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ECONOMIC COMMISSION FOR AFRICA

REPORT OF THE AFRICAN SEMINAR ON

VITAL STATISTICS

(Addis Ababa, 14-18 December 1964)

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Executive Secretary of the Economic Commission for Africa

I. INTRODUCTION

1. The first African Seminar on Vital Statistics was held in Addis Ababa from 14 to 18 December 1964. The Seminar was organized by the Economic Commission for Africa with the co-operation of the Statistical Office and the Bureau of Technical Assistance Operations of the United Nations. It was convened in response to a recommendation of the Third Conference of African Statisticians.
2. The aims of the Seminar were (a) to study the methods, techniques and problems of obtaining immediate measures of the principal vital rates in Africa, whether by retrospective inquiries or by other devices implemented as substitutes for a fully-functioning system of civil registration and (b) to discuss methods, devices and procedures for establishing, extending and improving civil registration of vital events in the region. In the planning of the Seminar particular emphasis was placed on certain experiments at present being conducted in African countries where the combination of a number of technical devices would, it was hoped, provide a basis of experience of great value in assessing possible future development in this field in the context of local conditions.
3. The meeting was attended by participants from 12 member or associate member countries and by a group of expert consultants, supplemented by representatives of outside organisations with particular interests in the development of African demographic statistics.
4. Mr. Thomas Curtis, Directeur de la statistique générale et de la mécanographie of Guinea, and Ato Seyoum Alemayehu of the Central Statistical Office of Ethiopia were elected Chairman and Vice-Chairman respectively.
5. The agenda of the Seminar, the list of participants, the list of Seminar documents and the opening statement by the Executive Secretary of ECA appear as Annexes I to IV respectively to this report.

II. THE STATE OF VITAL STATISTICS IN AFRICA

(Agenda item 4)

Discussion leader: Miss K.M. Jupp

6. The collection of demographic statistics is an integrated process in which the statistics of vital events constitute an important element, supplementing as they do the data on size and structure of populations. Since the latter are traditionally obtained in large-scale periodic operations of the census type, there exists a very close relation between these operations and any scheme for vital statistics collection, whether it be through civil registration or through some substitute for registration.

7. In Africa, the relation between the two types of data is even closer than is generally the case. In the absence of reliable statistical information from registration of vital events, it has become a common practice to meet the urgent needs of economic and social planning by deriving estimates of birth and death rates from retrospective questioning during the course of the national census or national sample survey. In addition, numbers of smaller-scale surveys have sought to obtain similar data, pending the time when civil registration will succeed in producing reliable vital statistics, in Africa as in other parts of the world, as a by-product of its legal function of establishing the status and rights of individuals in the community. The practice of obtaining vital data from national census/survey operations is likely to continue for some time in Africa and it would be of advantage to the countries of the region if they could plan their attempts in this direction as part of their participation in the 1970 World Census Programme, taking into consideration the revised international recommendations which will shortly become available.

8. It was noted by the Seminar that civil registration is compulsory and general only in a limited number of African countries, representing approximately one-third of the total population of the region. It was

noted also that even where the law makes registration of vital events compulsory, it is not often complied with.

9. Taking account of these deficiencies in registration and recognizing some of the problems which confront African governments in the effort to overcome the difficulties, the discussions on the present state of vital statistics collection and on proposals for future work in this field were both interesting and revealing. In outlining the position of their countries, participants took a common view - which was the more notable in that it was taken for granted rather than explicitly stated that continuing civil registration must be vigorously promoted and that solutions must be sought to the difficulties of achieving complete coverage. The inference was that there is now a more marked emphasis on and recognition of the need for civil registration, both in its legal and statistical aspects, than had been shown either at the Third Conference of Statisticians, held in Addis Ababa in 1963, or at the Seminar on Population Problems in Africa, Cairo 1962.

10. The growing interest of African statisticians in registration as the ultimate source of vital statistics coincides with a comparable expression of interest emanating from a public administration seminar held earlier this year in Northern Nigeria on Central Services to Local Authorities. It is therefore timely that the United Nations should plan now to offer its sponsorship on an international basis to urge the establishment of civil registration, mainly on the grounds of the protection of human rights afforded by proper documentation of identity, nationality, etc. This encouragement should give rise to practical assistance to countries, by providing moral and technical support for promotional activities.

11. It is important to get more accurate data on vital events, and to that end control and evaluation techniques should be accepted as a necessary part of the projects in hand at present or now in the planning stages, both in regard to registration itself and to substitute devices for obtaining vital data.

12. This meant that survey techniques would continue to be an important element in the collection of vital statistics, but difficulties are to be anticipated in urban areas, where mobility is frequently great. The problem for Africa, however, will remain basically a rural one, since urban areas containing 20,000 or more inhabitants represent only a very small fraction of the total population, estimated at one-tenth in the 1950s.

13. Participants expressed a variety of views on the most effective approach to the promotion of registration. The desirability of a suitable legislative framework, fairly simple and flexible, was stressed by some delegates but others considered legislation secondary in importance to methods of persuasion which would make the general population aware of advantages to themselves in registering vital events. Others again took the view that it is not so much lack of interest on the part of the people as lack of effective support from the administration which retards progress, and instances were cited of changes in the administrative provisions; in personnel in the registration centres, of loss of returns, of failure by the registrar to make correct entries. The inherent difficulties in obtaining information from nomadic populations was a contributing factor in some areas.

14. Finally, it was felt that the programmes for stimulation of registration would be most effective if they were phased in some way, by concentration of resources in certain selected areas and later expansion to other areas.

III. COUNTRY EXPERIENCES

(Agenda item 5)

Discussion leader: Dr. Pierre Cantrelle

15. By way of introduction, a review was made of the situation regarding demographic surveys and civil registration in the various countries of Africa since 1961.

16. In Kenya, it was necessary to have in each registration centre a full-time employee having the special responsibility of carrying out statistical surveys, checking information in the field, and keeping a close watch on the data obtained. The registrar often had functions other than those of registrations. Budgetary problems involved in the recruitment of an official working full-time on vital statistics in each centre were not overlooked, however. Repetition of observations or field visits seemed a worthwhile procedure, as it provided a better knowledge of population movements. In that connexion, the experiments conducted in Pakistan, where the frequency of annual observations in the field was three, were mentioned. As a single questionnaire did not always allow for accurate population surveys to be made, certain participants considered it desirable to make use of other forms better adapted to the very different populations within a country.

17. In Togo, a distinct improvement in registration, especially of births and deaths, had been noted during the last decade. The information concerning men was more satisfactory than that for women. The problem of name changing was mentioned, as was the problem of inaccurate declarations concerning residence in a given locality. It is hoped that fruitful results will be obtained from the present experiment of combining the efforts of the health service with those of the statistics and civil registration offices. Such a method could provide useful data for the health services as well as furnishing current demographic statistics.

18. In Rhodesia, experiments are being conducted with small sample surveys of five hundred persons to assess the merits of the intensive method in limited areas, repeated observations, and combination of the extensive method with the intensive method of observation already mentioned, by multiplying small samples.

19. In Senegal progress has been made in the registration of vital events by the use of a variety of means. A demographic survey/complementary to the registration system is in course, consisting of repeated visits in a limited zone. It appears that annual visits to each family give better results than quarterly visits to each village.

20. In Morocco the retrospective method was used in the urban areas, while in the rural areas the approach was both comparative and retrospective. In the rural areas different questionnaires were used in the 3 rounds. Births and deaths occurring during the survey period were traced by comparison of the composition of each household at the successive rounds. In addition, retrospective questioning was employed to obtain information on infants born alive and dying between 2 consecutive rounds. One can say with confidence that the combination of several methods gave more precise results than the use of a single method. The positive results of this survey make an important contribution to Moroccan demographic research. Moreover, the registration procedures have been changed and the results will be verified by sampling methods using the network of health assistants now in process of installation.

21. In the United Arab Republic, a continuous registration system has been in existence for a long time; moreover, a special project has been designed to start in 1965, in collaboration with the Cairo Demographic Centre, on the basis of continuous observation, with a view to obtaining a measure of under-registration and revealing the major causes of such deficiencies. The project also aims to determine the most effective method to ensure complete coverage. Trained women investigators will be assigned to reside in the sampled villages for a whole year in order to carry out the continuous observation through repeated visits to all the households in the villages. Three census counts will be conducted for each of the sampled villages, at the beginning, middle and end of the year of observation. The experiment attracted attention on account of the appointment of women investigators for this project. It seemed that such an experiment could only be carried out in a very limited number of countries where such possibilities are available.

22. For Nigeria mention was made of the comprehensive Demographic Sample Survey to be conducted early in 1965 which will cover among other things questions on fertility, mortality, economic characteristics and internal migration.

23. In Guinea an effort has been made to bring registration within reach of the population. Thus the powers of civil registration officers have been passed to the Présidents de Comité, the Comité being a geographic unit comprising 500 to 800 persons. However, there are difficulties of collection and of filling-in the forms, difficulties which may be removed as a result of the literacy campaign which will make it possible for the Comités to use forms in French and the vernacular. A systematic effort at explaining the procedures has been undertaken by sending missions to set up model Comités, the ultimate objective being to attain progressively complete and continuous registration of vital events.

24. In Madagascar a continuous system of registration has existed for a long time, but it is incomplete, with the percentage of under-registration varying considerably from region to region. In the province of Tananarive where registration is almost complete detailed data on fertility and mortality rates have been obtained. A sample survey will begin in 1965 to obtain regional data and to measure the effect of economic and social factors on the rates.

25. It was noted by several participants that the rates observed amongst the nomad population deviated considerably from those observed among the settled population. This phenomenon called for further investigation. In certain countries or regions, there was frequent changing of names, which gave rise to difficulties in the operation of civil registration and in control. Two tentative solutions were advocated: on the one hand legislation drawn up by the authorities, and on the other hand, the elimination or easing of difficulties by making maximum use of the traditional naming system, if such existed.

26. On the whole, the discussions showed that difficulties in different countries were generally of the same nature and that the methods had a common basis, but that ways and means varied considerably from one country to another according to geographical, social, or political facts, and also according to financial resources.

IV. DEFINITIONS, CLASSIFICATIONS AND TABULATIONS OF VITAL EVENTS
BOTH FROM CIVIL REGISTRATION RECORDS AND FROM FIELD INQUIRIES

(Agenda item 6)

Discussion leader: Dr. Yves Biraud

27. As the Seminar emphatically confirmed that the ultimate objective was to establish an efficient, continuous and general registration and vital statistics system in all African countries, it was considered necessary to review existing international definitions and rules in the field, to see whether and how they could be effectively applied to the continent.

28. Out of the series of World Health Organization and United Nations definitions presented in Principles for a Vital Statistics System, those concerning live births and foetal deaths were particularly examined because of their repercussions on the death, infantile mortality, general mortality, and still birth rates.

29. Without wishing to modify these definitions, which apply mainly to births attended by doctors or midwives, the Seminar considered that, in demographic surveys, it would be advisable to consider as live births those children who cried at birth, and as foetal deaths those children who did not cry.

30. It strongly endorsed the principle that a live-born infant dying a few days after birth should be entered in the register of births and also in the register of deaths, the latter specifying the length of life.

31. It was proposed that, in subsequent tabulation, such infant deaths should be grouped according to the WHO Rule 1 classification, adopted by the United Nations, namely:

age less than one day, 1, 2, 3, 4, 5, 6 days; 7-13 days; 14-20 days; 21-27 days; 28 days-2 months; 2, 3, 4, 11 months; and not specified.

32. With regard to adult deaths, the unanimous opinion was that the age should be registered with all possible accuracy, perhaps with the help of local calendars of historic events, though the necessary groupings might have to be made subsequently in tabulating the data.

33. Data collected by years of age might then be grouped according to the five and ten-year classes advocated by WHO and the United Nations, and re-grouped according to the needs of school, labour, fertility statistics, etc.

34. The Seminar's attention was drawn to the advantages of grouping in physiological ages from 0 to 1 year, 1 to 4, 5 to 14, 15 to 49, and 50 and above, which corresponded to the rough classification frequently employed.

35. The age-limit of 50 years (even approximate) was that adopted for Swaroop and Uemura's health and demographic conditions indicator (proportional mortality above 50), applicable even when civil registration is incomplete.

36. The Seminar participants considered that they could not discuss definitions relative to marriages, divorces, etc., owing to the many legal situations existing in the various countries of Africa, and even among the various ethnic groups within a single country.

37. The Seminar noted that, in many African countries, the laws on civil registration did not cover still births (foetal deaths), and considered it impractical to recommend their registration under present conditions in most of Africa.

38. It also considered that, when the particular conditions under which demographic work was carried out in Africa did not permit the application of international definitions and classifications, an effort should be made to indicate the degree of correspondence with them, and the points of divergence, so that the users of the published work could not be misled.

39. The Seminar noted that, while accepted international definitions were available for the facts and the procedures of traditional civil registration, the same did not hold true for the various forms of demographic inquiry designed to make up for the lack or incompleteness of traditional vital statistics. The Seminar requested Dr. Biraud to make a preliminary draft of definitions of different types of vital statistics inquiries, as a basis for discussion at a later date.

V. DESIGN OF CIVIL REGISTRATION EXPERIMENTS AND
SURVEYS OF VITAL EVENTS INCLUDING CONTINUOUS OBSERVATIONS

(Agenda item 7)

Discussion leader: Mr. C. Scott

40. The over-riding need for annual and comprehensive data on vital rates was accepted, together with the implication that countries should try to introduce nationwide vital registration at the earliest possible time.

41. With this as the basic premiss, the statistical problems involved in setting up a registration system were examined. Development of such a system would begin with sample surveys, operating as a substitute for registration, proceed to sample registration schemes supported by surveys, and ultimately reach the goal of nationwide registration. A complete programme of this kind was inevitably complex, and should not be undertaken lightly.

42. Survey methods were briefly reviewed. A distinction was made between the single-round wholly retrospective method; the multi-round comparative or follow-up method; and continuous observations. The latter two were more expensive but reduced the error of reporting.

43. The role of surveys in support of a sample registration scheme was considered. Such surveys were indispensable; they served as a check on the completeness of registration, as an independent source of estimation of the vital rates, and as a means of obtaining the base population, without which the registration data were of no statistical value.

44. There was discussion of the variability of the vital rates in time and space and the statistical implications of this. It was agreed that time-variation might be large and this had an important bearing on the design of surveys when these were used as a substitute for registration. Time variation was the main factor behind the statistician's preference for a vital registration scheme rather than periodic surveys. Space-variation (i.e. geographic component of variance) might also be important, perhaps more particularly for mortality, but there appeared to be no readily available data on this. The necessary information could, however, be obtained very easily from past surveys and it was agreed that studies of this kind should be undertaken. Such information was essential for the efficient planning of surveys.

45. The fundamental question was raised whether vital rates at the national level were in fact of any value. It was generally held that they were and that governments expressed a strong demand for such data, in particular for the planning of education, manpower and population policies.

46. Finally, the difficulties of introducing registration on a nationally representative sample were mentioned. While the desirability of this was not questioned, circumstances could arise in which it was a practical impossibility - examples: financial limitations, inaccessibility of the population in some areas.

VI. NON-SAMPLING ERRORS AND BIASES IN RETROSPECTIVE
DEMOGRAPHIC INQUIRIES

(Agenda item 8)

Discussion leader: Mr. Ranjan K. Som

47. Retrospective demographic inquiries, where information is collected by interview on the births and deaths occurring in the near and the distant past, are one feasible recourse to obtain vital rates in defective or non-existent registration systems. Although in general, the rates obtained from these inquiries have been seen to be better than the registration rates, in some other cases these were subject to considerable errors and biases. With greater use of surveys including questions about past events, increasing attention is being given to a systematic study of such errors and biases.

48. The Seminar approved of the general line of approach in the Secretariat paper (E/CN.14/CAS.4/VS/3) and commended the work done at the Secretariat and recorded its awareness and recognition of the problems of such studies, re-iterating that it is the total error that has to be minimized in any process of data collection, whether on a sample or a census basis, and not only the sampling errors. Sometimes, non-sampling errors and biases have been seen to completely nullify the data of otherwise well-designed enquiries. The presence of non-sampling errors and biases in complete enumeration was also well recognized and the need to control these underlined.

49. The different methods of adjusting for non-sampling errors and biases mentioned were: re-survey of sub-sample of the original inquiry (either a complete enumeration or a sample survey); use of inter-penetrating networks of sub-samples to test the different methods of collection, etc.; and, the use of recall analysis.

50. In considering the re-survey of a sub-sample of the original units as an evaluation technique, the need for caution was emphasized so that the data from the re-survey may not themselves be subject to non-sampling errors and biases. The use of interpenetrating networks of sub-samples was mentioned both to study the differential effect of investigators and to supply the sampling errors: difficulties encountered for the former purpose were mentioned, and the solutions adopted in other countries discussed. These two methods are universal in application, and not limited to retrospective inquiries.

51. Recall lapse is a particular type of non-sampling errors and biases in retrospective inquiries, when such errors and biases can be seen to depend on the recall period, i.e. the interval between the date of occurrence of an event (e.g. birth and death), and the date of interview. Such lapse may be due to memory and understanding of the informant, the skill of the interviewer, the type of questionnaire used etc. and has also been seen to occur in the developed countries. The method developed to study recall lapse in current vital data and to adjust for such lapses was illustrated with data from Upper Volta in 1960-61. Apart from the failure to report an event at all, the "boundary effects", arising from the failure to report the date of an event correctly, leading to the over-reporting ("telescopic effect") or to under-reporting ("receding effect"), was also discussed. It was felt that the available data may be examined for such recall lapse and it was recommended that in future surveys be so designed as to permit such analysis. Examination of the sex-ratio at birth and of infant deaths was mentioned as likely to reveal the existence of recall lapse.

52. Mention was also made of periodic surveys to provide directly the rate of growth of population and also to check the results of retrospective inquiries. Information on infants born and dying between the interval has also to be collected by retrospective inquiry. Individual person-by-person matching was most desirable, though costly and presenting certain difficulties.

53. The method of matching of vital events obtained both from retrospective inquiries and from registration was mentioned for increasing the accuracy of the vital rates obtained from the retrospective inquiries and for providing measure of the extent of under-registration. The power of the Chandra Sekhar and Deming formula, which was applied in other regions, was recognized, but further work was recommended to study the validity of the basic assumption of the independence of omission (or inclusion) of the events in the survey and in the registration. Operationally this method is prohibitive, but a sub-sample of the original units may be taken for this purpose, along with the method of recall analysis.

54. The study of recall lapse in historical fertility data on the total number of children born included an analysis of the sex-ratio at birth and of infant mortality by the marriage cohort and the age of mother; an analysis of the total number of children born by age of mother and fitting of a straight line to the fertility data beyond the post-fertile age-range of women, on the assumption of stable fertility and no association between fertility and post-fertility age mortality; and a comparison of the total number of children born with cumulated current fertility, based on stable fertility assumptions and no association between fertility and mortality of mothers. Doubts were expressed on the validity of the assumption of stable fertility conditions. The need for further studies on these assumptions was stressed in the context of conflicting evidences of different trends in a recent inquiry.

55. An important source of non-sampling errors in historical fertility data mentioned was the possible omission of children by previous marriage of mothers.

56. Some field techniques were described which might help in minimizing non-sampling errors and biases: these include detailed schedules of investigation, better training of investigators, provision of local calendars etc.

57. Some participants stated their intention to incorporate a study of non-sampling errors and biases in future inquiries. In conclusion the Seminar recommended that the methods of detecting and adjusting for non-sampling errors and biases in collected data, whether on the basis of a complete enumeration or sample survey, should be built into design of any inquiry to permit a systematic analysis.

VII. USES OF CENSUS OR SURVEY DATA FOR ESTIMATING VITAL RATES

(Agenda item 9)

Discussion leader: Mr. W. Brass

58. The paper (E/CN.14/CAS.4/VS/7) presents a consistent set of methods for estimating vital rates from census and survey records in which data of two kinds have been collected; births and deaths in a short preceding period (usually one year) and the total number of children born and died by age group of mother. It is assumed that ages of the living and of those dying in the preceding period are recorded in intervals of moderate length.

59. The basic principle of the methods is that errors in the observations are detected and allowed for by comparisons of the different sets of data. In making the comparisons and adjustments, population models are used to replace gaps in the knowledge of the detailed demographic patterns for the community studied. On these principles the birth rate and total fertility ratio are estimated by accepting the total children born to the younger age groups of women (particularly 20-24 years) as correct and from this deriving a correction factor for recall failure to apply to the births recorded in the previous year. By the help of population models a technique is derived for estimating life table probabilities of dying up to age 30 years or so from the proportions of children dead by age of mother. Methods are given for reconciling these probabilities with the corresponding values, calculated by standard methods from the deaths recorded in the past year, by the help of a model life table system.

By these means a complete life table for the population is obtained. Independent checks of the validity of the estimates of fertility and mortality by the use of quasi-stable population theory are suggested.

60. In applications of the techniques to census and survey records from West and East Africa it had been observed, in general, that the fertility estimates were higher than would have been obtained either from the births in the preceding year alone or from the total children born per woman in age groups near the end of child-bearing. In nearly all instances the mortalities from the children dying by age of mother were very much higher than the rates from deaths in the preceding year. In all cases the checks by quasi-stable population theory gave good results.

61. In the discussion it was agreed that the basic data required for the application of the techniques should be collected in a survey or sample census rather than a complete enumeration because of the need for detailed and intensive interviews to obtain records which are as accurate as possible.

62. The assumption that recall failure for births in the previous year was the same at all ages of mother was regarded by some as very doubtful. The estimates of fertility, however, were not sensitive to moderate variations in recall lapse because only a part of the total fertility calculated could be appreciably affected by an error in the assumption. The justification of the technique must be in the consistency of the results in particular cases and not the plausibility of assumptions for all sets of records.

63. There was considerable discussion of the effects of age errors on the methods for estimating fertility. Because the age errors have similar effects on the two sets of fertility measures compared (from births in the preceding year and total children born by age of mother) the method in practice is not sensitive to such errors but in theory there can be an effect. The important point is that the technique can not be applied uncritically but only after a careful study of how the

comparisons vary with age group of women. It was agreed that there were characteristic distortions of the age distribution obtained in most surveys of African population with too many children shown as under five years, an overestimation of ages of women in the early part of the reproductive period causing a crowding towards the centre of this period. This pattern of error was quite different from that found in censuses of Asian and Latin American countries. The errors lead to a distortion of the estimated specific fertility distributions which must, therefore, be treated with great caution.

64. It was noted that the paper had presented a system of model life tables which was different from the United Nations system. The new model had been developed because it was believed a more flexible system which was not restricted to one table at each level of mortality was needed. Other more flexible systems had been prepared and also the United Nations Models were being revised; in the new system more weight could be given to the experience of African countries.

65. It was agreed that quasi-stable population theory was a useful tool in the estimation of vital rates from age distributions but that it must be used with discretion. Otherwise, variations in the choice of patterns of mortality and relatively small errors in the age distribution could lead to inaccurate estimates.

66. The main limitations in the techniques proposed are found in the determination of mortality in middle and old age, and also of very young children who might be omitted from the records of both births and deaths. The checks and models were not efficient for these estimates. It was pointed out that mortality under age five years was a better measure of deaths of young children in Africa than infant mortality; there was evidence that deaths in the second year of life might be relatively very much higher than in life tables for other parts of the world. An attempt had been made to obtain checks on mortality in later years by asking members of the population whether their parents were alive. This had been done in Chad and Cameroon. The idea was good but the analysis might be difficult.

67. Several participants stressed the fact that in the attempt to detect and correct response errors there could be no routine procedure. Methods suitable to the particular records should be applied as critically as possible. Assessment must be made from detailed comparisons with the help of all the knowledge about the characteristics of the population and field procedures which could be obtained. The greater the detail recorded and tabulated in the survey the more powerful the checks could be and the more likely that important discrepancies could be detected and allowed for in the estimates.

68. It appeared that more accurate estimates of fertility, mortality and natural increase could be made from the data on vital events, collected retrospectively in surveys, than might be expected in view of the response errors and indirect nature of the observations. An important question, therefore, was how far it was worth while to carry out more expensive follow-up and continuous observation surveys. It was agreed that they must still play a crucial part in the identification of errors. From the information thus obtained, the methods, both of field work and analysis in the retrospective inquiries whether censuses or surveys could be improved and better estimates of vital rates derived by relatively cheap means.

VIII. RECOMMENDATIONS FOR FUTURE ACTION

69. The Seminar recommended that:

1. Recognition be given by governments to the fundamental importance of establishing a comprehensive civil registration system in each country of the region at the earliest possible opportunity. In the light of limitations of resources in certain countries, suitable priorities should be adopted for phasing the implementation of registration schemes.

- ii. Recognition be given to the equally fundamental need for sustained efforts both by governments and international agencies in all projects aimed at obtaining reliable vital statistics on a continuing basis.
- iii. The United Nations should give the fullest possible support to the promotion of civil registration in Africa including material contribution and technical assistance in personnel.
- iv. Pending the achievement of complete coverage of vital events through registration, the United Nations should assist to the fullest possible extent in schemes, such as those discussed at the Seminar, for obtaining temporary substitutes for the vital rates.
- v. Experimentation and analytical studies should be continued (a) to improve the efficiency of sample design through suitable variability studies and (b) to improve the quality of data by adopting methods for detecting and adjusting for non-sampling errors and biases, including use of demographic models.
- vi. The Economic Commission for Africa through working groups or other means, should take up studies aimed at standardizing the classification and definition of substitute measures for civil registration, taking account of the provisional list supplied at the Seminar by one of the consultants.

IX. CLOSING SESSION

70. After the adoption of the report at the final session of the Seminar, Mr. F.A. N'Liba-N'Guimbous, Deputy Executive Secretary of the Economic Commission, made a formal closing speech on behalf of the Executive Secretary. Mr. N'Liba thanked the participants, the consultants, the Secretariat staff, the interpreters and others who had combined to make the Seminar a fruitful discussion, the results of which would, it was hoped, be of lasting benefit to the countries of the region.

AGENDA

1. Opening addresses.
2. Election of officers.
3. Adoption of the agenda.
4. State of vital statistics in Africa.
5. Country experiences.
6. Definitions, classification and tabulations of vital events both from civil registration records and from field inquiries.
7. (a) Design of civil registration experiments and inquiries into vital events;
(b) Continuous observation of households for the reporting of vital events.
8. Errors, mainly non-sampling, in retrospective demographic inquiries.
9. Uses of census or survey data for estimating vital rates.
10. Adoption of the report.

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LIST OF DOCUMENTS

<u>Symbol</u>	<u>Title</u>	<u>Language</u>	
E/CN.14/CAS.4/VS/1	Provisional agenda	E	F
E/CN.14/CAS.4/VS/2	Annotated provisional agenda	E	F
E/CN.14/CAS.4/VS/3	Technical paper on non-sampling errors and biases in retrospective demographic enquiries	E	F
E/CN.14/CAS.4/VS/4	The state of vital statistics in Africa	E	F
E/CN.14/CAS.4/VS/5	Methods of obtaining vital data in developing countries	E	F
E/CN.14/CAS.4/VS/6	Definitions, classifications and tabulations of vital events and their characteristics	E	F
E/CN.14/CAS.4/VS/7	Uses of census or survey data for the estimation of vital rates	E	F
E/CN.14/CAS.4/VS/8	Experiments in vital registration and sample surveys of births and deaths in Kenya	E	F
E/CN.14/CAS.4/VS/9	Sources of data on birth and death rates in Senegal	E	F
E/CN.14/CAS.4/VS/10	The calculation of crude birth and death rates from repeated observations in a rural pilot zone in Senegal	E	F
E/CN.14/CAS.4/VS/11	List of documents	E	F
E/CN.14/CAS.4/VS/12	Provisional list of participants	Bilingual	
E/CN.14/CAS.4/VS/13	The use by Morocco of the 1960 census and the multi-purpose survey (1961-1963) to determine birth and death rates	E	F

In addition, a limited number of copies of the following documents and publications were distributed to the participants as background material (in English and French):-

1. Methods and problems of civil registration and vital statistics collection in Africa, documents E/CN.14/CAS.3/8 and E/CN.14/CAS.3/8 Corr. 1.
2. Report of the Seminar on Population Problems in Africa, document E/CN.14/186, E/CN.9/CONF.3/1.
3. United Nations, Principles for a Vital Statistics System, Statistical Papers, Series M, No. 19, New York (1964). (Sales No.: 53.XVII.8).
4. United Nations, Handbook of Vital Statistics Methods, Studies in Methods Series F, No. 7, New York (April 1955). (Sales No.: 55.XVII.1).
5. United Nations, Handbook of Household Surveys : A Practical Guide for Inquiries on Levels of Living, Studies in Methods, Series F, No. 10, New York (1964). (Sales No. : 64.XVII.13). (Complete text in English; Chapters II and IX only in French).
6. International activities in promoting development of improvement in civil registration: 1954-1964. Draft paper prepared by the Statistical Office of the United Nations for the Second Inter-American Seminar on Civil Registration, 30 November - 10 December 1964.
7. Methods of evaluating completeness of civil registration. Draft paper prepared by the Statistical Office of the United Nations for the Second Inter-American Seminar on Civil Registration, 30 November-10 December 1964.
8. Manual of Demographic Research in Under-Developed Countries document E/CN.14/ASPP/L.14, E/CN.9/CONF.3/L.14. (Original: Robert Blanc, Manuel de recherche démographique en pays sous-développé, I.N.S.E.E., Service de Coopération, Paris (1962)).

OPENING STATEMENT BY MR. R.K.A. GARDINER, EXECUTIVE SECRETARY
OF THE ECONOMIC COMMISSION FOR AFRICA

Ladies and gentlemen,

I have great pleasure in welcoming you here today to the African Seminar on Vital Statistics, convened by the Economic Commission for Africa in a first comprehensive attempt to grapple with the problems at issue in the light of local conditions and experience.

This is a field of operations which has increasingly engaged the attention of African governments in recent years and strong recommendations have been formulated at a number of meetings that every effort should be made to stimulate the development and improvement of vital statistics and civil registration in the countries of the region. Emphasis was given to the need for intensive study of the difficulties involved and of the technique for solving these difficulties, both by the Cairo Seminar on Population Problems in Africa, held in 1962, and by the Third Conference of African Statisticians, held in 1963. It is significant of the wide interests served by traditional systems of vital statistics that the Seminar on Central Services to Local Authorities held in Nigeria earlier this year should also have concerned itself with the matter and should have recommended international co-operation for promoting such systems.

A properly functioning vital statistics system has very broad implications indeed, much broader than could profitably be indicated here. The personal benefits accruing to individuals in the community and the great utility of the statistical data for economic and social planning and for research, mean that there is growing support for the promotional side of what this Seminar is trying to achieve. What has been lacking up to now is a set of techniques which can be applied in African conditions to achieve

the desired ends with the available resources and it is the basic purpose of this Seminar to explore some of the suggested methods, to assess the success or otherwise of experiments now being carried out in a number of African countries and if possible to devise new techniques.

The discussions at the Seminar will draw on a substantial body of documentation, some very recent and some less recent. Included as background material are a number of manuals and papers prepared at United Nations Headquarters for international use, and a review by the ECA secretariat of the problems of vital statistics collection and civil registration in Africa. Papers specifically prepared for the Seminar by the ECA Secretariat and by a group of expert consultants cover a wide variety of relevant difficulties, conceptual, procedural and analytical.

These difficulties are the reason for our being: without them there would be no challenge; faced with them we hope to find solutions. We believe that the theoretical considerations and the practical experiments discussed at the meeting will provide for participants suggestions which they can convey to their governments for improvements in this particular field of statistical development.

From the participants we should be grateful to receive guidance on how best we can direct our future efforts in assisting the countries of the region and on planning effective international co-operation.

The Economic Commission is happy to welcome you and I personally wish you every success with your meeting.