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PLANNING OF A POPULATION AND HOUSING CENSUS

Paper submitted by the secretariat of the
Economic Commission for Latin America

TABLE OF CONTENTS

	<u>Paragraphs</u>	<u>Page</u>
I. INTRODUCTION	1- 4	1
II. DEFINITION AND CONCEPT OF A CENSUS	5- 21	2
A. Definition of a population census	5- 6	2
B. Definition of a housing census	7- 8	3
C. Essential features of a population and housing census	9- 21	4
III. PLANNING OF A CENSUS	22- 52	7
A. Integrated planning of a census	22- 30	7
B. Elements of a census plan	31- 36	10
C. Nature of census elements	37- 46	12
D. The census calendar	47- 52	16
IV. ORGANIZATION AND ADMINISTRATION OF THE CENSUS .	53-100	18
A. Legal basis of the census	53- 58	18
B. Budget and cost control	59- 68	20
C. Administrative organization	69- 93	24
D. Staff recruitment and training	94-100	32
ANNEX I		37
ANNEX II		40
ANNEX III		42

QUESTION

1. The following table shows the number of people who visited the National Gallery in London in each year from 1990 to 2000. The number of people is given in thousands.
- | Year | Number of people (in thousands) |
|------|---------------------------------|
| 1990 | 120 |
| 1991 | 125 |
| 1992 | 130 |
| 1993 | 135 |
| 1994 | 140 |
| 1995 | 145 |
| 1996 | 150 |
| 1997 | 155 |
| 1998 | 160 |
| 1999 | 165 |
| 2000 | 170 |
2. The following table shows the number of people who visited the British Museum in each year from 1990 to 2000. The number of people is given in thousands.
- | Year | Number of people (in thousands) |
|------|---------------------------------|
| 1990 | 180 |
| 1991 | 185 |
| 1992 | 190 |
| 1993 | 195 |
| 1994 | 200 |
| 1995 | 205 |
| 1996 | 210 |
| 1997 | 215 |
| 1998 | 220 |
| 1999 | 225 |
| 2000 | 230 |
3. The following table shows the number of people who visited the Tate Gallery in each year from 1990 to 2000. The number of people is given in thousands.
- | Year | Number of people (in thousands) |
|------|---------------------------------|
| 1990 | 100 |
| 1991 | 105 |
| 1992 | 110 |
| 1993 | 115 |
| 1994 | 120 |
| 1995 | 125 |
| 1996 | 130 |
| 1997 | 135 |
| 1998 | 140 |
| 1999 | 145 |
| 2000 | 150 |

ANSWER

PLANNING OF A POPULATION AND HOUSING CENSUS

I. INTRODUCTION

1. A population and housing census is one of the most extensive and complicated statistical operations. If the census operation is to be properly planned and executed, therefore, preparations should start some considerable time before the census operation itself. These preparations demand substantial administrative, financial and personal efforts from each of the countries concerned.
2. A census is basically a national operation which requires the full attention of the national statistical authorities. International uses of census data are also important, however, as is the application of internationally-agreed principles of sound census taking, which can help countries in improving their censuses to a considerable extent. Hence, the recommendations of the United Nations and of the Inter-American Statistical Institute merit the careful attention of all national census authorities.
3. The main principles of the planning, organization and administration of a population and housing census are given in the United Nations recommendations for the 1970 censuses. These serve as a general guide for the census taking, but each country must build up a detailed census plan on the basis of its own experience and possibilities. The most important publications for use in planning population and housing censuses, which have been used as a basis for the present document, are:

Principles and Recommendations for the 1970 Population Censuses, Statistical Papers, Series M, N° 44, New York, 1967 (United Nations publication, Sales N° 67.XVII.3).

Principles and Recommendations for the 1970 Housing Censuses, Statistical Papers, Series M, N° 45, New York, 1967 (United Nations publication, Sales N° 67.XVII.4).

"Programme for the 1970 Census of America (COTA-1970): Census of Population: Proposed Standards", Inter-American Statistical Institute, IX COINS, Venezuela, August 1967 (IASI document 5392).

/"Programme for

"Programme for the 1970 Census of America (COTA-1970): Census of Housing: Proposed Standards", Inter-American Statistical Institute, IX COINS, Venezuela, October 1967 (IASI document 5424).

Handbook of Population Census Methods, Studies in Methods, Series F, N° 5, Rev. 1, New York, 1958 (United Nations publication, Sales N° 58.XVII.6, Vol. I-III).^{1/}

Vol. I. General aspects of a population census

Vol. II. Economic characteristics of the population

Vol. III. Demographic and social characteristics of the population

4. Before discussing the planning and administration aspects of censuses in detail, reference must be made to the definition and concept of a modern population and housing census.

II. DEFINITION AND CONCEPT OF A CENSUS

A. Definition of a population census

5. Generally speaking a population census should obtain information about the state of the population at a given time. Most frequently all inhabitants of a given country are counted simultaneously. The term "census" denotes that there is a complete coverage of the population, i.e., that every member of the population concerned is counted.^{2/}

6. The definition of the population census, according to the Principles and Recommendations for the 1970 Population Censuses, is the following:

"Population is basic to the production and distribution of material wealth. It is impossible to plan for, and carry out, economic and social development, administrative activity or scientific research without precise and detailed data on the size, distribution and composition of population. The population census is a primary source of these data." (Para. 7.)

1/ A revised version will be published under the title Handbook of Population and Housing Census Methods.

2/ Multilingual Demographic Dictionary, Population Studies, N° 29, New York, 1958, page 12 (202). (United Nations publication, Sales N°: 58.XIII.4.)

B. Definition of a housing census

7. According to the Principles and Recommendations for the 1970 Housing Censuses, the definition of a housing census is the following:

(a) "A housing census is the total process of collecting, compiling, evaluating, analysing and publishing statistical data pertaining, at a specified time, to all living quarters, and occupants thereof in a country, or in a well delimited part of a country, for the purpose of obtaining information concerning the housing inventory and housing conditions of the population. The census should also take account of homeless persons.

(b) "The census must provide information on the supply of housing units together with information on the structural characteristics and facilities which have a bearing upon the maintenance of privacy and health and the development of normal family living conditions. Sufficient demographic, social and economic data concerning the occupants must be collected to furnish a description of housing conditions and also to provide basic data for analysing the causes of housing deficiencies and for the study of possibilities for remedial action.

(c) "The first objective of a housing census, therefore, is to make an inventory of all the various kinds of premises in which people live and which together constitute the stock of housing accommodations at a given time and to classify these places according to their geographic location, structural characteristics, available facilities, installations and services. The second objective is to obtain indicators of the housing conditions in which the population lives - living space per inhabitant and per household, the equipment provided and the services laid on, i.e., the kind of lighting, supply of gas, water, cooking equipment, etc." (Paras. 11-13.)

8. Housing censuses are usually carried out in conjunction with censuses of population (of the forty-two American countries and territories in which a housing census was taken during the period 1955-64, thirty-eight carried out the population census and housing census together as a single operation). Therefore, in this Seminar the organization and conduct of both censuses are treated together.^{3/}

^{3/} The problem of co-ordination between housing and population censuses will be discussed under separate agenda item (N° 2) based on the discussion of ST/ECLA/Conf.32/L.2, paper prepared by the United Nations Statistical Office.

C. Essential features of a population and housing census

9. The essential features of a population and housing census are the following:

- (a) Individual enumeration
- (b) Defined territory
- (c) Universality
- (d) Simultaneity
- (e) Defined periodicity
- (f) Compilation and publication

(a) Individual enumeration

10. A census implies that each individual and/or each set of living quarters is enumerated separately and that the information obtained is recorded separately for each statistical unit, i.e., in a population census the characteristics of each person have to be recorded separately and in a housing census, the characteristics of each set of living quarters must be recorded separately. Only by this procedure can the data on the various characteristics of an individual (e.g., age, literacy, occupation) or of a given set of living quarters be cross-classified.

11. Individual enumeration does not preclude the use of sampling techniques for obtaining data on specific characteristics, provided that the sample design is consistent with the use of the areas for which the data are to be tabulated and the degree of detail on the cross-tabulations to be made.^{4/}

(b) Defined territory

12. A census should cover a precisely defined territory, which will generally be the entire country. The territory covered, along with any changes in area in successive censuses, should be clearly and explicitly stated (especially if the census does not cover the entire country).

^{4/} Questions relating to the use of sampling in population and housing censuses are dealt with under a separate agenda item (N° 12).

(c) Universality

(c) Universality

13. A census should include every person present and/or residing within the census territory and all living quarters, irrespective of type, which exist in that territory, without omission or duplication. If in certain cases, a country is not able to enumerate certain specific groups of its population (such as aborigines), the concept of universality is still applicable to those groups of the community whose enumeration is intended.^{5/}

(d) Simultaneity

14. Each person and each set of living quarters should be enumerated as nearly as possible in respect of the same well-defined point of time and the data collected should relate to a well-defined reference period. The time-reference period need not, however, be identical for all of the data collected. For most of the data it will be the day of the census; as a general rule, a day is fixed, and almost always an hour also and a particular moment which is the census moment. This moment is often fixed at midnight, but in some developing countries it seems better to fix it at sunrise because many people may not know when it is exactly midnight, and the sunrise is easier to distinguish; but it may be a period prior to the census, as in the case of economic characteristics of the population, or rental, in housing censuses; or a longer period of time, as is the case with fertility questions and with the period of construction of the building in which the living quarters are located.

15. The setting of a definite census date and time becomes particularly important if the actual enumeration extends over more than a day or two and lasts for many weeks (e.g., in Brazil) so that persons may have moved about to some extent during the period.

(e) Defined periodicity

16. Censuses should be taken at regular intervals so that comparable information is made available in a fixed sequence. A series of censuses makes it possible to appraise the past, accurately describe the present and estimate the future.

^{5/} The census reports must state whether certain specific groups of persons are included in or excluded from the population total of the country. (The recommended list of this group could be seen in the Principles and Recommendations for the 1970 Population Censuses, para. 260.)

17. The census data of any country are of greater value nationally, regionally and internationally if they can be compared with the results of censuses of other countries which were taken at approximately the same time. It is, therefore, recommended that, whenever possible, each country undertake a population census and a housing census in the years ending in "0" or as near to those years as feasible.

18. It is obvious, however, that legal, administrative, financial and other considerations often make it inadvisable for a country to adhere to a standard international pattern in the timing of its population and housing censuses. In fixing a census date, therefore, such national factors should be given greater weight than the desirability of international simultaneity.

19. The United Nations world recommendations call for population and housing censuses to be taken at least every ten years, although it is recognized that some countries may find it necessary to carry out housing censuses more frequently.

20. In the American region, the Fourth International American Conference held in 1910, was the first to recommend to Governments "the taking of a decennial census of their population". After other resolutions the First Inter-American Demographic Congress (in 1943) recommends to the Governments of the American countries that they take the necessary measures during the years 1950 and 1967 to carry out a continental census. A resolution was adopted by the Inter-American Economic and Social Council in 1954, recommending to the Governments of the member States, the Programme of the 1950 Census of the Americas, which contains the recommendation that "national censuses of population, housing and economic activity be taken every 10 years, beginning with 1950". In this context, the 1970 census round would be the third Census of the Americas.

(f) Compilation and publication

21. A census is not complete unless the data collected are compiled and published by geographical areas and by basic variables. There have been instances in which information collected during the enumeration has gone to waste because of failure to make adequate provision for the processing, tabulation and publication of the data.^{6/}

^{6/} See document ST/ECLA/Conf.32/L.10, prepared for this Seminar, on a census publication programme.

III. PLANNING OF A CENSUS

A. Integrated planning of a census

22. According to the Principles and Recommendations for the 1970 Population Censuses:

"The population census is one of the most extensive and complicated statistical operations, consisting of a complex series of closely inter-related steps which must be carefully planned in advance so that a proper and uninterrupted sequence of operations can be maintained. A small oversight in planning may lead to serious defects and inefficiencies. Careful planning of the census is, therefore, of the first importance to the successful conduct of the operation, not only in countries with comparatively little statistical experience but also in countries with a developed system of statistics." (Para. 39.)

23. Similarly, it is stated in the Principles and Recommendations for the 1970 Housing Censuses:

"When the housing census and the population census are carried out together the planning, organization and administration of the two censuses should be considered as separate aspects of a single, closely integrated operation. Careful planning of the housing census is of the first importance to the successful conduct of the operation, not only in countries with comparatively little statistical experience but also in countries with a developed system of statistics. A census is a complete operation in itself, consisting of a complex series of closely inter-related steps which must be carefully planned in advance so that a proper and uninterrupted sequence of operations can be maintained. A small oversight in planning may lead to serious defects and inefficiencies." (Para. 46.)

24. A population and housing census may be planned in two different ways:

/(a) The

(a) The census planning is a continuing activity of the national statistical agency. In this respect the planning for the next census should start immediately after completion of the last one, or even simultaneously with some final phases of this census. By this method, after or during the last phase of the census work, i.e., with the systematization of census experience, preliminary plans could be prepared for the next census. Therefore, for well-established planning a permanent census staff is necessary. This staff will be able to apply the experience obtained in the last censuses immediately to the theoretical and methodological aspects of the next census. (Regarding this aspect of census organization, see paragraphs 71-74 which set out the other advantages of a permanent census office.)

(b) The other, and more frequent, form of census planning is that the census is considered an independent activity and the preparation starts only a few years before the census is to be taken and sometimes several years after the completion of the last census. This has the added disadvantage that the census is planned each time with entirely new staff who have no previous census experience. In this case, it is necessary to study the records of the previous census from the beginning.

25. Even if there is a permanent census office, it will still be necessary to start the actual census preparation work in due time. In this respect there is no difference between the two forms of organization, mentioned above.

26. A properly executed post-enumeration sample field check can be of great service to the next census because it can reveal some of the causes of error in the current census. It can, in fact, be considered the first pre-test of the next census.^{1/}

27. The main thing which all countries must accept is that a relatively long period is needed for the preparation of the census, and that it is impossible to plan for a census operation only a few months before the enumeration. In this respect it should be recalled that a census operation is not limited to the preparation of a questionnaire and the determination of the census items.

^{1/} For details of such surveys, see document ST/ECLA/Conf.32/L.11, prepared for this Seminar.

28. The detailed planning of a modern census takes at least two or three years. In the following sections the main elements of a census plan will be explained. The discussion papers presented at this Seminar explain the necessary steps for planning, organizing and conducting a population and housing census.

29. The main phases of the planning work are the following:

(1) Study of census background, national experience and international recommendations.

(2) Planning the census in outline. This includes the elaboration of a preliminary census plan by the census office, and co-ordination with other government organizations. During this phase it is necessary to draft an optimum programme which takes the requirements as well as the available resources into consideration.

(3) The presentation of a full and detailed census plan. This phase starts immediately after the final decision on the census execution has been taken. The conduct of a census needs detailed and specialized preparation so as to preclude the possibility of having to take piecemeal and improvised measures at a later stage which might jeopardize the census results.

30. Modern census techniques (especially tabulation by computer) lay emphasis on well-prepared and detailed census planning. As a consequence, this phase of the census work takes longer than before. Experience of the 1960 censuses showed that in most countries where the computer technique was used, even the tabulation work took much longer than with the traditional tabulation techniques if the planning was not begun very early before the enumeration, mainly because of the time required for programming the tabulation. The use of such a technique makes it even more necessary to extend the preparatory period for the census. The time required for census preparation and execution could be described as follows for the different alternatives:

/Traditional technique

	Traditional technique	Modern technique late preparation	Modern technique optimum preparation
3 years before the enumeration			
2 " " " "			preparation
1 " " " "	preparation	preparation	
<u>Enumeration data</u>			
1 year after the enumeration			tabulation publication
2 " " " "	tabulation publication	tabulation publication	
3 " " " "			
4 " " " "			
5 " " " "			

B. Elements of a census plan

31. Before presenting the detailed census plan in a census calendar, it is necessary to discuss the main elements of such a plan. Though not all censuses can follow a uniform pattern, three major elements which must be taken into account are common to all censuses.

32. In the census operations the following three main phases can be distinguished:

1. Preparatory and pre-enumeration work;
2. Enumeration;
3. Post-enumeration work.

1. Preparatory and pre-enumeration work

33. The preparatory work is the first phase of the census operation and includes every phase that comes before the enumeration. As mentioned before, a well-founded preparation is a necessary condition for an acceptable enumeration and for obtaining good census data. According to the Principles and Recommendations for the 1970 Censuses, the census preparation comprises the following elements:

- (a) Legal basis for a census;
- (b) Budget and cost control;
- (c) Census calendar;
- (d) Administrative organization;
- (e) Cartographic work;
- (f) Living quarters and household listing;
- (g) Tabulation programme;
- (h) Questionnaire preparation;
- (i) Census tests;
- (j) Plans of enumeration;
- (k) Plans for data processing;
- (l) Publicity;
- (m) Staff recruitment and training.

34. These phases of the census work are not entirely separate chronologically or mutually exclusive. There is necessarily much overlapping in the various steps of the work. Some of this is merely due to the fact that different types of work can be going on at the same time, and in other cases, the overlapping is essential to the prompt execution of the work.

2. Enumeration

35. In respect of the planning of the enumeration, the following four steps should be mentioned:

- (a) Method of enumeration;
- (b) Period of enumeration;
- (c) Supervision;
- (d) Use of sampling at the enumeration.

These questions will be discussed in document ST/ECLA/Conf.32/L.7, on the preparation of the census. The several steps of the enumeration can and should be tested by pilot censuses.

3. Post-enumeration work

36. The post-enumeration work can be divided into five well distinguished phases, as follows:

- (a) Data processing;
- (b) Evaluation of the results;
- (c) Analysis of the results;
- (d) Dissemination of the results;
- (e) Systematic recording of the census experience.

It is necessary to draw attention to the fact that according to modern techniques it is not considered sufficient only to process and publish the data on points (a) and (d) but that a good census should also include the other activities.

C. Nature of census elements

37. It is common to distinguish the census elements not only by their contents and sequence, but also by other circumstances. In this way it is possible to divide them into four different groups:

- 1. External elements;
- 2. Strategic elements;
- 3. Contingent elements;
- 4. Publicity elements.

1. External elements

38. Those elements of a census may be considered as external, which are given either by legal provisions or generally by economic, social and cultural circumstances and which have an influence on the census requirements and also on the method of enumeration. When planning a census it is necessary to take into account the effects of those elements and to minimize as much as possible the obstacles which they create and to maximize the facilities which they offer.

39. The following factors may belong to this group of elements:

- (a) The constitutional and other legal provisions covering censuses and statistics in general;
- (b) The state of development of the national statistical organization and its sectoral and local subsidiary bodies;
- (c) The kind of administration in general, especially the local administration;
- (d) The extent of financial resources available for statistics in general, and specially for the census operation;

/(e) The

- (e) The availability and technical level of census staff (technical and other);
- (f) The cartographic material to be used for census maps and lists;
- (g) The kind of infrastructure, such as communication and transport facilities and power supplies;
- (h) The settlement pattern, climatic conditions, etc.

40. It is possible to include two other elements in this group, which are however, of a different nature. These are:

(a) The national and other requirements for data - especially the needs of government agencies, research institutions and industries which require the census data as a tool for planning, policy decisions, analysis, etc.;

(b) The experience and knowledge of census methods and procedures - which determines the quality of census planning and execution.

41. Some of the existing external conditions cannot be changed, but most of the unfavourable elements can be modified by appropriate measures when dealt with in time and by well-organized census planning. This probably implies a series of studies, consultations and discussions between all the parties concerned. In this way it is possible to change and improve any negative elements. For instance, the legal provisions are subject to change; improvements can be introduced in the organization and work of the field staff; the statistical organization can be strengthened by training and/or by recruiting qualified personnel; the cartographic material can be checked and renewed, changing its scope and status; etc.

2. Strategic elements

42. The other group of census elements, could be called strategic (or in other words technical), as they determine the main issues of a census, i.e., its substance, methods, procedures and techniques. These are the elements which have shown the most rapid changes during recent decades. This is due mainly to the development of sampling, the use of computers, and innovations in enumeration techniques.

43. These technical elements are interrelated in many ways, since it is necessary to plan during the same stage, for instance, the tabulation programme, the questionnaire, the method of enumeration, the field organization and the technique of elaboration. These phases have to be planned in a given order (e.g., it is necessary to plan first the tabulation programme and then the questionnaires) but the elements treated first are reflected in and also influenced by the later ones. Therefore, it is necessary to plan in two different steps: first, to build up the preliminary plan in outline and then, after all necessary information has been obtained, to formulate the final plan in which all other steps are reflected.

44. Since the final aim of any population and housing census is to supply adequate information on population, households, families, localities and living quarters, the final plan should perhaps start with a thorough discussion of data requirements. However, these must be considered in the light of all other elements which might impede the maximum satisfaction of the requirements, so that the following may be discussed consecutively by the planning team:

(a) The scope of the census in relation to the tabulations as well as to the census units and the list of census topics; the concepts, definitions and classification; in addition to traditional characteristics and to the ones internationally recommended, any other suggested characteristics, and their relationship to traditional characteristics and existing statistics;

(b) The feasibility of the use of sampling techniques as an integral part of a population census; the allocation of some questions to the questionnaires for full enumeration and of other special questionnaires for enumeration on a sampling basis; the type of sampling to be employed and related problems; the use of sampling for tabulation purposes either of individuals or of other units (families, households);^{8/}

^{8/} The uses of sampling techniques in a population census are obviously broader than stated above (for preliminary results, current quality control, post-enumeration surveys, etc.) but this does not necessarily need to be discussed at this stage. See also document ST/ECLA/Conf.32/L.12.

(c) Enumerations, methods and techniques; their influence on questionnaire construction and census operations; examination of the characteristics for which information has to be obtained in the questionnaire and of those which may be derived as a by-product of other answers; consideration of the social and psychological attitudes to the enumeration which can be expected;

(d) The method of data processing, including automatic detection and correction of errors; this covers programming the tabulations, preparation of documentation; sheets; choice of equipment and associated questions affecting labour-equipment ratios.

3. Contingent elements

45. A third group of census elements may be regarded as contingent for they depend largely on the decisions taken with respect to the two previous groups. To this group belongs the organizational question, the instructions, control and supervision, training of field staff, tests, printing of material, etc. These problems will be treated in detail in part IV of this document and also in document ST/ECLA/Conf.32/L.7.

4. Publicity elements

46. The fourth group could be called publicity elements. The main purpose here is to create a favourable climate towards the census taking and to avoid the refusals and the presentation of purposely erroneous answers. Another aim is to ensure the active co-operation of the public in order to facilitate contacts for enumerators. In this group, consideration should also be given to the best way in which help for the work of the census office can be obtained from other government institutions.

D. The census calendar

47. After all these preliminary studies and plans have been made, the draft census plan should be established as a basis for discussion and also for the final authorization of the census. When the general outline has been approved, the planning moves on to the second state in which all steps have to be worked out in detail. The detailed census plan, its phasing, and the interrelationship between its component parts are determined in a census calendar which is the real census plan and a way of guiding and controlling the over-all census planning.

48. Every country has to work out its own census calendar, based on its own experience, possibilities and requirements, but it is possible to draw up an outline of a calendar which could be a help for individual plans. In annex I a detailed census calendar is presented as an example for the preparation of the calendar of any given census operation. This calendar is prepared for a census in which the enumeration will be executed during July 1970, for which a two-year preparation period is planned and for which some preparatory phases, such as preliminary studies and preparation of the general programme, have already been accomplished.

49. The fact that this calendar is prepared for a two-year preparatory and a three-year post-enumeration period does not mean that these periods are the only recommendable ones for a population and housing census programme; but because most Latin American countries plan to carry out a census in or around 1970, and because there are only about two years before that date, this example was prepared for that period. Those countries which have already started their census preparation will dispose of a certain reserve of time compared with annex I. For some Latin American countries a three-year preparatory period might be preferable. Of this period, the first year could be used for the preliminary planning and studies and the second and third years for the detailed preparation. The period of the post-enumeration work depends mostly on the data processing methods to be applied but it is highly recommendable to complete the data publication three or at most four years after the enumeration.

/50. During

50. During the census preparation it is necessary to work out at least two different census calendars. The first one has to be prepared during the first phase of the preparation, together with the general programme. The second, final and detailed calendar has to be prepared after the development of the census programme and the census organization.

51. When preparing the census calendar it is necessary to take into consideration the relationship of the census to the other statistical operations, because the whole census work has to be built into the general statistical programme of the country. Just before and after the census year it is preferable not to organize any other big statistical project, such as other censuses or large surveys. In a balanced statistical programme there should not be too many simultaneous competing inquiries which might place too heavy a burden on the statistical services, especially on the field officers and also on the public, with a possible result of loss of both administrative efficiency and public co-operation.^{2/}

52. A much better method which could be used for the preparation of a census calendar is the Programme Evaluation and Research Technique (PERT), which is really a refinement of the census calendar. It is very much like a flow-chart, which breaks each operation down into its smallest component, and shows, for each component, the next step into which it feeds, the minimum amount of time needed to finish it, and the latest date by which it must be completed in order not to interfere with any other part or operation. It is possible to tell almost at a glance what the effect would be of a delay in any part of any operation. Hence, if it appears likely that a given part of an operation will not be completed at the scheduled time, it can instantly be seen if the delay can be tolerated. If the delay cannot be tolerated, it can also be seen from what other work personnel can be diverted to work on the delayed component. Critical operations (i.e., those in which a postponement would seriously affect other operations)

^{2/} See also paper ST/ECLA/Conf.32/L.2 on the co-ordination between population and housing censuses with other statistical inquiries.

can be distinguished from those operations for which there is a wide margin of time for completion and which can, therefore, be postponed if necessary. Also, if time is saved on any operation, the best use of the saved time can quickly be decided upon.

IV. ORGANIZATION AND ADMINISTRATION OF THE CENSUS

A. Legal basis of the census

53. For any important statistical operation a legal basis is required. This is especially the case for such a big operation as the census, in which the whole population and many central and local government organizations are involved.

54. Legal authority for the census is required in order to establish preliminary administrative responsibilities, to obtain the necessary funds, and to determine the general scope and form of the census. In addition, it places a legal obligation on the public to co-operate and to give truthful answers, and on the enumerators to record the responses faithfully.

55. In practice there are three different forms of census legislation in the various countries:

(a) In some countries there is a general statistical legislation which lays down the obligation of taking decennial censuses, and the main characteristics of those censuses. Moreover, the national constitution of some countries incorporate some regulations on census taking.

(b) In other countries a specific law lays down the obligation to take a periodical census. As a general rule a permanent legislative basis exists for the censuses, known as the census laws.

(c) Finally, the third group of countries lacks a permanent legal authority for taking periodic censuses. It is then necessary to establish ad hoc legal authority each time that a census has to be taken. This legislation should be approved before a census operation is launched, i.e., during the very early part of census preparation. Obviously, alternatives (a) and (b) have the advantage that it is not necessary to prepare legislation each time a census is taken.

56. Even in those countries where permanent legislation exists, it is necessary to establish subsidiary legislation, generally for detailed and special administrative and organizational questions relating to the census. This subsidiary legislation is mostly limited to departmental or ministerial decrees, as compared with the general statistical legislation, which comprises mainly laws approved by the national parliament.

57. The following main subjects have to be covered in the permanent or basic census legislation:

(a) Periodicity of the censuses, i.e., the legislation fixes either the regular intervals - for instance, every five years or every ten years - or the exact year of the census;

(b) Determination of the authority responsible for taking the census i.e., the Ministries or other governmental offices which have the responsibility of the preparation and execution of the census, or the other governmental organizations which have to co-operate in the census operations (especially regional and local authorities which have to participate in the field work);

(c) Scope of the census programme, i.e., whether only a population census will be taken or if census is of housing, of agriculture, or of industrial and commercial establishments, etc., are also included..

(d) Individual obligations, i.e., the duty of the inhabitants to furnish personal information for the census and prescribing penalties for those who refuse to furnish particulars or who give false information;

(e) Confidentiality, i.e., the guarantee of the confidential nature of the personal information and that the information obtained will not be used for other than strictly statistical purposes, and the imposition of heavy penalties for any breach of confidence on the part of any census or other civil official.

58. The subsidiary legislation (either the specific enforcing clause of the permanent census law or the specific census law itself) has to cover the following points:

/(a) The

(a) The exact date and period of the census, because the general law generally indicates only the periodicity;

(b) Detailed organization and administration for the census operation, including the main steps of the preparation and especially of the enumeration; this includes the rights and responsibilities of the enumerators and supervisors, the method of enumeration, etc.;

(c) Census financing, i.e., appropriation of the necessary funds. It is necessary at the same time to establish the personnel plans, i.e., to provide for the expansion of the staff of the census office.

B. Budget and cost control

59. One of the first steps in the census plan is to prepare the preliminary cost estimates for the whole operation. These estimates are only the basis for the general census planning. They may be changed after the finalization of the census plan, and during the subsequent stages of census preparation, the budget will have to be re-examined and its performance compared with the plans. This will indicate any inefficiency and often acts as an incentive for the introduction of required economies or innovations.

60. The financial planning generally has to go through the following stages;

(a) Provisional plan, worked out together with a preliminary outline of the census;

(b) Final budget for the whole census period and for all operations, which is worked out during the development of the final census programme;

(c) Census budget for a given period, generally for one fiscal year or for a given census phase, i.e., pre-enumeration, data processing or publication.

61. No universal system of census budgeting and cost control can be suggested because the general administrative and financial practices vary greatly from country to country. However, in general the census costs can be divided in two different groups:

/(a) Direct

(a) Direct costs especially those which are to be defrayed directly from the census office;

(b) Indirect costs, which do not arise directly from the expenses of the census office, but which are also expected to arise as part of the census operation.

62. The direct census costs are really the appropriation for the census budget, but some of these expenses could also be separated from the general census budget; for instance, the costs of data processing could be borne by the general data processing unit. In these cases the expenses are part of the budget of the statistical agencies and not of the census budget. The same could happen if, for instance, the permanent census staff's salaries were a charge on the statistical agency's general budget, and not in the special census budget. It is preferable however that all expenditures on census operations, whether they are administratively part of the census financing or not, should be worked out in the census financial plan and thus also be subject to the census costs control.

63. No general suggestions or draft scheme can be presented for a theoretical census budget, but it is possible to list the main items which form part of the census budget. These items correspond generally to the main elements but the amounts are not necessarily proportional to the time spent on the work relating to them. For instance, the enumeration lasts only one day or at most one or two weeks, but its expenses, if the enumerators are paid, could amount to one-third or one-half of the total census cost. A tentative list of items of a census budget can be found in annex II.

64. Besides preparing estimates of the census expenses, it is also necessary to plan the physical facilities required for all census operations. In some cases it is more difficult to obtain some of these facilities than to get the financing for them. Generally speaking, the main physical and technical facilities required for a census, which can cause serious problems and which have to be planned in time, are the following:

/(a) Assuring

(a) Assuring office space for the census office (because the buildings of the statistical agency are not usually adequate for the relatively large census staff);

(b) Obtaining the necessary office furniture and other equipment (calculating machines, etc.) in the special census building and for the census staff;

(c) Ensuring a supply of paper for the census materials (questionnaires, instructions, punch-cards, tabulations, publications) which could amount to a total of 2-3 kgs per 1,000 persons enumerated;

(d) Assuring printing facilities for census materials; some of the materials have to be reproduced by high-pressure printing, e.g., the questionnaires, instructions for enumerators, publications; others such as the tables and internal instructions, can be reproduced by other techniques, e.g., photo-offset; special printing techniques are necessary for the punch cards;

(e) Obtaining the necessary additional processing equipment, as any existing equipment will not be enough for the census. Therefore, it is preferable to obtain a new machine park exclusively for the census or assure a given amount of time for using the existing machines, especially computers; whichever alternative is chosen, it is necessary to determine the processing methods and to obtain the necessary machines, either by buying or by renting them or by using some of the machines which exist for other purposes in the statistical agency or in other government institutions;

(f) Special equipment and preparation is necessary if the cartographic work is executed by the census office itself. In that case the necessary equipment has to be obtained well ahead of time because this operation is one of the most complicated tasks and has to be started at the same time as the first preparatory steps. If this work is done by the permanent geographic or cartographic institutions or by the existing cartographic unit of the statistical agency or

/census office,

census office, it is also necessary to make sure of its collaboration in advance and of sufficient working time being reserved for the census preparation.

65. For the analysis of the census expenses proper it is necessary to estimate all expenditures for the census operation, including those which are incurred by other public authorities and not by the census organization. These indirect expenses, which do not include any costs and loss of time which the census operation may cause to private organizations, business and individuals, could amount to a relatively high proportion of the total costs if the census organization is decentralized. For instance, if the central census office is responsible only for the preparation of the census and the processing of the results, the whole enumeration being left in the hands of the local administrative authorities which pay for all field operations, these expenses could reach a very high level. It is also necessary to estimate the cost of that part of the work which is done by local officials, or by enumerators, even if they are not paid, because the work which they do for the census falls outside their normal activities.

66. In the same category are the supplies and services for the census which are furnished by other government or research institutions free of charge and which would have cost the census office a considerable sum if it had had to order them. Such expenses include for instance, the use of electronic computer equipment, preparation of maps, household lists, staff to help in evaluating and analysis, etc.

67. Because a relatively large part of the census budget is spent on salaries of staff, it is necessary to estimate and work out a very detailed personnel plan. This is true, naturally, not only for the financial estimates but also for the personnel programme itself, in so far as staff recruitment is concerned. A more detailed explanation of the problem of staff recruitment will be given in section D below.

68. As with any other financial operation, it is necessary, to supervise the execution of the census budget and to carry out a continuing analysis of each operation. This cost control is executed after the

/fulfilment of

fulfilment of each major census step and before the preparation of the next periodic financial plan. The plan as executed may change in some respects after the preparation of the original calculations as a result, for instance, of new conditions arising during the period of operation or by the adoption of new and better ideas which make it possible to complete some operations ahead of schedule, or with a smaller workload, etc.

C. Administrative organization

Principles of a census organization

69. Because the census is an ad hoc but relatively large statistical operation, it is preferable to establish for its preparation and execution a special and, as much as possible, independent organization, generally inside the general statistical service. Its composition and extent will change in accordance with the different phases of the census work, i.e., pre-enumeration and post-enumeration.

70. The census organization is generally established on three different levels:

(a) Preparation and execution of the census at national level, by the central census office;

(b) Preparation and execution of the census at the territorial, i.e., provincial, regional and local level, by census field offices;

(c) Co-ordination of the census work at the national and territorial levels, by the national, regional and local census commissions.

Central office

71. The main task of the central census office is to prepare the census, administratively and technically to supervise and control the enumeration, to carry out the data processing and to publish the results. The head of the central office is responsible to the central government for the conduct of the census.

72. The census office may be organized in two main ways, which vary in detail in accordance with the system of public administration,

/the existence

the existence of a census tradition, the available financing resources and several other factors. The various national census organizations can be divided roughly as follows:

(a) There is an office which is permanently responsible for census work as an integral part of the statistical system of the country. This permanent census office may be wholly autonomous or part of the central statistical office and exist not only during the census preparatory and post-enumeration period, which lasts generally for four or five years, but on a continuing basis. In some countries this office has a regional organization also, which either works on the general statistical operations or only on census preparation and execution. In other countries there is only a central office, and this has contact with the local administrative authorities,

(b) There is no permanent census office and for every census it is necessary to establish a new census organization which will be dissolved after the census operations end.

73. The need for a permanent census organization during inter-censal periods is increasingly being recognized by countries. However, only a few countries in the region have had the financial resources to retain the census organization - or at least a nucleus of it - that was set up for their 1960 censuses. It is hoped because of its advantages that after the next census most countries will be in a position to retain their census organization after the termination of the 1970 census operations.

74. The main advantages of a permanent census office are the following:

(a) The availability of a trained and experienced staff which can be used for the preparation and execution of the next census and which can develop its skill between censuses;

(b) The maintenance of records, i.e., maps, descriptions of census work phases, summaries of experience, etc., which can be studied and improved or modified between censuses;

/(c) The

(c) The continuity of the census work between censuses in the form of analytical studies, the continuous evaluation of the data obtained at the last census, the organization of inter-censal demographic censal studies, which serve also as experimental and pilot studies for the next census;

(d) The possibility of a much longer and better census preparation which really starts after or even before the termination of the last census, thus ensuring that the census plan, the budget, the cartographic materials, etc., will be ready on time;

(e) The availability of a nucleus of processing equipment and office space which can be temporarily enlarged at the time of the census.

75. The countries not having permanent census offices must face the problem of establishing a new office in the relatively limited time available for the preparation of the census. As a result, these offices are often lacking in documentation and other working necessities and are nearly always staffed with personnel who are not specialized and have little or no census experience.

Field organization

76. For the preparation of the census field work it is necessary to have an adequate census field organization. Whatever the details of the organization and whether or not there is a permanent regional statistical organization, it would be best to have a separate and independent technical field organization.

77. The preparation and supervision of the field work should be in the hands of regional census commissioners who have general statistical and if possible census experience and are directly subordinate to the central census office. If there is a regional statistical organization one of the employees of the regional office is generally appointed to this job. His activities should start at a fairly early stage in the census preparation because he is responsible for all preparatory work in the field and for co-ordinating the activities of the local administrative authorities.

78. Later in the preparation, census field offices are established, especially in larger countries, to help the regional commissioners. These offices are responsible for the final pre-enumeration work at the

/provincial and

provincial and local levels. They could also be part of the statistical organization and help in and co-ordinate the census activities of the local authorities. Frequently the permanent regional and local statistical offices are transformed, wholly or partly, into temporary census field offices, perhaps with extra personnel. The basic idea is however, that all of these offices are co-ordinated by the regional census commissioner, who is in the closest contact and responsible to the central office.

79. In some countries the local census organization does not come directly under the central office because the census activity is decentralized to the independent regional statistical or administrative organizations. In this case also it would be preferable for the central office to have its own responsible regional officer to co-ordinate and control the local census work.

80. Sometimes the census field offices participate not only in the census preparation and enumeration but also partly or wholly in the data processing and/or in the publication work. This procedure is preferred if the country is large or has a federal administrative system; but theoretically it is much more advisable and also less expensive to centralize the data processing and publication work as much as possible. This is especially so with the new computer processing techniques. Some of the preparation for data processing might perhaps be decentralized if necessary. This would include, for instance, checking, editing and coding or at most also punching the questionnaires. But all this work should be executed under the strict supervision and control of the central census office.

81. Generally speaking, not all preparatory field work is the responsibility of the field offices and/or the census commissioners. This depends on the statistical organization of the country. In most countries some pre-enumeration work - for instance, house identification, house listing, zonification, and the enumeration itself - are the

/responsibility of

responsibility of the local administrative authorities, and the central statistical organization only prepares, organizes, helps, co-ordinates and supervises the work.

82. Whatever the administrative forms of the census enumeration, it is necessary to establish a census administration at all territorial levels. This organization could take two different forms:

(a) A census commission which as a consultative body co-ordinates the works at all territorial levels;

(b) Local census officers execute and supervise the local census activities. In rural areas they are generally the heads of the local administrations and in the urban areas high-level employees of the local administrations temporarily assigned to census work. In big cities it is necessary to establish a local census office which has several sub-offices, one in each administrative district. This office is generally responsible for all census activities during the enumeration stage. It is rather important that their promotional and advisory functions should be well defined and that it should be clear that the final responsibility for all census planning rests with the executive agency, i.e., the central census office.

83. In some countries the census commission mentioned above assumes the general direction of the census work. It is, however, desirable that the functions of such commissions should be of a strictly advisory nature and it is essential that provisions be included in the census legislation defining the exact relationship between the advisory and executive organs of the census. The advisory body must not interfere in the development of the census work by assuming responsibility for matters which are clearly within the competence of the executive agency.

84. As a general rule, there is a national census commission which is composed of high government officials (ministers or their representatives) and in some cases representatives of non-governmental users of census data. This highest advisory body may include representatives of the following governmental agencies: Ministries (or Departments) of the Interior, Justice, National Defence, Economics, Finance, Housing, Labour, Health, and Education, the national planning office, a representative each of the police department, the Armed Forces and the national cartographic institute, the director of the national statistical agency and the directors of the central census office. In some cases the Commission may include representatives of private or semi-official organizations of employees, consumers or workers, and representatives of other interested groups (e.g., research institutes, universities, etc.).

85. The national census commission meets only occasionally and it discusses the main phases of the census plan, e.g., legislation, general plan, budget, plan of administration, final plan, etc. The permanent work may be done - as preparation also for the commission's decision - by the several sub-commissions or committees in which representatives of the members of the full commission participate at a somewhat lower level. The members of the sub-commissions are technicians and have time for detailed discussions.

86. It is recommended that at least the following sub-commissions should be established:

(a) Programme sub-commission, which decides upon the census topics, tabulations, questionnaires, etc., and in which representatives of users of the census data participate in an advisory capacity;

(b) Finance sub-commission, which works out the financial and personnel plans for the census;

(c) Field organization sub-commission, which co-ordinates the field organization, cartographic and geographic preparation of the census, etc. and on which all government agencies with employees participating in the census enumeration are represented, (for instance, Departments of the Interior, National Defence, Police, Health, Education, etc.);

/(d) Publicity

(d) Publicity sub-commission, which helps in the preparation and execution of the publicity campaign to obtain the full co-operation of the population. In this sub-commission representatives of the radio, TV stations, the press, etc., participate also.

87. In some countries other technical sub-commissions are formed, for instance to help in the cartographic and other geographic work, transportation, communication, etc.

88. Generally speaking, such and similar sub-commissions are also formed at the regional and local level with the exception of the programme sub-commission. These sub-commissions have the same advisory task at their territorial level as the national ones at the country level, and they include representatives of the regional and local special agencies, administrative authorities, non-governmental organizations which can help in the census preparation and operation, etc. It is preferable that the chairman of a sub-commission should be the chief of the administrative authority concerned, and its secretary the executive chief of the census.

Internal organization of the central office

89. The internal organization of the central census office is always changing according to the stages of the census, and it will vary as the census work progresses with the changing emphasis on different organizational problems. The tasks are laid down in the census plan and the extent and dimension of the office are determined by the quantity of work which has to be executed.

90. Generally speaking, the organization of the census office goes through the following stages:

(a) At the stage of preparation of census studies and general planning it is not necessary to enlarge the permanent census office if there is one; this office can execute the preparatory tasks.

(b) At the stage of preparation of an experimental census and of the final census plan, and especially for the field preparation, the office must be enlarged. In other words, it is necessary to organize the census office with additional staff.

(c) As a general rule, the same personnel and organization can exist at the enumeration stage, but with the difference that everybody is participating in the control and co-ordination of the enumeration.

/(d) After

(d) After the enumeration the whole structure is changed because the main activity is now that of data processing, preparations for which were naturally started before the enumeration.

(e) After the data processing and the publication of the results, the census organization can be reduced once more to the size of a permanent census office which operates until the next census.

91. There are very many variations between the forms of organization of the census offices in different countries but it is possible to give a general example of such an organization (see annex III). This is not the only form of census organization but it presents a systematic chart of a central census office. The importance and extent of the different departments or sections of the office changes during the stages of the census, as explained above, but the organization itself can exist throughout the whole census.

92. Technically the most important part of the census office is the methodological and analytical department, which works on the preparation of the census and the publication of the results and which ensures the co-ordination of all the census work. This unit is the nucleus of the census organization and the basis of the permanent census organization. Of course, the main technicians of the other departments, such as administration, field organization, data processing and a major part of the cartographic department, also form part of the permanent census organization.

93. In number of personnel the biggest unit is that which carries out the data processing and it concentrates the bulk of its activities in the period after the enumeration. But the planning and programming of data processing must be done during the pre-enumeration phase. In some countries, however, the data processing itself, and especially the elaboration of mechanical tabulations, does not form part of the work of the census organization itself because the statistical agency has a permanent data processing unit which is responsible also for the census data processing. In both these cases, however, it is preferable to organize a small tabulation unit inside the census office, which co-operates with the bigger data processing unit and collaborates in the programming and tabulation control. The pre-tabulation work (checking, editing, coding) is done by the census office, but in some countries this work is decentralized to regional offices. In other

/countries, however,

countries, however, the pre-tabulation work is directed by the regional office but executed by outside contract workers. This system is generally accepted because there is a lack of experienced computer programmers and operators and also of enough space for their accommodation in the office building. These outside workers are generally employees of the general statistical service or other offices or perhaps retired employees who have experience of statistical data processing and have time available for this special work. There is another alternative, which is that the data processing should be done completely outside the statistical office.

D. Staff recruitment and training

Staff recruitment

94. Together with the expansion and/or organization of the census office it is necessary to recruit the required staff of the central office. This staff may be divided roughly into three different groups:

(a) Professional staff, who have the necessary statistical and demographic training and census experience and who generally form the core of the permanent census office;

(b) Statistical officials who have some census or general statistical processing experience and could participate as assistants to the professionals in the census preparation and later could work as supervisors in the data processing;

(c) Temporary processing workers, who generally have no experience and will be trained especially for the different census jobs (especially those which need a relatively large number of personnel, e.g., checking, coding, editing, publishing, etc.).

95. The bulk of the census personnel comes from the third group, but their activity lasts a relatively short time. The first group has to work continuously as permanent personnel of the statistical agency while the second group is working during the whole census period; after that they may be on the staff of the other departments of the statistical office as skilled statistical personnel. It is desirable that this second group should be recruited mostly from persons who participated at the same level of work during the last census and are willing to accept the same employment

/again. Many

again. Many of the temporary workers for the processing operations could be recruited from the enumerators or supervisors (unless, of course, all the enumerators are school teachers or other government workers), and these persons can be shifted from one operation to another as the post-enumeration work proceeds.

96. Because of the changes in the organization according to stages of the census, the central office's staff recruitment also goes through several stages during the census period:

(a) At the beginning of the formation or expansion of the census office, the main assistants to the technical staff, the administrative personnel and the personnel in the field organization and cartographic units must be recruited. The total number of census employees during this first phase of preparation is rather limited.

(b) The second expansion of the office should take place at the same time as the experimental censuses, which need a relatively large number of data processing personnel (including the nucleus of the mechanical processing personnel). They learn the census work during this operation and could be second-echelon officers at the final processing.

(c) The third and largest staff recruitment is needed before and after the enumeration for the data processing work - checking, editing, coding, punching, tabulating, etc. - especially if all of these are done at the central office. In some countries, and for a limited time in this case, the total personnel of the census office may reach a few hundred persons.

97. After the termination of the data processing the number of personnel may decrease again to the main nucleus, who carry out the tasks of data publication, analysis and evaluation.

98. The staff recruitment for the field offices is a relatively difficult task, especially because these offices also need trained and experienced personnel. The first and main task is to recruit the chief of the field office, i.e., the regional census commissioner, who should in fact be recruited at the time when the central office is organized. For this post it is necessary to find persons who have experience of census work or at least some statistical experience. Secondly, it is necessary to recruit the assistant personnel of the field offices, at a not too early phase of the census organization. The number of these employees depends on

the general statistical organization of the country, and basically on the help which the permanent statistical regional and local offices can give to the census work. Naturally, the most difficult task is the recruitment of the enumerators and supervisors, who are the largest group of field workers; the details are explained in the document ST/ECLA/Conf.32/L.7, prepared by this Seminar.

Staff training

99. Because of the nature of the census work and the form of recruitment of its personnel, it is necessary to prepare a fairly large number of census training courses over a fairly long period. The following training courses must be organized during the census work:

(a) Detailed methodological and theoretical training for the professional and semi-professional staff (if possible the main technical personnel should have participated in national and international census seminars or courses or other forms of training);

(b) Training of the field organization and preparation for the regional commissioners and members of the central office's territorial organizational staff (possibly together with the preparation and execution of the experimental courses);

(c) Training for the instructors and central and local supervisors of the enumeration, which means centralized training for all personnel who are participating as leaders of the local enumeration for a period of four to six weeks;

(d) Training for field office members (either in the technical or in the administrative offices) in the field - duration one to two weeks;

(e) Training for supervisors and enumerators in the field (for details see "Method of enumeration" in document ST/ECLA/Conf.32/L.7);

(f) Training for preparation of data processing at different levels, i.e., checking, editing, coding, supervision of data processing - duration one to two weeks;

(g) Training for operators of data processing machinery (for details, see "Electronic data processing" document ST/ECLA/Conf.32/L.9.

100. These courses should be given, if possible, directly by the staff of the census office, but on specialized subjects other specialists should participate as teachers in the courses (e.g., on the problem of cartographic materials, electronic data processing, etc.). The courses may be carried on full-time during work hours, while others, such as those for the data processing work, might be given as part-time courses. All courses should be given at a practical level (with examples, practical exercises, experimental studies, etc.) and not only theoretically. When all courses are finished, examinations must be held and only those who pass the requisite examination should be allowed to participate in the relevant phase of census.

Elements of the census plan	Months before enumeration																								Enu- mera- tion	Months after enumeration				
	-25	24	23	22	21	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2		1	1	2	3	4
	Month	-6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4		5	6	7	8	9
Year	1968												1969												1970					
I. PREPARATORY STAGE																														
A. Preliminary studies																														
01 Studies of previous census records	[Shaded]																													
02 Studies on applicability of methods and procedures	[Shaded]																													
03 Analysis of data requirement	[Shaded]																													
04 Considerations on valid legal provisions	[Shaded]																													
05 Control of existing cartographic materials	[Shaded]																													
B. General program preparation																														
06 Determination of objectives	[Shaded]																													
07 Discussion on census scope	[Shaded]																													
08 General outline of census programme	[Shaded]																													
09 Preliminary census calendar	[Shaded]																													
C. Census organization																														
10 Preparation of legal basis	[Shaded]																													
11 Determination of responsible office for the census	[Shaded]																													
12 Organization (or extension) of central census office	[Shaded]																													
13 Appointment of regional census commissioners	[Shaded]																													
14 Organization of census commissions	[Shaded]																													
15 Organization of field offices	[Shaded]																													
16 Final detailed calendar	[Shaded]																													
D. Financial and personnel plan																														
17 Preliminary estimates of expenses	[Shaded]																													
18 Preliminary estimates of personnel	[Shaded]																													
19 Staff recruitment (central office)	[Shaded]																													
20 Staff recruitment (field offices)	[Shaded]																													
21 Staff training (central office)	[Shaded]																													
22 Staff training (field offices)	[Shaded]																													
E. Pilot census																														
23 Preliminary selection of census topics (after discussions)	[Shaded]																													
24 Preliminary tabulation plan	[Shaded]																													
25 Draft questionnaire and instructions for pilot census	[Shaded]																													
26 Plan of enumeration for pilot census	[Shaded]																													
27 Plan of data processing for pilot census	[Shaded]																													
28 Execution of pilot census	[Shaded]																													
29 Analysis of the results of census tests	[Shaded]																													
II. PRE-ENUMERATION STAGE																														
F. Final programme preparation																														
30 Final tabulation programme	[Shaded]																													
31 Final form of questionnaire	[Shaded]																													
32 Definitions and classifications for data processing	[Shaded]																													
33 Instructions for enumerators	[Shaded]																													
34 Printing of questionnaires and instructions	[Shaded]																													
G. Enumeration plan																														
35 Enumeration methods and procedures	[Shaded]																													
36 Date and period of enumeration	[Shaded]																													
H. Data processing plan																														
37 Processing methods, form and place	[Shaded]																													
39 Planning and programming of data processing	[Shaded]																													
40 Forms, materials, instructions for data processing	[Shaded]																													
41 Training for data processing	[Shaded]																													
I. Publication plan																														
42 Design of publication programme	[Shaded]																													
43 Assuring of printing facilities	[Shaded]																													
J. Plan of sampling																														
44 Scope of sampling application	[Shaded]																													
45 Detailed plan of sampling operations	[Shaded]																													

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MEMORANDUM FOR THE RECORD
SUBJECT: [Illegible]

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ANNEX II

Main items of a census budget

Note: This budget scheme includes all possible census budget items, relating either to the central census office or to the field offices. The exact budget has to be worked out for individual offices (central and field) and also by other institutions which participate in the census work. It is also necessary to give a periodical distribution of the financial estimates (generally by years), parallelly with the census calendar. Some budget items exclude each other, e.g., if the office has to buy the census machinery, only the item 13 is included and not item 41; if the rental is accepted, the reverse will be the case, etc.

1. Investments

11. Transformation or extension of the central office's building
12. Purchase of statistical machinery and other office equipment
13. Purchase of data processing machines
14. Purchase of vehicles (for field preparation and control)
15. Other investment

2. Personnel expenditures

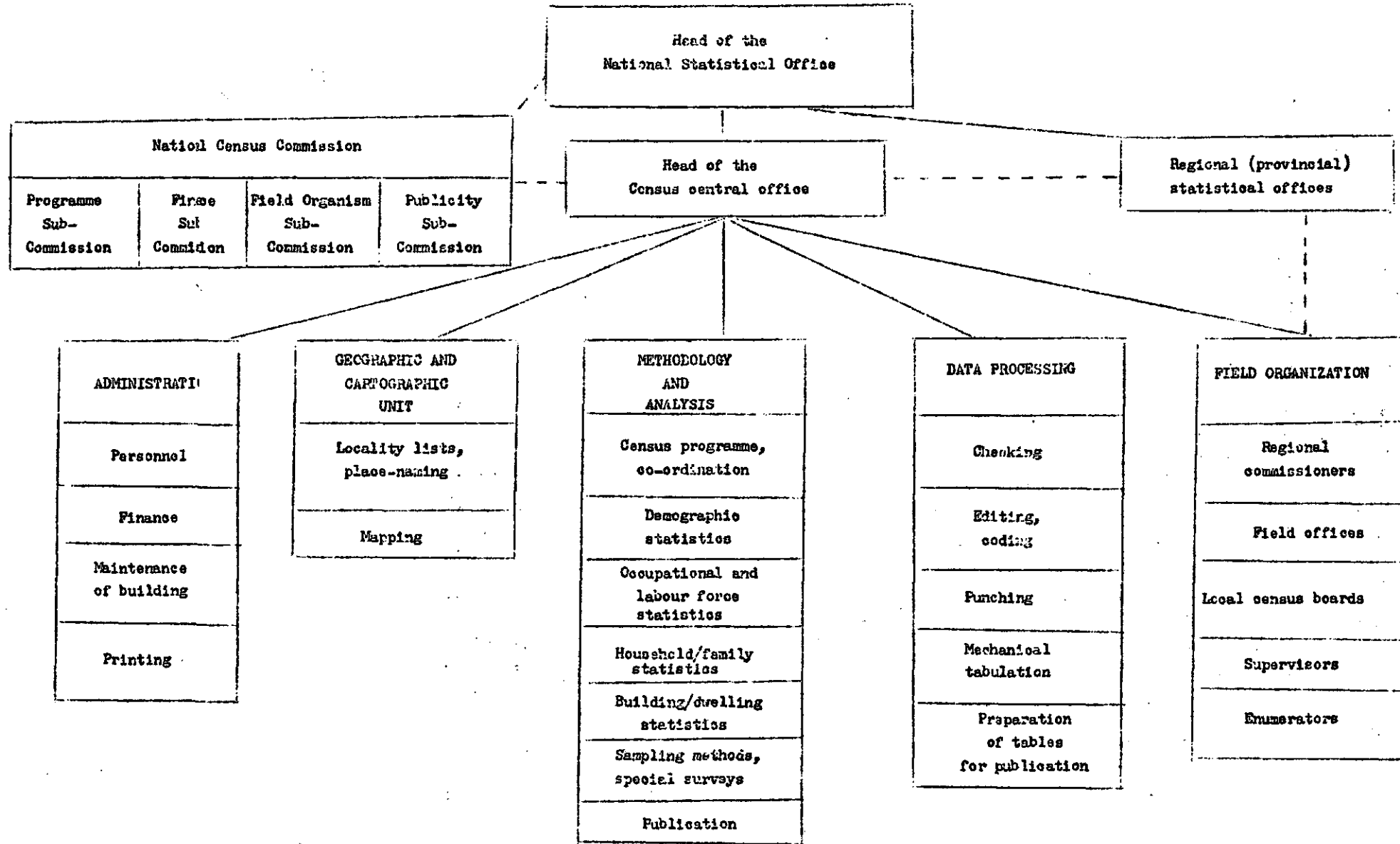
21. Salaries of permanent staff
22. Payment to temporary employees in central office
23. Costs of operations paid for on a piece-work basis (e.g., editing, coding, punching, etc.)
24. Salaries of regional (provincial, state) census commissioners
25. Payment of temporary employees in field offices
26. Social security, income taxes, etc.
27. Other personnel expenditures

3. Expenditures for materials

31. Purchase of paper for all census operations (questionnaires, instructions, tabulations, posters, punch cards, publications, etc.)
32. Purchase of cartographic materials
33. Office supplies
34. Expenditures for other materials

/4. Expenditures

Annex III
ORGANIZATION OF A CENTRAL CENSUS OFFICE



— direct line of command
- - - - indirect relation

4. Expenditures for services
 41. Rental for mechanical data processing equipment
 42. Printing (questionnaires, instructions, tabulations, posters, punch cards, publications, etc.)
 43. Communication expenses (postage, telephone services, cables, etc.)
 44. Freight (despatch of census materials from and to the census office, etc.)
 45. Rental of office buildings (central, field)
 46. Maintenance of offices (central, field)
 47. Advertising and other publicity expenses
 48. Travelling expenses - staff of central office
 49. Travelling expenses - regional commissioners and employees of field offices
 40. Payment to instructors for staff training (other than regular staff)
5. Expenditures for enumeration
 51. Enumeration costs of census tests
 52. Costs of locality, house and household listings
 53. Instruction expenses (travelling expenses of instructors and participants, payment for enumerators and instructors for participating in training, rental of halls for instruction, etc.)
 54. Enumerators' fees (on a piece-work basis)
 55. Field supervisors' fees (on a piece-work basis)
 56. Rental of vehicles during enumeration
 57. Payment of guides
 58. Travel allowance for enumerators, supervisors and guides (in complicated areas)
 59. Enumeration costs of post-enumeration surveys and other sample enquiries
 50. Other costs related to census enumeration
6. Sundries and unforeseen expenses
 61. Sundries and unforeseen expenses