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INTERNATIONAL DEFINITION AND MEASUREMENT OF
LEVELS OF LIVING

Progress report by the Secretary-General

TABLE OF CONTENTS

	<u>Paragraphs</u>
<u>Introduction</u>	1-6
<u>Part I</u>	
<u>Components, indicators and basic information for the measurement of levels of living</u>	1-62
Components and specific indicators	12-46
Health	12-16
Food consumption and nutrition	17-21
Education	22-27
Employment and conditions of work	28-35
Housing	36-41
Social Security	42-43
Clothing	44
Recreation and entertainment	45
Human freedoms	46
General indicators	47-50
Basic information	51-62
Population and labour force	52-53
Income and expenditure	54-60
Communications and transportation	61-62

TABLE OF CONTENTS (continued)

	<u>Paragraphs</u>
<u>Part II</u>	
<u>International activities related to the definition and measurement of levels of living</u>	63-105
Health: activities of WHO	63-68
Food consumption and nutrition: activities of FAO	69-73
Education: activities of UNESCO	74-78
Employment and conditions of work: activities of ILO	79-86
Housing: activities of the United Nations	87-89
Social Security: activities of ILO	90-92
Collection of data: activities of the United Nations and the specialized agencies	93-105

INTERNATIONAL DEFINITION AND MEASUREMENT OF
LEVELS OF LIVING

Progress Report by the Secretary-General

Introduction

1. The Report of the Committee of Experts on the International Definition and Measurement of Standards and Levels of Living^{1/} was prepared in accordance with resolution 434 13 (XIV) of the Economic and Social Council which requested the Secretary-General, in co-operation with the International Labour Organisation and other appropriate specialized agencies "to convene a small group of experts to prepare a report on the most satisfactory methods of defining and measuring standards of living and changes therein in the various countries, having regard to the possibilities of international comparisons".
2. The Expert Committee concluded that the most satisfactory approach to the international measurement of levels of living was through the measurement of clearly delimited aspects or parts of the total life situation that were amenable to quantification and that reflected generally accepted aims of social and economic policy at the international level. Separate fields such as health, nutrition, housing, employment conditions and education were considered "components" of levels of living and the specific factors within each component used in statistical measurement were termed "indicators", in the sense in which, for example, calorie consumption measures one aspect of nutrition and literacy rate measures one aspect of education.
3. The recommendations of the Expert Committee have been discussed in debates in the Economic and Social Council, in the Social Commission and in the Statistical Commission. Comments have been received from Member Governments and from central statistical agencies.^{2/} The specialized agencies have made periodic reports on progress and developments within their respective spheres.^{3/} These debates and discussions have resulted in a continuous review of the recommendations made by the Expert Committee.

^{1/} United Nations Publication, Sales No. 1959.IV.5.

^{2/} Comments of Governments on the Report on International Definition and Measurement of Levels of Living (E/CN.3/213).

^{3/} The latest reports from the specialized agencies were made in response to a request from the Secretary-General for contributions to this progress report.

4. At the same time the proposals of the Expert Committee have provided, within the limitations imposed by the availability of statistics, a framework for the second report on the World Social Situation for certain field work and for the reports by the specialized agencies on trends within their fields. There has therefore been an opportunity to experiment with the proposed components and indicators and this opportunity to check the theory against its practical application is likely to increase as more data become available.

5. The interest which has been reflected in recent debates within the United Nations on the relationship between social policy and economic development, and on economic and social programming, has focussed attention on the definition and measurement of levels of living from another angle, since the indicators that are used to measure trends on an international level are in many cases the same indicators that are used in formulating the aims of social programmes and in evaluating progress at the national level.

6. For these reasons and in accordance with the request of the Economic and Social Council (resolution 585 B (XX)) to present at future sessions of the Statistical Commission, the Social Commission and the Council a progress report on the work done with a view to the development of measurement of levels of living, it has been considered appropriate to prepare a progress report which will reflect the current thinking and activities of the United Nations and the specialized agencies relating to this question. A draft report prepared on the basis of contributions from the specialized agencies and the United Nations was considered by an inter-agency group of specialists - the Working Party on Social Statistics for Social Programmes - which met in Geneva in September 1959. The first part of this report is based on the recommendations of the Working Party on specific components and indicators. The second part deals with related activities of the United Nations and the specialized agencies.

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PART I

Components, Indicators, and Basic Information for the
Measurement of Levels of Living

7. The inter-agency Working Party on Statistics for Social Programmes which met in Geneva in September 1959 adopted as a basis for its discussion the system of components and indicators recommended by the Committee of Experts. The components recommended by the Expert Committee included the following:

- (1) Health, including demographic conditions
- (2) Food and nutrition
- (3) Education, including literacy and skills
- (4) Conditions of work
- (5) Employment situation
- (6) Aggregate consumption and savings
- (7) Transportation
- (8) Housing, including household facilities
- (9) Clothing
- (10) Recreation and entertainment
- (11) Social security
- (12) Human freedoms

8. As the Working Party noted, some of the components appear to be more directly related to the measurement of levels of living than others. Some of the indicators under the employment component reflecting the structure of employment, although closely related to levels of living, should not be regarded as direct measures of these levels. It is doubtful whether transportation should be considered a component of the level of living: transportation is primarily a means to the achievement of other goals, and in some circumstances may represent a social cost. The macro-economic indicators included under aggregate consumption and savings are significant indicators of the level and structure of the economy as a whole, but do not provide a direct measure of levels of living in the same way as the components dealing with levels of education and nutrition, for example.

9. It is therefore proposed that the following should be considered as components of levels of living:

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- (1) Health
- (2) Food consumption and nutrition
- (3) Education
- (4) Employment and conditions of work
- (5) Housing
- (6) Social security
- (7) Clothing
- (8) Recreation
- (9) Human freedoms

10. It is recommended that those items such as aggregate consumption and savings and transportation, that are closely related to levels of living but are not direct measures of levels of living in the same sense as the above components, should none the less be considered (in somewhat revised form) as providing basic information necessary for the interpretation of levels of living. It is proposed that a further category should be added to this group of essential background items, namely an item dealing with population and labour force, and that the transportation category should be widened to include data on communications. The categories recommended under the general heading of basic information are therefore the following:

- (1) Population and labour force
- (2) Income and expenditure
- (3) Communications and transportation
 - (a) Mass communications
 - (b) Post and telecommunications
 - (c) Transportation

11. The Working Party reviewed the indicators proposed for the measurement of levels of living under the different components and noted that some of the indicators appear to be more useful for international comparisons than others; certain indicators which are more directly affected by climatic and geographical differences, for example, are nevertheless important for national purposes. It also considered that while most indicators provide measures under specific components, others are affected by a great variety of factors and may be considered as non-specific or general indicators. The resulting recommendations

on indicators to be included under the components or as general indicators, and on the type of data to be included as basic information, are given in the following paragraphs:

1. Components of levels of living

Health:

12. The following priority indicators are recommended under this component:

- (1) Expectation of life at birth
- (2) Infant mortality rate
- (3) Crude annual death rate

These three indicators have long been used as measures of general levels of health, in addition to being closely related to other components of levels of living.

Expectation of life at birth is considered theoretically the best indicator of levels of health. The infant mortality rate has traditionally been regarded as one of the best measures of environmental sanitation closely correlated with the general levels of economic and social development. The crude death rate is included in spite of its dependence on the age structure of the population and because it reflects the intensity of mortality in a given country or area because of its greater availability.

13. The use of these indicators is however limited by lack of reliable data for many countries and territories of the world. The next round of censuses which will make available data on age structure of population should increase the number of countries for which it will be possible to make estimates of the expectation of life. The real difficulty is that data involving fertility and mortality rates cannot be more reliable than the registration of births and deaths from which the data are derived. Since the completeness of registration is in turn related to the general level of social and economic development of the country concerned, the problem of obtaining reliable data for the less-developed countries is a very real one.

14. Mortality from specific causes and particularly the percentage of deaths from parasitic and infectious diseases have frequently been proposed as indicators of levels of health. However, in the countries where this latter ratio would be of the greatest significance, medical certification of causes of death is either not available or unreliable. Since mortality from specific causes is influenced by the geographical distribution of specific diseases, such data are of use in formulating national health programmes, but do not provide a good indicator of general levels of health.

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15. The two indicators of health facilities originally recommended by the Expert Committee, the number of hospital beds and the number of physicians in relation to the population, are not considered satisfactory measures of medical services. Although these indicators are available for a larger number of countries than other indicators that have been recommended and although they may be useful for national purposes, they are not satisfactory as measures of levels of health, since the effectiveness of these services depends to a considerable extent on the way in which they are organized, on their distribution and on the professional qualifications of the medical personnel. More information on the availability and utilization of medical and health services is expected from pilot studies in local health services that have recently been carried out.

16. Within this general field the focus of interest has tended to move from the measurement of mortality to the measurement of morbidity. Morbidity has been defined, types of illness classified and indicators of morbidity proposed in terms of the prevalence or incidence of morbidity over a period or at a point of time. Although no indicators of morbidity are recommended in this report for international use, data from morbidity surveys are widely used for formulating national health programmes and for adding to the general background information on levels of health in the countries concerned.

Food consumption and nutrition:

17. The following indicators are recommended under this component:

- (1) National average food supplies in terms of calories at the "retail" level compared with estimated calorie requirements;
- (2) National average food supplies in terms of total proteins at the retail level;
- (3) National average food supplies in terms of animal protein at the retail level;
- (4) Per cent of total calories derived from cereals, roots, tubers and sugars.

18. The first indicator relates purely to the quantitative aspects of the diet. Recommendations, based on present scientific knowledge, have been made by the FAO Committee on Calorie Requirements for estimating calorie requirements in relation to selected physiological and biometric characteristics of different

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population groups, although the important characteristic of physical activity cannot yet be taken into account.

19. It is noted that no satisfactory and practicable indicators of actual nutritional status of people have yet been developed, although the second and third indicators have a bearing on it, since they may be regarded as partial indicators of the nutritional quality of the diet. These are different in character from the first indicator in that no optimum levels of requirements for total or animal protein have yet been established on an internationally acceptable basis, since they depend, among other things, on the composition of the diet in respect of other nutrients. The quantity of animal protein is probably a better indicator than total protein, since foods of animal origin are also comparatively good sources of other essential nutrients such as vitamins and minerals. However, recent advances in nutritional science have tended to lay less stress on the superiority which has been traditionally ascribed to animal proteins.

20. The fourth indicator which has been proposed indicates the quality of the diet indirectly. Cereals, starchy roots and tubers and sugars contain large amounts of carbohydrates and are relatively poor in proteins and other essential nutrients. This proportion therefore gives an approximate idea of the value of the diet as a whole, since the lower the proportion of these foods in the diet, the higher generally would be the proportion of the more nutritious foods. Thus the indicator has a negative correlation with nutritive value, and with the two previous indicators. However, it cannot be relied upon in all cases, since nutritive value is influenced not only by these proportions but also by the precise nature of the foods comprising the group of cereals, starchy foods and sugar, and also by that of the rest of the foods in the diet. Nevertheless, it has the merit of simplicity, and since in almost all countries cereals or starchy roots and tubers are staple elements of the diet, it is fairly widely applicable.

21. These indicators have usually been calculated from data on national food supplies classified by different categories of foods and reflect the limitations of these data resulting from inadequacy in coverage and unreliability in estimates. However, in recent years a much greater use of surveys of household food consumption makes it possible to use data from these surveys as a check on the national supply figures.

Education:

22. The following priority indicators are recommended:

- (1) "Adult literacy rate" - percentage of population, male and female, 15 years old and over, able to read and write;
- (2) "Total school enrolment ratio" - total enrolment in all schools below the level of higher education as a percentage ratio to the population aged 5-19 inclusive. This indicator may, where appropriate, be subdivided into the following two indicators:
 - (a) "Primary school enrolment ratio" - total enrolment in all primary schools as a percentage ratio to the population aged 5-14 years inclusive;
 - (b) "Secondary school enrolment ratio" - total enrolment in all secondary schools as a percentage ratio to the population aged 15-19 years inclusive.
- (3) "Higher education enrolment ratio" - total enrolment in institutions of higher education per 100,000 population.

23. There is also agreement on the usefulness of the following supplementary indicators of education:

- (1) "Index of educational attainment" - median number of years of formal schooling completed by the population, male and female, 25 years old and over;
- (2) "Pupil teacher ratio" - average number of pupils per teacher in all primary schools, urban and rural.

24. Data on school enrolment and literacy are available for a relatively large number of countries but important qualifications have to be made when using these data in international surveys. For example, data on attendance or absenteeism as well as enrolment are needed, but data on attendance are not generally available except through censuses and surveys.

25. Figures on enrolment also need to be supplemented by data on the extent to which children drop out of the educational system before completing the full primary or secondary education provided.

26. It should be noted that the population groups used in connexion with school enrolment ratios have been chosen on an empirical basis to correspond with the

demographic data most likely to be available, although in many instances they do not correspond exactly to the school-going population.

27. It is still not considered possible to recommend indicators of technical education because of the difficulty of defining the different levels and forms of technical education in such a way as to provide comparable data. Great importance is attached to the development and standardization of data in this area.

Employment and conditions of work

28. The Working Party agreed that the indicators included by the Expert Committee under the two components "employment" and "conditions of work" are closely related and can more conveniently be considered as a single component. The following priority indicators are accordingly recommended under this component:

1. Proportion of persons unemployed in the total labour force
2. Ratio of male labour force in agriculture to total male labour force
3. Relative real wages (including wage fringe benefits) in selected occupations.

29. The proportion of persons unemployed in the total labour force is recognized as a significant indicator under this component in countries where comprehensive statistics of the wholly unemployed are available, or where fairly reliable estimates can be made. It is realized, however, that useful unemployment data are not available for most under-developed countries and that even in the economically more advanced countries the unemployment ratio needs to be interpreted with caution, since small differences may be explained in part by differences in such factors as the industrial structure, seasonality of industries, mobility of labour and the rate of economic development.

30. It has been pointed out many times that in the less developed areas underemployment is frequently of greater economic and social significance than complete unemployment. Progress has been made in defining underemployment (see Part II of this report), but it is considered premature to recommend any indicator of underemployment for international use.

31. It is proposed that since many of the indicators reflecting the structure of the labour force originally proposed by the Expert Committee under the

employment component cannot be considered unambiguous measures of levels of living, these should be included as basic information rather than as indicators of levels of living. It is, however, recommended that one of this group of indicators, "the ratio of male labour force in agriculture to total male labour force" should be retained as an indicator under the present component. The ratio is expressed in terms of the male agricultural labour force because of the lack of uniformity among countries as regards the classification in censuses of women in farm households.

32. The significance of real wages as an indicator of the level of living of workers has been stressed. In this connexion emphasis has recently been put on the need to systematize wage data. Wage rates alone have little significance as they are frequently minima based on normal hours of work and differ in varying degrees from earnings; in many countries "wage fringe benefits" which are computed separately from wages paid for work done, have become such a large proportion of total payments to workers by their employers that their omission invalidates comparisons of wages between countries. The importance of determining which fringe benefits should be regarded as wages has been emphasized.

33. The Working Party agreed that since the average wage of broad groups of workers is influenced by such factors as the proportion of females and juveniles in the group of workers considered, and the relative importance of different industries within the scope of the statistics, it is preferable to compare wage levels of workers in similar occupations. It is accordingly proposed that a short list of occupations be drawn up for use in connexion with this indicator.

34. It is recognized that comparisons of real wages over time within a particular country, provided an appropriate consumer price index is available, raise fewer problems than international comparisons. In the case of international comparisons there is no ready solution to the problem of how to convert wage data into a satisfactory common currency unit, or any other international unit. Account has to be taken of varying price structures and tastes. It is suggested that countries might be asked to supply, in addition to indices of real wages, wage data in money terms together with price data and supplementary information necessary to permit a study of relative wages between any two particular countries according to methods described in the ILO study, International Comparisons of Real Wages.

35. As the Working Party agreed, other indicators proposed by the Expert Committee under the component, conditions of work, such as "normal hours of work per week as laid down by law or by collective agreements for workers in industry" and "minimum age of eligibility for employment", should be considered as norms rather than as indicators of levels of living.

Housing:

36. The following priority indicators are recommended under this component:

- (1) Per cent of the population living in "dwellings"
- (2) Per cent of occupied dwellings with three or more persons per room (overcrowding)
- (3) Per cent of occupied dwellings with piped water.

37. A "dwelling" is defined for the purpose of a housing census in terms of a permanent building as distinct from semi-permanent rustic housing units such as huts and cabins, and mobile and improvised housing units. It is expected that more data for this indicator as well as for the second and third indicators recommended above will become available within the next few years, since many countries are planning to take housing censuses in conjunction with the next round of population censuses.

38. In addition to these priority indicators, the following supplementary indicators are recommended:

- (1) Per cent of the population living in substandard housing units (e.g. those classified as "rustic", "improvised" and "not intended for habitation")
- (2) Average number of persons per room, for occupied dwellings only
- (3) Per cent of occupied dwellings with flush toilet (urban)
- (4) Index of change in the number of dwellings in relation to population growth.

39. The first two of these indicators supplement the first two priority indicators. The third provides additional information on sanitary facilities. This indicator is limited to flush toilets, since problems of definition make it difficult to get reliable information on all types of sanitary installations, although it is agreed that a wider definition would be more meaningful.

40. Unlike the indicators where the data are obtained from housing censuses, the last supplementary indicator proposed, an index of change in the number of dwellings in relation to population growth, is available for many countries on

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an annual basis from figures of residential construction. It cannot, however, be used as an indicator of levels of housing without reference to the existing level of housing conditions, and since it is subject to considerable annual fluctuations, it is proposed that averages for a three- or five-year period would be preferable to an annual figure. This indicator is also more useful for national purposes than for international comparisons, particularly where less-developed countries are concerned, since registered housing construction may represent a widely varying proportion of actual housing construction.

41. It is realized that many of these data do not lend themselves easily to international comparisons because of differences in climate, kinship, composition of families, traditions and values. In all cases the statistics need to be supplemented by descriptive material, particularly on a regional basis, interpreting the local concept of housing, describing household facilities of significance in specific cultures and evaluating the level of community facilities.

Social security

42. The importance of this component is recognized and considerable progress has been made in systematizing social security statistics, but at the same time the Working Party agreed that while such statistics are important for assessing progress in national programmes, differences in the organization of social security schemes in the various countries make it extremely difficult to determine the extent of social security coverage and the number of participants and beneficiaries on a uniform international basis.

43. The principle difficulty in obtaining uniform and complete data arises from the diversity of arrangements found in the various countries for meeting social security needs. These arrangements vary from the voluntary private family self-help system to the provision of all social services out of general public revenues; the most common situation is that certain contributory and compulsory social security schemes covering a few specific risks are supplemented by general government services and by local government services covering other risks, and not infrequently by local government services covering other risks, and not infrequently also by voluntary schemes covering some of the same or

additional risks. For these reasons it is not yet considered possible to recommend indicators for international use under this component.

Clothing:

44. This component has been retained, even though it is not considered possible to recommend indicators for purposes of international comparison, since the adequacy of clothing as an element in the level of living is significantly affected by climate, occupation, and cultural factors.

Recreation and entertainment:

45. The difficulty of measurement in the case of this component is due to the differences that prevail in forms of recreation and entertainment and the virtual impossibility of getting internationally comparable data on the older and more traditional forms including that element in recreation and entertainment that arises from family and personal relationships. Indicators of the more modern forms of recreation and entertainment, such as the number of cinema seats, theatre seats, museum visits etc. per 100,000 population can be used, but they would give an inadequate and misleading picture of the level of this component in many parts of the world. It is suggested that efforts be made to obtain descriptive materials on the possible items under this head.

Human freedoms:

46. The Working Party noted that in the discussion on the recommendations of the Expert Committee there has been considerable agreement on the importance of this component, but doubt as to how it could be measured in quantitative terms. The Working Party agreed to retain this component but considered it still impracticable at the present time, from an international point of view, to recommend specific indicators.

2. General indicators

47. The indicators that have been recommended in the preceding section are considered as direct measures of particular components. Other indicators have been suggested which appear to be related to levels of living generally rather

than to a particular component. Two such general indicators that have been proposed are:

(1) Proportional mortality indicator, that is, the proportion of deaths at ages 50 and over to all deaths

(2) Expenditure on food as a percentage of household expenditure.

48. The proportional mortality indicator, although it is not considered a specific indicator of health because it is affected by present as well as past demographic conditions and other factors, has been shown empirically to be highly sensitive to differences in levels of living generally. It has the additional advantage that the primary data are comparatively simple to collect, and the method of construction is straightforward.

49. It has also been empirically demonstrated that there is an inverse correlation between expenditure on food as a percentage of total household expenditure and the real income level of selected population groups. Although this relationship is likely to be significantly affected by differences in market structure and level of government consumption expenditure, it should be considered a general indicator of levels of living and not a specific indicator of food consumption and nutrition.

50. It is suggested that there are other indicators which would appropriately belong in this category but further work would be necessary in order to establish their significance.

3. Basic information

51. The following categories are recommended under this heading:

Population and labour force:

52. With the exception of mortality figures included under the health component, data on demographic structure are not considered to be international measures of the levels of living. It is, however, suggested that data on population growth, the age structure of the population and the urban-rural distribution are so closely related both as cause and effect with levels of living that data on the demographic situation should be included as basic background information. The type of data which would have to be taken into consideration would include:

- (1) Size and age structure of population
- (2) Birth rate, death rate and rate of natural increase
- (3) Population by size of locality
- (4) Extent and direction of internal migration.

53. Indicators providing for detailed breakdowns of labour force data were included by the Expert Committee under the employment component. As was noted by the Working Party, there has been considerable discussion as to whether these data should be considered as providing direct measures of levels of living. Although it is realized that, particularly in the less-developed countries, labour force data such as the proportion of professional and skilled workers in the labour force are an important factor in the economic and social development of the country, it is proposed that these data, like the demographic data discussed above, should be included as basic background information rather than as direct indicators of a component of the level of living. It is suggested that the following items should be included here:

- (1) Proportion of total population in the labour force;
- (2) Proportion of persons under fifteen in the labour force;
- (3) Proportion of persons sixty-five years of age and over in the labour force;
- (4) Percentage distribution of labour force by status, i.e. employees, employers and workers on own account, family workers, and members of producers' co-operatives (if any);
- (5) Percentage distribution of labour force by principal industrial categories;
- (6) Percentage distribution of labour force by principal occupational categories.

Income and expenditure:

54. The Working Party agreed that while the indicators originally proposed under the component "aggregate consumption and savings" are of great significance, they cannot be regarded as indicators of levels of living in the same sense as other indicators. It was noted, for example, that some of the ratios proposed by the Expert Committee as indicators under this component such as government and

private consumption as a proportion of national income are ambiguous as measures of levels of living. It is therefore recommended that data on income and expenditure should be included as basic information rather than as a component of levels of living.

55. The items proposed within this category fall into two groups, the first reflecting the over-all trends and the second group including data on government and private expenditure in the different social fields.

56. The following items are recommended within the first of these two groups:

- (1) National income per capita and average annual rate of growth
- (2) Private consumption expenditure per capita and average annual rate of growth.

57. Rates of growth are stressed rather than levels because of the well-known problems in the way of making international comparisons of per capita national income, particularly between countries at varying stages of economic development. In spite of the considerable work which has been done on the methodology of comparisons of purchasing power between pairs of countries and small groups of countries with similar economic and social backgrounds, it is not considered possible to recommend wide-scale international comparisons of levels of per capita income.

58. The Working Party considered it important in connexion with the study of levels of living to evaluate the government and private expenditure for education, housing and other aspects of social development, and therefore included a second group of statistics relating to this general category, namely: information on government and private expenditure from the national accounts, and household expenditure from surveys of selected population groups, as follows:

- (1) General government consumption expenditure - percentage devoted to education, housing and other social services;
- (2) Private consumption expenditure - percentages devoted to health, food, education and rent;
- (3) Private household expenditure distributed by object of expenditure. Urban and rural and by level of expenditure or income if possible.

The first two of these items should also be considered in relation to national income.

59. In this connexion it is noted that in A System of National Accounts and Supporting Tables^{1/} as well as in a Manual for Economic and Functional Classification of Government Transactions^{2/} there is provision for obtaining the type of statistical information needed, but considerable work would need to be done in order to establish the necessary categories.

60. As the Working Party realized, there are considerable difficulties in the way of collecting and presenting comparable information relating to the various fields of public expenditure. Problems arise because of the division of responsibility between central and local authorities, between public and private organizations. Also the apportionment of certain public expenditure between related social fields is interpreted differently in different countries. For example, expenditure on school feeding programmes may be allocated to health, education or welfare. The cost of hospitalizing old people may be allocated to health or to welfare and so on. These border-line expenditures are particularly difficult in the health field and studies are being carried out in an attempt to bring some precision to the concept of health expenditure.

Communications and transportation:

61. Although transportation was originally recommended by the Expert Committee as one of the components of levels of living, the Working Party noted that there had been some question of the interpretation of indicators relating to kilometres of roads and railways and numbers of vehicles in view of geographical and economic differences between countries. At the same time it is realized that transportation and means of communication in the widest sense are a vital factor not only because of the influence they exert on the nature and extent of the utilization of the country's resources, but also because of the extent to which they facilitate individual mobility and enable a more thorough utilization of social services affecting the various other components in the levels of living. It is therefore proposed that a broad category of basic information should be

^{1/} ST/STAT/Series F./No. 2.

^{2/} ST/TAA/M/12 - ST/ECA/49.

included under the heading communications and transportation which would bring together data of the following kind:

- (1) Mass communication
 - (a) Average circulation of daily and non-daily newspapers per 1,000 population
 - (b) Number of radio receiving sets in use per 1,000 population
- (2) Post and telecommunications
 - (a) Number of telephones per 1,000 population
- (3) Transportation
 - (a) Number of power-driven road vehicles per 100,000 population
 - (b) Kilometres of roads, separately for metalled and non-metalled roads, per sq. km. of area
 - (c) Kilometres of railways per 100 sq. km. of area.

62. It is realized that these indicators reflect the potential rather than the actual accessibility of information and services such as education and health services and that further work needs to be done in developing this group of items.

PART II

International Activities Related to the Definition and
Measurement of Levels of Living

Health: activities of the World Health Organization

63. The recommendations of the Expert Committee on health indicators have been considered by the Expert Committee on Health Statistics at its fourth, fifth and sixth sessions^{1/} and by a special Study Group on Measurement of Levels of Health^{2/} which met in October 1955. The Expert Committee on Health Statistics made recommendations on the proposed indicators and as a result of studies carried out by the WHO Secretariat^{3/} proposed an additional indicator, the proportional mortality ratio (i.e. the percentage of death at ages 50 and over to total deaths) as being the most sensitive to differences in levels of living. Recommendations on this indicator are included in Part I of this report.

64. WHO has attached great importance to the development of morbidity statistics. Already in 1951 a Conference on Morbidity Statistics was held with a view to standardizing in so far as possible measurements of morbidity which had hitherto lacked uniformity. A series of studies were recommended and carried out by national committees on vital health statistics set up under the sponsorship of WHO.

65. Progress is reviewed in the fifth and sixth reports of the Expert Committee on Health Statistics and recommendations are made on definitions of terms and measurements in the field of morbidity statistics. It is suggested that the proposed definitions and terms should as far as possible be adopted for national or international presentation of morbidity statistics and that countries should report to WHO on the acceptability of these terms as standard definitions.

^{1/} WHO Expert Committee on Health Statistics. Fifth Report (WHO Techn. Rep. Ser. 1957 No. 133). Expert Committee on Health Statistics, Sixth Report (WHO Techn. Rep. Ser. 1959 No. 164).

^{2/} WHO Study Group on Measurement of Levels of Health (WHO Techn. Rep. Ser. 1957 No. 137).

^{3/} S. Swaroop and K. Uemura, "Proportional Mortality of 50 Years and Above" (Bulletin WHO 1957 pp. 439-481).

Although there is not a sufficient quantity of comparable data to include measurement of morbidity amongst the indicators of levels of health recommended in Part I, considerable progress has been made.

66. The Expert Committee on Health Statistics has stressed the usefulness of household surveys as a source of morbidity statistics and has proposed that an expert sub-committee should be formed to consider the standardization of morbidity survey methodology.

67. Since 1954 WHO has carried out in conjunction with the Governments concerned pilot studies on local health services in selected areas in six different countries (England, India, Netherlands, Puerto Rico, Sweden and the Union of South Africa) including family health surveys in five areas. Reports from all the countries regarding the pilot studies on local health services have been obtained and from two countries (Sweden and the Union of South Africa) on family health surveys. The purpose of the studies was to experiment on the methodology of planning and organizing such field studies, including the testing of a set of questionnaires to be used in family health surveys. The local health studies covered all types of medical and health services available to the population in the area. The family health studies carried out on a sample basis for a year covered a wide range of subjects from living conditions and habits, etc., to the illnesses and health services received by the members of the families. It is hoped eventually by this method to obtain substantial information for the design of suitable health indicators.

68. WHO has also been conducting a series of pilot studies to ascertain the possibility of collecting comparable information on public and private expenditure for health.^{1/} Some of the problems involved in defining "health expenditure" are discussed in Part I of this report.

Food consumption and nutrition: activities of the Food and Agriculture Organization

69. FAO has been attempting to develop a priority indicator which will reflect the nutritional quality of the diet in the same way that calorie consumption

1/ Report of the Inter-Agency Working Party on the Costs and Sources of Finance for Medical Care (WHO/CMC/31). Medical Care in Relation to Public Health (WHO/PA/164, 1959).

measures the quantitative aspect. "The percent of total calories derived from cereals, roots, tubers and sugars" has been provisionally suggested for this purpose as an additional indicator and has been included in the recommendations of Part I of this report. FAO has suggested also that further empirical tests of the sensitivity and efficiency of different indicators should be carried out. Some statistical tests have already been made, but the results obtained so far are not conclusive.

70. The subject has been considered also by an FAO Ad Hoc Committee of Statistical Experts in December 1959. The Committee has suggested the tests for population groups of different nutritional levels within countries instead of between countries. It further has suggested that a combination of indicators would perhaps be more sensitive than any one indicator used alone. Another possibility in the opinion of the Committee would be the application of the method of factor analysis to the problem.

71. The Expert Committee on Definition and Measurement of Levels of Living drew attention to the limitations of food consumption data obtained by the balance sheet method, and recommended that more use should be made of food consumption surveys showing actual levels and patterns of consumption on a family basis and by levels of income or expenditure. FAO has taken a first step in this direction by the preparation and publication of a study reviewing about sixty food consumption and expenditure surveys in twenty-six countries. The tenth session of the FAO Conference has adopted a resolution recommending that its member Governments make further efforts to organize comprehensive surveys of food consumption, and has requested the Director-General of FAO to prepare a draft programme for food consumption surveys to organize regional meetings and training centres as well as prepare suitable manuals for making food consumption surveys.

72. A Draft Programme of Food Consumption Surveys has already been prepared by FAO and plans are being made for a large-scale promotion of the programme.

73. In addition suitable manuals will be prepared on the methodological and organizational aspects of food consumption surveys based on the experience of countries in the conduct of such surveys. A manual on dietary surveys in the less developed countries with special reference to Latin America is under preparation.

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Education: activities of the United Nations Educational, Scientific and Cultural Organization

74. UNESCO has been carrying out a long-term programme involving the collection, analysis and publication of statistics relating to the education component, and to the improvement of their comparability. The adoption by the General Conference at its tenth session (1958) of the Recommendation concerning the International Standardization of Educational Statistics^{1/} provides certain standard definitions, classifications and tabulations to be used by those compiling statistics in this field. A Manual of Educational Statistics is scheduled for publication in 1960, giving detailed explanations and examples concerning the application of these recommended standards.

75. Much has been done to expand and improve the data relating to educational institutions. Pupil enrolment statistics are brought up to date in the annual publication: Current School Enrolment Statistics. Numbers of pupils and teachers, at each level of education, are computed and published each year in Basic facts and figures. Every three years, a World Survey of Education is published, giving detailed descriptions of school systems in every country of the world, together with statistical data on institutions, teachers and pupils at all levels of education.^{2/}

76. UNESCO has recommended that the total school enrolment ratio, and, where possible, the primary and secondary school enrolment ratios should be considered as priority indicators of the level of education. These recommendations are included in Part I of this report. The use of primary school enrolment ratios is fully explained and illustrated in World Survey of Education, II, Primary education, Chapter III "The progress of primary education since 1930". Similar

^{1/} UNESCO 1958 CPG. 58.VI.10.z.AFSR.

^{2/} The first survey (1955) provided general information on education at all levels; the second volume (1958) was devoted particularly to primary education; the third issue (1961) will concentrate on secondary and vocational education.

treatment of the secondary school enrolment ratio will be given in the third World Survey of Education.

77. UNESCO presented in 1957^{1/} a study on literacy and illiteracy for some sixty-five countries based on available census data since 1945. The Expert Committee on Definition and Measurement of Levels of Living had recommended that priority should be given to a second indicator of educational attainment, namely the number of years of formal schooling completed. Although this is recommended as a supplementary indicator, UNESCO has pointed out that while figures are now available for over sixty countries, it is considered that they are far from being susceptible to international comparisons.

78. A section of the UNESCO Recommendation concerning the International Standardization of Educational Statistics, mentioned above, deals with statistics of educational finance. UNESCO has published some preliminary compilations of available data relating to public expenditure on education.^{2/} Current figures on educational expenditure are published annually in Basic Facts and Figures and periodically in the World Survey of Education. Categories to be recommended for classifying data on educational receipts and expenditures are given in the UNESCO Recommendation and further explained in the Manual of Educational Statistics.

Employment and conditions of work: activities of the International Labour Organisation

79. The activities of the ILO relating to the international standardization of the major economic classifications of the labour force by industries, occupations and status have been set out in detail in a recent publication.^{3/} and particular reference will be made in this report only to activities relating to the indicators recommended under this component in Part I.

1/ World Illiteracy at Mid-Century UNESCO 1957.

2/ Public Expenditure on Education (ST/R/14(I), 1955; ST/R/14 (IIa) (IIb) 1956).

3/ The International Standardisation of Labour Statistics, ILO Geneva 1959, pp. 21-39.

80. Following the recommendations of the Eighth Conference of Labour Statisticians,^{1/} emphasis has been put on the definition of the labour force on the basis of the activity of each individual during a specified period as distinct from the "gainful activity" approach. The classification of the unpaid family worker has received particular attention. This definition of labour force provides a more realistic approach to the measurement of employment and unemployment in the less developed countries.

81. Availability of meaningful data on unemployment is still limited largely to the more developed countries with highly organized labour markets. In the less developed countries information obtained through the employment services continues to be by and large only broadly indicative of trends of unemployment in the urban organized sector of the economy. As has been pointed out many times, in these countries unemployment tends to be submerged in the general phenomenon of underemployment.

82. The importance of developing methods of measuring underemployment had been stressed by the Expert Committee on International Definition and Measurement of Levels of Living. A brief discussion of relevant national studies and a discussion of the conceptual and methodological problems involved were given in a Report on Measurement of Underemployment (Report IV, ILO, Geneva, 1957) which was discussed at the Ninth International Conference of Labour Statisticians held in Geneva in May 1957. The Conference distinguished the major categories of underemployment and outlined a definition and methods of measuring disguised and potential unemployment. Some pilot surveys under the ILO programme of technical assistance are in progress and the measurement of visible underemployment along the lines recommended by the Ninth Conference may become possible.

83. The concepts and definitions of underemployment were one of the major topics discussed at the Asian Seminar on Labour Statistics held in Manila in November 1958. The importance of collecting information on all aspects of this phenomenon in the Asian countries was stressed. The participants at the Seminar

^{1/} Resolution concerning Statistics of the Labour Force, Employment and Unemployment, Adopted by the Eighth International Conference of Labour Statisticians (Geneva, November-December, 1954).

considered different means of obtaining information on underemployment in underdeveloped countries through censuses, labour force sample surveys and special surveys of underemployment, and considered that the last provided the best means of measuring underemployment, since such surveys may be designed to meet the particular immediate needs of the country in which they are envisaged and can cover the various and multiple aspects of the problem. Such studies are currently being carried out by the ILO in Ceylon and Indonesia.

84. It was also suggested at the Seminar that census organizations in underdeveloped countries be urged to collect information on the labour force by the current activity approach, in addition to the usual, or gainful occupation approach, recording the number of days and hours worked during the week preceding the census and the additional hours available during that week.

85. Finally, in view of the importance of underemployment in the participating countries, it was urged that countries should foster wherever possible experiments of measurement of underemployment and particularly of invisible forms of underemployment, as was recommended by the Ninth International Conference of Labour Statisticians.

86. The problems inherent in international comparisons of real wages were stressed by the Expert Committee on the International Definition and Measurement of Levels of Living. These problems were discussed in the ILO study International Comparisons of Real Wages: a Study of Methods.^{1/} which took into consideration the conclusions and recommendations of the Eighth International Conference of Labour Statisticians (1954). The report stressed the importance of "fringe benefits" as a part of real income and the importance of securing uniformity in the inclusion of such benefits and related contributions in real wage estimates. The importance of various supplements to wages has recently been stressed in another ILO report.^{2/}

Housing: activities of the United Nations

87. Although the Expert Committee on International Definition and Measurement of Levels of Living did not recommend specific indicators under the housing component,

1/ International Comparisons of Real Wages: a Study of Methods. ILO 1956.

2/ Labour Costs in European Industry. ILO, Geneva 1959.

they indicated the type of data that should be collected and recommended that the United Nations and the interested specialized agencies develop a programme for uniform housing surveys so as to obtain comparable data, at least on a regional basis, on housing conditions.

88. In compliance with resolutions 19 (X) and 12 (X) of the ninth and tenth sessions respectively of the Statistical Commission, the Statistical Office of the United Nations has prepared General Principles for a Housing Census (ST/STAT/SER.M/28) to provide a general guide for countries planning to take housing censuses. The Principles include definitions and classification of different types of housing units and outline a list of items for possible inclusion in a housing census.

89. On the basis of this classification of housing units and the concepts, definitions and tabulations included in the Principles, a series of statistical indicators of housing conditions has been selected on an experimental basis. This paper provided the basis for the recommendations on indicators under the housing component included in Part I of this report. The paper has since been circulated among a selected number of experts, statistical offices and housing agencies and a report on the comments received has been issued.

Social security: activities of the International Labour Organisation

90. Progress has been made at a number of meetings in developing standards for statistics on social security which may serve as a basis for the selection of indicators. A meeting of experts was convened by the ILO in October 1956 to review the problems involved in the development of international standards in social security statistics.^{1/} The report of this meeting of experts served as a basis for a paper^{2/} presented to the Ninth International Conference of Labour Statisticians. The resolution adopted by the Ninth Conference on this subject lays

^{1/} Report of the Meeting on Labour and Social Security Statistics (SSS 18, ILO)

^{2/} Social Security Statistics: Development and Uses. Ninth International Conference of Labour Statisticians. Report V (Geneva 1957, mimeographed).

down international standards concerning the collection of social security statistics and recommends the development of relative measures under the following broad headings:

- (1) Extent of social security coverage
- (2) Incidence and severity of contingency
- (3) Level of benefits
- (4) Economic incidence of social security
- (5) Trends in real per capita expenditure for social security

91. Experimental studies on the suitability and feasibility of some of these measures were recommended by the meeting of Social Security Experts held in Geneva in February 1959.^{1/}

92. The ILO has also undertaken studies on social security costs in different countries.^{2/}

Collection of data: activities of the United Nations and the specialized agencies

93. The Expert Committee indicated that improvement in the collection of data on levels of living would depend in general on three broad sources: the strengthening of statistical systems, especially in the less developed areas of the world; second, the design and tabulation of special analytical tables from the censuses taken in and around 1950; third, the utilization of special purpose and multi-purpose sample surveys.

94. The first of these sources, the strengthening of statistical systems through technical assistance and other means, is a continuing function of the statistical offices of the United Nations and the specialized agencies, and it would not be possible for this report to list all the programmes bearing on the measurement of levels of living. The assistance given to national governments

^{1/} ILO, G.B. 141/6/7 1959.

^{2/} International Social Security Association: The Cost of Social Security, 1949-1951 International Inquiry Prepared by the ILO (Geneva 1955).
ILO: The Cost of Social Security 1949-1954, (Geneva, 1958).
ILO: The Cost of Medical Care (Geneva 1959).

in carrying out the population censuses planned for around 1960 would be one major aspect of this continuing programme. Particular mention has been made in the reports of the specialized agencies of the assistance provided by their regional statisticians to national governments in strengthening their statistical services in their respective fields.

95. In connexion with the second main source of data, that is, data obtained from census tabulations, the Expert Committee recommended (para. 146) "that the Secretariat of the United Nations and the specialized agencies concerned review the materials available in the various censuses with the special purpose of designing and proposing tabulations and cross-tabulations that would maximize information available for individual countries on levels of living and also permit international comparisons".

96. Standards for the censuses to be taken around 1960 have now been established and the results of these censuses will provide data on some of the priority indicators. United Nations assistance is being provided through seminars and case studies in the adaptation of national programmes of tabulation for the purpose of providing data for national policy and programming in the economic and social field.

97. Of particular relevance to problems of obtaining data on levels of living is the emphasis which has been put on the use of sampling to extend and supplement information obtained from population censuses. It has been pointed out^{1/} that the census and sampling procedures are not competing techniques and should be looked upon as interrelated parts of a concerted programme of data collection and research.

98. Sampling may be used as part of a population census to broaden the scope of the census by asking supplementary questions of only a sample of the population, as was done for example in the Ceylon census in 1953 where sampling was used to obtain additional information on fertility, education, income and unemployment. Or special sample inquiries may be made subsequent to the census within the general census framework. The Indian Sample Survey and the Philippines

^{1/} Document E/CN.9/CONF.1/L.12 prepared for the United Nations Seminar on Evaluation and Utilisation of Population Census Data in Latin America, Nov.-Dec. 1959.

Statistical Survey of Households are examples of periodic sample surveys covering a wide range of subjects carried out within the census framework. Another example is the Mysore Population Study undertaken jointly by the United Nations and the Government of India shortly after the 1951 Population Census as a pilot project to study the relationship between population and economic and social factors.

99. The Expert Committee put considerable emphasis on the importance of family living studies as a source of data on levels of living. "Such studies, designed primarily to obtain first-hand information on patterns of actual living, including patterns of consumption and expenditure in the context of general background information, would, in the opinion of the Committee, provide the best information obtainable as an approximation of the total level of living situation." The Committee considered that such studies should include both specialized surveys and multi-subject surveys.

100. The extent to which use is being made of household inquiries to obtain data on levels of living is reflected in the accounts of the activities of the specialized agencies. These include both specialized inquiries, such as, nutrition, morbidity, employment, family budgets, and multi-subject, for example, the health surveys including data on living conditions, employment surveys including other demographic data, cost-of-living surveys widened to include data on housing, employment and other items.

101. Discussion on multi-subject household inquiries was carried a step further by the Working Group of Experts on Family Living Studies convened by the ILO in 1955.^{1/} The group recommended that such inquiries should be undertaken both in the interests of national development and to provide a basis for international comparisons of levels of living, and that the international agencies should aid in the development of sound methods of study and encourage international comparability by drawing up lists of standard definitions and classifications.

102. The importance of family living studies as a source of data in under-developed countries was again emphasized at the Asian Seminar on Labour Statistics held in Manila in November 1958. The need to define the aims and purposes of such

1/ Report of the Working Group of Experts on Family Living Studies, ILO FL/20.

inquiries was stressed, and it was suggested that an inquiry should be made into the uses of recent family living studies. The need for technical papers and practical manuals on standardized methodology concerning the different facets of family living studies was noted.

103. Co-ordination of the work of the United Nations and specialized agencies on household inquiries was discussed at an informal inter-agency meeting on household inquiries held in Geneva in February 1959. The possibility of drawing up a standard list of items which could be included in multi-subject inquiries was discussed at this meeting and was again considered by the Working Party on Statistics for Social Programmes held in Geneva in September 1959. It was agreed at that meeting that the United Nations Statistical Office should prepare a draft outline for a handbook of sample surveys of family living conditions to be based on technical contributions from the specialized agencies.

104. There is in fact no clear dividing line between multi-subject household inquiries as proposed by the Expert Committee, and sample surveys intended to obtain demographic and related data carried out within the framework of the census. It is hoped that the handbook will provide a unifying thread for these different types of inquiries.

105. Work on the methodological aspects of household inquiries in their special fields is being carried on by the specialized agencies. Among these studies may be mentioned a revised report on the methodology of dietary surveys by FAO, work on the methodology of family health surveys by WHO, and the more comprehensive Symposium of Family Living Studies which is being prepared by ILO, in addition to a series of technical papers. The Statistical Office of the United Nations has prepared for publication in 1960 an elementary manual on sampling which describes in simple terms the many techniques of sample surveys for the benefit of national statistical offices.

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INTERNATIONAL DEFINITION AND MEASUREMENT OF
LEVELS OF LIVING

Progress report by the Secretary-General

CORRIGENDUM

1. Page 3, line 3 should read "resolution 434 B (XIV)".
2. Page 3, foot-note 1/ should read "Sales No. 1954.IV.5".
3. Page 7, paragraph 12, last sentence should read "The crude death rate is included in spite of its dependence on the age structure of the population, because it reflects the intensity of mortality in a given country or area and because of its greater availability".
4. Page 21, foot-note 3/. The reference should read Bulletin WHO 1957, 17, pp. 439-481.
