Mr. James R. Ravelojoana
Ministry of Population
and Social Condition

MALAWI

Mr. F. S. Chatsalira
Ministry of Community Services

Mr. William H. Mbale
Social Statistics Section
National Statistics Office

MAURITIUS

Mr. Harish Bundhoo
Central Statistical Office

SOMALIA

Ms Sahara Aden Diriye
Planning Section
Somalia Women's Democratic Organization

Mr. Awil Mohamed Farah
Central Statistics Office

TANZANIA

Ms Elizabeth Marc Mande
Co-operative College

Mr. Cletus P. B. Mkai
Bureau of Statistics

UGANDA

Ms Margaret H. Odwongo
Ministry of Culture and
Community Development

ZAMBIA

Ms Dorothy Kapantha
United Independence Party (UNIP)

Ms Celestina L.C. Ssewankambo
Central Statistics Office

Ms Susan Sikaneta Yoyo
Research Bureau, UNIP

ZIMBABWE

Central Statistical Office:
Mr. Gibson Mandishona
Mr. J. Z.Mzelethi
Mr. David J. Mzite
Ms Joyce Ndudzo

Mr. Zaipa Herbert Chigwada
Registrar-General's
Department

Mr. S. E. Chikwana
Ministry of Health

Mr. Samson D. Gumbo
Ministry of Education

Ms Ia Phylis Mafethe
Rural Health Services
Ministry of Health

Ms Margaret Mwalo
Ministry of Labour, Manpower
Planning and Social Welfare

Ms R. L. Nkomo
Ministry of Lands,
Resettlement and
Rural Development

Ms Usha Patel
Training and Research
Ministry of Construction
and National Housing

Mr. Paul S. S. Shumba
Zimbabwe National Family
Council

Mr. W. N. Tichagwa
Ministry of Community
Development and Women's Affairs

Ms Kate Truscott
Ministry of Agriculture

Mr. Naison Zumbika
Agricultural Finance
Corporation

Observers

Canadian International Development Agency: Mr. Stephen Wallace

Food and Agricultural Organization of the United Nations: Mr. D. C. Alonzo

United Nations Children's Fund and United Nations Fund for Population Activities:
Mr. R. Decoster, Mrs. Hapte-Mariam and Mrs. S. Haji-Ahmed

United Nations Development Programme: Ms Birgit Madsen

Eastern and Southern Africa Management Institute, Arusha, Tanzania: Ms Misrak Elias

University of Zimbabwe: Prof. Robert Mazur

Organizers

United Nations Economic Commission for Africa (ECA)

African Training and Research Centre for Women (ECA/ATRCW):
Ms Nancy J. Hafkin
Ms Mekdes Gabre Medhin

Statistics Division:
Mr. Toma John Makannah

International Training and Research Institute
for the Advancement of Women:
Ms Mervat Tellawy
Ms Jeanne S. Newman, Technical Co-ordinator (Consultant)

Department of International Economic and Social Affairs,
Statistical Office, United Nations Secretariat:
Ms Joann Vanek
Ms Grace Bediako (Consultant)

Zimbabwe Co-ordinator: Mr. Kuezi-Nke

III. AIDE MEMOIRE

A. Organization

The Subregional Seminar on Improved Statistics and Indicators for Women in Development, sponsored by the Economic Commission for Africa and the International Research and Training Institute for the Advancement of Women in co-operation with the Statistical Office of the United Nations Secretariat, is being held in Harare, Zimbabwe, from 29 April through 7 May 1985. It will be hosted by the Government of

Zimbabwe through the Central Statistical Office and the Ministry of Community Development and Women's Affairs. Financial support has also come from the United Nations Fund for Population Activities and the United Nations Development Fund for Women.

The objectives of the Seminar are:

(a) To facilitate a dialogue between producers and users on the sources and application of statistics and indicators on women;

(b) To familiarize participants with:

- sources of data on women;
- the resources of national statistical offices;
- a variety of indicators useful for planning, monitoring and evaluating policies, plans and programmes for women in development, together with methods of calculation and presentation;
- current and potential applications of these indicators and user organizations;

(c) To provide participants with experience in calculating and presenting a representative set of these indicators;

(d) To contribute to the on-going search for better ways of incorporating data on women into national statistical series and of using such data in policy and programme planning, monitoring and evaluation.

The Seminar is the first of its kind, following up the INSTRAW/Statistical Office Expert Group Meeting on Improving Statistics and Indicators of the Situation of Women in Development (New York, 1983) as well as the ECA Subregional Seminar on the Utilization of Research by National Machineries for the Integration of Women in Development (Zimbabwe, 1982).

The programme will include lectrures, panels, participatory discussion, and programming exercises drawing on the INSTRAW/United Nations publication Compiling Social Indicators on the Situation of Women (which will be mailed to participants as soon as their nomination is received) and national materials on women and development gathered for this Seminar, with emphasis on practical possibilities for indicator compilation and application in each country. There will also be sessions on use of micro-computers for development and maintenance of data bases and for computing indicators.

B. Results expected

The Seminar is expected to result in follow-up work at the national level and increased communication at the national level between users and producers of statistics and indicators on women and development.

Participants have been invited from countries of the east and southern Africa subregion. Each delegation was requested to include a representative of the central statistical office, preferably the official in charge of social statistics, and a representative of the national machinery for the integration of women in development, who should be working in a planning or research capacity.

The working language of the Seminar will be English. No translation or interpretation will be provided.

C. Programme

Among the topics included in the programme will be review of statistical concepts and methods for women and development planning related to statistics and indicators, demand for and applications of statistics and indicators for women and development planning, sources for statistics and indicators on women, assessment of relationships between national statistical services and users of their products, manipulation of statistics and indicators in specific fields, and promotion of national follow-up activities.

The Seminar will work in a plenary as well as in small groups of 10 to 15 persons. The methods of work will include lectures, panels, participatory discussions, and exercises utilizing national data. Emphasis will be placed on stimulating communication between users and products of statistics. There will also be a one-day field trip to observe data collection sites of the African Household Capability Programme Survey as well as projects on women and development operated by the Ministry of Community Development and Women's Affairs.

IV. PROGRAMME OF WORK

Monday, 29 April

SESSION 1, 9:15 - 12:00

Time	Topic	
9:15	1.	Opening

- Minister of Community Development and Women's Affairs (The Honourable Teurai Ropa Nhongo)
- INSTRAW
- UNFPA
- ECA/ATRCW

Time	Topic	
10:00	2.	Introduction to origins, purposes, scope and organization of the workshop
		- Co-ordinator - Director, Central Statistical Office, Zimbabwe
10:15		Break
10:30	3.	Demand for and applications of statistics and indicators of women's situation
		- Lecture and discussion
		SESSION 2, 1:30 - 5:00
1:30		Review of session 1 and overview of session 2
1:40	4.	Sources for statistics and indicators on women
		- Lecture and discussion
3:15		Break
3:30	5.	Organization of statistical services and interaction with users
		- Lecture and discussion

Tuesday, 30 April

SESSION 3, 8:30 - 12:00

Time	Topic	
8:30		Review of session 2 and overview of session 3
8:40	6.	Introduction to basic principles for calculating and presenting indicators
		- Lecture and discussion
9:45	7.	Population: composition and growth
		- Lecture and discussion
10:15		Break

Time	Topic	
10:30	8.	Population: distribution, migration and urbanization
		- Lecture
11:30	9.	Population indicators: discussion
		SESSION 4, 1:30 - 5:00
1:30		Review of session 3 and overview of session 4
1:40	10.	Households, families and fertility
		- Lecture and discussion
3:15		Break
3:30	11.	Calculating and presenting statistics and indicators: demonstration
4:00	12.	Demographic indicators: exercises (small groups)

Wednesday, 1 May

SESSION 5, 8:30 - 12:00

8:30		Review of session 4 and overview of session 5
8:40	13.	Education: enrolment and achievement
		- Lecture and discussion
10:15		Break
10:30	14.	Education: curricula, vocational/technical training
		- Lecture and discussion

SESSION 6, 1:30 - 5:00

1:30		Review of session 5 and overview of session 6

Time	Topic	
1:40	15.	Literacy and out-of school education
		- Lecture and discussion
3:15		Break
3:30	16.	Educational indicators: exercises (small groups)

Thursday, 2 May

SESSION 7, 8:30 - 12:00

8:30		Review of session 6 and overview of session 7
8:40	17.	Economic activity: concepts and definitions
		- Lecture and discussion
9:00	18.	Employment, labour force participation, occupation, formal and informal activity
		- Panel discussion
10:15		Break
10:30	19.	General discussion
11:30	20.	Time use
		- Lecture and discussion

SESSION 8, 1:30 - 5:00

1:30		Review of session 7 and overview of session 8
1:40	21.	Rural economic activity
		- Panel and discussion
3:15		Break
3:30	22.	Economic activity: exercises (small groups)

Time	Topic	
Friday, 3 May		
		SESSION 9, 8:30 - 12:00
8:30		Review of session 8 and overview of session 9
8:40	23.	Health and nutrition, health services
		- Lectures and discussion
10:00	25.	Health and health services: discussion
10:15		Break
10:30	26.	Health, nutrition and health service indicators: exercises
		SESSION 10, 1:30 - 5:00
1:30		Review of session 9 and overview of session 10
1:40	27.	Women's organizations
		- Lectures and discussion
3:15		Break
3:30	28.	Political participation
		- Lecture and discussion
Monday, 6 May		8:30 - 4:00
		Field trip
Tuesday, 7 May		
		SESSION 11, 8:30 - 12:00
8:30	30.	Review of field trip
		- CSO staff
		- Discussion
9:00	31.	Development of data bases for women in development
		- Lecture

Time	Topic	
9:35	32.	Development and dissemination of indicators
		- Lectures and discussion
10:15		Break
10:30	33.	Policy and programme planning, monitoring and evaluation
		- Lecture
11:35		Data bases and indicator programmes for policy and programme planning: discussion
		SESSION 12, 1:30 -4:00
1:30		Review of Session 11, overview of Session 12 and general announcements
1:40	34.	Prospects for development of statistics and indicators in the region
		- Panel discussion
3:15		Break
3:30		Closing remarks
4:00		Adjournment

(Sixth day of the programme)

In order to provide participants with a more vivid sense of the problems and possibilities for data collection on women in rural areas and of the kinds of indicators needed by women's groups and those seeking to serve them, a one-day visit to Bindura, a rural community two hours outside Harare, was organized by the Central Statistical Office and the Ministry of Community Development and Women's Affairs.

A. Central Statistical Office field office, Bindura

During the morning the group met with field staff of the CSO at the Bindura field office, where it learned about the structure and organization of the CSO's field offices and the data collection methods and schedule of the National Household Survey Programme. Presentations by four of the field staff were followed by questions and discussion.

A representative of the Economic Commission for Africa described the African Household Survey Capability Programme, in which Zimbabwe was participating. Under this programme, ECA assists participating countries to organize a permanent survey unit with the central statistical office and regional field offices. Each country develops a 5-year programme of topics to be investigated in accordance with national priorities covering, for example, labour force, agriculture, nutrition and population. Permanent staff of the survey unit plan all the surveys, supplemented by experts in the CSO and the relevant ministries. Permanent trained enumerators and their supervisors help to ensure competence and uniformity in survey implementation.

A provincial supervisor of the CSO field office described the structure of the survey unit. At the centre in Harare is the head office. Each province has an office and is organized into 8 districts, each with supervisors, team leaders, and enumerators (4-5 per team). Their task is to collect continuous data on a continuing basis for on-going statistical programmes, in order to formulate, implement and evaluate programmes in the provinces.

The sample design employed in these surveys was described. A master sampling frame, based on the August 1982 census, lists all households within specific economic/ecological areas: urban, commercial farming, peasant farming, and so on. The specific frame used depends upon the aim of the survey. Within each province, the population is divided into "Statistics Divisions" of 4000 households. Divisions are selected by probability sampling, and within each Division two sections (of 200 households each) are selected systematically. The 200 households are listed by basic socio-economic and demographic characteristics and 10 are selected for interviewing by means of systematic sampling.

income, consumption, and expenditures as a model, was also described. Finally, an enumerator team leader described some of the problems enumerators face in the field. Maps and interview schedules must be prepared in the local languages; local authorities must be induced to publicize the survey locally or people will be reluctant to give information; randomly selected households must be reinterviewed to check for reliability; manual editing must be carried out daily to identify and solve problems in a timely fashion; confidentiality of responses must be ensured; accomodations are inadequate for enumerators in remote rural areas; transport must be secured; and so on.

During the discussion the following points were made:

(a) It is important not to overwork a sampled unit. Two years is the longest period that a household can remain in the sample;

(b) Enumerators must be retrained each year as survey topics change;

(c) For some topics women enumerators may obtain better information but the job is difficult for women. The population is widely-spaced and much of the work must be done at night. Safety is an issue as is conflict with domestic responsibilities;

(d) Co-ordination between the CSO and user Ministries is achieved through an Inter-Ministerial Committee, chaired by the Director of the CSO. More recently attempts have been made to involve parastatals;

(e) The appropriate respondent may not always be the "household head"; interviews with the "head" may not provide reliable information about others in the household who are not respondents.

B. Women's sewing group: a producers' pre-co-operative, Bindura

In the afternoon, participants visited the Community Center to meet with a group of women who were seeking recognition from the Department of Co-operative Development as a producer's co-operative, to sew and market school uniforms.

To become a registered co-operative and thus eligible for a variety of assistance programmes, the group must demonstrate viability, that is, it must be profitable. It must buy new materials and build a savings account to build factory or shop. The volume of business must grow and it must have a reasonable market. At present, the group is still too small to qualify but they are working with the Ministry of Community Development and Women's Affairs to become viable and thus eligible for registration.

To become viable the group must solve a number of problems:

(a) Working capital, supplies and equipment: Each of the 24 initial members contributed $Z10 for a total of $Z240 of initial working capital, enough to purchase initial materials, but not to acquire the necessary sewing machines. They are now working with only two machines loaned by members. These are insufficient and some members have dropped out because of this;

(b) Facilities: The Bindura Rural Council provides a place to work in the Community Center, with water and electricity;

(c) Training:

(i) technical - the Ministry of Community Development and Women's Affairs has assisted in the costs of a 2-week training course for the numbers - samples of school uniforms testified to the technical skill of the members;

(ii) Management, administration, accounting - the group is sorely in need of assistance in these areas;

(d) Markets: There are six primary schools in the area. The group has set the price for a uniform at $8.00 and have given their output to local headmasters to sell. Some have been sold on credit. Assistance is needed to assess the potential market and to market the uniform.

Seminar participants had a number of questions and suggestions. They were concerned that appropriate channels be identified and mobilized to assist the women in acquiring the administrative and marketing skills and working capital needed to make their project viable. Moreover, participants were concerned to identify the kinds of information the Ministry of Community Development and Women's Affairs and the Department of Co-operative Development would need to have in order to decide how to advise and help such a group. A representative of the Department of Co-operative Development agreed to assist the group in assessing their market. It was suggested that the Ministry of Community Development and Women's Affairs help to bring together several such groups and assist them to develop the information needed to prepare a proposal to the United Nations Development Fund for Women.

There was obvious frustration that a group of rural women who were technically skilled, ambitious, and committed to their enterprise had found so little practical assistance in turning their efforts into a productive business.

The initial hour of the morning of the next day was devoted to a review and discussion of what had been observed on the field trip. The stark reality facing the sewing pre-co-operative group -- loosely organized with only rudimentary literacy and great need for assistance -- is the same reality facing thousands and tens of thousands of such groups around the world. What kind of data collection about such groups could help the user organizations represented at this seminar better plan to direct assistance to such groups?

In the discussion of the field trip, the following observations were made:

(a) On data collection and processing:

(i) Can surveys be organized to obtain information from different members of the household? Survey research technology is progressing but it is costly to interview separate members of the household. Yet if present practice fails to yield adequate information, perhaps the methodology will need to be modified;

to be unable to process and disseminate the information sufficiently rapidly. The problem is magnified with a continuing data collection effort, as in Zimbabwe's Household Survey Programme. The solution may lie in decentralized data processing on micro-computers. Meanwhile, initial manual tabulations are published quickly and are reliable at the national and provincial levels. Users also collaborate by processing their own data and in report writing;

(b) On the needs of the women's sewing group:

(i) In planning for assistance to women's groups, it is important to look at all beneficiaries, not just the participants but the community at large;

(ii) Data currently being collected provide information on the number and variety of projects and on participants by project type, but they are not very helpful for monitoring and evaluation. Data on receipts and expenditures are unavailable;

(iii) More information should be included in project proposals: on socio-economic background of participants, malnutrition, illiteracy in the community, and so on. Perhaps the household survey programme can provide the needed statistical profiles at small area levels;

(iv) Perhaps specific items could be added to the household survey questionnaire to obtain information on the kinds of changes introduced by women's projects;

(v) Another possibility is to ask Provincial Community Development Offices to collect their own statistics, using agricultural extension workers to ask specific questions, separately of women and men;

(vi) Women's groups need to begin with a feasibility study to answer three questions:

- are materials available?
- is there a market?
- can they obtain start-up funds?

Can the provincial officers help them with such a feasibility study?

(vii) Perhaps a very simple project proposal form can be developed for extension workers to use on which to indicate the needs of each group for technical assistance, equipment, and so on. These profiles of women's groups could then be brought together at the Ministry and used as a basis for developing and directing assistance to the groups.

"To participants:

Your response to the following questions will help us improve future workshops. On a 5-point scale (5 = very much, 1 = not at all), please assess the material and presentations in terms of usefulness to you. For each item, circle the rating which most accurately reflects your assessment and give us your comments or suggestions.

A. Workshop design

Please indicate how satisfied you were with each of the following:

		Very much				Not at all
1.	Overall workshop design	5	4	3	2	1
2.	Overall workshop schedule	5	4	3	2	1
3.	Amount of time allocated for discussion	5	4	3	2	1

B. Sessions

Please indicate how useful each of the following were for you:

		Very much				Not at all
4.	Session 1 (Monday), topics 2-5 on introduction, demand for and sources of statistics, organization of statistical services	5	4	3	2	1
5.	Session 2 (Tuesday), topics 6-11 on basic principles of indicators, population, fertility and demonstration of calculating indicators	5	4	3	2	1
6.	Session 3 (Wednesday), topics 13-15 on education	5	4	3	2	1
7.	Session 4 (Thursday), topics 17-22 on economic activity, employment rural areas, time use and access to resources	5	4	3	2	1
8.	Session 5 (Friday), topics 25-30 on health, health services and nutrition, women's organizations and political participation	5	4	3	2	1

Bindura

10.	Session 7 (Tuesday), topics 32-35, review of field trip, development of data bases and dissemination of indicators, policy and programme planning	5	4	3	2	1
11.	Small group calculation exercises	5	4	3	2	1

12. Comment on curriculum: _____

_____

_____

C. Workshop Arrangements

Please indicate how satisfied you were with each of the following:

13.	Information received before the workshop	5	4	3	2	1
13a.	Workshop venue - Harare	5	4	3	2	1
14.	Travel arrangements	5	4	3	2	1
15.	Hotel accommodation	5	4	3	2	1
16.	Hotel meals/service	5	4	3	2	1
17.	Workshop staff	5	4	3	2	1

18. COMMENTS: _____

_____

_____

D. Workshop overall

19. What did you like best about the workshop?

_____

_____

_____

_____

_____

20. What did you like least about the workshop?

_____

_____

_____

_____

22. What use do you think you will make of your experience at the workshop after its completion?

23. How could ECA/INSTRAW improve future workshops?

24. Please indicate what other kinds of workshops you would be interested in attending (if you check more than one, please indicate your first choice, second choice, etc.)

_____ Development of proposals
_____ Training in statistics/research techniques
_____ General aspects of women in development
_____ Other _____

Thank you for participating in the evaluation of this workshop."

1. D. Ahawo, "Development and dissemination of statistical indicators in Kenya with special reference to the status of women: A summary".

2. Food and Agriculture Organization of the United Nations, "The state of statistics on women in agriculture in the third world", by C. Safilios-Rothchild (ESA/STAT/AC.17/7-INSTRAW/AC.17/7).

3. _____ "Statistics and indicators on the role of women in agriculture and rural development", by D. C. Alonzo.

4. United Nations, Department of International Economic and Social Affairs, Statistical Office, and International Research and Training Institute for the Advancement of Women, "Background paper on statistics on economic activities with special reference to the situation of women", by Claes Norrlof.

5. _____ Compiling Social Indicators on the Situation of Women, Series F, No. 32 (United Nations publication, Sales No. E.84.XVII.2).

6. _____ Improving Concepts and Methods for Statistics and Indicators on the Situation of Women, Series F, No. 33 (United Nations publication, Sales No. E.84.XVII.3).

7. United States of America, Department of Commerce, Bureau of the Census, Women of the World. Sub-Saharan Africa, by Jeanne S. Newman, WID-2 (Washington, D.C., Government Printing Office).

8. Zimbabwe, Central Statistical Office, "Indicators for women's participation in development", by Gibson M. Mandishona.

9. _____ T. R. Nhongo, Minister of Community Development and Women's Affairs, Opening Address to the Seminar.