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**IMPROVING SOCIAL STATISTICS
IN DEVELOPING COUNTRIES:
CONCEPTUAL FRAMEWORK
AND METHODS**



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NOTE

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PREFACE

This publication is a technical report based on two papers concerned with improving social statistics in developing countries: "Promoting the improvement of social statistics in developing countries" and "Framework for the integration of social and demographic statistics in developing countries".

The first paper (part one of the present publication) outlines a general strategy for the development and integration of social statistics programmes in developing countries. In recognition of the need for a joint approach, it is addressed both to the producers and users of those countries' social statistics and is concerned primarily with the practical problems of organizing and implementing integrated programmes of improving social statistics. It examines the nature and purpose of social statistics and the reasons for a programme to improve them and it considers the uses to which they can be put and the value of placing them in a co-ordinated general framework for integration, such as the one presented in the second part of the present publication. It suggests possible ways of developing practical and viable statistical operations to make them more relevant, sufficient, timely and co-ordinated. The purpose of part one is not to suggest a complete statistical programme but to examine the problems that need to be overcome if suitable programmes are to be realized.

The second paper (part two of the present publication) presents a conceptual outline and a discussion of technical methods for improving and integrating social, demographic and related economic statistics which it may be feasible for developing countries to apply in the medium-term future, consonant with their statistical and social circumstances and priorities for improving the welfare and living conditions of their populations. The approach presented is one of step-by-step integration and systematization of social statistics and social indicators, fully integrated with the continuous development of the required basic statistics in social, demographic and related fields. Part two does not propose new methods or definitions for social statistics but rather presents a framework for co-ordinating these statistics, including harmonization of concepts, classifications and definitions, based on existing recommendations and guidelines of the United Nations and its specialized agencies. Chapter I of part two considers the feasibility and usefulness of a framework, how it might be designed, and the role of social indicators. Chapter II reviews each field of statistics included in the framework in terms of contents, concepts, organization and priorities appropriate for developing countries.

Annexes I and II present illustrative series, classifications and social indicators for each field discussed in part two and technical references. Annex III provides additional selected references to documents of the United Nations regional commissions on their work on development and integration of social, demographic and related economic statistics and annex IV reproduces the text of the United Nations Economic and Social Council resolution on the National Household Survey Capability Programme. Household surveys of various kinds are of

central importance in the development of integrated social, demographic and related economic statistics; the United Nations National Household Survey Capability Programme aims at assisting in the implementation and improvement of this vital statistical capability in all interested developing countries.

The present publication is one in a series of reports on work in the United Nations on the framework for the integration of social, demographic and related economic statistics. The first stage of this work was completed in 1974 with the publication of the technical report, Towards a System of Social and Demographic Statistics. 1/ Work in this field since 1974 has been concerned with such topics as social indicators, development and integration of social statistics in developing countries, harmonization and development of concepts, classifications and definitions in social, demographic and related economic fields, and conceptual and practical approaches to integration of these statistics. The results of this work are also presented in two other United Nations publications in addition to the present one; these are: Studies in the Integration of Social and Demographic Statistics: Technical Report, and Social Indicators: Preliminary Guidelines and Illustrative Series. 2/

Drafts of the two papers contained in the present publication were discussed by the Statistical Commission at its nineteenth session, which recommended that they should be circulated to the regional commissions for comment and then published in combined form. 3/

1/ United Nations publication, Sales No. E.74.XVII.8.

2/ United Nations publications, Sales Nos. E.79.XVII.4 and E.78.XVII.8.

3/ See Official Records of the Economic and Social Council, Sixty-second Session, Supplement No. 2 (E/5910), para. 98.

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Part One

Promoting the Improvement of Social Statistics in Developing Countries

INTRODUCTION

1. Part one of the present publication is concerned primarily with problems of organization, collection and dissemination of social statistics in the conditions pertaining in developing countries and in the context of an integrated programme. At its nineteenth session the Statistical Commission considered a draft of part one

and endorsed its emphasis on the importance of a joint approach to the subject involving both producers and users of statistics. It also endorsed the need to undertake programmes to improve social statistics in developing countries in a co-ordinated manner among the various sectoral agencies involved. That was particularly important when undertaking work combining data from administrative and survey sources when linking national data with more detailed local information.

The Commission underlined the importance of ensuring that proposed improvement programmes were of a practical nature and reasonably limited in scope in the first instance so that useful results could be achieved within a short period. Particular attention should be paid to the problem of establishing appropriate co-ordination mechanisms among the various producers of statistics and with the users concerned.

Co-ordination between producers and users was particularly important in establishing the priorities of the programme of work and in undertaking concerted programmes in selected development areas or with seriously affected population groups of priority concern. Co-ordination among the different producers was especially relevant in establishing agreed concepts, classifications, definitions and tabulations as well as codes for processing and information retrieval.

The Commission noted that the matter of costs of surveys and censuses was of major concern to developing countries and requested that further information on the costs of statistical operations be compiled and disseminated. The Commission also recognized the need to design simple recording and analytical measures, taking into account the constraints of limited national resources both financially and in terms of skilled manpower. In that context, it was felt that training was a critical element; the Commission welcomed the attention that had been paid to training in the report.

The Commission placed particular emphasis on the importance of speedy dissemination of data and pointed out the danger of generating more data from new programmes than could be processed within a reasonable time period or could be effectively transmitted to the user concerned. 1/

1/ See Official Records of the Economic and Social Council, Sixty-second Session, Supplement No. 2 (E/5910), paras 91-95.

2. Drafts of the present paper and of a paper on the relevance and feasibility of adapting the full version of the framework for the integration of social and demographic statistics for use in the developing countries 2/ were considered by an Expert Group convened by the United Nations Statistical Office in November 1975. 3/ An outline of the present paper, together with a discussion of some key issues, was also presented to the 1975 Conference of African Statisticians 4/ and the 1975 meeting of the Committee on Improvement of National Statistics (COINS) of the Inter-American Statistical Institute. The views and recommendations of these conferences and of the Expert Group, together with those obtained by consultations with developing countries and the specialized agencies and the conclusions of the Statistical Commission at its nineteenth session, have been taken into account in completing this paper (part one of the present publication).

I. CONCEPT OF SOCIAL STATISTICS

3. For the purposes of this paper, social statistics are taken to include statistics describing social conditions, a very broad coverage which inevitably includes certain elements of what are commonly considered economic statistics such as income distribution, housing and the costs of social services. The main components will be statistics of food and nutrition, housing and provision of water, health and medical care, labour, education and training, social welfare, and major elements of demographic statistics. Such diversity is a feature of most large bodies of statistics such as economic statistics and environmental statistics. Unlike economic statistics, however, social statistics lack a common unit of measurement but are, nevertheless, more unified than environmental statistics in that the various components refer to the same set of individuals and groups.

II. GENERAL CHARACTERISTICS OF SOCIAL STATISTICS IN DEVELOPING COUNTRIES

4. Because all countries have current social programmes, a considerable body of largely disparate social statistics already exists, developed mainly for administrative rather than policy purposes. Little attention, however, has been paid to their mutual reinforcement and integrated improvement. Considerable work has been done in developing countries on the concerted improvement of economic, financial and also demographic statistics. The other social statistics, however, have been left to make their own way under the auspices of their separate administrative agencies. In various countries, certain sectors with well-established administrative structures, such as health or education, may have

2/ Revised and issued as part two of the present publication.

3/ "Report of the Expert Group on Social Statistics and a System of Social and Demographic Statistics for Developing Countries" (ESA/STAT/AC.3/2).

4/ "Report of the ninth session of the Conference of African Statisticians" (E/CN.14/646), paras. 214-219.

made considerable independent progress while others, such as nutrition, remain at a rudimentary stage. The concern of this paper is primarily with those unevenly developed social statistics outside the demographic area and with the need to improve them in a directed and co-ordinated mutually reinforcing programme.

5. There is a very wide range of statistical policies, capacities and performance among developing countries, particularly in social statistics. Indeed, in many respects there is a greater heterogeneity among developing countries than among the industrialized ones. In some there is concerted support for an integrated approach to improving social statistics as part of the national development plan. In others, support is provided in an ad hoc manner or along instrumental lines, for example, in the form of a population census or household survey. The most common policy, however, is ad hoc support provided along subject-matter lines whereby the Government seeks to improve the statistics of those particular sectors which national policy and administrative interests require to be strengthened. This usually takes the form of expanding the existing administrative reporting systems. It is as a result of these fragmented sectoral policies that most of the improvements in statistics of health, labour, education etc., have taken place. There are also some local programmes for improving social statistics, often where social decisions are taken at the local level. There are, of course, countries where there is no national support for improving social statistics in any form owing to limited resources and competing priorities or as a result of general scepticism as to the benefits that might accrue from such a programme.

6. Among developing countries conditions vary greatly and call for a wide range of options within an over-all strategy; however, a number of significant differences between developed and developing countries need to be taken into account in order to avoid transplanting inappropriate models of development. Developing countries have fewer financial resources and more basic economic needs. This argues for the avoidance of expensive and capital intensive schemes; proposals involving high maintenance costs that work well in developed countries may not be suitable in view of the constraints on available resources and financing. This is not to say, however, that adequate funds are not essential for the purposes of improving statistics in general and social statistics in particular. However, it is not realistic at this stage to suggest possible costs of country programmes to improve social statistics, since they will depend on the nature of the existing statistical services and the scope of the improvement programmes.

7. There are further differences between developed and developing countries in the very nature of the society itself; with respect to the processes being described. In developing countries, masses of people live in appalling and unquantified social conditions and a major concern should be measuring problems relating to them. Not only has the traditional agricultural sector been neglected but it is an oversimplification to refer to the "modern" and the "traditional" sectors as if they were quite independent. In practice, there are significant areas of activity that do not fall comfortably into either category, in which a large proportion of the employed and self-employed population in the developing countries is engaged.

8. For historical and other reasons, developing countries have limited administrative capacities and a restricted supply of trained manpower; sophisticated systems which rely on the constant updating of records and on speedy transmission of information over long distances are unlikely to be successful there,

although they work well elsewhere. Because of the lack of trained statisticians in the governments of most developing countries, particularly at the middle and senior levels, programmes need to be devised that make the greatest use of this scarce resource while encouraging the maximum use of semi-trained and untrained personnel. This means that national training programmes supported by the dissemination of training manuals are the key to the success of social statistics improvement and that the statistical authorities will often have to do much of their own training.

9. The official statistical collection systems and infrastructures of many developing countries are much more fragile than are those of developed countries; in social statistics, which have relied primarily on administrative sources, the collection systems are particularly weak. The central statistical offices in many developing countries have not yet established field organizations with networks of provincial offices and still rely heavily on the use of local administrators or ad hoc staff. Programmes have, therefore, to be capable of producing workable and simple frameworks that are technically sound but that do not go beyond the capacity of the existing statistical mechanism. One might be tempted to elaborate a strategy best suited to the most advanced developing countries, inasmuch as their statistical structures offer the most manageable transitions from the developed world where considerable progress in social statistics has already been made. This would, however, leave the least advanced countries without a viable strategy. What is needed is a realistic and flexible co-ordinated approach with a minimum set of graduated priorities within each component.

III. USES OF SOCIAL STATISTICS

10. Most social statistics have traditionally served the purposes of administration. They have been developed independently by each social agency and one of their major functions has been to record the execution and performance of their several undertakings in a form primarily designed to meet administrative needs; this has given rise to their heterogeneity. In addition to their internal accounting function, social statistics have also been used for describing social circumstances and identifying areas of concern. Thus a description of health conditions may aim to provide some indicative series for social planning and policy. This is usually done as part of a comprehensive national plan with its implications in terms of resource allocation.

11. However, the link between the social statistician and the social planner and policy maker has not been as close as that found in economic statistics. In social programmes there has not been such an urgent need to know, in order to act, as there has been in, for example, the case of balance-of-payments questions, where failure to act appropriately and quickly may lead to rapid economic disaster. The internal social process is characteristically slow and, although serious malfunctions can and do occur and may lead eventually to disaster, such deterioration usually spans a number of years. As a result, Governments and planners have felt less obliged to make immediate decisions. Until recently in many countries low priority was attached to policies to reduce social disparities; the policy makers were thus less interested in obtaining early information about

varying conditions in different parts of the country. The statistical services of the social agencies have, in short, tended to concentrate on meeting administratively determined needs for detail rather than on the over-all requirements for policy planning and problem solving.

12. Social planning and policy has been based more upon political and social imperatives than on an analysis of past trends and current achievements, particularly in those developing countries, in which social pressures were more likely to lead to political instability. The educational planner, for example, is dealing with social aspirations closely allied in most developing countries with the struggle for independence and nation-building. He is, therefore, obliged to act more out of social pressures and political considerations than out of a recognition of current progress and realizable prospects. Similarly, a target for the complete eradication of a major disease is in itself a political instrument.

13. Under these conditions, the data the statistician produces will often be of poor quality because they are never closely scrutinized; however, in some instances even incomplete data can serve a useful purpose as an early warning system, e.g., notified cases of cholera. In general, however, data will be lacking in key series and in general practical usefulness because they are not designed to assist the planner, who never comes to grips with the problem of identifying the most reasonable approximations to the characteristics he really wishes to measure. Furthermore, the lack of internal comparability due to the multiplicity of agencies and differing definitions deprives statisticians and planners in the social sectors of the opportunity for supporting their colleagues in other sectors. Thus, each programme is left to continue in a self-perpetuating and piece-meal manner, without benefiting from the fundamental improvements made in other bodies of statistics.

14. Because social statistics were born of administrative processes, statisticians have traditionally tended to identify mainly with administrative concerns and to concentrate on the conditions closest to the administrator even in their description of social circumstances. In developing countries, where there is enormous divergence in social conditions, social concern and description and the search for data beyond the censuses nevertheless tend to be concentrated on that small segment of the urban population with the greatest access to well-established social services. The recording process for this group is also administratively most manageable but the net result is a serious distortion effect in measurement. Social statistics have been concentrated in the "modern" sector and are thus not equipped to measure the total social reality.

15. A distinction needs to be made between on the one hand policies for improving social statistics which are idealistic expressions of long-term aspirations in response to social and political imperatives and on the other hand practical guides for early action. Making social statistics more relevant, sufficient, timely and co-ordinated will take considerable time and resources. Responsible authorities should not only be convinced of the usefulness of the undertaking but also be aware of its probable results and the probable time scale. One cannot alight upon a social problem like some deus ex machina and carry out a quick survey with a team of specialists. One can in fact do very little in statistics without historical and continuous data. This means an efficient, planned programme. One cannot conjure up new social statistics only because the present social crisis requires answers. Statistics take time - time to design, to collect and to analyse. To begin a new statistical series takes a number of

years and this is a serious disadvantage because, in the midst of a crisis, a country is tempted to plan without time-consuming statistical series.

16. Unfortunately there are few authentic short cuts. There is practically no alternative to establishing a durable capability to carry out an efficient and regular collection and analysis programme, and it is here that the greatest problems arise. A social planning unit is capable of making a great effort to obtain estimates for a specific subject on a one-time basis for the purposes of an international loan, a policy statement etc. The cost is, however, high and the results may be highly inaccurate and are unlikely to be used to establish the necessary time series. It is cheaper and more useful in the long run to develop a practical programme of establishing a permanent reporting structure, to create a mechanism for co-ordination, to develop a means for ongoing evaluation and to provide a capability to carry out surveys on a planned sample basis. The creation of these structures distinguishes aspiration from action programmes.

IV. ESTABLISHMENT OF NATIONAL PRIORITIES

17. It is not the purpose of this report to indicate what should be the national priorities for social statistics. Each country has its own social priorities within its national plan and the priorities for social statistics should naturally accord with them to the extent that they are quantifiable at all. It is important, however, that some priorities in statistics be established if improvements are to be given tangible shape. The following paragraphs discuss briefly some of the general social considerations which might be significant for developing countries in the selection of priorities for social statistics.

18. At present, there is a growing concern with the problem of internal disparities in developing countries and the realization that the equitable distribution of wealth is as important as the growth of total resources. This is leading to policies of national integration, the lessening of regional inequalities, the creation of social funds, the redistribution of national income etc., in order to correct distortions arising from current models of economic development. An improved social statistical service would be able to play an important role in measuring and evaluating the changes brought about by these new policies and in helping to solve the problems encountered in their implementation. In some countries, priorities will be established on the basis of some unitary concept or theory of social change or development; other countries may establish priorities on the basis of the importance of the gaps identified or on the basis of those sectors or regions that seem to provide the best opportunity for improvement in the short run.

19. If they are to be of immediate value, the statistical priorities should represent those areas of direct intervention in social development and welfare in which the country is currently engaged, complementing projects in which special actions are being taken. Given the similarity of social problems in most developing countries, it is likely that there will be a common core of priority areas. Such priority areas will often include: adequate supply of drinking water; improved nutrition for vulnerable groups; basic primary health services; improving maternal and young child health; provision of basic education, particularly pre-occupational and other technical training; family planning and, more generally, strengthening the family and the community and enlarging opportunities for women and girls. These are operationally oriented priority areas pertaining to the

larger areas of concern indicated in the first part of this document. In the context of these priority areas of concern, a balanced statistical approach should include reliable series on institutional activities and performance and a sound procedure for estimating access to and use of local services.

20. There is a need to develop a capability for providing statistics at the local level to serve the data requirements of local policies. To this end, the field organizations of the central statistical offices need to be strengthened and local officials need to receive some minimal training in the collection and handling of statistical data so that the local information can fit in with national data. One useful device for accelerating this process is the exchange of statistical personnel between the field offices and the central office so that improved techniques can be widely disseminated and the central staff can learn at first hand the nature of the local needs and the available resources for local data. Local and regional data have a key measuring function; the need for local statistics is closely bound up with the problem of internal disparities referred to above. The regional and local agencies will need to strengthen their role in monitoring the impact of social policies within the country, using the resulting data to improve the programmes themselves. Local statistics are not a substitute for national statistics but they provide a basis for the support of local programmes and should be made comparable with national statistics.

21. Because more attention needs to be given to those outside the modern sector in accordance with national plans for social improvement, programmes should seek particularly to supply data concerning disadvantaged areas and groups, which are likely to include rural areas, urban slums and shanty towns, isolated regions, the lowest income groups, young children and cultural and ethnic minorities. Regional development will also probably be a priority and it is important to agree on the selection of special regions and to have all the ministries working in them in a co-ordinated manner. The special regions would probably be the most backward agricultural districts and those with which transport communications are the weakest. Some of these may already have been designated as "development areas"; statistical programmes should be linked to current activity in these regions. On the other hand, care must be exercised not to include every social or regional problem as a priority or improvements may be jeopardized. It is evident that in the developing countries the greatest division is between the well-housed urban families and those in the shanty towns and rural areas; it is these divisions within the country that should be of primary concern.

V. NEED FOR AN INTEGRATED APPROACH

22. When a country has established its priorities and identified its major areas of social concern, it will face the tasks of putting its policy into a co-ordinated framework. The work should not be conceived as a series of isolated and fresh initiatives in the various ministries concerned but should rather be seen as part of an integrated programme of mutually reinforcing activities seeking an added perspective and a new impetus for a concerted national effort to expand what is already under way. This is particularly difficult in social statistics because of the multiplicity of agencies engaged in planning and formulating social policies. Integrated social statistics should also be conceived as part of over-all statistical development that includes development of economic statistics and should be paid to the allocation of limited resources among different statistical areas.

23. In designing an integrated programme of social statistics, the immediate aim should be to provide statistical benefits by showing up gaps, harmonizing concepts and classifications, setting up standard definitions and making social statistics more comprehensive and compatible with each other. A programme should also be seen as part of the work of developing an integrated framework for social statistics, such as the one described in part two of this publication. The work should bring additional support to that part of an integrated framework of social statistics and those parts of the programmes of the concerned ministries that impinge upon the priority areas of social welfare and seek to strengthen the relevant sectoral statistics. The continuing work will make use of both international and country experience in using the framework to service the needs and capabilities of the developing countries. In the course of this work, the programme will be instrumental in focusing on aspects of practical concern for the improvement of social statistics.

24. The approach to social welfare and development must necessarily be multisectoral and take into account the implications of a wide range of policies. Information on a variety of social and economic dimensions may be required for the formulation of policies for any single sector. The environment in which people live, food intake, health, physical and mental development, education and employment all affect each other. For example, food intake and composition have a fundamental bearing on health and physical growth, education, and productivity. One of the valuable features of co-ordinated social statistics should be the interlinking of data from different sectors. Surveys in one sector should ask questions about the inputs and outputs from other sectors in such a way that they can be related to macro series normally compiled for the whole sector. It has become increasingly clear that sectoral approaches are not sufficient in themselves and that, beyond a point, fruitful outcomes depend on different sectoral approaches supplementing and interacting with one another. An integrated operation, such as a household survey, can produce statistical evidence on the way different aspects of social conditions interrelate in the lives of people and on the extent to which inequalities in one are linked with inequalities in others.

25. In any country, no matter how under-developed, extensive statistical activities are already taking place in the social sectors. There are regular statistical operations allied to the administrative process, large-scale regular but infrequent operations such as the population and housing and agricultural censuses and a considerable number of surveys and case-studies undertaken quite independently by some governmental agencies. A programme for improving social statistics should, as one of its major tasks, seek the co-ordination and rationalization of those activities - particularly the various surveys and case studies - that are of possible relevance. Surveys are expensive - too expensive for duplication, missed chances and non-utilization of results. In view of the interdependence of the data and the multiplicity of agencies concerned with social statistics, careful attention should be given to the need to devise an appropriate co-ordination mechanism for data collection and analysis and the establishment of common concepts, definitions and classifications.

26. Statisticians in developing countries are in short supply, particularly for the social sectors. It is all the more important, therefore, that their efforts be made as productive as possible and that they act in concert to help each other rather than duplicate administrative processes necessary to carry out different surveys. Survey interviewers in one social area may be used to carry out surveys in other areas. One sectoral statistician may be well placed to assist in a

related study in another sector. To make the best use of limited resources an effort should be made to group the statisticians working in the social sectors in a team. For more effective use of scarce resources, the aim should be to improve and rationalize sectoral data already available while developing the compatible sectoral and cross-sectoral statistics required.

27. A programme should be designed jointly by the producers of statistics and the users and policy makers so that the necessary links are established at the outset. It is important that all viewpoints be represented, above all those of the policy makers, so that a programme can be geared to the needs of problem solving and receive the necessary political backing. Policy makers can be attracted if stress is laid on (a) contributions to improving management by monitoring and evaluation, (b) ability to provide information justifying a ministry budget by relating inputs to expected outputs or (c) the value in providing a basis for policy decisions by indicating the probable outcome of past and current trends or by an assessment of whether pilot projects are replicable at a justifiable cost and in preference to other measures. The policy maker has to be convinced that a statistical programme will make some early contribution to the solution of his problems. Research and academic institutions engaged in social studies are also very much concerned with the development of social statistics both as users and producers of data. The contributions of such institutions can be substantial; such institutions should be encouraged to participate and lend their expertise and prestige to a co-ordinated programme.

28. Each country will make its own arrangements to create mechanisms for co-ordination and linkages in the light of its administrative structures; however, this is best done under the guidance or with the strong support of a central statistical authority. Social statistics in most developing countries are at present decentralized, each major ministry being responsible for the statistics of its own sector. The national statistical office may have an advisory role through legislation or even national statistical councils but only in a minority of cases is a single national statistical agency directly responsible for sectoral social statistics. On the other hand, most large-scale statistical operations, such as the agricultural, population and housing censuses and national household sample surveys, are organized by bodies which are part of or directly associated with the national statistical office. The major exception is the operation of the civil registration system for vital events, which is often the responsibility of another agency.

29. A central statistical office, or a statistical co-ordinating council where it exists, has a fundamental role to play in ensuring that the statistical work of the various substantive ministries is not dissipated but contributes to a systematic approach to the improvement of social statistics. Working closely with the statistical services of the various ministries, the national statistical office can assist, for example, in working out common classifications to benefit the users of data in all fields of social statistics. It has a key role in improving statistical standards, establishing concepts and definitions and initiating projects concerning common services and functions, e.g., training facilities, electronic data processing and statistical administration.

30. The national statistical office together with the statistical departments of the sectoral ministries may have regional and local offices responsible for data collection. However, in the case of the ministries, their regional and local offices are often staffed by officials who have no statistical training.

Communication is maintained between the national statistical office and the sectoral ministries - though sometimes only formally; but communication between the local units of the national statistical office and the ministries is weaker. The national planning agency usually has an overriding authority and works in close collaboration with the national statistical office and the statistical units of the ministries. Most national planning agencies carry out the bulk of the analytical work they need but, in the main, rely on the existing statistical system to obtain the data required. Often the planning authority and the statistical office belong to the same central ministry but even when they are in separate ministries the links are close.

VI. INVENTORY OF ACTIVITIES, REQUIREMENTS AND CAPABILITIES

31. The actual requirements of a national programme will vary widely depending on the statistical and social situation. It is, therefore, important for each country to undertake, to the extent possible, a preliminary inquiry into the current statistical activities, the major requirements of the potential users and the range of possible statistical improvements. Statistical offices should carry out a survey of the major concerns and the types of data which may be useful in the process of responding to them. In arriving at some consolidated list of over-all requirements, reconciliation of conflicting demands from different agencies may be necessary; at this early stage the views of the users are most important.

32. Where feasible, the inventory of data being currently collected should include an evaluation of their quality and the degree to which they are currently used. That some data are collected, compiled and published is itself of little value if such data are unreliable or out of date or cannot be used for some other reason. Both producers and users should indicate which of the series they consider least significant. It is important to distinguish between series not used because the information is not required and those that are not exploited because the data, although on important matters, cannot be effectively interpreted. It would also be useful to list the inevitable cases of duplication and of incompatibility in definition; in this way it should be possible to identify the major gaps and deficiencies in the statistical system. Identifying gaps is a particularly laborious exercise; it may be useful for each agency to make a prior identification of the major gaps in its own area of concern as well as to provide information on needs and availability. These individual lists of major gaps would not be intended to pre-empt the final decisions but would be a preliminary covering of the ground to enable the co-ordinating group to recognize the areas of mutual concern and concentrate on the major disagreements or contradictions.

33. Once the gaps have been identified, they must be put into some order of priority, to be viewed in the light of a number of criteria, such as need and accessibility. Obviously, it is important to keep in mind the use to be made of the statistics. Priorities, however, cannot be assigned exclusively on the basis of the importance of a topic and considerable attention should be given to those areas in which the missing information, once supplied, would be used immediately and frequently. The criterion of need will thus be a composite of departmental commitments and requirements for national and local planning and support in the implementation of the established policies. The criterion of accessibility will be a composite of the ease with which new data can be collected, the existence and suitable conditions for the processing of data and the rapidity with which they can

be disseminated, most of which factors will depend on the co-operation of the administrative agency concerned and the enthusiasm of the prospective users.

34. The identification of gaps does not by itself lead to the explanation of such gaps, especially with regard to the quality and utility of data. Therefore in addition to the review of data and needs, there should also be a review and evaluation of the social statistics structure, i.e., organization, capacity, personnel, equipment, working procedures, production and use of statistics and the existing links with users. Here the central statistical office can play a very useful role, being the body with the greatest number of statisticians in the country; this office should be able to assist the sectoral ministries in the review of their statistics. Many sectoral ministries might find it difficult to carry out such a review without this assistance. An additional advantage would be that the sectoral reviews would be carried out in a comparable manner and thus be a valuable tool for the operational programme of the co-ordinating group. It is understood that, in practice, the consultation process outlined here will not be a series of distinct steps but that the steps will overlap, be repeated and move out of the described sequence, following instead other pragmatic paths according to local conditions. The process has been described as a series of steps to clarify the content and purpose of each step.

VII. DESIGNING A REALISTIC MINIMUM PROGRAMME

35. Since we are thinking in operational terms, special attention should be paid to the feasibility of proposed data systems and collection mechanisms in the context of the statistical realities of countries at different stages of development. It is generally agreed that statistical systems in developing countries, while varying widely, are under considerable pressure and that the demands made upon them have often been in excess of their capacities. It is not intended that the improvement of social statistics should add unnecessarily to the existing burden but rather that there should be concentration on a few priorities that can be viewed as a minimum significant for the development of social policies.

36. It is important that those responsible for improvements in social statistics should avoid sketching out their design on too large a canvas. Their aim should be to design a minimum, easily attainable programme potentially able to produce quick and significant results, even if the investment period is a comparatively long one. Even the most realistic and minimum programme will take time, although once it is working, accurate and relevant social statistics can be produced relatively quickly and cheaply. If, at the beginning, a maximum schedule is drawn up with exhaustive lists of desirable series, there is great danger that it will not get off the ground. It should be remembered that it is neither the statistician nor the actual user who provides many of the raw data of social statistics but administrative and technical personnel responsible for the delivery of social services, and that they often resent the added burden.

37. Each country will make its own assessment of the comparative importance of individual series in the light of the criteria of need and accessibility (see paras. 32-33) and the degree to which attention should be paid to improving some series and eliminating others in the first phase. Because statistical expertise is in short supply and administrative good will limited, less active series should be collected less frequently or sometimes eliminated altogether so as to make room for

new series while the improvement of existing questionnaires and series should be given priority so that a small effort produces a large return. Accessibility should be given due regard because a programme needs some early successes. In many developing countries, a great deal of work can be done to simplify records and reduce unexploited record keeping, both of which are a legacy from earlier administrative practices. Such streamlining at the outset will help to produce the early results necessary if further support is to be obtained.

38. The success of a programme depends to a large extent on the degree to which it can be grafted onto the existing administrative structure. For sectoral statistics largely derived from administrative uses or authorities, the work of preparing and issuing questionnaires, collecting the data, verifying and collating the information and analysing and publishing the first results will remain with the agencies traditionally responsible for this work. Efforts will be needed to move these agencies along certain agreed and compatible lines and to supplement sectoral work with appropriate centralized activities including particularly household survey operations. In this way, centralized activities will complement rather than overlap any of the agencies' responsibilities. However, in pressing for certain priorities, the organizers of effective programmes will probably find it necessary to argue for a streamlining of cumbersome processes that have traditionally been the reflection of antiquated accounting procedures.

39. Even a minimum viable programme can never be a short-term undertaking. Far-reaching or dramatic changes in policy are not to be expected within a few years. The statistics which must reflect relevant changes are often difficult to obtain and become available only after a considerable time-lag - for instance, data on changes in mortality, the health and nutritional status of the population, the living and working conditions of women etc. An operational programme can hope to deal extensively with only one or two of these areas in its first phase. Its content and phasing should correspond to both the period and content of the national development plan, which will reflect the basic strategy of the country. Ideally, the time-table should coincide with the period of a new national plan or the remaining period of an existing one. This can allow for an easier settling of competing demands, since some of the priorities to which statistics are to be directed will already have been established. The resource concentration and authority associated with a national plan can also be exploited by this identification.

40. A possible "minimum" list of statistical series and classifications might form the heart of a multisectoral national effort at improving social statistics. Each country will have its own priorities and it is not the intention here to provide an international minimum list of social indicators. In annex I to this publication there are tables of illustrative series and classifications which can be used as a check list. Taking health as an example, a country with a well-organized statistical system might seek to obtain series that would allow the calculation of infant mortality rates and age-specific death-rates. It might also be able to obtain reliable data on the percentages of the population having "reasonable" access to a protected water supply, being served by primary health service points and reached by immunization and protection against selected diseases. On the other hand, a country with a rudimentary statistical system might have to concentrate on the one or two series with the most immediate impact, which may call for a different formulation - e.g., the number of persons attending primary health service points in those districts in which basic health services are being extended

and the number of villages or hamlets with a protected water supply. According to need and availability, there should be a minimum disaggregation within these series by sex, age, administrative and geographical areas etc.

41. The implementation of even a minimum list is in itself a considerable undertaking; there should be caution about going beyond agreed lists until initial operations prove successful. A minimum programme should establish the basic series in sufficient detail in terms of locality and types of individuals to measure inequality throughout the country rather than expand the number of series limited coverage, e.g. in the major urban centres only or without a breakdown by age or sex. One of the purposes of a minimum list would be to suggest those elements that might be common to all sectoral and multisectoral activities. The series and classifications to be thus collected should be carefully selected so as to be most indicative of the social situation and most useful from a management viewpoint within the limits of what is practicable to collect. Each country will design a minimum list that will reflect partly its own priority areas of concern and partly its state of statistical development. It is, however, important that the sights be set realistically.

VIII. PRACTICAL METHODS

42. There is a pressing need for easily applicable practical methods, taking into account the limited resources available to social statistics in developing countries. To argue for simple methodologies is not to make a case for crude thinking. On the contrary, only the most careful thinking and open-minded approach can produce efficient, reliable and trustworthy techniques that are both simple and inexpensive. It is not sufficient, in the area of nutrition for example, to propose to limit oneself to carefully monitored surveys of family food consumption. They are very expensive and time-consuming where immediately serious nutritional problems are faced and few resources are available. Even the use of an anthropometric measurement such as height for weight is limited, since it depends on distribution and maintenance of machinery. The nutrition problem applies to children above all and thus the accuracy of the weighing is paramount. The statistician is obliged constantly to look for approximate but simple indicators of malnutrition - one of which is arm circumference - using untrained assistants to record these data from simple tools.

43. Such solutions do not arise solely out of statistical ingenuity but also out of an understanding of the nature of the concern. To take the nutritional problem as an example, the measurement of the circumference of the upper arm does not depend on exact age reporting, often lacking, for its general validity. Between the ages of 1 and 5, the normal child shows little change in the circumference of the upper arm, thus allowing the measure to be applied within a considerable age range. This is particularly important because the first manifestations of serious malnutrition are found in young children. It might also have an advantage over height for weight in that it more adequately measures the effect of recent malnutrition and requires no more measuring equipment than a suitably coloured strip of X-ray film. However, the use of an arm circumference measurement is still controversial, particularly as applied to individual children as opposed to groups.

44. Other methodological solutions for statistical problems specifically pertaining to developing countries are needed, particularly for problems involving management and policy, e.g., defining employment and underemployment, calculating the time spent in obtaining drinking water and fuel, evaluating the relevance of formal academic education when it often leads to early drop-out, producing an operational and reliable definition of literacy, estimating the access to and impact of basic health services etc.

45. Effective use of sampling and estimation is another way in which statistical practice can be improved. Statisticians working in the social sectors of developing countries have not made sufficient use of estimation and sampling techniques, unlike their counterparts in other fields. Although present administrative reporting is deficient it is also, in a sense, too complete. In many instances, timeliness is more important than comprehensiveness and the advantages of early dissemination sometimes outweigh the possible biases introduced by the use of partial returns. In long-established statistical operations, particularly in recurrent administrative statistics where it is possible to make reliable estimates, the local and central social statisticians should be encouraged to make estimates in order to speed up the dissemination process. In new or recently established operations it is not always possible to give reasonable estimates; alternative time-saving mechanisms need to be sought.

46. Sampling provides one such mechanism and offers other advantages as well. Experiences both in developed and developing countries have shown that quite small samples can provide data sufficiently reliable to guide policy. The services dealing with social statistics in developing countries have for too long considered their primary objective to be to enumerate all elements of the universe so as to obtain "accurate" data for accounting purposes rather than to produce some idea of the magnitude, trend and distribution of the series as quickly as possible for social policy and management purposes. One of the aims of statistical improvement should be to help to change this attitude.

47. Sampling does not necessarily involve the application of cumbersome techniques or the creation of complicated universes. The use of easily applied measures such as systematic sampling should be encouraged even if small biases may be introduced with small samples. Precision is not an absolute good and the returns from added precision must be set off against the increased costs and time involved. Moreover, in many instances reductions in sampling errors achieved through enlarged samples are more than offset by increases in non-sampling errors, because the fixed resources available for supervision and control are spread more thinly over the larger sample. Thus the statistician should make his decisions in terms of rates of return with respect to the major anticipated uses of a series and not in terms of abstract principles or absolute standards. There are technical problems to be mastered in sampling, however, particularly the problem of using sampling to measure trends and local conditions. International and national statistical agencies should be encouraged to promote expertise in sampling and survey design and to advise in the use of effective sampling techniques and estimation procedures.

IX. STAFFING AND TRAINING

48. A successful programme for improving statistics requires the assistance of able and enthusiastic staff. Such a programme requires the authority and support of the national statistical office; one way of formalizing this authority and support would be to set up within the national statistical office a social statistics division, if one does not already exist, headed by a senior official. One of its main responsibilities would be to co-ordinate the programme for improving social statistics. Since this programme would be intersectoral by its very nature, the head of the division should have a multisectoral outlook and he should maintain close contact with the statisticians and planners of the major sectors, with the central planners and with the co-ordinating group.

49. In some countries, the social statistics division taking on this primary responsibility will be able to staff the operation without any help, other than technical, from outside sources. In others, there may be a need for financial aid to tide the unit over a sufficient period to cover the procedures involved in getting approval for additional staff. Other countries may feel that the appointed official will need, for a limited period of time, the advice of a national or foreign statistician with experience in the area.

50. Staffing requirements are not limited only to the co-ordinator of the programme and his immediate associates. A basic deficiency in one or more of the key sectors or regions could well threaten the success of the programme as a whole. Here, it would be the responsibility of the co-ordinating group to assess staffing needs and recommend appropriate measures for establishing the necessary staffing arrangements or securing the additional resources needed. The important sectoral and local issues involved should be faced by the co-ordinating group at an early stage, since it would be desirable to co-ordinate the programme of external assistance in the same way as the improvement programme itself. The timing and sequence of assistance programmes are crucial, particularly if they involve the use of advisers, the holding of workshops and the departure of some officials for training programmes abroad.

51. The international assistance programme should be used as a controlled input into the statistics improvement programme. In current practice, on the contrary, assistance tends to be provided in a piece-meal manner according to the decisions of the individual national and international agencies, with little over-all assessment of statistical needs and capabilities. The various national authorities responsible for promoting a programme to improve social statistics should be able to rely upon a consistent policy on the part of the international organizations.

52. The role of the statistician in the social sectors has tended to be less valued than that of other national statisticians (themselves not one of the most prestigious groups of government officials). Perhaps one of the causes is that he usually works alone or almost alone among colleagues who are specialists in the subject area in which he is working. He is, in a sense, considered to be outside his subject area while, at the same time, he is not in frequent contact with his fellow statisticians. Where the statistician working in the social sectors belongs administratively to the national statistical office, as is the case in most developed countries, the problem is less likely to arise, even if he is outposted to a ministry. In most developing countries, however, this is not the case and

consideration needs to be given to dealing with the twin problems of low status and isolation. Where this is practicable, the establishment of a national cadre of statisticians could help to alleviate the problem.

53. Another very important part of a programme is training. If the work of senior officials and advisers is to be of long-term benefit, the training of personnel and the transfer of skills at different levels and within all the national agencies concerned will have to be undertaken. This involves training statisticians and statistical assistants at the local and provincial levels as well as at the national level and holding national and provincial workshops as well as arranging for attendance at appropriate regional training courses and the exchange of experience between countries. The training efforts of the various ministries and local authorities will have to be co-ordinated with a view to implementing a comprehensive training programme for social statistics. The programme will press upon existing statistical resources; it will be necessary, therefore, to carry out in-service training at an unsophisticated level and for professionally untrained officials in order to increase the availability of statistical help.

54. The training programme for social statisticians will cover many specialities of concern to statisticians in other areas - statistical organization, sampling, design of questionnaires and forms, non-sampling errors, estimation, cartography, analysis and presentation of results - all problems of particular importance to developing countries. The manuals used in such training programmes will have to be based on sound statistical principles; however, the solutions offered must also be feasible in terms of the practical problems facing statisticians in developing countries. The focus on the work in this area should go beyond that of the highly trained statistician and should include advice on recording social activities by non-statisticians and step-by-step suggestions for carrying out techniques appropriate to the material available. The interested international statistical agencies may be asked to co-operate in a joint programme for the preparation of suitable manuals.

X. NATIONAL HOUSEHOLD SURVEY CAPABILITY

55. A key element for any improvement of social statistics is the establishment of a continuing national household survey capability. Household surveys are an important complement to the relatively infrequent population and housing census since, in addition to their timeliness, they permit both a wider range of topics to be covered than is possible in the census and more extensive questioning on each topic and they allow for continuous comparison with parallel statistics collected from administrative sources. Administrative statistics impose a considerable and continuous burden on the respondents and there is a definite limit to the extent which they can be expanded and still provide timely and relevant information. Indeed, in most developing countries household sample surveys are the only practicable way of obtaining up-to-date national data on social conditions and trends, access to needed services and the impact of policies to reduce the poverty in which the vast majority lives. Moreover, if suitably designed and implemented, such a household survey activity can be an important instrument for the integration of social statistics.

56. The main features of the desired national capability for survey taking are described in the resolution of the Economic and Social Council (2055 (LXII)) on the National Household Survey Capability Programme, reproduced as annex IV to the

present publication, and in a progress report on the programme to the United Nations Statistical Commission at its twentieth session (E/CN.3/527). In the context of the concerns of the present report it is important to note that the emphasis should be, first, on continuing integrated surveys as opposed to a series of unrelated ad hoc ones and, secondly, on a multisubject survey. Such a strategy emphasizes the development by the national statistical office of the infrastructure for continuing and responsive survey taking: a permanent field organization and services at headquarters, including sampling, cartographic, methodological, administrative, data processing, analytical and publication services. With the ability to conduct properly organized and continuing surveys, statistical services would be in a position to supply integrated data on employment, other productive activity, income, consumption and expenditure, together with the related social and demographic statistics required for the assessment of problems and issues in such areas as rural development, mass poverty, population programmes and maternal and child health. It further has to be borne in mind that the permanent field organization that will be established or upgraded will also contribute to the improvement of agricultural, industrial, employment, price and other statistics. Thus a continuing survey organization provides an opportunity for securing up-to-date information for policy formulation and for programme planning and evaluation within an integrated conceptual and methodological framework. Moreover, it provides a vehicle for experimentation with uniform concepts, definitions, questionnaires etc. within the context of the diverse needs and circumstances of individual countries.

XI. DISSEMINATION

57. Another element in a concerted national effort to improve social statistics is the output of publications which present the social statistics produced by the individual ministries, along with the relevant census and survey data obtained by the general statistical services, in an orderly and attractive series and in a format geared to the interests of the user. Such publications help the producers of statistics by giving greater visibility to their outputs, by emphasizing the interrelatedness of social statistics rather than their fragmented sectoral aspects and by organizing selected indicative statistics into time series. More important, the users of statistics - particularly those with multisectoral and policy concerns - thus have an important new tool for policy planning and monitoring. Publications of this type, which are being issued by a growing number of countries, should be multisectoral in content and in sources, oriented towards policy, and prepared by the national statistical office or statistical co-ordinating agency with the support and co-operation of the sectoral services.

58. One aspect of the generally backward, fragmented and unfocused state of social statistics in developing countries is the lack of emphasis on data dissemination. This is understandable, since many kinds of social statistics are derived by some ministry from its own administrative records. When the producer of statistics is in the same governmental agency as the primary user, the publication of statistics tends to be conceived as serving archival rather than operational purposes. Data may be published, if at all, as part of an annual agency or ministerial report. Such reports are often characterized by a focus on a single sector or even subsector, by organization and content reflecting administrative rather than substantive considerations, by an absence of analysis, by a generally dull and unattractive presentation and by a late appearance - sometimes as much as five or six years after the collection of the statistics.

59. The limited body of statistics actually used for planning and administration is circulated somewhat more promptly by informal means within a project or ministry. Unfortunately, other users must rely on ad hoc requests to specific ministries for unpublished data, on whatever social statistics the national statistical office may publish in its statistical yearbook or similar general compendia and on the disparate publications of the individual ministries. These constraints can only hinder the evolution of integrated social statistics and work to the disadvantage of the users and producers of statistics within each ministry, because such arrangements do little to foster needed improvements. The increased visibility of a multisectoral social statistics publication exposes the central and ministerial statistical services to increased risk of criticism for gaps and shortcomings in published data. However, it is primarily and precisely through such exposure that the statistical services receive criticism and then the resources needed for improvement.

60. As with any multisubject statistical compendium, some balance will have to be struck between the value of using common classifications and formats in presenting the statistics of each sector and the cost of excluding some statistics that are available only with non-standard classifications. In the early years of such a publication, greater emphasis would necessarily be placed on the availability of data regardless of the classifications used. However, with time, as the value of common classifications became clearer to the users and producers of statistics alike, the compilers of a social statistics publication could help to promote these common classifications by casting the publication increasingly within their frame.

61. Needless to say, attempting to improve the image of social statistics through the creation of a publication without taking steps to improve the quality of social statistics would be self-defeating. Better publications will not by themselves overcome many of the obstacles to improved social statistics already discussed but they can contribute to the process of improvement. However, failure to review the adequacy of existing dissemination vehicles and if necessary to improve them can substantially reduce the impact of improvements in other aspects of social statistics.



Part Two

**Framework for the Integration of Social and Demographic Statistics
in Developing Countries**

INTRODUCTION

1. Part two of this publication presents a framework for the integration and analysis of social, demographic and related economic statistics for developing countries, based on selection and adaptation of material from three United Nations publications on the integration of social and demographic statistics and on social indicators. These related publications are the technical report Towards a System of Social and Demographic Statistics (Towards an SSDS), Social Indicators: Preliminary Guidelines and Illustrative Series (Social Indicators ...) and Studies in the Integration of Social and Demographic Statistics: Technical Report (Studies in Integration). 1/

2. This framework is intended to provide guidance to developing countries on approaches to the integration of social statistics which it may be feasible for them to apply in the medium-term future. For this purpose the methodologies, concepts, classifications and examples presented in the three publications mentioned above are reviewed and summarized, with a view to their adaptation and application in developing countries, consonant with the statistical and social circumstances in those countries and their priorities for improving the welfare and living conditions of their populations. The approach presented is one of step-by-step integration and systematization of social statistics and social indicators, fully integrated with the continuous development of the required basic statistics in these and related fields. The emphasis is on a flexible framework and a process rather than on a rigid or inflexible system to be adopted in every detail.

3. This emphasis was strongly endorsed by the Expert Group on Social Statistics and a System of Social and Demographic Statistics for Developing Countries which met at United Nations Headquarters from 17 to 21 November 1975. The Expert Group particularly noted that the framework does not propose new methods or definitions for social statistics but is rather a framework for co-ordinating and harmonizing concepts and classifications in accordance with existing recommendations and guidelines of the United Nations and the specialized agencies and for exploring improvements or adaptations which might be made to these. 2/

4. The Statistical Commission considered a draft of the present report at its nineteenth session. The Commission noted that

"improvement and integration of social and demographic statistics in developing countries were urgently required. Concerted efforts were needed if the necessary methods and concepts were to be developed and disseminated, and the necessary organizations for collecting, processing and disseminating those statistics were to be established and maintained.

1/ United Nations publications, Sales Nos. E.74.XVII.8, E.78.XVII.8 and Series F, No. 24 (in press), respectively. The present paper was drafted by Professor S. Chakravarty (Planning Commission, India) acting as consultant to the United Nations.

2/ Report of the Expert Group (ESA/STAT/AC.3/2).

"It was agreed that the report presented one valuable element in that process, a conceptual framework setting forth the scope and desirable priority areas of an integrated framework, as well as illustrative series, classifications and social indicators which developing countries could use as a point of reference in analysing and building up their statistical programmes in an integrated fashion. At the same time the Commission stressed that that represented only a first step, however significant, and that much more conceptual and empirical work was needed before social and demographic statistics in developing countries could approach the standards of timeliness, frequency and detail of conceptual precision demanded for integrated social and economic policy planning, administration and evaluation. In particular, the Commission noted the problems encountered by many developing countries in compiling and interpreting statistics of employment and unemployment - given the low percentage of their populations engaged in regular paid employment - and problems of timeliness and sufficient detail to meet urgent policy needs. The Commission urged that the results of experiments to develop new concepts in the various fields of social statistics suitable for use in developing countries should be widely disseminated and discussed on an urgent basis." 3/

5. The framework presented here is complementary to part one of the present publication, "Promoting the improvement of social statistics in developing countries" - which in its report form was also considered by the Commission and discussed by the Expert Group. The Commission agreed that the two reports were closely linked and should be combined, with a view to the needs of national statisticians, planners and policy makers. 4/

6. Part two is divided into three chapters. Chapter XII considers the feasibility and usefulness of a framework for the integration and analysis of social statistics in developing countries, the scope and priorities of the framework presented here, and its design, organization and possible applications, including the selection of social indicators. 5/ Chapters XIII and XIV consider concretely each field of statistics of the framework in terms of content, concepts, organization and priorities appropriate for developing countries. For most of these fields, the table in annex I shows illustrative series, classifications and social indicators which developing countries may consider in planning and implementing a framework to meet their planning and other requirements for integrated social and related economic data and indicators in the various socio-economic fields.

7. Annex II presents selected references to illustrative concepts, classifications and definitions that may be used in a framework, based largely on existing international guidelines and correlated with the table in annex I. Annex III provides selected references to the work of the United Nations regional commissions on development and integration of social, demographic and related economic statistics.

3/ Official Records of the Economic and Social Council, Sixty-second Session, Supplement No. 2 (E/5910), paras. 85-86.

4/ Ibid., para. 98.

5/ Social indicators are discussed in more detail in the related United Nations publication, Social Indicators

XII. DEVELOPMENT AND APPLICATIONS OF A FRAMEWORK

A. Objectives and uses

8. In developing guidelines for a framework for the integration and analysis of social statistics and social indicators for developing countries, it is very important to be clear as to the objectives that these statistics are expected to serve. From the viewpoint of many developing countries, the first question that needs to be answered is the importance of social statistics relative to economic statistics. Although for a very large number of developing countries the linkage between economic statistics and the formulation of policies is particularly close, the current state of economic statistics is not yet particularly satisfactory. In this situation, there is a question as to whether it is going to be counterproductive to try to implement a comprehensive framework of social statistics at this stage. The question is a legitimate one, especially if one takes into account the limited resources at the disposal of many developing countries for improvement of their statistical systems. Put differently, the problem appears to be one of deciding what constitutes an optimum distribution of the budget, including financial, physical and human resources, in collecting statistics of different types.

9. The word "optimum" suggests that there is an underlying criterion function, based on an assessment of costs and benefits, which the statistical offices are trying to maximize. While it goes without saying that no statistical office operates with an explicit criterion function, there is little doubt that many of them implicitly use such a concept in assigning priorities. It is, therefore, useful to consider whether the criterion function implicitly assumed needs to be stated explicitly and whether any alterations in it are called for.

10. When economic development came to occupy a very important position in the thinking of many national Governments, the problem was largely seen as one of increasing the level of national income and product per capita; statistical offices in developing countries began working seriously on constructing national income and related totals. This also led at a subsequent stage to the construction of input-output tables not merely as a way of improving the accuracy of national income estimates but also as a part of formulating internally consistent production plans at the industry level under conditions of relative structural rigidity. Data on balance of payments and money supply date back to earlier periods for obvious reasons. With an overwhelming degree of emphasis being placed on the formulation of development plans centring round production data, it was only natural that social statistics came to occupy a relatively subordinate place, although certain countries tried to secure data on levels of living etc. through carefully designed multisubject sample surveys. Demographic statistics were given attention in connexion with formulating decennial censuses. Social and demographic statistics were also used as background material for computing national income estimates and for a variety of governmental uses.

11. The conception of the development problem has, however, undergone some change in the course of the past few years. In developed countries, there is a great deal of dissatisfaction with conventionally measured gross national product (GNP) as an index of economic welfare. Various proposals have been made of measures of

economic welfare that would describe changes in the quality of life more accurately than GNP. ^{1/} While much of the criticism of GNP in this regard is misplaced since it was not meant as a welfare indicator (although under certain restricted conditions it may be used as a measure of socio-economic performance, there is little doubt that in affluent societies problems of external diseconomies reflected in pollution, congestion etc., as well as the much greater role of government in providing non-market services and unrequited transfer payments, do call for supplementary measures that can be linked with the national accounts data to yield a more balanced picture of the performance of the socio-economic system. It is, therefore, quite understandable that social statistics should acquire a much greater degree of importance for developed countries at this historic juncture.

12. For developing countries, the case for increased emphasis on social statistics cannot be sustained by the argument that the costs of growth are proving too much, since production and income in most of these countries are not growing at rates which are regarded as desirable. A rapid increase in gross domestic product (GDP) per capita is an urgent necessity for all of them. Why, then, should we emphasize a shift in matters relating to statistics? There are two principal reasons why this shift is very desirable. First, there is a growing recognition that economic growth cannot be achieved merely by an increase in material capital investment. The importance of human capital is now widely recognized as a major contributory factor to the growth process. Data on human capital require adequate information on matters related to education, health and housing. Secondly, there is a much greater degree of awareness of problems connected with inequality in income or in the distribution of the benefits of public expenditure. For example, it has been found that because of the failure to distinguish between inputs and outputs in areas such as health and education, and also because of the existence of dominant pressure groups in societies, an increase in the amount of public expenditure in such areas often leads to the opposite of expected results when measured by egalitarian norms.

13. In addition, the problem of population growth is once again at the centre of attention. While attitudes vary a great deal among the developing countries in matters relating to family planning, there is no doubt that whether countries want to accelerate population growth rates or want to decelerate them, important structural adjustments are called for in planning for such changes. Countries undergoing sharp declines in birth-rates will be faced with the socio-economic

^{1/} These criticisms are not altogether new. Many of them were made quite clearly by Simon Kuznets in his early writings on national income. What has happened of late is that there has been a much greater degree of awareness on the part of users of national income statistics that it is necessary to consider structure and distribution as well as totals. There is also much criticism about the way the production boundary is conventionally drawn and also of the failure to distinguish "goods" from "bads" in output. Promising attempts to reformulate the aggregate measures to take these criticisms into account have been made by J. Tobin and W. D. Nordhaus, "Is growth obsolete?" reprinted in Measuring Economic and Social Performances, M. Moss, ed. (New York, National Bureau of Economic Research, 1973). An extended review of work in this area may be found in The Feasibility of Welfare-Oriented Measures to Supplement the National Accounts and Balances: A Technical Report (United Nations publication, Sales No. E.77.XII.12).

consequences of an aging population whereas those that are experiencing rapid increases in growth rates consequent on reductions in mortality are faced with a rising dependency ratio, a phenomenon which inhibits savings and economic growth. As in the case of health and education, failure to ensure diffusion of family planning benefits can lead at least in the medium run to increased inequalities in the distribution of incomes.

14. For accelerating growth in national income and also for ensuring a wider diffusion of the benefits of the growth process it has, therefore, become quite important to attach greater importance to social statistics. However, as this analysis makes clear, to implement a comprehensive statistical framework covering social phenomena for developing countries, the focus of attention will have to differ from that in developed countries, both because of differences in their requirements and because of differences in structural characteristics. In section B below, the design and organization of a framework, including priorities appropriate for developing countries, will be discussed. In section C the special role of social indicators in a framework for developing countries will be analysed. In addition, there are obvious questions concerning implementation which will be taken up in section D.

B. Design and organization

15. Once the need for collecting social statistics in developing countries is recognized, it becomes important to think of a possible integrating framework within which such statistics can be collected. It is necessary to think in this context of alternative ways of approaching the problem. The approach presented in the publications of the United Nations on the framework for the integration of social and demographic statistics 2/ provides a very convenient starting point for discussing the issue.

16. The approach outlined in Towards an SSDS has been criticized as too ambitious for developing countries and perhaps too inflexible and systems-oriented as well. The latter argument has been put forward by those who consider that the most useful approach to improving social statistics would lie in attention to the basic data through such measures as conducting carefully designed sample surveys and a more effective use of censuses and administrative records, rather than what they call premature systematization. The former argument has been made by those who think that the urgent requirement is for specific data covering particular concerns.

17. What is at issue here is whether the search for an integrating framework should be replaced by a conscious decision to rely on data focusing on an ad hoc basis on issues that are prominent at any given time. The principal argument here is that since there is no comprehensive, agreed theory of social action with measurable parameters to serve as a theoretical framework, it is not possible to devise a systematic approach to social statistics. The analogy with economic accounts is considered not to hold since economics deals with a class of phenomena which can be relatively easily isolated from other social activities (though this is less true in many developing regions where subsistence agriculture predominates). Furthermore, the system of national accounts basically rests on the

2/ See introduction to part two, para. 1 and foot-note 1.

concept of the circular flow of incomes, a subject on which the understanding gained by economists has a long history. No analogous theory has been developed which encompasses a similarly wide range of social phenomena. This argument concludes, therefore, that it would be most prudent to concentrate on getting such information as we specifically need through sample surveys or from other sources without reference to any over-all framework.

18. There is no doubt that at the moment there is no comprehensive theory of society which is widely agreed to, let alone statistically implementable; but the real question is whether we need such a theory for developing a comprehensive, interlinked framework for social statistics and whether, if developed, such a theory would not be complementary to rather than incompatible with an emphasis on collecting basic social statistics.

19. As a starting point, it can be agreed that social statistics are expected to deal very largely with human beings, either as individuals or in various groups. The framework in Towards an SSDS was constructed by according primary emphasis to demographic models as the key framework around which individual fields and subfields are developed. This emphasis would appear to be appropriate for two principal reasons. First of all, it is clear that if social statistics are primarily about human beings, the basic emphasis has naturally to be given to recording human stocks and flows over time. Secondly, by presenting systematic demographic data it is possible to take advantage of well-developed techniques and substantial experience in demography to begin to systematize other social statistics.

20. To do this it is necessary to define the states or characteristics to be analysed, in the context of the basic social problems of the developing countries. In addition to the population field, there are at least five major areas of concern on which there would appear to be a great measure of consensus among the developing countries. These are education, employment, health and nutrition, distribution of income, consumption and accumulation and, to a less but an increasing extent, housing and its environment.

21. Since most countries are faced with adjustment problems in the wake of considerable migration from rural to urban areas as well as rapid population increases from high birth-rates in urban areas, the issues relating to urbanization also figure prominently in many discussions. In the data series it is, therefore, necessary to adopt an urban/rural classification to understand the nature and scope of the urbanization that is taking place as well as to facilitate discussions on investment planning in relation to the stated aims of social policy. The urban growth that is currently taking place in many low-income developing countries also raises important questions relating to the type of development strategy that is currently being pursued. Hence, a framework for social statistics for developing countries will need to pay adequate attention to the question of urbanization. Data relating to distribution of city sizes will also be required in the case of the larger developing countries. Many statistics and indicators directly concerned with urbanization are discussed in chapter XIII, below.

22. Besides the six basic fields listed above, the United Nations framework for integration deals with social stratification and mobility, families and households, social security and welfare series, and public order and safety. There is no doubt that these areas are of considerable importance for the developed countries; however, they are likely to be less so for developing countries. Hence these areas are discussed much more briefly in chapter XIII, below.

23. The questions of time use and leisure and culture, the remaining fields dealt with in the framework, are interesting ones. Basically, time can be looked at in terms of quantity or in terms of price. In developing countries the question of disposition of time is fundamentally different from that in developed countries. It is most natural to look upon time in the developing countries as a quantity. It is useful to note that for this reason time-use budgets are usually dealt with in connexion with data on underemployment, especially so-called "visible underemployment". Existence of much visible underemployment deprives the question of leisure time of any independent policy significance except in regard to matters pertaining to cultural policy.

24. On the other hand, it has been observed in recent years in developed countries that time may more appropriately be regarded in terms of price. Here, man-hours worked can be regarded as a value rather than as a quantity. The treatment of leisure time in post-industrial societies, therefore, assumes a very different complexion and it is necessary to deal with the problem in a relatively extensive way. In developing countries with an extensive agricultural sector and a tertiary sector based to a considerable extent on the decomposition of the older mode of social organization, it is not necessary to deal with time as an independent field of social statistics, even though the time dimension should be indicated in certain areas where it is important, such as employment or access to important services or facilities. Hence, the time dimension is taken up as one aspect of statistics and of concern in several of the fields dealt with in chapter XIII, below, but it is not discussed as an independent field.

25. This outline of a framework for social statistics for developing countries generally coincides with the policy-makers' identification of problem areas to which they attach a great deal of importance. Moreover, these are areas in which structural changes are often projected but in which, because of the absence of requisite data and analysis, actual performance often turns out to be substantially different from what was originally contemplated. Consider the case of education, for example. In this area, the demand side of education is often considered in isolation from the supply side. This may lead to unbalanced expansion of education with higher levels recording a much faster rate of expansion than elementary levels. It is possible to argue that these results reflect political choices that would have remained unaltered even if more data were available. However, the case does not appear to be proven.

26. In addition it should be observed that these are also areas which have very close links with the systems of national accounts and balances either on the output side or on the input side. Implementation of linkages between these fields will, therefore, lead to considerable improvements in data which have so far been a relatively neglected part of economic accounting. Moreover, substantial amounts of financial and material resources are often needed in implementing programmes relating to the main areas outlined above. The need for determining cost-effective solutions is correspondingly quite great. Further, these are areas in which some statistics are currently being collected as by-products of various administrative activities. Hence with some additional effort, suitably organized, significant improvements can be made.

27. Finally, we should note that one of the basic objectives of a statistical programme is to permit adequate formulation of testable hypotheses for research and analysis which may ultimately lead to substantial improvements in potential policy effectiveness. If for example, demographic data are considered alongside data on

education, health, urbanization and distribution of income, it may be possible to infer what factors are operative in determining the crucial variable in the population growth process, such as the fertility rate or the type of educational policy that would be most effective in improving the distribution of income.

C. Social indicators

28. How important are social indicators as a part of a framework for social statistics for developing countries? Should the initial emphasis be put on a large number of social indicators covering all the major fields of social concern at any given point of time or should we be selective with regard to fields and with regard to the number of indicators that will need to be developed?

29. The question is of some importance since in recent years we have witnessed a great deal of interest in the subject by both research workers and policy planners. Impetus to the work has come from several disparate sources. One of them relates to the dissatisfaction felt by many over the pattern of growth experienced in both developed and developing countries which, in the absence of comprehensive social statistics, made people look for indices pertaining to aspects of social life that had received little attention until that time. This is related to the question of measuring and evaluating the performance of a social system and has already been touched upon in connexion with the treatment of gross national product as an indicator of welfare. Another source of inspiration has come from a feeling expressed by some social scientists that over time it may be possible to formulate in quantitative terms analytical models pertaining to the functioning of a particular society which could help in prediction and policy making. In other words, their idea is to develop a quantitative macrosociology analogous to macroeconomics. Social indicators are considered from this point of view as analogues of macroeconomic aggregates. The idea is an exceedingly ambitious one; as of today, the conceptual problems involved would appear to be rather formidable. Finally, there has been a general feeling that while many social statistics were collected as routine by-products of carrying out the work of government, not enough was being done to focus attention on what was relatively essential. Hence the need arose to collect data which would measure relatively accurately changes taking place in certain fields of social concern.

30. The position that has been adopted in this report is a pragmatic one that does not compel one to subscribe to any one particular view at this stage of our knowledge. This also corresponds to the position taken in the United Nations preliminary guidelines on social indicators and in Towards an SSDS, in which the approach is summarized as follows: "Social indicators relate to some area of social concern and they may serve the purposes of curiosity, understanding or action. They may take the form of simple data series or they may be synthetic series obtained by applying a greater or lesser amount of processing to data series. At any particular time, it may not be possible to construct all the indicators that would be desirable and this limitation should be kept in mind. Social indicators form a subset of the data series and constructs actually or

potentially available and are thus distinguished from other statistics only by their suitability and relevance for one of the purposes mentioned." 3/

31. This would appear to be a very judicious statement in many respects, particularly because it places social indicators fairly clearly within a framework for the integration and analysis of social statistics. In other words, it dispels any possible misunderstanding that may exist in regard to establishing a "system" of social indicators as a parallel to a framework for social statistics.

32. However, the above concept of social indicators is rather wide and if not used with caution may lead to a great deal of proliferation of social indicators. Thus selectivity would appear to be very important. In this respect, the fields of social concern for which indicators are sought should preferably correspond to the fields which have been highlighted in connexion with the articulation of the main framework itself. As a secondary purpose for social indicators, some emphasis may be given to developing a relatively few internationally comparable social indicators to throw light on the possible patterns of socio-economic development that may be pursued. Finally, for countries having sufficient diversity, social indicators may also be developed on a regional or local basis so as to facilitate evaluation and diagnosis of regional or local problems and the formulation of remedial policies. 4/

33. Social indicators may be constructed using, for example, any one or a combination of the following methods drawn from social statistics: (a) proportions, percentages, ratios, rates; (b) means, medians; (c) measures of dispersion, including range, fractiles, mean and standard deviations, skewness, kurtosis and the Gini coefficient; (d) factor analysis; (e) index numbers; (f) linear programming; (g) life expectancies; and (h) surveys of public opinions and attitudes. It would appear that while in most fields simple indicators may be the only ones for which the state of the data would permit calculations within a reasonable range of accuracy, even here there may be cases where considerable ingenuity may need to be employed. For example, the existing data may be far too limited to permit of any meaningful construct using conventional procedures or the

3/ Social Indicators ... and Towards an SSDS, para. 5.8. The United Nations Educational, Scientific and Cultural Organization (UNESCO) has actively studied the uses of social indicators in development planning. See The Use of Socio-Economic Indicators in Development Planning (Paris, United Nations Educational, Scientific and Cultural Organization, 1976) and "Report of joint CEPAL/CDCC/UNESCO workshop on the application of socio-economic indicators to development planning in the Caribbean", held at Port of Spain, Trinidad and Tobago, 12-14 June 1978 (E/CEPAL/CDCC/45). UNESCO has convened other meetings on this subject, including a workshop at Bangkok, 23 January 1976 and an expert meeting at Montevideo, 13-16 December 1976.

4/ The United Nations Research Institute for Social Development has conducted an extensive study of the development and application of social statistics and indicators at the local level. See Measurement and Analysis of Progress at the Local Level, vol. I, An Overview and vol. II, Country Case Studies in Ghana, India and Poland. Reports Nos. 78.1 and 78.2 (Geneva, United Nations Research Institute for Social Development, 1978). Additional country case studies are in preparation.

reality may be too complex to be captured within the set of classifications and concepts normally used. The use of special techniques to adjust defective fertility and demographic data of developing countries is an example of how these problems may be dealt with. 5/ Life expectancies are not at the moment widely used for constructing social indicators. However, it is useful to bear in mind that the method can be fruitfully used to study "any imaginable changes of state" and not merely the conventional one connected with the biological length of life. 6/ The two obvious examples given in this regard are education and health. This generalization would appear to be very valuable and may be employed in constructing some very useful social indicators. Obviously, the data requirements are demanding but, equally clearly, the payoffs are also much larger.

34. Some additional very useful social indicators would be measures of dispersion or of type (c) (see para. 33), whether in reference to income or to any other variable defined in terms of homogeneous units. These measures are illustrated in a few cases in Social Indicators ... and many of the other data series illustrated there are set up so as to enable their ready calculation. Such measures are likely to prove very useful, especially when there is currently so much interest in developing countries in matters relating to social justice, equity and equality.

35. One indicator commonly used for these purposes is the Gini coefficient, which is obtained from underlying data which may relate to income, wealth or land-holdings, for example. However, as has been pointed out in recent discussions on the measurement of inequality of incomes, this measure has certain technical characteristics which limit its interpretation and analysis. 7/

36. However, there is no reason why one may not use the Gini coefficient as one of the measures. It may also be supplemented with measures such as those based on shares going to different fractile groups such as the lowest sixth or third of the population.

37. This will at least serve the purpose of focusing attention on evolving policy measures directed at specified target groups. In no case should we allow the

5/ It may be noted, however, that factor analysis and other similar techniques involving scaling and weighting of series do not impose any unusual data requirements peculiar to them, and hence can be performed by using various existing series or indicators as inputs. See, for example, D. V. McGranahan and others, Contents and Measurement of Socio-economic Development, Research Report No. 70.10 (Geneva, United Nations Research Institute for Social Development, 1970) and J. Drewnowski, On Measuring and Planning the Quality of Life, (The Hague, Mouton, 1974).

6/ Towards an SSDS, para. 5.42. See also Dudley Seers, "Life expectancy as an integrating concept in social and demographic analysis and planning", Review of Income and Wealth, 23/3 (December 1977), pp. 195-203.

7/ See A. B. Atkinson, "On the measurement of inequality", Journal of Economic Theory, vol. 2 (1970), which follows up and extends the work carried out by H. Dalton in the 1920s. See also subsequent contribution by Das Gupta, Sen, Starett and Stiglitz in the same Journal. A fairly exhaustive discussion of the question of measurement of inequality by D. G. Champernowne has appeared in Economic Journal, December 1974.

difficulties stated above to stand in the way of providing information relating to distribution. The difficulties pointed out should be used as cautions that may be borne in mind by the users of statistics. Inequality measurement is taken up again below in chapter XIII, section D.

D. Implementation and applications

38. It has been indicated above that a framework for the integration of social statistics and social indicators may serve a very useful purpose for developing countries both through promoting efforts towards systematization of data which at present are widely scattered and through influencing information feed-back to and between different agencies of government dealing with different aspects of economic and social planning.

39. This last aspect deserves very considerable emphasis in the formulation of development plans for many developing countries. To date, most of these plans have been focused on the rate and composition of growth defined in the conventional economic sense of the term. This has doubtless provoked a considerable amount of criticism in recent years but an attempt to replace GDP by some other scalar index of welfare is likely to prove an unilluminating exercise with very little operational content. What one requires is a disaggregated picture in terms of different social groups and a multidimensional concept of welfare for each group with a corresponding specification of instruments of economic policy. The planner's job would consist in assigning appropriate instruments to each objective or dimension after allowing for the differential impact of a particular objective on the welfare levels of different groups. 8/

40. At this stage the data base for carrying out such an exercise is inadequate for most countries, though there are wide variations among developing countries in the quality, detail and scope of the available data as well as in collection resources and experience. The framework suggested here can play an important part in organizing the provision of a large part of the missing information; moreover, it is a flexible framework which can be elaborated from a relatively simple basis in countries with more limited statistical resources to a relatively substantial scale in other countries and as country resources are strengthened.

41. In many developing countries, the fields of statistics which are likely to prove most relevant are population, employment, income, consumption and accumulation, health and nutrition, education and, to a less extent, housing. In each case, the information that is needed has two parts, first, a distributional part dealing with who enjoys how much in terms of a specified characteristic and secondly, an input part, dealing with the use and allocation of scarce physical and human resources. There is in addition a financing part, dealing fundamentally with availabilities for different target groups. The framework discussed here can provide valuable information on the first part relating to the distributional aspects and on the second part dealing with input requirements. As regards the

8/ UNESCO is sponsoring a series of papers and workshops for the developing regions on the application of socio-economic indicators in development planning. See foot-note 3.

financing part, clearly social data must be employed in conjunction with economic data from the national accounts and balances and elsewhere. It is only through combined use of the data from the social and economic spheres that one can implement more satisfactory models of planning.

42. While planning uses of the framework presented here are likely to interest policy-makers, it is also important to mention that the analytical possibilities are very considerable. Behaviour of even crucial economic variables often depends in important ways on data which are conventionally placed outside the scope of economic statistics. Perhaps the most striking examples are provided by the rate of population growth and the distribution of income, which can rarely be satisfactorily explained by using conventional economic indices alone. An integrated approach to social statistics may provide insights into many important linkages which can substantially enrich our understanding and lead to better predictions and remedial actions. The use of various simulation models may prove quite rewarding in this regard, both as tests of the data collected and for suggesting additional linkages that may need to be explored.

43. In terms of collecting data, the first priority should be to build up bench-mark data for each major field of concern in as comprehensive a manner as possible, using standard concepts, classifications and definitions to the greatest extent possible. For describing the changes over time, it may be necessary to resort to periodic surveys on a probability sampling basis when normal administrative agencies do not generate the necessary data routinely. In cases where data are available through the administrative agencies, they will need to be standardized so that changes in levels over time can be measured with some precision and so that they can be compared with related data in other fields.

44. As regards the question of collecting stock data as against flow data, clearly stock data are often much easier to collect. For a few basic variables such as those related to population, a relatively complete set of data is desirable, which will require computation of gross flows to link it with many of the other fields of social statistics. In most areas, however, the relevant question is whether changes in policy are being envisaged which require information on gross flows. If the basic emphasis is on policy formulation, then the question of stocks versus flows will often resolve itself in a more natural way. Similarly, the question of defining relevant states can be meaningfully answered only in relation to a well specified model of social planning of which economic planning in the conventional sense will form only a part, even though the most important part at the present stage of development for most developing countries. Finally, social indicators are obviously important as a component part of the framework presented here. These help the general public, planners and decision-makers in identifying problem areas and, as summaries of some of the basic data of the system, can help to clarify its data requirements, structure and results.

XIII. PRINCIPAL FIELDS WITHIN A FRAMEWORK

45. An account has been given of a conceptual framework to underlie a programme for integrating social statistics for developing countries. It has also been noted that while the logical foundations set forth in the United Nations framework for the integration of social, demographic and related economic statistics remain valid, the approach needs to be adapted and simplified to suit the requirements of

developing countries. The need for adaptation arises for reasons of policy; but it is no less urgently needed for dealing with certain conceptual problems in a manner more appropriate to the structural features of a developing country. In the sections below, we shall deal with each of the major fields of the framework for social statistics, emphasizing structure, concepts and priorities relevant for developing countries. These major fields are population, education, employment, distribution of income, consumption and accumulation, health and nutrition, and housing. In chapter XIV we shall deal with the remaining fields. These secondary fields are sketched out only in summary fashion in the context of the developing countries, since they are not considered priority areas for statistical development in most of these countries in the medium-term future.

46. Each of the fields of statistics is discussed individually in the sections below. For each field, there is a correlated panel in the annex I table showing illustrative series, classifications and social indicators for developing countries to consider in planning and developing the integration of their social statistics. The illustrative classifications in particular are essential as integrative devices to be applied as uniformly as possible throughout the framework. Selected references to existing international guidelines on concepts, classifications and definitions are shown in annex II. Additional detail is provided in the United Nations publication Studies in Integration While there is nothing rigid about these tables, they have been drawn up after careful consideration of current international guidelines and common country practices. They show the statistical requirements of a relatively comprehensive framework, and classifications and social indicators which would be useful for policy planning, analysis and decision-making in the fields of welfare and social development covered. It is of course recognized that no country is in a position to "implement" these tables in full in the foreseeable future, nor would it necessarily be desirable for any country to do so. What is intended is that there be sufficient material presented in the tables, organized within the framework suggested here, for each country to be able to make a selection which best balances its own national priorities and circumstances. The annex tables provide a relatively comprehensive basis for considering priorities and once such selections have been made they should be useful in planning, compiling and using the data in an integrated and efficient way.

A. Population

47. In the framework for the integration of social, demographic and related economic statistics, demographic data enter in two ways. First, principles or demographic accounting are used in Towards an SSDS to establish a basic organizing structure for the parts of the framework that deal with human stocks and flows. These principles are set out in chapter III, section A ("Social demography") and chapter VII ("Models of human stocks and flows") of that publication. They revolve around the stock-flow matrix, from which models of the population can be constructed wherever outflow coefficients (transition proportions) and inflow coefficients (admission proportions) can be obtained and can reasonably be expected to remain constant. It is evident that application of this approach will be quite limited for some time to come in developing countries, owing to limited data and to the rapidity of social change, which makes the assumption of constant probabilities inappropriate.

48. Secondly, the demographic characteristics of populations are important in any general framework of social statistics because some of these characteristics are themselves frequently the subjects of social concern, public interest and even of social policy. The exact subjects of concern and certainly the extent, if any, of public intervention contemplated in regard to them, vary considerably among developing countries but several basic topics are common to most of them. These are size and age structure of the population, its distribution and density among geographical and urban and rural areas and changes in these, and the natural and net rates of population increase and their components in terms of rates of birth, death and migration.

49. In panel I of annex I, series, classifications and social indicators to illustrate the statistical content of this field are shown. The two foci of concern in this field are (1) size, structure and changes in population and (2) geographical distribution of population and changes in the distribution. For each of the series, classifications and social indicators are illustrated respectively covering stocks and flows. The illustrative social indicators select from or summarize the series for such purposes as welfare and/or policy-oriented (including planning) analyses of the main topics.

50. Among the illustrative classifications are sex and age, size and type of household (in the case of population size), geographical area, urban or rural area, size and type of place, national or ethnic origin and socio-economic group. Other important classifications, such as size and type of family nuclei and cause of death are covered in other fields.

51. In this illustrative list developing countries, depending on their cultural development and statistical resources, are likely to face difficulties in applying some of the classifications to some of the series, particularly in detail or more frequently than on a bench-mark basis. For example, classification according to national or ethnic origin and to some extent urban/rural and size and type of place may be difficult to apply, on account of the lack of basic data and substantial differences among countries in the use and application of these classifications. However, most countries will find it useful to develop many or all of these classifications in the long run, even though it may take a little time for certain developing countries to develop and apply on a regular basis the basic concepts and definitions of these classifications according to their own particular circumstances.

B. Learning and educational services

52. Learning activities and educational services constitute an extremely important field of statistics for all developing countries. No matter whether one adopts a social demand approach or a human resources approach towards planning of education - without considering sophisticated programming approaches for the time being - it is necessary to generate a certain minimal amount of data. At one end, these data are intimately related to the demographic field of statistics defined in terms of human beings belonging to different age groups and, at the other end, they form an essential part of the input-output data pertaining to the flow of goods and services among the different productive sectors when augmented by information relating to their occupational requirements. One of the advantages of the present approach is that it permits an internally consistent framework for data presentation which links demographic statistics with statistics connected with

education and human resources planning. Furthermore, by making a systematic distinction between the inputs and outputs of the education system, it provides information in a form that will help in devising cost-effective strategies for educational planning.

53. Finally, by introducing a further link between outputs of the educational system, defined as groups of individuals possessing certain qualifications, and the occupational needs of different industries, the present approach can serve to provide possible measures of discrepancies that may arise between demand for skilled manpower and supply of skilled manpower. These discrepancies can be forecast, which will permit corrective action to be taken ahead of time. In view of the fact that unemployment and underemployment among educated persons in some countries represents a significant waste of investment resources and generates social and political tensions as well, the importance of improving the data base that is required for this purpose is clear.

54. In panel II of annex I, illustrative series, classifications and social indicators for use in the field of learning and educational services in developing countries are shown. These deal with educational attainments and achievements (A), use and distribution (B), and inputs, outputs and performance of educational services (C).

55. Educational attainments is dealt with as a stock concept - that is, the stock of education in the population as measured, for example, by median years of schooling completed by a specified age group. Series on educational enrolments are also suggested, from which expectation of completed attainment can be calculated. Inputs of educational services are dealt with in terms of the stock of teachers engaged and certain expenditure flows based on the system of national accounts. These basic data on inputs are suggested in a simplified form to permit their application in the medium term in developing countries. Finally, outputs and performance may be dealt with in terms of numbers and percentages of enrolees completing given years and levels and qualifications awarded (not shown). These data permit a basic model of educational flows to be built up. Each of these areas is dealt with separately below.

Educational attainments and educational achievements of the population (A)

56. In the case of educational attainments of the population, the illustrative series in panel II cover the following basic topics:

- (1) Years of schooling completed;
- (2) Literates;
- (3) Levels of schooling completed;
- (4) Knowledge of a second language.

The illustrative classifications shown are sex, age; urban, rural; geographical area; national or ethnic origin; socio-economic group; level of education; and, in the case of level completed, kind of economic activity and occupation where applicable. From these series social indicators may be selected concerning:

- (1) Median years of schooling completed;
- (2) Literacy rates;
- (3) Proportions having completed various levels of schooling and obtaining various qualifications;
- (4) Percentage distributions of population according to mother tongue and knowledge of a second language.

Series relating to mother tongue and knowledge of a second language are included, since these are a particularly important concern of educational planning and cultural policy in many developing countries. They would not necessarily be relevant to all developing countries and should, therefore, be considered on a case-by-case basis in each country. Classification by kind of economic activity may be used to build up data pertaining to the educational composition of the labour force in each area of the economy. This can serve as a surrogate, even though a rather crude one, for a more extended treatment involving education, occupation and field of employment.

57. Many of the possible series and indicators on educational attainment may pose problems for developing countries because of rather thin statistical bases, particularly where time series data are desired. At present, these proportions are often available only for intervals corresponding to the frequency of census operations; sometimes even these do not contain information in regard to items such as educational composition of the industrial labour force. In most of the developing countries, the information with regard to years and levels of schooling completed is of rather an uncertain character; these data may be strengthened gradually using a combination of sample survey data and administrative data on completions and qualifications awarded in the educational system to supplement and extend census data, particularly focusing in the first stages on the age group 5-24.

Use and distribution of educational services (B)

58. The illustrative series, classifications and social indicators on use and distribution of educational services are divided into four parts in section B of panel II: (1) enrolment proportions, which are dealt with as stocks and from which (2) measures of expectation of completed attainment can be calculated; and (3) supplementary series on time spent in education activities and (4) distance of population from educational institutions. The first part, together with the series on completions in section C, provides a basic model of stocks and flows in the educational system; a number of measures of activity and performance can be calculated from these series.

59. Measurement of educational wastage is an issue which demands immediate statistical attention. Enrolment figures are the magnitudes which are generally given in setting educational targets. Yet while it is well known that in many developing countries rates of dropping out from the educational system are very high, effective retention ratios are often lacking. As a result, it becomes difficult to evaluate the effectiveness of educational expenditure. Furthermore, it is rarely known with an adequate degree of precision what the total period taken to complete a particular stage of education is - that is, the extent of repetition.

60. In many developing countries, educational targets for the primary level of education are often given in a form which exceeds 100 per cent of the population in the relevant age group. Strictly speaking, these figures are invalid. But from the practical point of view, they only represent an attempt to fit the data into on the one hand, an officially defined age group for repetition, and on the other, the enrolment of children above or below the official age. In the absence of more detailed statistics, it is not possible to know how much over-reporting is due to repetition, how much to inaccurate reporting of age and how much to other report biases.

61. To measure dropping out as well as repetition, one should devise appropriate cohort studies, derived for example from a data system based on individual records or suitable probabilistic models. Estimates obtained from these studies can be combined with demographic data to give an idea of the retention ratio at appropriately selected points. It will also enable us to devise a measure of the period that is needed on the average to complete a particular level of education. ^{1/}

Inputs, outputs and performance of educational services (C)

62. Information on costs per student-year is another important area of statistics that needs to be developed. While it should be the ultimate objective to compute a table of economic accounts in education, at this stage it will be necessary to make do with fairly crude statistics such as the following magnitudes:

(1) Full-time equivalent teachers engaged at the various levels of education, for calculating pupil/teacher ratios;

(2) Final consumption expenditures at each level, for calculating expenditures per student;

(3) Expenditures on gross fixed capital formation in education in buildings and the like.

63. If these input data can be compiled as is illustrated in section C of panel II, it should be possible to work out, together with measures of wastage, a coefficient of effective utilization of educational expenditure. However, for a more satisfactory analysis of the productivity of the educational system, it is necessary to have output statistics pertaining to the education system. A basic measure of output would be the number of students graduating at different stages of the educational system. However, allowance will need to be made for those who do not graduate even though they may have spent several years in school. A weighted index may be constructed by allowing for the length of time spent at school. This may be done using the series and indicators shown under series 4 and 5 to supplement the enrolment series (B.1).

^{1/} A methodology and examples are provided in A Statistical Study of Wastage at School (Paris, United Nations Educational, Scientific and Cultural Organization, 1972), a study prepared for the International Bureau of Education by the UNESCO Office of Statistics. The reports of the Education Projections Unit of the UNESCO Office of Statistics analyse these problems and provide a continuing review of new applications of this approach. Chapter XXIX of Towards an SSDS also gives a number of examples from developed countries.

64. Attempts have been made to measure output indices for different levels of education by weighting them according to differential lifetime earnings. While such measures are obviously very useful in determining how much to invest in different levels of education and while they even address the more basic question of how much to invest in education as a whole as distinct from investment in material equipment, they would require much more information than it may be possible to collect in many developing countries at this stage. It will, however, be useful to make some efforts to collect information on a sample basis on this particular index of output of the educational system in order to assess its productivity, since the data may suggest unbalanced expansion rates for different stages of education as well as varying internal rates of return at the margin.

65. It should be noted that in working out the size of an educational budget it is necessary to distinguish between transfers and other types of expenditure. Hence a distinction should be made between consumption expenditures on education and unrequited current transfers. Capital expenditure on eating and lodging facilities should also be shown separately and not be merged as a part of educational services.

66. Proper costing of educational expenditure can be used to assess the extent of educational subsidies which are currently given to different classes of beneficiaries, particularly at the higher levels of education, and in certain fields such as medical or legal training. For this purpose it is, of course, necessary to adjust for the distribution of transfer payments to households.

67. Statistical analysis along these lines should be a first step in any policy planning aimed at equalization of educational opportunities, which is an important objective of human resource planning in many developing countries.

Classifications and implementation

68. The principal classification in this field is of level, field and programme in education. This classification and the related definitions have been elaborated in substantial detail by UNESCO as the International Standard Classification of Education (ISCED). ^{2/} Where education and skills are concerned, this classification is used throughout the illustrative series, classifications and social indicators in annex I.

69. The other classifications variously shown in this field are the usual ones of sex, age; urban, rural; geographical area; socio-economic group; national or ethnic origin; and institutional sector. This last would be used to distinguish public from private educational institutions.

70. Among these illustrative series and classifications, many may not be initially very feasible for most of the developing countries; but one must stress that these are very relevant for meaningful educational planning. For example, in the case of proportions of enrollees who successfully complete each year, the statistical data base is rather thin in many of the developing countries and efforts need to be made in that direction. On the other hand, good progress is already being made in this area by many countries in Africa, Latin America and Asia. In the case of the

^{2/} See annex II, sect. A.

classification of teachers by level of education successfully completed, these data are likewise not often collected on a sound footing; this often vitiates efforts to improve the performance of the educational system. This is another area which calls for improvement.

71. Summing up, we can say that while the potential scope of the learning field is quite vast with many implications for better educational planning, for developing countries emphasis needs to be placed at this stage both on measurements relating to wastage and expenditures in order to get an adequate picture of the educational situation and also on suggested improvements in educational planning. There is likely to be a trade-off between accuracy and comprehensiveness. For getting an accurate picture, properly designed sample surveys are called for, along with the data generated by the educational administration and by censuses. Sample studies are essential to a reasonably good description of the educational system, including its deficiencies. In countries in which the machinery for collecting administrative statistics in education is weak, it may be possible to resort to sample village or sample institutional surveys or to other short-cut methods of arriving at reasonably timely estimates.

C. Earning activities and the inactive

Conceptual and statistical problems

72. The part of the framework for social statistics dealing with questions of employment and unemployment is likely to prove the most difficult in implementation. At the same time, there is little doubt that this field is in many ways the most crucial one for a very large number of developing countries. This importance stems from a variety of reasons, beginning with problems relating to the formulation of an adequate model of growth and including those connected with designing a set of policy measures that will lead to an improvement in the levels of living of large masses of people.

73. While in the early post-war years emphasis was placed on the existence of a reserve army of labour for achieving a rapid increase in gross domestic product, of late the emphasis seems to have shifted to redistributive policies with consideration of growth taking a somewhat secondary role.

74. Since the conceptual and statistical problems of employment and unemployment depend upon the kind of policies that are being discussed, it is important to note that it would be altogether false to suggest a sharp dichotomy between growth and redistribution, especially in developing countries where fiscal measures for redistribution are very limited in scope and effectiveness. Hence, in defining measures of employment, underemployment, unemployment and related magnitudes, attention must be given to measures of waste in terms of human resources as well as to structural features that define the living conditions of the different segments of the labour force.

75. The first important thing to note about developing countries is that in view of the very widespread existence of self-employment, the problem of unemployment cannot be viewed in the same conceptual frame as has been used in developed countries, where the mode of labour utilization generally takes a contractual form. Furthermore, because of seasonality in agricultural operations and the relatively low level of labour mobility, it is often grossly inaccurate to describe

employment as a zero-one variable. Doubtless, states corresponding to full employment and to prolonged involuntary idleness exist but they do not tell the full story and, in many cases, not even the more important part of the story. Employment is best seen as a continuum with end points corresponding to full employment and unemployment. This implies that underemployment defined as a class of intermediary situations must be fully taken note of.

76. Secondly, the meaning of "economically active" in the definition of labour force is also subject to considerable margins of error on account of the absence of minimum schooling requirements at one end, in terms of age, and the absence of social security measures at the other. These difficulties are compounded by the changing and unstable character of participation in production by the female members of the population. In addition, there is the much talked about case of people who have ceased to look for work altogether, because of inability to find work. All these considerations imply that the "participation rate" defining the fraction of population which is normally available for work needs to be worked out very carefully for developing countries, though the "labour force" concept need not be abandoned altogether. 3/

77. Failure to take account of these difficulties has often led to surveys of unemployment ending up with very small percentage figures, particularly in rural areas. In India, successive rounds of the National Sample Survey produced percentage figures of unemployment that were so small as to suggest that the problem was not being approached in the right way.

78. Partly as a reaction to this, one definition of unemployment has been proposed according to which anyone is regarded as unemployed whose income is below a preassigned figure corresponding to some designated minimum level of subsistence. Although such a definition has found some popular support, it is clear that it is quite unhelpful as a measure of unemployment, both from the point of view of throwing light on the causes of unemployment and from the point of view of adequate formulation of policy. From the causal point of view, this measure is unhelpful because it does not indicate how people continue to subsist even when their productivity is below the so-called subsistence level. In other words, the problems relating to mode of economic organization involving work sharing, particularly in subsistence agriculture, are completely missed in this approach. From the policy point of view, it does not indicate what should be done to improve conditions. If giving more employment is supposed to be a major instrument to bring up consumption levels, then an independent definition of employment conditions is called for. In addition it is quite clear that, in many developing countries, in order to provide an adequate description of the employment situation it is necessary to bear in mind the time factor as well as the income factor. In addition, in order to distinguish between leisure and involuntary idleness it is necessary to have some measure of willingness to work. For considerations relating to potential "waste", a phenomenon emphasized in the early post-war literature on development, it may be necessary to get a measure of productivity as well, although in practice this will prove quite difficult. Furthermore, to get a more complete picture of how the social and economic system adapts itself to conditions of unemployment/underemployment, it is useful to get certain data on both households and on individuals.

3/ The limitations of the "labour force" concept as normally applied have been particularly strongly emphasized by Gunnar Myrdal in Asian Drama: An Inquiry into the Poverty of Nations (New York, Pantheon Books, 1968).

79. Problems of defining and applying suitable concepts of employment, underemployment and unemployment in developing countries have been under examination by the International Labour Office. As early as 1966, the conferences of labour statisticians which met under the auspices of the International Labour Organisation (ILO) adopted a set of recommendations concerning measurement and analysis of underemployment and under-utilization of manpower which, if they had been implemented, could have provided many valuable data in this regard. More recently, the World Employment Programme undertaken by the ILO has re-emphasized the need for developing suitable measures reflecting the structural characteristics of developing countries. While no clear consensus has yet been achieved on a feasible approach, nearly all the proposals discussed and tested have agreed on the need for relatively disaggregated data on labour utilization rather than single measures of labour force participation and unemployment. ^{4/} The main classifications and additional series proposed in this connexion and the needs which give rise to them are:

(a) Separate treatment of urban and rural, since the structures of employment opportunities and participation in urban and rural areas are quite different;

(b) A broad definition of employment, to include unpaid family members and other "informal" work which contributes to production;

(c) Data on hours worked, to measure intensity of work by the week, season and year;

(d) Data on wages and earnings, disaggregated by kind of economic activity and occupation, to indicate areas of very low productivity;

(e) Cross-classification of employment and unemployment by educational attainment, to indicate un- or under-utilized skills. This is an important point since mismatch between education and employment is often a source of under-utilization of the labour force, which suggests the need for evolving appropriate policy instruments in the areas of both education and employment planning.

Illustrative series and classifications along these lines are included in panel III of annex I; illustrative indicators based on them are shown in the third column as a first step in applying these data in the planning process.

^{4/} A general review is provided in Concepts of Labour Force Underutilization, Employment Research Papers, (Geneva, International Labour Office, 1971). An overview and progress report on the World Employment Programme may be found in World Employment Programme: Research in Retrospect and Prospect, (Geneva, International Labour Office, 1976) and in "A progress report on ILO research, with special reference to labour, employment and income distribution", World Employment Programme: Population and Development (Geneva, International Labour Office, 1977). These publications include programme bibliographies. For an overview of recent work on concepts and methods in this field, see the Report of the Association of Southeast Asian Nations (ASEAN) Seminar on Concepts, Techniques and Methods of Data Collection Regarding Employment, Underemployment and Unemployment, held at Jakarta, 25 July-3 August 1977 (Jakarta, Department of Manpower, Transmigration and Cooperatives, 1977).

80. These illustrative series, classifications and social indicators are divided into four sections, covering: labour force participation (A); unemployment and underemployment (B); employment compensation (C); and working conditions (D). The illustrative series and classifications shown are intended to provide as comprehensive a picture as possible of participation in economic activity (participation in production) in developing countries. The classifications are intended as a basis for selection by countries in compiling the series. They would, of course, be applied in greater or less detail according to each country's own situation and statistical circumstances. These classifications are also designed to serve as a basis for linking up series in the employment field with series in other areas of the framework. The classification by socio-economic group, for example, provides an important means of linking labour utilization measures with, on the one hand, population characteristics and trends and, on the other, with income.

81. No series are shown relating to employment services, since data on the live register of employment exchanges are useful mostly for the educated segment of the labour force. Even here, the data may prove inaccurate because of under-reporting, on the one hand, and the practices of multiple registration and of registration by the employed who are seeking to improve their lot, on the other.

Labour force participation and employment opportunities and mobility (A and B)

82. Meaningful description of labour force participation and employment in rural areas and in the so-called urban informal sector presents particular problems in developing countries, as has been discussed above. For this reason, certain disaggregations of series and classifications are particularly emphasized in annex I:

(a) Labour force participation rates by age and sex and by urban and rural;

(b) Employment and unemployment series classified by important characteristics of the worker and by certain types of employment and workers, such as own-account, family, seasonal and part-time.

83. A question may be asked as to whether we can sum up the information collected on labour force participation and employment and unemployment to present a global picture of unemployment as a unidimensional magnitude. There is a very natural temptation to answer this question in the affirmative. Thus, the Committee of Experts on Unemployment in India decided to add the number of those who are without work to the number of those who work for less than 14 hours a week to form an over-all estimate of unemployment.

84. It would appear, however, that much valuable information will be lost in presenting an aggregate figure, which may be lacking in any operational significance. It would be much better to present the data in a disaggregated manner along the lines suggested above for different occupations. In addition, household income and expenditure surveys should be carried out simultaneously to throw light on familial characteristics in relation to wages, earnings and employment. Finally, it may be useful to get a measure of willingness to work by inserting a few probing questions in a labour force survey. The 25th round of the National Sample Survey in India tried to ascertain this factor in terms of willingness to move out of the villages if regular wage employment were

guaranteed. The results obtained for different parts of the country were quite different and have given rise to the need for devising different types of employment strategies.

Employment compensation and working conditions (C and D)

85. Productivity levels among employees in certain economic activities may be measured in the first instance by wage rates, earnings and benefits per employed person. These series should be disaggregated by kind of economic activity and occupation to bring out essential distributional and structural differences as between, for example, agriculture, industry, trade and community services (mainly governmental). Supplementary data should be collected with regard to educational levels.

86. Of course, in many developing areas employees do not constitute the majority of the labour force. Hence in considering employment and productivity, attention should also be given to the distribution of labour time over a reference period, such as a week, month, quarter or year, for all workers as an aspect of working conditions. The reference period may be adjusted to bring out the seasonal character of labour utilization in certain circumstances. This is shown in connexion with the series on average hours worked in annex I, panel III, section D.

87. Other principal aspects of working conditions - such as paid holidays and occupational health and safety - relate mainly to employees and will initially be of secondary importance for systematic statistical reporting in developing countries; however, they should be scrutinized as early as possible in the process of industrialization. They are also closely related to the field of health.

Summary

88. The indicators shown in this area of Towards an SSDS are in many cases not appropriate for a majority of developing countries. To recapitulate, the main reasons and the approaches suggested in adapting and implementing a framework for integration for developing countries are the following:

(a) The production boundary must include non-monetized activities if a proper description of the employment situation is to be obtained. Hence, it is suggested employment data show specific series relating to socio-economic group, family workers, seasonal and part-time workers, and own-account workers;

(b) The concept of economically "inactive" is ambiguous and should be used only in connexion with the institutional population and full-time students;

(c) A very large proportion of the labour force is not employed for wages; hence, the labour force concept must be broadly inclusive of family workers, own-account workers and any employment remunerated in kind;

(d) Even within the category of wage-employment, there are considerable variations in conditions of employment, for example, "casual labour" in agriculture, mining, construction and trade. Hence it is suggested that special attention be given to in-kind compensation and to duration of work;

(e) Among the category of the self-employed in urban and rural areas, there are pronounced differences in time dispositions because of seasonality of work. In addition, there are large differences in productivity levels. Hence, in-kind earnings must be covered and the classifications of kind or economic activity and occupation and hours-worked series are again useful.

89. Disaggregated along the lines shown in annex I, the illustrative indicators should conform rather closely to the main structural divisions and types of employment in a developing country, such as urban and rural, agricultural and industrial, and "organized-unorganized". In order to cover fully the rural, household and small-scale sectors, much more reliance than heretofore will have to be placed on household-based censuses and surveys. In addition, data on educational profiles can be used together with data on learning activities to build up the necessary balances on the human resources side.

D. Distribution of income, consumption and accumulation

Principal focus in developing countries

90. Statistics relating to the distribution of income, consumption and accumulation as they concern a framework for social statistics are dealt with in Towards an SSDS, chapter XIII. Except for the addition of the concept "net worth" and some observations dealing with the dynamics of income formation, they are based on the Provisional Guidelines on Statistics of the Distribution of Income, Consumption and Accumulation of Households (Provisional Guidelines ...). 5/ This publication presents at appropriate points certain adaptations and simplifications designed to reflect the structural characteristics of developing countries and their limited statistical resources. All three publications look at the statistics of distribution primarily from the point of view of households. They all disaggregate the income and outlay accounts for households of A System of National Accounts (SNA). 6/ In fact, the presentation for developing countries uses the household as the statistical unit for all purposes. In spite of the fact that Towards an SSDS deals largely with stocks and flows of human beings, this emphasis would appear to be justified for both developed and developing countries quite apart from the fact that economic life in developing countries is such that incomes are largely spent by households rather than by individuals. For the developing countries, household income (where the household is defined on a housekeeping basis) is defined to include transfers between households in cash and in kind, since these may comprise an important source of income and consumption for a significant portion of the population.

91. An index of inequality in the distribution of income often turns out to be different if computed on a household basis compared to one computed on a per capita basis. This is because in many developing countries poorer households frequently

5/ United Nations publication, Sales No. E.77.XVII.11.

6/ United Nations publication, Sales No. E.69.XVII.3. See accounts III E and supporting and supplementary table 23.

include more persons, compared to what has been observed for developed countries. ^{7/} Hence it is useful in this area to include tabulations relating to available income etc., on a per person basis, even though for the initial collection of data it is preferable to use the household concept. This is proposed in the United Nations documents referred to above. It would also be useful to show separately income per adult. These data will also make explicit whether poorer families are characterized by higher dependency ratios, an assumption often made and which, if true, would have very significant implications in devising egalitarian economic policies.

92. The Provisional Guidelines ... includes the concept "primary income", a term that does not appear in SNA. The proposals for developing countries allow for separate entries for incomes received in cash and in kind, which is quite appropriate. Furthermore, they distinguish between, on the one hand, primary income comprising wages and salaries and gross entrepreneurial income and, on the other hand, total household income, which is defined as primary income plus property income and current transfers, on the other. In the classical approach to the problems of income generation, primary and property income are based on actual payments to the so-called factors of production; of course, however, on family farms and in small industrial units, entrepreneurs perform many of the services that that employees perform in the case of large, incorporated enterprises. These circumstances indicate that actual payments to the factors of production cannot be used for measuring factor shares with any kind of precision.

93. There is no denying the fact that these difficulties are inherent in developing economies characterized by a substantial amount of "dualism", where concepts which are well-defined for the "modern" sector begin to lose exactitude as soon as the attempt is made to extend them to an economy-wide basis. This has led some scholars, notably those who are inclined to follow the socio-institutional approach of Professor J. Marchal, to use socio-economic groups for the statistical description of the distribution process. An example is provided by Professor Gundarmé, who has used the following classification: (1) servants;

^{7/} Tinbergen has found evidence for this in dealing with income distribution over time in the case of the Netherlands, the Federal Republic of Germany and Great Britain. See V. M. Dandekar and N. Rath, "Poverty in India", Economic and Political Weekly, vol. VI (2 and 9 January 1974) for the data relating to India, and J. Tinbergen, "Trends in income distribution in some Western countries" in M. B. Connolly and A. K. Swoboda, eds., International Trade and Money (London, George Allen and Unwin, 1973).

(2) urban subproletariat; (3) artisans; (4) factory wage-earners; (5) rural proletariat; (6) civil servants; (7) army; (8) bourgeois and aristocratic classes; and (9) foreigners. 8/

94. From the point of view of a framework for social statistics, there is no denying that there is some merit in this approach even though it is inadequate for answering questions which have figured repeatedly in connexion with growth models, such as that of analysing the effect of capital accumulation on the rate of profit or that of the influence of tariffs on the distribution of income. To be able to answer a question as to whether income inequality can be reduced further in developing countries, one needs to obtain a complete size distribution of incomes by households broken down by as many distinguishing characteristics as may be considered relevant on the basis of theoretical considerations and the current state of information that we may possess for the developing countries.

Priorities

95. In developing economies, since property and entrepreneurial incomes are generally considered to be much more important than in most developed market economies and the factors lying behind the distribution of property and entrepreneurial incomes are likely to be quite different from the ones that cause variation in compensation of employees, it is desirable to obtain two size distributions, one of compensation of employees and the other of property and entrepreneurial incomes. Furthermore, as the available survey data reveal that urban and rural distributions are generally different, it would be desirable to distinguish at least four distributions altogether.

96. For rural property, net farm and entrepreneurial incomes, a first approximation to the desired distribution can be provided by the distribution of land holdings. Land census data are sometimes available which can be used for this purpose. Special studies can be carried out on rural indebtedness to get an estimate of income from money lending. For analysing urban property and entrepreneurial incomes, the principal source in the first instance must usually be fiscal data, such as the data on income tax and wealth tax. In fact the usefulness of income tax data can be improved if data on gross incomes are furnished. Gross income for income tax purposes is defined as assessed income plus all the deductions and rebates allowed to the assessee. Despite the prevalence of tax evasion, the data can be processed to give some idea of the distribution of

8/ See R. Gundarmé, "Reflections on the approaches to the problem of distribution in underdeveloped economies" in Jean Marchal and Bernard Ducros, eds., Distribution of National Income (London, Macmillan, 1968). An example of a socio-economic classification, from the 1974-75 family expenditure survey in Brazil, is the following: (1) Agricultural activities, divided in 11 employers, 12 own-account, and 13 employees; (2) Non-agricultural activities, divided into 21 employers and/or liberal professions, 22 own-account (distributed among trade, other and non-proprietors) and 23 employees (distributed among upper-level managerial, mid-level managerial, other occupations (non-manual) and other occupations (manual)). From Despesas das Famílias, Dados Preliminares, Região III, Estudo Nacional da Despesa Familiar (Rio de Janeiro Institute for Geography and Statistics, 1978).

property and entrepreneurial incomes in urban areas. It has been generally noticed that the Pareto distribution fits the upper tail of income distribution fairly closely, a phenomenon which can be used to graduate the distribution. Alternative graduation formulae can also be tried.

97. For obtaining the distribution of total household income, it is reasonable in many cases to begin with a distribution of consumer expenditure by urban and rural residence. In other cases, such as countries in which no reliable or nation-wide family budget survey exists, existing employment surveys may give income data, at least for urban areas, although these data are also subject to non-sampling errors. No doubt, at the upper end consumer expenditure would be a very inadequate measure of income. Similarly, at the lower end income will be below consumer expenditure. Thus there are two difficulties. There must be some resolution as to what supplementary data are needed and how they should be processed so as to generate the distribution of total household income from the consumer expenditure data.

98. In the case of India, several attempts were made to deduce the distribution of personal incomes from the consumption data. Swamy, Ranadive and several others tried to obtain the distribution of personal incomes by combining data on consumption expenditure furnished by the National Sample Survey with data on savings provided by other survey studies including the data provided by the Reserve Bank on the ownership pattern of financial assets. 9/

99. Until integrated household survey data covering income, consumption and accumulation begin to be collected on a regular basis, it is not easy to see how better estimates can be obtained for the rural and urban sectors in their entirety. For carrying out household income surveys, the real difficulties stem from non-sampling errors, since it may be possible to take care of sampling errors through introducing a proper design. However, for obtaining distribution of labour incomes in the organized industrial sector, no special difficulties need be anticipated.

100. Once size distributions have been arrived at, particular attention will need to be paid to the two tails of the distributions because of the special significance they possess for carrying out any redistributive policy.

101. Until very recently, our knowledge of factors determining the size distributions of incomes was very limited, if not altogether non-existent. Attention was directed to analysing the functional distribution of incomes, which, in spite of its obvious importance for theoretical purposes or for long-run analysis, cannot provide much direct help on the policy questions. Furthermore, to the extent theoretical analyses were attempted, they pertained largely to producing schemes of stochastic processes which would produce asymptotically certain empirically observed distributions of incomes by size classes. Reference can be

9/ See J. G. Sandersars, ed., The Indian Economy, Performance and Prospects (University of Bombay, 1974). The entire part II of the book is devoted to income distribution. See, in particular, the contributions of Ranadive, Swamy and Krishnan.

made in this connexion to the interesting work done by Champernowne. 10/ From recent analysis, it would appear that apart from the influence exerted by ownership of means of production such as land etc., which no doubt plays a very important role in influencing the distribution of incomes at the accrual stage, education plays a very important role in explaining the variance of the observations. In addition to education, distribution of the labour force by kind of economic activity would appear to be important. It has been found that a high percentage of the labour force engaged in industry tends to be accompanied by a lower index of inequality. 11/ It has also been noticed that the age distribution of the population has a systematic influence on the distribution of incomes.

102. Since the age distribution of the population is connected with the factors influencing mortality and fertility, health and family planning measures can be expected to exercise a systematic influence on the distribution of income.

103. These considerations would suggest that households should be cross-classified with educational attainment, land holding and tenure, size and type of household, and the usual occupation and industry.

Statistics on poverty

104. A concept that has been particularly emphasized in recent years is "absolute poverty". The criterion of "maximin" devised by J. Rawls in connexion with his theory of distributive justice has been invoked to support the policy prescription that planners should try to maximize the economic lot of those who are worst off.

105. Generally, the procedure that has been employed is to define poverty with respect to a preassigned consumption norm. Those whose consumption expenditure is found to lie below this norm have been described as "poor". In actual practice, this means selecting a group such as the lowest three deciles for special attention from the policy point of view. Although the criterion is not altogether unambiguous from the ethical point of view, since any observed distribution will show that while all of these people are poor, some are poorer than others, it is doubtless a more meaningful way of approaching the problem than through using Gini ratios, unless the underlying distribution is of a certain specific type.

106. Considerable care should, however, be exercised in defining the norms. Clearly, in many developing countries a physical definition of the essential requirements of life should be attempted from the nutritional point of view, even though allowance will need to be made for agro-climatic variations as well as for customary habits, if they are not considered to be otherwise prejudicial. In translating physical requirements into money values, care must also be taken in choosing the appropriate set of prices.

10/ See D. G. Champernowne, "A model of income distribution", Economic Journal, vol. 63 (1953), pp. 318-351.

11/ See, for example, Simon Kuznets, Modern Economic Growth: Rate, Structure and Spread (New Haven, Yale University Press, 1966), and Harold Lydall, The Structure of Earnings (Oxford, The Clarendon Press, 1968).

107. To get an estimate of the percentage of people living below the poverty line, the data collected on the observed distributions of consumption expenditure should be adjusted for fractile group-specific price indices. Since these indices are not often available, efforts should be made to collect them.

108. While international comparisons are extremely hazardous in this context, interregional variations within the same country and intertemporal variations for a given region are likely to prove useful in assessing the nature of social and economic development as well as for suggesting remedial courses of action.

Statistics on redistribution

109. So far, we have dealt with the distribution of income at the accrual stage. It is necessary to consider statistics dealing with the size distribution of income after allowing for redistribution through taxes, transfers and other items of direct benefits. It is suggested in the Provisional Guidelines ... on income statistics that, since direct taxes is the only item for which reliable information is available and since the item also happens to be dimensionally significant, distributed factor income less direct taxes may be used as a proxy for total available household incomes (paras. 1.13 and 1.30).

110. This statement is true only in a limited sense. It is true to the extent that transfers in cash are generally insignificant in many developing countries. However, it is not true to the extent that important services are often rendered at a price less than their cost. Furthermore, there are often subsidies in relation to food and certain essential items. In the Provisional Guidelines ... table II.1, presumably these direct and indirect benefits are to be taken into account by distinguishing between factor income and total available household income.

111. While for the construction of this table the distinctions make sense, in actual practice what should be of interest is to determine how much of collective consumption is enjoyed by different size groups of households. Furthermore, one wants to know where subsidies accrue in regard to food and other essential consumption.

112. Complete analysis will require an estimate of total household income after receipt of all direct and indirect benefits and after payment of all direct and indirect taxes. Such an analysis requires a thorough study of the entire fiscal policy, which may not be immediately practicable. But some efforts must be initiated immediately; these are indicated below. Tables 2 through 56 of the Provisional Guidelines ... call for distributions of total consumption of the population, among other transactions, according to socio-economic status and according to size groups of households according to average household and average per capita income. These distributions are relevant here although they do not take account of the incidence of indirect taxes.

Illustrative series, classifications and social indicators

113. Illustrative series, classifications and social indicators covering household income and accumulation, household and total consumption of the population, and inequality and redistribution are shown in annex I, panel IV.

114. Fractile group distributions are shown for certain series concerning income and consumption as proposed in the Provisional Guidelines Classifications in relation to primary income (series A.1) should also include educational attainment of the household head or main earner; income should be calculated per household member. The classification by land holding and tenure in the case of agricultural households should provide important information on the distribution of income in relation to the distribution of land. In the Provisional Guidelines ..., primary income is composed of compensation of employees and gross entrepreneurial income; property income received by households consists mainly of interest and land rent received; total available household income is distributed factor income (primary income plus property income) plus or minus net social security and pension benefits, plus current transfers received and minus direct taxes paid. Gross capital formation consists of the sum of gross fixed capital formation (including non-monetary) and increases in stocks of unincorporated enterprises. A useful concept of income often used in developing countries is distributed factor income less direct taxes. This concept differs from available income principally in that current transfers are not included.

115. In regard to household consumption expenditure, data should be collected not merely in monetary terms but also in physical (quantity) terms for certain items, using a classification of household goods and services such as that shown in SNA, table 6.1.

116. To measure the redistributive character of the government budget, government expenditure devoted to providing various services to households should also be compiled, with special emphasis on education, health and nutrition (annex I, series B.2; Provisional Guidelines ..., table II.1 and paras. 5.7-5.9). Data on current transfers (series C.1) should also be used in this connexion where they are relatively substantial in the aggregate. In addition, it is important in some countries to indicate who bears the burden of indirect taxes, since these taxes often account for a very large part of the current receipts of government in many developing countries (series C.2). For this purpose, it is necessary to indicate the amount of indirect taxes paid by different groups of consumers. Certain subsidies, as of food-grains, may also account for an important proportion of government expenditure and of household consumption. In the absence of detailed incidence studies, which are often difficult to carry out with the weak data base in developing countries, some insight into the question may be obtained by computing the total amount of indirect taxes paid by different size classes of consumers. In India, several studies of this type were carried out and the results proved quite interesting. ^{12/} Similar studies can be carried out elsewhere as a by-product of the information on the size distribution of consumer expenditure.

117. As regards statistics dealing with saving, consumer durables and accumulation of households, it is clear that statistics of accumulation and net worth are beyond the computational reach of the developing countries. Furthermore, from the point of view of analysis and policy-making, these are not variables which can be regarded as immediately demanding of attention. Similarly with respect to data on consumer durables, it is not clear whether these should have a high priority.

^{12/} See Government of India, Ministry of Finance, "Incidence of indirect taxation, 1963-64" (New Delhi, 1969).

However, certain items like cars, radios etc. can be listed on a per household basis depending on the country. For these items, regular administrative sources for collecting data exist: however, these should be integrated with other data connected with households using a classification of household goods and services and a series such as series B.1.

118. With respect to social indicators, it is particularly important to obtain inequality measures pertaining to different distributions, along with average values. The subject has been dealt with above. However, in relation to income distribution statistics, the measures proposed by Eltetö and Frigyes deserve special attention, not because they possess any great merit as measures of welfare but because they are very simple to compute and possess a very convenient "decomposability" attribute which is useful for purposes of analysis and policy making. ^{13/} These measures are $u=m/m_1$, $v=m_2/m_1$, and $w=m_2/m$ where m is the mean of a given distribution, m_1 the mean of the lower half of the distribution and m_2 the mean of the upper half of the distribution. These three measures may be approximately interpreted as the degree of inequality experienced (a) by the lower half (of, say, households) relative to the over-all average, (b) by the lower half relative to the upper half and (c) by the upper half relative to the over-all average. These measures are easily computed from the fractile distributions shown in annex I, even where the data are quite sketchy; and they possess a number of other desirable attributes which make them useful for policy analysis and calculation.

E. Health, health services and nutrition

119. In the area of health and nutrition, the information needed to assess comprehensively, systematically and over time the state of health and nutrition of the population is hardly available for most of the developing nations. Statistics which are frequently available in time series form relate to death rates, number of health establishments and number of medical personnel. Many additional data which are needed can be had only through initiating sampling inquiries. Only a phased programme of consistent efforts can develop these data with the desired degree of coherence and the needed classifications.

120. With respect to available health services and facilities, the basic data shown in Towards an SSDS and in Social Indicators ... include some items on which a good amount of data is likely to be available in most of the developing nations; However it should be remembered that these data may often say very little about either the health services available to the population generally or the effectiveness of these services and facilities - both important concerns in developing countries where physical and human resources are very scarce and often inequitably distributed.

121. Similarly, data on personal consumption expenditures on health, even where available, may be relevant only for a fraction of the population in many developing countries.

^{13/} See O. Eltetö and E. Frigyes, "New income inequality measures as efficient tools of causal analysis and planning", Econometrica, April 1968.

122. However, some effort may be made to develop the required data on total and especially government health services expenditures, since these data are essential to efficient, controlled planning and distribution of these services. The amount and distribution of preventive health expenditures and the correlated services are likely to be especially important in this connexion in developing countries.

123. Nutrition is an area of concern in which the need is very great. Many of the relevant data must be collected through special household food consumption surveys. In combination with statistics of food supplied, these data may be used to assess the adequacy of food supplies relative to the energy (calorie) requirements of the population. Other special surveys may be used to assess the rate of subclinical protein-calorie malnutrition among children;

124. Annex I, panel V, shows illustrative series, classifications and social indicators in the areas of health, nutrition and health services. Under section A, "State of health", items 1 and 2 relate to health conditions generally and are based on commonly collected statistics of deaths and incidence of selected communicable diseases of public health importance. Those communicable diseases that are of current concern for public health will vary from country to country and over time. In most cases, the absolute number of cases rather than the rate or incidence is the more important measure of the degree of threat to public health and hence of the effectiveness of preventive policies, on the one hand, and the need for corrective action, on the other. Where an outbreak of a specified disease spreads to such an extent that it affects a significant proportion of the population in a particular area, the proportion of the population so affected would be a suitable measure of the impact of the disease on the population's health and welfare generally. The Special Programme for Research and Training in Tropical Diseases of WHO is particularly concerned with many such diseases in developing countries. Similarly item A.2 (b), on chronic functional disabilities such as blindness, provides a measure of this aspect of health and welfare conditions in the population, for which the possibilities of preventive or corrective action or of some sort of assistance to those affected may be considered. Sections B and C of panel V deal with nutrition and health services and facilities. The illustrative series, classifications and social indicators in these areas are discussed above and in the publications of WHO shown in annex II.

F. Housing and its environment

125. It is generally recognized that housing and food constitute two of the basic necessities of life. Family expenditure studies in urban areas provide considerable evidence for this, while in rural areas a large part of non-monetized or partially monetized investment takes the form of construction or repair of living quarters. Yet the data on the housing situation are far from satisfactory in most developing countries. This data gap must be filled if this aspect of the quality of life in developing countries is to be addressed.

126. To obtain an accurate picture of the housing situation in most developing countries, it is necessary to consider all types of living quarters and to pay particular attention to semi-permanent and marginal units since these are types of housing occupied by a substantial portion of the population in many areas. Semi-permanent units are frequently constructed of locally available crude materials such as bamboo, palm, straw or similar vegetable materials. They sometimes have mud walls, thatched roofs etc. and they may be expected to last for

only a limited time. They are typical and traditional in many developing countries, especially in rural areas (for example, the ranchos or bohíos in some parts of Latin America, the barong-barong in the Philippines). However, because they are of a less permanent nature, their identification as a separate category adds significantly to the possibility of making a meaningful analysis of the quality and quantity of housing.

127. It would also be useful to identify the units located in squatter settlements. While these units may vary in quality of construction, they are generally makeshift shelters built of waste materials and as a rule they lack basic sanitary facilities. They are usually found in urban and suburban areas particularly at the peripheries of the principal cities. There is wide variation in the procedures and criteria used to collect data on these units; countries should consider appropriate methods to enumerate and classify them according to existing conditions. Since squatter settlements very often correspond to well-established social entities, there would be advantages for analytical purposes in collecting information in regular censuses and surveys or in special surveys so that separate tabulations showing the characteristics of housing and its occupants in these settlements could be prepared.

128. Data on housing are most frequently collected in housing censuses carried out in connexion with a population census. Intercensal data are sometimes gathered by means of special surveys. Data on construction are sometimes derived from administrative data made available in connexion with the issuance of building permits or from other sources. It is desirable that these be supplemented by sample surveys which test the extent to which permits represent actual construction or which broaden the coverage of the data by including areas not covered by permit information. At the same time, since housing represents a significant part of total capital formation and of household and public expenditure, estimates of gross fixed capital formation in housing and of the sources from which it is financed are desirable. In this context, it is necessary to pay particular attention to the institutional sources from which the principal part of the expenditure originates. In panel VI of annex I, only one illustrative series of this nature - gross fixed capital formation in residential buildings (series 3) - is shown, since these data are rather difficult to compile systematically in developing countries. Classification of this series by institutional sector, where possible, would show in addition the relative expenditures in this area of households, government etc.

129. In panel VI, illustrative series, classifications and social indicators are outlined which would provide basic statistical coverage of this area of living conditions. These series relate to the stock, characteristics and distribution of housing and its ownership, and gross additions to the housing stock as well as the associated gross capital formation. As emphasized here, priority should be given to identifying semi-permanent dwellings and marginal living quarters. The illustrative classifications shown relate mainly to location and type of living quarters. In most cases these are relatively easy to compile where censuses and surveys include questions relating to housing. 14/

14/ Data currently available internationally are published in the Compendium of Housing Statistics, 1972-1974 (second issue) (United Nations publication, Sales No. E/F.75.XVII.12). A third issue is in preparation.

XIV. SECONDARY FIELDS WITHIN A FRAMEWORK

130. The remaining fields treated in Towards an SSDS and Social Indicators ... are: family formation, families and households; social security and welfare services; social stratification and mobility; public order and safety; time-use; and leisure and culture. For reasons of statistical availability and priorities of social and economic planning, these are generally accorded lower priority in most developing countries. Of course, this situation varies considerably among different countries.

131. The sections that follow discuss and illustrate a limited selection of social concerns and basic series, classifications and social indicators for consideration by developing countries wishing to establish some minimal statistical coverage in one or more of these areas. In those instances where countries wish to establish a more comprehensive statistical framework in these fields, reference should be made to the extended discussion and illustrations set out in other publications on the framework for integration (see preface to this publication).

A. Family formation, families and households

132. Much of the information in this field discussed in Towards an SSDS is unavailable in the desired form in the majority of the developing countries. There has been discussion in the previous sections concerned with population and housing of most of the elements in those important areas that it would be desirable to provide in developing countries. The agencies concerned with family formation and stability provide little relevant data in systematic form. The main source for these specialized data appears to be special surveys like the Sample Registration Scheme introduced in India. The position in other developing countries would depend on the extent to which similar surveys may be implemented.

133. Therefore only a limited number of series relating to marriage and household composition is shown in annex I, panel VII for consideration by developing countries at an early stage of development of social and demographic statistics.

B. Time-use and leisure and culture

134. The information available in these areas in developing countries is extremely weak and hardly any reliance can be placed on it in the majority of cases. Important aspects of time-use in general and in connexion with education and work in particular have been dealt with above in paragraphs 23-24 and in chapter XIII, sections B and C. The potential importance for developing countries of time-use statistics in other areas, such as access to various types of social and other services, is widely recognized but much more experience is needed to assess the feasibility and usefulness of collecting them and to develop appropriate classifications and methodologies. ^{1/} Some other aspects of time allocation raise serious conceptual problems in developing countries because of the substantial

^{1/} See the report to be considered by the Statistical Commission at its twentieth session, "Progress report on the development of statistics of time-use" (E/CN.3/519).

own-account, household and subsistence production that occurs there. For these reasons, illustrative series relating to time-use are shown in annex I in the fields of learning and work activities only.

C. Social security and welfare services

135. In developed countries, data relating to social security and welfare services constitute an important field of social statistics. They are intimately related to the process of redistribution of national incomes through the intermediation of the State. Because of the progressive nature of the tax system in many of these countries and also taking into account the fact that social security and welfare services in these countries tend to be concentrated on the less skilled and relatively handicapped segments of the society, after adjusting for net benefits made available through social security services the distribution of incomes in these countries shows a much lower degree of inequality.

136. In most developing countries, however, the situation is considerably different. Only a small fraction of the total labour force, typically those employed in the organized industrial sector, is eligible for such services and it is often not at all evident that these are the people who are most in need of such assistance. Very often, in the absence of a formally defined contractual relationship between the employer and the employee, irrespective of whether the employee is a worker or a sharecropper and the employer is a small businessman or a rich peasant, there is little possibility of enforcing such welfare provisions as may exist on the statute books. Even these do not always exist because of the lack of organization among workers in small scattered establishments or on farms. In these situations, social security provisions generally take various forms, depending on the type of social organizations prevailing in certain countries, such as an extended family system and/or caste and tribal organizations.

137. For these reasons and also because, relatively speaking, the magnitudes involved in transfer payments are generally quite modest, it may not be worth while to attempt a very extended coverage of this field in many developing countries. However, since conditions vary from one country to another and for certain countries, especially in Latin America, such services may not be negligible, it may be useful to accord more extensive treatment to this field in some cases. The illustrative series, classifications and social indicators in panel IX of annex I show how this field of statistics could be developed. They are concerned with the coverage of social security and similar schemes and the distribution of expenditure for benefits. The former type of series is intended to show the extent and trend of eligibility for various types of assistance, which may be factors in the security the population feels against the economic consequences of major losses in earning power. The latter type of series is concerned with actual expenditures on various types of benefits and the number of recipients. Such series are required to assess the over-all current costs of social security and welfare provisions and to gauge the extent to which they actually reach and assist the intended recipients. In addition, classification of the series relating to type of benefit and recipients of benefits will be particularly useful for certain analytical purposes, such as ascertaining the distribution of unemployment coverage and benefits by age or the receipt of benefits by older persons. Classification of persons covered and of those receiving benefits according to urban or rural is also desirable, since although there may be considerable differences between these categories in developing countries, only a geographical classification may be feasible, using administrative sources of data.

138. In the early stages of development of this field of statistics, administrative statistics only may be available for compilation of series and indicators. These may usefully be supplemented at a later stage by statistics of the distribution of benefits and characteristics of recipients obtained from household surveys of income and consumption.

D. Social stratification and mobility

139. This field of statistics requires relatively sophisticated and accurate data, in some cases extending over a long time-span, in order to be fruitfully applied. Such information, usually drawn from cohort, longitudinal or retrospective studies, is seldom available in most developing countries and is not likely to be for quite some time in the majority of them. Meanwhile intensive micro studies may be undertaken by sociologists and social anthropologists, perhaps in conjunction with programmes of census analysis, research and development, along the lines envisioned in Towards an SSDS and in Social Indicators

E. Public order and safety

140. The illustrative statistics envisioned in this field in Towards an SSDS and Social indicators ... would be based mainly on the facts and figures collected, processed and presented by police authorities or those connected with countries' internal legal administration. Standardization and summarization of these statistics are usually extremely difficult, even in developed countries. For developing countries interested in this field, a very small number of series which might be relatively easily compiled, at least in larger urban areas, is illustrated in annex I, panel X. These cover (1) numbers and rates of selected offences, such as homicides, (2) activities of legal authorities as measured by gross number of persons detained and charged for any reason and (3) a rough measure of resource inputs in this area, namely, number of persons engaged. In the first two cases, minimal age, sex and location classifications are illustrated. In the case of persons employed, classification by size and type of place is also suggested, since in these respects there is often considerable variation within countries.

Annex I

ILLUSTRATIVE SERIES, CLASSIFICATIONS AND SOCIAL INDICATORS

Fields of social concern and series	Classifications	Social indicators
<u>Principal fields within a framework</u>		
I. Population		
A. Size, structure and changes in population		
1. Size of the population (annually) and percentage distributions (infrequently)	Sex, age Size and type of household National or ethnic origin Socio-economic group	Size of the population: Total and percentage under age 15 National or ethnic groups as percentages of the total population Socio-economic groups as percentages of the total population
2. Population flows, numbers and rates per 1,000 persons:		
(a) Net changes in population (annual estimates; classifications for bench-mark years only)	Sex, age National or ethnic origin Socio-economic group Age of mother National or ethnic origin	Numbers and rates of net changes in population: Under age 15, over age 15 and total
(b) Births (annually)	Age of mother National or ethnic origin	Rates of live births in the total population and per 1,000 females of child-bearing age

Fields of social concern and series	Classifications	Social indicators
		Gross or net reproduction rate
(c) Deaths (annually)	Sex, age National or ethnic origin	Number and rate of deaths in the total population
(d) Net international migration (annual estimates; classifications infrequently)	Sex, age National or ethnic origin Socio-economic group (selected categories)	Net international migration: Numbers and rates in the total population according to sex and selected national or ethnic groups
B. Geographical distribution of population and changes in distribution	Sex, age and socio-economic group or national or ethnic group according to:	Number, percentage distribution and density of the population: Urban,
1. Number, percentage distribution and densities of population (annual estimates; detailed classifications in bench-mark years)	Urban, rural Geographical area Size and type of place	Urban, rural and total Large places Geographical areas
2. Population flows, numbers and rates per 1,000 persons (annual estimates or bench-mark years):		
(a) Net changes in population	Sex, age and socio-economic group or national or ethnic group according to: Urban, rural Geographical area Size and type	Number and rate of net change of population: Urban, rural and total Large places Geographical areas
(b) Births	Adjusted for age of mother in: Urban, rural Geographical area	Gross reproduction Urban, rural Geographical areas

Fields of social concern and series	Classifications	Social indicators
(c) Deaths	Sex adjusted for age in: Urban, rural Geographical area	
(d) Net internal migration (bench-mark or more frequent estimates)	Sex, age according to: Urban, rural Geographical area Size and type of place	Number and rate of net internal migration of population: Between rural, urban Into large places Out of or into selected geographical areas
II. . Learning and educational services		
A. Educational attainments and educational achievements of the population		
1. Years of schooling completed (bench-mark)	Sex, age Urban, rural Geographical area National or ethnic origin Socio-economic group	Median years of schooling completed: Male, female Ages 15-24, 25+ Urban, rural Selected national or ethnic groups
2. Numbers and percentages of literates (less than annually)	Sex, age Urban, rural Geographical area Level of education National or ethnic origin Socio-economic group	Percentages of literates: Male, female Ages 15-24, 25+ Urban, rural Geographical areas

Fields of social concern and series	Classifications	Social indicators
3. Numbers and proportions of population according to levels of schooling completed (bench-mark)	Level of education Sex, age Urban, rural Geographical area Kind of economic activity (where applicable) Occupation (where applicable)	Proportions who have attained specific levels of schooling: First level, second level, third level Ages 15-24, 25+ Urban, rural and total Geographical areas
4. Numbers and percentage distributions of population according to mother tongue and knowledge of a second language (bench-mark)	Sex, age Geographical area National or ethnic origin	Percentage distribution of the the population according to mother tongue Percentages of the population with knowledge of a second language: Males, females, age 15+
B. Use and distribution of educational services		
1. Numbers and proportions enrolled in regular education (annually; some classifications less frequently)	Level, field of education Type of education Sex, age Urban, rural Geographical area National or ethnic origin Socio-economic group Institutional sector	Proportions of population enrolled in regular education: Male, female Ages 5-9, 10-14, 15-19, 20-24 Urban, rural and total Proportions of population participating in formal and non-formal adult education, age 15+: Male, female Urban, rural

Fields of social concern and series	Classifications	Social indicators
2. Expectation of completed attainment (bench-mark estimates)	Sex, age Urban, rural National or ethnic origin	Expectation of level or grade of attainment at school entrance age: Male, female Urban, rural and total
3. Time spent in educational activities, specified periods (bench-mark)	Sex, age Urban, rural Level and type of education Time-use	<u>Per capita time</u> spent in formal educational activities: Male, female Urban, rural Ages 5-14, 15-24, 25+
4. Distance of population from educational institutions (bench-mark)	Urban, rural Level and type of education	Average distance of households from education institutions: First level, second level Urban, rural
C. Inputs, outputs and performance of educational services		
1. Number of full-time equivalent teachers engaged (annually)	Level and fields of education (at which engaged) Level of education successfully completed (of teachers) Urban, rural Geographical area Type of education	Ratios of students per teacher: Urban, rural and total First level, second level Median level completed by teachers: Urban, rural and total First level, second level

Fields of social concern and series	Classifications	Social indicators
2. Final consumption expenditures on regular education, current and constant prices (annually or annual estimates)	Level of education Type of education Urban, rural Geographical area Institutional sector	Total consumption expenditures on education per full-time enrollee: First level (urban, rural) Second level Third level Total consumption expenditures on education as a percentage of GDP
3. Expenditure on gross fixed capital formation in education, current prices (annually or less frequently)	Level of education Urban, rural Geographical area Institutional sector	Gross fixed capital formation in education as a percentage of total gross fixed capital formation: First level (urban, rural) Second level Third level
4. Number and proportion of specified years' enrollees who successfully complete their grade	Sex, age Level and field of education Urban, rural Geographical area	Proportions of enrollees who successfully complete their year: Urban, rural and total First level, second level
5. Numbers and rates of successful completions according to levels (numbers annually and rates infrequently; selected groups in classifications)	Level and field of education Sex, age Urban, rural Geographical area National or ethnic origin	Proportions of enrollees who successfully complete their level: Urban, rural and total First level, second level

Fields of social concern and series	Classifications	Social indicators
III. Earning activities and the inactive		
A. Labour force participation		
1. Numbers and rates of labour force participation, specified periods (annually or more frequently)	Sex, age Urban, rural Geographical area National or ethnic origin Socio-economic group Level of educational attainment Occupation	Rates of labour force participation: Male, female Ages 15-19, 20-24, 25+ Urban, rural and total
2. Numbers and proportions of labour force who are first-time entrants (annual estimates)	Sex, age Urban, rural or Geographical area Level of educational attainment	Proportions of labour force who are first-time entrants: Male, female Ages 15-24, 25-44 Urban, rural and total
3. Numbers and proportions of labour force who die, retire or emigrate per year (bench-mark estimates)	Sex, age Urban, rural or Geographical area Socio-economic group	Proportions of labour force who die or retire: Male, female Proportions of labour force who emigrate: Male, female Selected socio-economic groups

Fields of social concern and series	Classifications	Social indicators
4. Numbers and proportions of population not in the labour force, specified periods (annually)	Sex, age Type of activity Urban, rural Geographical area National or ethnic origin Size and type of household	Proportion of the population inactive: Male, female Ages 15-24, 25+ Urban only
5. Numbers and proportions of persons devoting time to, and average amounts of their time spent on work and work-related activities, specified periods (annually or less frequently)	Sex, age Urban, rural Time-use Socio-economic group Size and type of household Type of activity	Average number of weeks worked during year, all members of labour force (annually or less frequently): Male, female Ages, 10-14, 15-19, 20 and over Urban, rural and total
B. Employment opportunities and mobility		
1. Number and proportion of labour force unemployed, specified periods (annually or more frequently)	Sex, age Urban, rural or Geographical area Size and type of place Level of educational attainment Socio-economic group Size and type of household	Proportion of labour force unemployed: Male and female Urban only Ages 15-24, 25+ Proportion of married men unemployed: Urban and rural Ages 15-24, 25-29

Fields of social concern and series	Classifications	Social indicators
C. Employment compensation		
1. Total and per employee wages and salaries in current and constant prices, specified periods (annually or more frequently)	Sex, age Urban, rural Geographical area National or ethnic origin Occupation In cash, kind Kind of economic activity	Mean or median weekly or monthly wages and salaries: Male, female Total and selected occupations Urban, rural and total Geographical areas
2. Primary income, total and per recipient in current and constant prices, specified periods (annually or more frequently)	Sex, age Urban, rural Geographical area Kind of economic activity	Mean or median monthly primary income: Urban, rural and total Geographical areas
3. Mean or median hourly wage or salary rate at current and constant prices, specified periods (annually or more frequently)	Sex, age Urban, rural or Geographical area Level of education completed Kind of economic activity Occupation	Mean or median hourly wage rate: Male, female Total and selected categories of economic activity Urban, rural and total Geographical areas

Fields of social concern and series	Classifications	Social indicators
D. Working conditions		
1. Average hours of work, specified periods (annually or more frequently)	Sex, age Urban, rural Seasonal and part-time workers Socio-economic group Time-use	Average hours worked per week: Male, female Urban only Total and selected categories of economic activity
2. Rate per 100,000 work-hours, permanently disabling injuries and deaths (annually)	Sex, age Urban, rural Occupation Causes of death Impairments and handicaps	Rate per 100,000 work-hours, permanently disabling injuries and deaths, selected categories of economic activity
IV. Distribution of income, consumption and accumulation <u>a/</u>		
A. Level and growth of household income and accumulation		
1. Primary income per household and <u>per capita</u> (every two or three years and annual estimates)	Sex, age Size and type of household Urban, rural Land holding and tenure in case of agricultural households Socio-economic group	<u>Per capita</u> primary income: Urban, rural and total Geographical areas Annual rate of change, <u>per capita</u> primary income in constant prices: Urban, rural and total

a/ All series are in current and preferably, where feasible and applicable, constant prices.

Fields of social concern and series	Classifications	Social indicators
	Level of educational attainment	
	Percentile groups of households according to total household income	
2. Property income per household and <u>per capita</u> (every two or three years)	Land holding and tenure in case of agricultural households	<u>Per capita</u> property income: Urban, rural and total
	Socio-economic group	Geographical areas Annual rate of change, <u>per capita</u>
	Percentile groups of households according to total household income	property income: Urban, rural and total
3. Total household income per household and <u>per capita</u> (every two or three years and annual estimates)	Urban, rural	<u>Per capita</u> total household income:
	Socio-economic group	Urban, rural and total
	Percentile groups of households and <u>per capita</u>	Primary income as a percentage of total household income:
	Size and type of household	Urban, rural and total
		Property income as a percentage of total household income:
		Urban, rural and total
4. Total available household income per household and <u>per capita</u> (every two or three years and annual estimates)	Size and type of household	Total available household income <u>per capita</u> :
	Land holding and tenure in case of agricultural households	Urban, rural and total
		Geographical areas Socio-economic groups

Fields of social concern and series	Classifications	Social indicators
5. Gross capital formation in households per household (every two or three years)	Socio-economic group Urban, rural Percentile groups of households according to total household income In cash, kind	Annual rate of change, available household income <u>per capita</u> in constant prices: Urban, rural and total Ratio of available household income to total household income Urban, rural
B. Level and growth of consumption		
1. Final consumption expenditure of households, total and categories of goods and services, per household and <u>per capita</u> (annually or less frequently)	Urban, rural Geographical area Socio-economic group Percentile groups of households according to total household income Household goods and services In cash, kind	<u>Per capita</u> and per household final consumption of households: Urban, rural and total Geographical areas Annual rate of change, <u>per capita</u> final consumption of households in constant prices: Urban, rural and total Consumption of food and beverages as a percentage of total final consumption: Urban, rural and total Geographical areas

Fields of social concern and series	Classifications	Social indicators
2. Total consumption of the population per household and <u>per capita</u> (annually or less frequently)	Urban, rural Geographical area Socio-economic group Percentile groups of households according to total household income	Consumption expenditure on food as a percentage of total household income (infrequently): Urban, rural and total Geographical areas Quantity index of consumption expenditure on <u>clothing per capita</u> : Urban, rural and total Geographical areas Total consumption of the population <u>per capita</u> and per household: Urban, rural and total Annual rate of change, total consumption of the the population <u>per capita</u> in constant prices Government expenditures in total consumption of the population as percentage of total consumption of the population Ratio of household consumption to total consumption of population: Urban, rural

Fields of social concern and series	Classifications	Social indicators
C. Inequality and redistribution of income and consumption		
1. Current transfers and other benefits (every two or three years)	Socio-economic group	Receipts of current transfers by households as a percentage of available household income: Urban, rural and total
(a) <u>Payments per household and per capita</u>	Percentile groups of households according to total household income	
(b) <u>Receipts per household and per capita</u>	Urban, rural or Geographical area	
(c) <u>Net per household and per capita</u>		
2. Total and <u>per capita</u> amounts of selected indirect taxes and subsidies (estimates for occasional years)	Socio-economic group	Selected indirect taxes and subsidies as a percentage of household available income: Urban, rural and total
	Urban, rural	
3. Lorenz curves: total available household income and final consumption expenditures of households (per household) (infrequently)	Urban, rural Geographical area National or ethnic National or ethnic origin	Gini ratios, available household income or total household income: Urban, rural and total
		Gini ratios, consumption expenditures of households: Urban, rural and total
		Percentages of available household income accruing to percentile groups of households: Groups (lower to upper) 0-50, 50-100, 95-100

Fields of social concern and series	Classifications	Social indicators
V. Health, health services and nutrition		
A. State of health		
1. Mortality and length of life		
(a) Number and rates of deaths (annually; some classifications less frequently)	Sex, age Urban, rural Geographical area Socio-economic group Causes of death (broad groups)	Proportions among live births of infant and maternal deaths: Urban, rural and total Geographical areas Rates of death: Ages 1-4, 5-14 Male, female, ages 15-24, 25-44 Urban, rural and total
(b) Expectation of years of life, selected ages (annually or less frequently)	Sex, age Urban, rural National or ethnic origin Socio-economic group	Expectation of life: Male, female Ages 0, 1, 15, 45 Urban, rural and total
2. Morbidity, impairments and handicaps		
(a) Number and/or incidence of selected communicable diseases of public health importance (annually)	Sex, age Urban, rural Geographical area Selected diseases	Number and/or incidence in the population of selected communicable diseases of public health importance
(b) Number and proportion of persons with selected chronic functional disabilities, specified periods (infrequently)	Sex, age Urban, rural Impairments and handicaps	Rate in the population of blindness, one or more limbs missing, etc.: Male, female Urban, rural, total

Fields of social concern and series	Classifications	Social indicators
B. Nutrition		
1. <u>Per capita energy</u> (calories) intake and food consumption, specified periods (infrequently)	Sex, age Urban, rural Geographical area Classification of foods according to energy values Classification of population according to energy requirements Percentile groups of households according to total household income	Percentages of the population with adequate energy (calories) intakes; Ages 0-1, 1-4, 15+ 5-14, 15+ Pregnant and nursing mothers Urban, rural and total Geographical areas
2. <u>Per capita intake of protein</u> , specified periods (infrequently)	Sex, age Urban, rural Geographical area Classification of foods according to protein content Classification of population according to safe levels of protein intake	
3. <u>Total and per capita supply of energy</u> (calories), specified periods (annually)	Geographical area Classification of foods according to energy values	<u>Per capita supply of energy</u> (calories), specified periods: Urban, rural and total Geographical areas Quantity index of food consumption or food supplies <u>per capita</u> : Urban, rural and total Geographical areas

Fields of social concern and series	Classifications	Social indicators
4. Rate of subclinical protein-calorie malnutrition among children (infrequently)	Age Urban, rural Geographical area Nutrition standards Classification of anthropometric standards Socio-economic group	Percentage of children with subclinical protein-calorie malnutrition: Ages 0-4, 5-14 Urban, rural and total Geographical areas
C. Availability, use and performance of health services		
1. Proportion of births attended by physicians or trained auxiliary personnel (annually)	Urban, rural Geographical area Socio-economic group	Proportions of births so attended: Urban, rural and total Geographical areas
2. Number and ratio in the population of health services personnel (annually or less frequently)	Geographical area Level of educational attainment Services	Ratio per 100,000 persons of health services personnel: Geographical areas
3. Number and ratio to the population of hospital beds (annually)	Geographical area Service Institutional sector	
4. Number and rate in the population of hospital beds (annually)	Geographical area Classification of diseases (broad groups) Socio-economic group	

Fields of social concern and series	Classifications	Social indicators
5. Percentage of the population served by and number and rate of visits of the population to primary health service posts (infrequently)	Urban, rural Geographical area Classification of diseases (broad categories)	Proportion of the population visiting trained health personnel (annually or less frequently): Urban, rural and total Geographical areas
6. Total and <u>per capita</u> total consumption expenditures on health services (annually or less frequently)	Geographical area Goods and services Institutional sector	Total annual consumption expenditures on health services as a percentage of GDP
7. Proportions of children immunized against specified diseases (less than annually)	Age Urban, rural or Geographical area Classification of diseases	Proportion aged 5-14 immunized against diphtheria, pertussis, tetanus, poliomyelitis, measles (examples): Urban, rural and total Geographical areas

VI. Housing and its environment

1. Stock and characteristics of living quarters (bench-mark, and more frequent estimates)	Urban rural Geographical area Characteristics of living quarters	Percentage of living quarters with one room only: Urban, rural Percentage of living quarters which are conventional permanent dwellings: Urban, rural Percentage of living quarters with piped water supply indoors or within 100 metres: Urban, rural
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Fields of social concern and series	Classifications	Social indicators
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		Percentage of living quarters with electric lighting Urban, rural
		Percentage of living quarters with telephones: Urban, rural
2. Number and gross rate of additions to stock of conventional dwellings (annually or less frequently)	Urban, rural Geographical area (Size and type of place - lower priority) (Characteristics of living quarters - lower priority)	Gross rate of additions to stock of conventional dwellings: Urban, rural and total Large places Geographical areas
3. Ratio of family nuclei to households and dwelling units (infrequently)	Urban, rural Geographical area	Ratio of family nuclei to households (infrequently): Urban, rural and total
4. Personal consumption expenditure on housing in current or preferably constant prices (annually or less frequently)	Urban, rural Socio-economic group Percentile distribution of households according to total household income Size and type of household	Household consumption expenditure on housing as a percentage of total household consumption expenditure: Urban, rural Geographical areas Large places Ratio of household consumption expenditure for housing to total consumption expenditures of the population for housing: Geographical areas Large places

Fields of social concern and series	Classifications	Social indicators
5. Gross fixed capital formation in residential buildings (annually or less frequently)	Urban, rural or Geographical area Institutional sector	Gross fixed capital formation in residential buildings as a percentage of total gross fixed capital formation
6. Distribution of population according to characteristics of occupied living quarters (every 5 or 10 years; selected estimates more frequently)	Characteristics of living quarters by selected cross-classifications according to: Urban, rural Geographical area Socio-economic group Size and type of household	<p>Percentage of persons living in squatter or shanty housing (annually or less frequently): Large places</p> <p>Percentage of the population homeless: Urban, rural and total Large places</p> <p>Percentage of the population occupying living quarters at densities of 3 or more persons per room: Urban, rural and total Large places Geographical areas</p> <p>Percentage of the population with indoor piped water supply or with access to a piped water supply within 100 metres: Urban, rural and total Large places</p>

Fields of social concern and series	Classifications	Social indicators
		Percentage of the population occupying living quarters with toilets: Urban, rural Large places Exclusive/shared
		Percentage of the population occupying living quarters with flush toilets: Urban only
		Percentage of the population in living quarters with electric lighting: Urban, rural and total Geographical areas
7. Households according to type of tenure in living quarters (every 5 or 10 years)	Urban, rural Geographical area Socio-economic group Percentile distribution of households according to total household income	Percentage of households in owner-occupied living quarters: Urban, rural and total Geographical areas
8. Domestic household energy consumption per household and <u>per capita</u> , specified periods (annually)	Urban, rural Geographical area Energy source	Domestic household energy consumption <u>per capita</u> : Urban, rural and total Large places

Fields of social concern and series	Classifications	Social indicators
9. <u>Per capita time-use for journey-to-work and travel in connexion with household activities, specified periods (infrequently)</u>	Sex, age Urban, rural Size and type of place Type of activity Time-use Socio-economic group	

Secondary fields within a framework

VII. Family formation, families and households

1. Numbers (annually) and rates (infrequently) of first marriages	Sex, age Urban, rural National or ethnic origin	Average age at first marriage: Male, female Urban, rural and total Proportion of the population ever married, selected ages: Male, female Urban, rural and total
2. Number and percentage distribution of households (less than annually)	Urban, rural Size and type of households Size and type of family nuclei National or ethnic origin	Number and percentage of multiperson household with one member only over age 20: Urban, rural and total Percentage of households with more than two children Urban, rural and total

Fields of social concern and series	Classifications	Social indicators
		Percentage of population with more than two children: Urban, rural and total
		Percentage of population living in family nuclei: Urban, rural
		Ratio of family nuclei to multiperson households: Urban, rural
VIII. Leisure and culture		
1. Total household consumption expenditure on leisure goods and services in current or preferably constant prices (infrequently)	Urban, rural Geographical area Household goods and services	<u>Per capita</u> household consumption expenditure on leisure goods and services (annually or less frequently): Urban, rural Socio-economic groups
2. Total consumption of the population on leisure goods and services in current or preferably constant prices (infrequently)	Geographical area Government purposes Goods and services	Total consumption expenditure of the the population <u>per capita</u> on leisure goods and services (infrequently)
3. Number of cinema, sports stadium and similar recreation-facility seats and ratio to the population and admissions <u>per capita</u> (annually or less frequently)	Urban, rural Geographical area Size and type of place Goods and services	Cinema and sporting admissions <u>per capita</u> : Urban only Large places

Fields of social concern and series	Classifications	Social indicators
4. Number, frequency distribution and <u>per capita</u> rate of newspaper and magazine circulation in the population, specified periods (annually or less frequently)	Urban, rural Geographical area Socio-economic group	Daily or weekly newspaper circulation <u>per capita</u> : Urban, rural and total
5. Number and <u>per capita</u> rate of books available in the population, at public libraries (annually or less frequently)	Urban only Geographical area Size and type of place	Number of books available <u>per capita</u> in public libraries: Urban only Geographical areas
6. Proportion of households with radios (annually or less frequently)	Urban, rural Geographical area Household goods and services	Proportion of households with radios: Urban, rural and total Geographical areas
IX. Social security and welfare services		
1. Proportions of persons and households at risk covered by social security and similar schemes by type (annually or less frequently)	Sex, age (where applicable) Urban, rural or Geographical area Type of benefit Type of activity Socio-economic group	Percentage of the labour force covered by old-age insurance or similar pension schemes: Male, female Urban only
2. Proportion of potentially eligible persons and households receiving social insurance, social assistance and similar benefits, by type of programme and average benefits per person and per household in current, or, preferably, constant prices (annually or less frequently)	Sex, age (where applicable) Urban, rural or Geographical area Type of benefit Socio-economic group	Percentage of the labour force receiving unemployment or similar benefits: Male, female Urban only Percentage of the population aged 65+ receiving old-age pensions or similar assistance: Male, female Urban, rural

Fields of social concern and series	Classifications	Social indicators
X. Public order and safety		
1. Numbers of selected offences and rates (annually; detail less frequently)	Urban, rural Geographical area Offences	Rate of homicides in the population: Urban only Large places Rate of assaults and robberies in the population: Large places only
2. Numbers and rates of persons detained and charged (annually or less frequently)	Sex, age Urban, rural	Rate of detentions by legal authorities in the population: Male, female Urban only Inmates in correctional institutions, proportion in the population: Male, female Geographical areas
3. Numbers and proportions of population engaged in public order and safety activities.	Urban, rural or geographical area Size and type of place Goods and services	Proportion of population engaged in public order and safety activities: Urban only Large places

Annex II

SELECTED REFERENCES TO INTERNATIONAL GUIDELINES ON CONCEPTS, CLASSIFICATIONS AND DEFINITIONS

A complete list of references to international statistical services, series and standards may be found in the Directory of International Statistics (United Nations publication, Sales No. E.75.XVII.11). A revised edition will be published in 1979.

A. General sources

1. Population and housing censuses

The 1970 international recommendations are contained in the following:

Principles and Recommendations for the 1970 Population Censuses (United Nations publication, Sales No. 67.XVII.3), hereinafter cited as Principles (Population Censuses)....

Principles and Recommendations for the 1970 Housing Censuses (United Nations publication, Sales No. 67.XVII.4), hereinafter cited as Principles (Housing Censuses)....

New international recommendations will be issued in 1979.

Regional recommendations for population and housing censuses (hereinafter cited as the Regional Census Recommendations) supplement the international recommendations. The references are:

(a) Africa

Economic Commission for Africa, "African recommendations for the 1970 population censuses" and "African recommendations for the 1970 housing censuses" (E/CN.14/CAS.6/1 and E/CN.14/CAS.6/2). The 1980 recommendations will be issued in 1978/79.

(b) Asia

Economic and Social Commission for Asia and the Pacific, Asian and Pacific Recommendations for the 1980 Population and Housing Censuses (Bangkok, 1977).

(c) Europe

Recommendations for the 1980 Censuses of Population and Housing in the ECE Region (United Nations publication, Sales No. E.78.II.E.6).

(d) Latin America

Inter-American Standards for Population Statistics: Census and Inter-American Standards for Housing Statistics: Census (Washington D.C., Inter-American Program of Basic Statistics (PIEB), Organization of American States/Inter-American Statistical Institute) 7398a-sects. I.A. and II.A.

Economic Commission for Western Asia, "Final report of the Expert Group Meeting on Census Techniques", held at Beirut, Lebanon, 12-16 December 1977 (E/ECWA/POP/WG.9/2).

2. Education

Educational Statistics: National and International Sources and Services, Bulletin of the International Bureau of Education, No. 202 (Paris, United Nations Educational, Scientific and Cultural Organization, 1977).

International Standard Classification of Education (ISCED), (Paris, United Nations Educational and Scientific Organization, 1976). Also published in an Abridged Edition (Paris, 1975).

UNESCO, in collaboration with the relevant national authorities, has prepared several national handbooks to promote a common interpretation of ISCED. Each handbook relates the system of education in a country to ISCED by level and field. In 1975-1977 "ISCED Handbooks" (Series CSR/E) were issued for the United Kingdom (England and Wales), France, Egypt, Peru and the Sudan.

3. Health and nutrition a/

Manual of the International Standard Classification of Diseases, Injuries and Causes of Death, 2 vols. (Geneva, World Health Organization, 1975). The World Health Organization convened a South-East Asia Working Group on Lay Reporting of Morbidity and Mortality Statistics in November 1976. Limited field trials on this topic were carried out in several countries of the Western Pacific and South-Eastern Asia regions in 1977/78. Further testing will be undertaken based on the results of these trials. This revised classification has come into use as of 1 January 1979.

Energy and Protein Requirements and Methodology of Nutrition Surveillance, reports of a joint FAO/WHO ad hoc expert group committee, Technical Report Series Nos. 522 and 593 (Geneva, World Health Organization, 1973 and 1976).

Food and Nutrition Planning, Nutrition Consultants Reports Series, No. 35 (Rome, Food and Agriculture Organization of the United Nations, 1975).

The Fourth World Food Survey (Rome, Food and Agriculture Organization of the United Nations, 1977).

a/ See also "Vital statistics and fertility surveys" and "Agriculture censuses, surveys and indicators", sects. 5 and 6 below.

New Approaches in Health Statistics, Report of the Second International Conference of National Committee on Vital and Health Statistics, Technical Report Series, No. 559 (Geneva, World Health Organization, 1974).

"Recommendations and statements of WHO expert groups in relation to health statistics" (WHO/HS/NAT.COM/75.345).

4. Labour

International Recommendations on Labour Statistics (Geneva, International Labour Office, 1976).

International Standard Classification of Occupations (ISCO) 1968 (Geneva, International Labour Office, 1969).

Labour Force Estimates and Projections 1950-2000, vol. VI, Methodological Supplement (Geneva, International Labour Office, 1978).

Technical Guide to the Yearbook and Bulletin of Labour Statistics, 2 vols., 6th ed. (Geneva, International Labour Office, 1978).

5. Vital statistics and fertility surveys

Principles and Recommendations for a Vital Statistics System (United Nations publication, Sales No. E.73.XVII.9).

The World Fertility Survey: January 1977-December 1977, Annual Report (The Hague and London, International Statistical Institute, 1978). This publication contains a bibliography and progress report on programme documentation. See also the Scientific Reports series of ISI/WFS, 1977- , occasional.

6. Agriculture Censuses, Surveys and Indicators (publications of the Food and Agriculture Organization of the United Nations at Rome)

Programme for the 1980 World Census of Agriculture (1976).

"A guide for the collection of statistics on agricultural population and employment" (ESS/12).

Manual on Household Food Consumption Surveys, Nutritional Studies, No. 18 (1962).

Programme of Food Consumption Surveys (1963).

"Towards a work-programme of economic and social indicators pertaining to food and agriculture", FAO Statistics Advisory Committee of Experts, Report on the Sixth Session, held at Rome 3-11 October 1973 (ESS:SAC/73/3).

It should be noted that despite the importance of food and nutrition as an important area of social concern in many developing countries, very few countries have conducted suitable food consumption surveys from which disaggregated data on

the levels and patterns of food intake can be analysed. Even where such surveys have been conducted there has been the problem of interpreting data on nutritional intake against requirements, mainly due to the limited knowledge available on the nutritional requirements of individuals under different conditions of activity and environment. A great deal of information needs to be collected for different ecological zones and further classified by important socio-economic characteristics of households. This would for instance be particularly useful in identifying, enumerating and locating the disadvantaged groups at low levels of nutritional status and the reasons for their state. The integration of such surveys with anthropometric and clinical surveys, undertaken on individual members of households, would also be useful in relating food intake with levels of health and nutritional status.

7. Economic statistics

A System of National Accounts (SNA) (United Nations publication, Sales No. E.69.XII.3): table 5.1, definition of the institutional sectors and subsectors; table 5.3, classification of the purposes of government; table 6.1, classification of household goods and services.

Basic Principles of the System of Balances of the National Economy (United Nations publication, Sales No. E.71.XVII.10).

Provisional Guidelines on Statistics of the Distribution of Income, Consumption and Accumulation of Households (United Nations publication, Sales No. E.77.XVII.11).

International Standard Industrial Classification of All Economic Activities (ISIC) (United Nations publication, Sales No. 68.XVII.8).

"Draft International Standard Classification of All Goods and Services (ICGS)" (E/CN.3/493), introduction and parts I-IV. (United Nations publication is in preparation.)

B. Guidelines in principal fields

1. Population

(a) Sex, age

Principles (Population Censuses) ..., paras. 176-178 and 276, and the Regional Census Recommendations.

(b) Urban, rural; size and type of place

No international recommendations have been issued. A classification of "localities" by size-class is given in Principles (Population Censuses) ..., ill. 2. These concepts are discussed in Principles (Population Censuses) ..., paras. 232-234 and 298-299, in the Regional Census Recommendations and in

"Statistical definitions of urban population and their uses in applied demography", Demographic Yearbook 1972 (United Nations publication, Sales No. E/F.73.XIII.1), pp. 5-12.

(c) Geographical area

Principles (Population Censuses) ..., paras 308-309. A classification using "major" and "minor" civil divisions and "principle localities" is given in Principles (Population censuses) ..., in the illustrations (ill. 4 and others). A review of national practices concerning the unit of geographical classification is provided by H. van der Haegen, "A world survey of small area statistics", in Th. Brulard and van der Haegen, eds. Small Area Statistics and Their Use for Social Geographical and Planological Research, Acta Geographica Lovaniensia, vol. 10 (Louvain, Belgium, Institute for Geography of the Catholic University of Louvain, 1972).

(d) National or ethnic origin

Principles (Population Censuses) ..., paras. 245-246.

(e) Size and type of household

Principles (Population Censuses) ..., paras. 146-147 and the Regional Census Recommendations. A classification of households by size is given in Principles (Population Censuses) ..., ill. 4.

2. Learning and educational services

(a) Level and field of education

International Standard Classification of Education (ISCED) and the Abridged Edition.

(b) Concepts and definitions of regular education (full-time and part-time) may be found in ISCED; of adult education (formal and non-formal) in Manual for the Collection of Adult Education Statistics (Paris, United Nations Educational, Scientific and Cultural Organization, 1975); and of special education in "Statistics on special education" (Paris, United Nations Educational, Scientific and Cultural Organization, 1975), (mimeo).

3. Earning activities and the inactive; distribution of income, consumption and accumulation

(a) Type of activity (employed, unemployed, not economically active)

Principles (Population Censuses) ..., paras. 288-297; and International Recommendations on Labour Statistics, chap. 2.

(b) Underemployment

"Resolution concerning measurement and analysis of underemployment and under-utilization of manpower", adopted by the Eleventh International Conference of Labour Statisticians (1966) reprinted in ibid.

(c) Occupation

International Standard Classification of Occupations (ISCO) 1968.

4. Distribution of income, consumption and accumulation

(a) Percentile distributions of income

Provisional Guidelines on Statistics of the Distribution of Income ..., total household income (annex I, table 4a), total household income per capita (table 5a), total available household income (table 8a), compensation of employees (table 15a) and entrepreneurial income (table 16a).

(b) Socio-economic class or group

Ibid., table III.1, and European Regional Census Recommendations, paras. 77-81 and annex. For further discussion see Principles (Population Censuses) ..., paras. 277-280.

5. Health, health services and nutrition

(a) Diseases, injuries and causes of death

Manual of the International Standard Classification of Diseases, Injuries and Causes of Death, 2 vols.

(b) Impairments and handicaps

A draft Classification of Impairments and Handicaps was issued in 1977 by the World Health Organization at Geneva, for trial purposes.

(c) Health services

(i) A draft Classification of Prophylactic, Diagnostic and Therapeutic Procedures in Medicine was published in 1977 by the World Health Organization at Geneva, for trial purposes.

(ii) Item 4, Health, in Classification of the purposes of government, SNA, table 5.3.

(iii) Group 9331, Medical, dental and other health services, in ICGS.

(d) Nutrition standards and classifications

Discussed in Energy and Protein Requirements and Methodology of Nutrition Surveillance.

6. Housing and its environment

(a) Characteristics and facilities of living quarters

Principles (Housing Censuses) ..., para. 239, and the Regional Census Recommendations.

(b) Type of tenure in living quarters

Principles (Housing Censuses) ..., paras. 327-329.

See also Statistical Indicators of Housing Conditions, United Nations publication, Sales No. E.62.XVII.7.

C. Guidelines in secondary fields

1. Family formation, families and households

Size and type of family nuclei

Principles (Population Censuses) ..., paras. 215-216.

2. Time-use

No applicable international guidelines have been issued. Illustrative classifications from several national and international survey programmes may be found in Studies in Integration ..., annex III, section VI.

3. Leisure and culture

The General Conference of UNESCO has adopted recommendations concerning the international standardization of statistics on the following subjects in this field: library statistics (1970), book production and periodicals (1964), radio and television (1976). Further information may be found in the UNESCO Statistical Yearbook and in the published texts of the recommendations. The Yearbook also provides statistics of film and cinema and discusses the applicable concepts, classifications and definitions.

4. Social security and welfare services

(a) Type of programme

No applicable international guidelines have been issued. An illustrative classification may be found in Cost of Social Security (Geneva, International Labour Office, latest issue, 1976).

(b) Type of welfare institution

Group 9340, Welfare institutions, ICGS.

5. Social stratification and mobility

No applicable international guidelines have been issued. Classifications in this field are normally drawn from other fields, for example level of education (item 2a above), occupation (item 3c above), income (item 4a above) and socio-economic class or group (item 4b above).

6. Public order and safety

No applicable international guidelines have been issued.

Annex III

SELECTED REFERENCES TO DOCUMENTS OF THE UNITED NATIONS REGIONAL COMMISSIONS ON DEVELOPMENT AND INTEGRATION OF SOCIAL, DEMOGRAPHIC AND RELATED ECONOMIC STATISTICS

Economic Commission for Africa

- "African Census Programme" (E/CN.3/447)
- "African Household Survey Capability Programme" (E/CN.3/473)
- "List of Household Data Requirements" (E/CN.14/CAS.9/10/Rev.1).

Economic and Social Commission for Asia and the Pacific

"Report of the Seminar on Statistics for Rural Development", held at New Delhi 5-10 April 1978 (E/ESCAP/STAT.3/1).

Expert Group meetings on measuring the social impact of population trends and development, held at Manila 3-9 October 1978, report in preparation.

Economic Commission for Latin America (ECLA) and Latin American Council on the Social Sciences (CLACSO/CELADE)

"A study of the economic and social classification of the Latin American countries", Economic Bulletin for Latin America, XVII/2 (United Nations publication, Sales No. E.72.II.G.7), pp. 26-97.

"Informe del Grupo de Trabajo Sobre un Sistema de Estadísticas Demográficas y Sociales", held at Santiago, Chile 11-15 December 1972 (E/CN.12/948).

"Informe de la Ia. Reunión del Grupo de Trabajo Sobre Sistema Integrado de Estadísticas Demográficas y Socio-Económicas", held at Mexico City, 2-6 December 1974 (CLACSO, Comisión de Población y Desarrollo, mimeo.).

Información e Investigación Sócio-demográfica en América Latina, Programa de Actividades Conjuntas ELAS/CELADE (PROELCE), Consejo Latinoamericano de Ciencias Sociales (Santiago, 1978).

ECLA and World Bank Development Research Center, Research Project on Measurement and Analysis of Income Distribution in Latin American Countries: Oscar Altimir, "Income distribution estimates from household surveys and population censuses in Latin America; an assessment of reliability" (mimeo., September 1975).

Oscar Altimir, "The extent of poverty in Latin America; a summary" (mimeo., July 1978).

Economic Commission for Western Asia

The Population Framework: Data Collection, Demographic Analysis, Population and Development (Beirut, 1978). This publication contains the technical background papers prepared for the Regional Seminar on Demographic Data Collection and Analysis which was held at Amman, Jordan from 30 October to 10 November 1976.

Annex IV

RESOLUTION 2055 (LXII) OF THE ECONOMIC AND SOCIAL COUNCIL ENTITLED
"NATIONAL HOUSEHOLD SURVEY CAPABILITY PROGRAMME"

The Economic and Social Council,

Taking note of the report of the Statistical Commission on its nineteenth session a/ and, in particular, of the high priority it assigned to the proposal by the Economic Commission for Africa for a regional programme of technical assistance to developing countries designed to enable them to establish or improve a continuing national household survey capability, and of the broad relevance of such a programme to other developing regions,

Recalling paragraph 74 of the World Population Plan of Action, b/ in which, inter alia, all countries that have not yet done so are encouraged to establish a continuing capability for taking household surveys,

Recalling also resolution 272 (XII) c/ adopted by the Economic Commission for Africa at its twelfth session and third meeting of the Conference of Ministers, in which it, inter alia, urged the undertaking of a multipurpose programme of household surveys for the collection of integrated demographic, social and economic data through the establishment of a field survey mechanism,

Recalling further the recommendation contained in paragraph 30 of the Programme of Action d/ adopted by the Tripartite World Conference on Employment, Income Distribution, Social Progress and the International Division of Labour, held at Geneva from 4 to 17 June 1976, in which, inter alia, international bodies and interested countries are invited to consider the feasibility of initiating a world-wide programme in support of household surveys,

Realizing that the renewed emphasis on approaching development efforts on an integrated basis, as exemplified by the decisions of the World Population Conference, the World Food Conference e/ and the World Conference on Employment,

a/ Official Records of the Economic and Social Council, Sixty-second Session, Supplement No. 2 (E/5910).

b/ Report of the United Nations World Population Conference, Bucharest, 19-30 August 1974 (United Nations publication, Sales No. E.75.XIII.3), chap. I.

c/ See Official Records of the Economic and Social Council, Fifty-ninth Session, Supplement No. 10, vol. I, part three.

d/ See E/5857.

e/ See Report of the World Food Conference, Rome, 5-16 November 1974 (United Nations publication, Sales No. E.75.II.A.3).

implies an increased need for countries to have integrated statistics available for the planning, management and evaluation of programmes arising from these efforts,

1. Considers that national sample surveys, carried out on a continuous and integrated basis, by focusing on the individual and the household, can provide important quantitative information on economic, social and demographic conditions, and changes therein, for the entire population and the special groups within it, including the most disadvantaged groups such as the rural poor;

2. Draws the attention of developing countries in all regions to the value of a continuing national household survey capability in serving their national needs for reliable and integrated statistics as a necessary complement to periodic census programmes;

3. Draws the attention of developing countries to the possibility of using additional funds available to them through their United Nations Development Programme country programme facility to support the establishment or upgrading of such national survey capabilities as an important component of developmental infrastructure;

4. Requests the Secretary-General and the United Nations Development Programme, in co-operation with the World Bank and in consultation with other multilateral and bilateral donor agencies, to convene a meeting, as soon as is practicable, to consider ways and means of carrying out this necessary and important development activity, including the provision of resources for needed intercountry technical advice and training in this statistical field;

5. Requests the Secretary-General, in co-operation with the regional commissions and the specialized agencies, to provide all necessary support for this programme and to submit a progress report to the Statistical Commission at its twentieth session.

2054th plenary meeting
5 May 1977

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