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PROGRESS REPORT ON ACTIVITIES IN THE FIELD OF DEMOGRAPHIC STATISTICS
 (OTHER THAN POPULATION CENSUS) 1960-1961 AND PROPOSALS FOR 1962-1964

(Memorandum by the Secretary-General)

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ANNEX I. CONSENSUS OF THE EXPERTS PARTICIPATING IN THE UN/WHO SEMINAR ON USE OF VITAL AND HEALTH STATISTICS FOR GENETIC AND RADIATION STUDIES	

1. Activities in the field of demographic statistics are reported in two documents: in E/CN.3/295 is set forth the progress made in connexion with the 1960 World Population Census Programme; this document is concerned with the international assembling, publication and utilization of population, vital, area and migration statistics, and with the steps taken to promote their development. Activities concerned with the evaluation of demographic data for analytical purposes are also mentioned.

I. ASSEMBLING DEMOGRAPHIC STATISTICS

A. Periodic population censuses and surveys

2. Information on the spatial distribution and characteristics of population is obtained from censuses and surveys, the results of which continue to come in on the regular Demographic Yearbook questionnaire and in publications. From these, the 27 cross-tabulations required by the United Nations Statistical Office are systematically extracted and scrutinized for re-publication in the international compilations mentioned in paras. 11-19. During 1960 and 1961, when the height of the 1960 World Population Census Programme was reached with a total of 118 censuses being carried out, results from 77 enumerations were received in the Statistical Office. During the same period, results from a number of demographic sample surveys were also received. Together, these constitute a formidable array of statistics to be processed and evaluated, but they also are indicative of the continued progress that is being made in the systematic enlargement of statistical knowledge concerning the demographic status of the world.

3. Very little is yet available on the quality of the enumerations in terms of quantitative accuracy or content reliability, but it is hoped that some over-all measures of evaluation will be produced when the results of the large number of planned post-censal field checks are made available. In accordance with a request of the Population Commission (E/3451, para. 84), the Secretariat plans to collect and publish such information as it becomes available. During the next two years, the Secretariat also plans to make a study of the accuracy of age reporting as revealed in the tabulations, a study similar to that made on the 1950 census results and last published in the 1960 Demographic Yearbook.

B. Annual population estimates

4. Annual intercensal and post-censal estimates of total population, the population of large cities, population classified by age and sex and by marital status, age and sex, are also assembled from questionnaires and publications. These are made available in comparable form in the publications mentioned in paras. 11-19.

5. Since 1950, estimates for the countries as a whole have been systematically analysed as to the type of data on which they are based, the recency of obtaining this base, the method of time adjustment, and the quality of the time adjustment. This analysis is synthesized into a code, which is published with the data, to distinguish reliable from less reliable population estimates. Censuses and surveys taken in 1960 and 1961 have served to increase the reliability of many series and additional information has made it possible to refine the codes accordingly.

C. Population projections

6. Population forecasting is becoming of increasing interest to Governments and international agencies as an aid to planning economic and social development. In consideration of this interest and in compliance with a request of the Population Commission at its eleventh session (E/3451, paras. 49-50) and a resolution of the Economic and Social Council [777 (XXX)] in which the desirability of continuing efforts at the national and international levels to improve the techniques and reliability of projections in economic and social fields was recognized, the Secretariat in May 1961 distributed to Member States a questionnaire on Population Projections and Forecast Methodology designed to obtain information on current national population projections, the arrangements for continuing work in this field and selected information on which proposals for standards to guide future work might be based. Replies have now been received from fifty-one countries. Abstracts of projections prepared in the Population Branch of the Bureau of Social Affairs will be published in future issues of the Population Bulletin of the United Nations, the current issue of which (ST/SCA/SER.N/6, in press) contains the first compilation relating to fifty-one projections made since 1950. Proposals for standards will be presented to the Population Commission at its 1963 session.

D. Vital statistics

7. Data on the components of demographic change, that is, statistics of live birth, death, foetal death, marriage, and divorce, continue to be assembled from countries and territories by means of questionnaires and official publications. A total of 29 separate series of absolute numbers are maintained as well as numerous rates and ratios. In general, these are data obtained from civil registers of birth, death and so forth, but official estimates of natality and mortality derived from comparative analysis of the results of successive censuses, as well as some obtained by retrospective sample household inquiries, have increased in number in recent years, as these techniques have been employed as interim measures in areas where civil registration is not yet functioning.

8. No changes were made during 1960-1961 in the method of distinguishing unreliable vital statistics from those which are believed to be relatively reliable. In connexion with the survey of conditions and trends in mortality prepared by the Population Branch for publication in the United Nations Population Bulletin, it was estimated that only about 36 per cent of the world's population could be said to have "complete" death registration (defined as 90 per cent or more of the deaths registered). For 14 per cent, there is no indication that registration facilities exist and for the remaining 50 per cent, registration (and hence statistics of deaths) is unreliable. The situation with respect to natality is roughly the same. In both cases the indices are world averages, which implies that the corresponding proportions for Africa or Latin America, for example, would be even less favourable. These evaluations, based on recorded figures, are substantiated by the relative size of the estimated rates of natality and mortality derived by the sample-survey method.

E. Migration statistics

9. At its 11th session, the Commission was informed that responsibility for assembling international migration statistics had been transferred from the International Labour Office to the Statistical Office. A Questionnaire on International Migration and Travel Statistics, containing four tables, was circulated in 1960 and 1961.

F. Area statistics

10. Revisions in statistics of land and water areas are collected annually from every country and territory in the world by means of the Demographic Yearbook questionnaire and these are systematically confirmed by reference to census volumes and national yearbooks as the occasion permits.

II. PUBLICATION OF DEMOGRAPHIC STATISTICS

A. Demographic Yearbook

11. The Demographic Yearbook continues to be the principal vehicle for publication of international demographic statistics.^{1/} Since it is planned on the principle of periodic recurrence or rotation of detailed subject-matter content rather than on an unchanging set of tables updated each year complete substantive coverage and historical series can be had only by reference to all of the issues. To facilitate understanding of the relationship between issues, a Cumulative Index in tabular form has been included each year, showing the exact contents of each issue in terms of subject and time coverage. However, with the production of the thirteenth issue (now in press) it has become impossible to encompass the entire series in tabular form and recourse has been made to an alphabetic subject index which gives also the time coverage of each cross-tabulation available in each issue of the Demographic Yearbook.

1/ In respect of regional compilations, it may be noted that a Statistical Handbook on Population is now in preparation at the Economic Commission for Africa. This is the first of a projected series of statistical handbooks. It will bring together the various demographic series that are available for African countries with the object of facilitating intra-regional and international comparisons of existing series, and of guiding future statistical development.

During 1960, the Pan American Union, Inter American Statistical Institute, published two volumes of statistics from the results of the 1950 censuses of the Americas entitled La Estructura Demográfica de las Naciones Americanas. Volumen I: Características Generales de la Población; Volumen II: Características Económicas de la Población. These two volumes of data were issued as six separate publications, covering all cross-classifications of enumerated population available, together with numerous derived indices. In 1961, the Institute published a series of eight booklets entitled "América en Cifras, 1960" designed to assemble basic current statistics relating to the American nations in a form which would facilitate their regional use as well as promote improvement and comparability. Number 1 of the series dealt with demographic statistics.

12. The new index shows that, in general, the thirteen issues of the Yearbook supplement each other in time and subject matter of the principal topic, some idea of which, in respect of frequencies,^{2/} is given below.

<u>Feature subject and issue</u>	<u>Time coverage</u>
Natality statistics:	
1949-50	1934-1949
1954	1936-1953
1959	1949-1958
Marriage and divorce statistics:	
1958	1948-1957
Migration statistics:	
1948	1945-1947
1949-50	1946-1948
1951	1948-1950
1952	1949-1951
1954	1950-1953
1957	1953-1956
1959	1956-1958
Mortality statistics:	
1951	1936-1950
1957	1948-1956
1961	1952-1961
Population statistics:	
1948	1935-1945
1952	1950-1951
1955	1945-1954
1956	1945-1954
1960	1920-1960

13. It must be remembered, however, that in addition to the detailed feature tables indicated above, a certain number recur annually to keep up to date the basic series. These include (1) time trends of total population estimates, and annual numbers of live births, deaths, foetal deaths, infant deaths,

^{2/} The corresponding rates usually begin with an earlier year.

marriages and divorces; (2) age/sex distribution of population, live births, deaths, and marriages; (3) deaths by cause; and (4) expectation of life by age. Thus, each issue is also a general-demography volume and the time coverage in respect of these annual series is "latest available year".

14. As indicated above, the 1960 Demographic Yearbook featured population trends beginning, in so far as possible, with data for 1920. It included total population, age-sex distribution and proportions by sex, literacy, economically active, urban, single and married. The 1961 issue, in press, will be the third mortality volume and will contain about 750 pages. A new feature of this issue is the attempt to include up-to-date (1961) data in the trend tables of births, deaths, infant deaths, marriages and divorces. New tables compiled for the first time include a trend of late foetal deaths by sex, and illegitimacy ratios; a perinatal mortality trend; and death rates specific for marital status, age and sex.

15. As reported to the Commission at its eleventh session, the reader of the Demographic Yearbook is made instantly aware of the relevant accuracy of statistics published therein through the device of using italic type for population or vital statistics of questionable reliability. Since its inception in 1959, the basis for the classification has become firmer and it is believed that it can now serve a useful purpose in differentiating the data according to their degree of accuracy, as requested by the Population Commission at its tenth session (E/3207/Rev.1, para. 48).

16. In this connexion, the Commission may be interested in an article entitled "How Well Do We Know the Present Size and Trend of the World's Population?" published as chapter I of the 1960 Demographic Yearbook. This analytical text was prepared by the Population Branch of the Bureau of Social Affairs and it was based on an analysis of the components of the estimate codes described in paragraph 5.

17. The study re-emphasized the fact that there is continuing need to determine more accurately the margin of error of available population estimates, especially since these series are considered jointly with trends in aggregate income, food output, international trade, and so forth in determining how economic achievements compare with increasing requirements. It is highly desirable, therefore, that errors in censuses, vital statistics and other

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population data be examined frequently and probingly, utilizing all means available, including direct field investigations, analytical techniques and critical examination of methods and procedures. It was suggested that Governments should not overlook the opportunity afforded by the 1961 censuses for undertaking such evaluations.

B. Population and Vital Statistics Report

18. The latest available population census results and annual estimates as well as annual totals and rates for live births, deaths and infant deaths for every country and territory of the world continue to appear at quarterly intervals in the Population and Vital Statistics Report, published 1 January, 1 April, 1 July and 1 October. Not only does this quarterly contain the most current demographic data for every country and territory but it serves also as a vehicle for quarterly revision of world and continental estimates of population.

C. Monthly Bulletin of Statistics

19. For a limited number of countries, the latest annual estimate of population plus crude monthly and annual rates of birth, death and marriage are published in the Monthly Bulletin of Statistics. Population series for 1952-1961 are currently being published in the Bulletin for 144 countries and territories; crude birth and death rates are shown for 51 areas and marriage rates for 43.

III. UTILIZATION OF DEMOGRAPHIC STATISTICS

20. In addition to their publication and distribution in annual, quarterly and monthly reference compendia, population and vital statistics assembled in the Statistical Office form a central collection of demographic statistical information for the use of the United Nations Secretariat, the specialized agencies and persons in related fields of interest.

21. To avoid duplication in collection of demographic statistics from Member States, copies of all pertinent Demographic Yearbook questionnaires have routinely been made available to the specialized agencies and the regional commissions. Under this arrangement, almost 3,000 pages of the 1959 questionnaires, over 2,500 of those for 1960, and, as of 31 December 1961, some 2,400 of those for 1961, were re-distributed.

22. The growing body of demographic statistics also serves as the source of data for analytical studies undertaken by the Population Branch of the Bureau of Social Affairs at the request of the Population Commission. One such study, the first in a series of reports on the Demographic Aspects of Manpower, is entitled Sex and Age Patterns of Participation in Economic Activities (ST/SOA/SER.A/33, in press). Another study which drew heavily upon the vital statistics data on file was "The Situation and Recent Trends of Mortality in the World", which is the first in a series of reports on different aspects of the world demographic situation intended to be published in the Population Bulletin of the United Nations. The mortality study will appear in Bulletin No. 6; a corresponding study of fertility trends for publication in a future issue is now in progress.

IV. PROMOTION OF DEVELOPMENT OF DEMOGRAPHIC STATISTICS

23. At its eleventh session, the Population Commission expressed its deep concern about the incompleteness of the registration of deaths in many countries and recommended that the Secretary-General bring to the attention of Governments the urgent need to improve mortality statistics (E/3451, para. 39).

24. These remarks were engendered by a study of mortality statistics throughout the world, but it may be added that the deficiencies observed in mortality data are matched, if not exceeded, by those known to exist in natality statistics. The Population Commission reaffirmed its view that the systematic evaluation of the quality of birth, death and other demographic statistics for under-developed countries especially, is of major importance. In this connexion, it noted that the work on population estimates and projections (see paras. 4-6) is producing a body of information on the quality of vital statistics and population estimates which should prove useful in connexion with Secretariat and regional commission activities in evaluating tabulated statistics.

25. Promotion of development at the international level continues to be carried out through the medium of technical assistance, more especially through seminars, conferences, and pilot studies, some of which are mentioned below.

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A. Asia

(i) Seminar on Evaluation and Utilization of Population Census Data in Asia and the Far East

26. A Seminar on Evaluation and Utilization of Population Census Data in Asia and the Far East took place in Bombay, India, from 20 June to 8 July 1960. This Seminar, which was organized by the United Nations Bureau of Social Affairs and Bureau of Technical Assistance Operations, the Statistical Office of the United Nations and the Economic Commission for Asia and the Far East, was designed to demonstrate the value of utilizing demographic data and especially the results of censuses in preparing and implementing development programmes (ECOSOC res. 721 B (XXVII)). In pursuing this objective, discussions necessarily dealt also with the complementary use of vital statistics, their deficiencies and their use in evaluating the quality of census data and in estimating and projecting population. The report on this Seminar is document ST/TAO/SER.C/47.

(ii) International Training Course on Vital and Health Statistics for the Western Pacific Region

27. An International Training Course on Vital and Health Statistics for the Western Pacific Region was organized by the United Nations and the World Health Organization in Manila, Philippines, 17 October to 25 November 1960. Forty-one officials from sixteen countries in the area participated in a course which included not only lectures, demonstration and laboratory work in vital and health statistics methods but also a field project designed to obtain demographic and health information by household sample survey techniques. A report on this training activity has been issued in English and French in Statistical Papers, Series M, No. 35.

B. Europe

(i) European Technical Conference on Mortality Statistics

28. From 23 to 28 October 1961, the Regional Office for Europe of the World Health Organization sponsored a European Technical Conference on Mortality Statistics. The Conference was held at Asnières-sur-Oise, France, and was attended by some twenty-four participants and six observers. The Conference was devoted to a

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discussion of the methods for increasing completeness of mortality statistics and improving their quality, with a view to making them comparable throughout Europe. A report will be issued by the WHO Regional Office.

C. Latin America

(1) Brazilian demographic pilot study

29. A demographic pilot study designed to experiment with the sample survey method of obtaining a measure of mortality and natality was undertaken in the State of Guanabara (City of Rio de Janeiro), Brazil in 1960 by the Instituto Brasileiro de Geografia e Estatística with the assistance of the United Nations. The initial stage was a survey of 5 to 6 months' duration in Guanabara; the second stage is an extension of the experiment to rural areas, with the prospect of national scope if the pilot study gives satisfactory results. In this experiment the sampling unit is a dwelling, rather than household; observations are made on the persons who comprise the households in each dwelling during a stated interval.

(ii) Seminar on Vital and Health Statistics for Countries of Central America and Panama

30. From 15 to 21 January 1961, the WHO Regional Office for the Americas, through its Zone Office for Central America, sponsored in Panama a Seminar on Vital and Health Statistics for Countries of Central America and Panama. The agenda for the Seminar included a discussion of international recommendations for collecting vital and health statistics, training of personnel and methods of co-ordination. The United Nations Statistical Office contributed publications for distribution to participants as well as a background paper reviewing the United Nations activities in the field. Representatives from eight countries participated.

(iii) Inventory of Vital Statistics in the American Nations

31. Assessment of the status of vital statistics in the American nations and formulation of a draft basic programme for production of useful series were the concern of the Vital Statistics Sub-Committee of the Inter American Statistical Institute's Committee for the Improvement of National Statistics (COINS)

at its meeting 27 February - 10 March 1961. The Sub-Committee, using the United Nations Principles for a Vital Statistics System as a benchmark, charted a three-stage course to be followed by the American nations in developing vital statistics of content and scope especially appropriate to the region. The suggested tabulation programmes will be circulated to Governments in the region for comment and the observations together with the report will be placed before COINS at a future session.

(iv) Inter-American Investigation of Mortality

32. Regional improvement of the comparability of mortality statistics from cardiovascular, cancer and other chronic diseases is the subject of a study now under way under the auspices of the WHO Regional Office for the Americas (PAHO). A planning conference was convened in Washington 1-4 May 1961 and another 22-30 January 1962. A retrospective inquiry, based on death certificates, will be carried out in ten large cities in the Americas with a view to computing comparable adjusted age-specific death rates for selected causes. The results of such a study would be very useful in elucidating ways of improving the comparability of mortality statistics in general.

D. International

(1) Seminar on Use of Vital and Health Statistics for Genetic and Radiation Studies

33. The use of vital and health statistics for genetic and radiation studies was the subject of a seminar organized by the Secretary-General's Scientific Committee on the Effects of Atomic Radiation, with the collaboration of the Statistical Office of the United Nations, the Bureau of Social Affairs and the World Health Organization.

34. This Seminar was convened in Geneva from 5 to 9 September 1960 with some ninety geneticists, radiation epidemiologists, civil registrars, vital statisticians and health statisticians in attendance. In the course of the discussions on the potentialities of vital and health statistics for assessment of genetic and somatic effects of radiation on human populations, the limitations of vital records and statistics were delineated and practical means for overcoming the limitations were suggested. The consensus of the experts (A/4528, Annex II) is attached as Annex I. The proceedings of the Seminar are in press. /...

(ii) Courses on Production of Demographic Statistics

35. Courses in collection and evaluation of demographic statistics continue to form part of the general curriculum inter alia at the Demographic Training and Research Centre at Chembur; at the Statistical Centre of the University of the Philippines; at the Regional Centre for Demographic Training and Research in Latin America, established at the University of Chile; at the Permanent Course in Demography at University College of Ghana; and at centres for statistical training in Ethiopia, Ghana, and Morocco.

V. FUTURE PLANS FOR PROMOTING IMPROVEMENT

36. In response to resolution 24 of the XI Pan American Congress of the Child, the Instituto Interamericano del Niño (a specialized agency of the Organization of American States) invited representatives of the United Nations, the Pan American Health Organization, the United States of America, the Inter American Statistical Institute, and the Population Council, to meet as a committee in Montevideo, Uruguay, to draw up an integrated plan for improving civil registration in the Americas. The committee met from 12 to 16 June 1961 and produced a report which constitutes in effect a blue print for action in this field.

37. The action suggested includes a variety of projects which envision co-operative effort on the part of the Instituto, the Pan American Health Organization, the United States Agency for International Development, the Economic Commission for Latin America, the Inter American Statistical Institute, and the United Nations. The United Nations Statistical Office proposes to assume principal responsibility for four projects, funds for which will be sought from those normally available to the Organization or from extra-budgetary sources. It is proposed to begin by setting up a mobile team of regional consultants in civil registration and statistics to advise Governments as required; to experiment in improving records and statistics in a sample of registration areas in one or more countries; to demonstrate, by case studies, the major uses of vital records and statistics; to show by pilot project

the methods for evaluating quality of vital records and statistics and the importance of such evaluation in economic and social programming; to organize a second seminar on civil registration and a training course for civil registrars of lower level.

38. For Africa, a similar experiment in collecting vital statistics in a sample of areas is planned, together with a regional workshop on vital records and statistics. The emphasis in Africa must of necessity be at a different level from that needed in Latin America. The basic aim will be to stimulate the development of civil registers of birth, death and marriage to meet the needs recognized by many Governments of the region. At the request of the Government concerned, negotiations are now being made to initiate a civil registration experiment in Kenya.

39. Plans for the continued development of international recommendations and standards for vital statistics include a re-canvass of countries and territories to bring up to date the information in the Statistical Office regarding current procedures and practices in civil registration and production of vital statistics. It will be recalled that the first Handbook of Vital Statistics Methods was based on a survey of national practices in force on 1 January 1950; a second survey relating to 1960 would produce information for a revised Handbook which would include not only practices in sovereign countries but also those obtaining in Non-Self-Governing Territories as well.

ANNEX I

CONSENSUS OF THE EXPERTS PARTICIPATING IN THE UN/WHO
SEMINAR ON USE OF VITAL AND HEALTH STATISTICS FOR
GENETIC AND RADIATION STUDIES

"1. The participants in the Seminar on Use of Vital and Health Statistics for Genetic and Radiation Studies have conducted a general and detailed examination of the current adequacy and future potentialities of civil registration procedures, as well as of vital and health statistics as a source of data in studies of genetics and of the effects of radiation in human populations. They have considered practical suggestions for overcoming present limitations, so as to meet, in particular, the critical needs of human geneticists and radiation epidemiologists.

"2. The participants note with satisfaction that co-operation between the official authorities concerned with registration of vital events and with the collection of vital and health statistics, on one side, and the students of human genetics and radiation epidemiology, on the other, has already been initiated in several countries and that closer contacts between them are to be expected in the future.

"3. In the conviction that we are entering an era in which knowledge of the genetic endowments of human individuals and populations will lead to new insights into the health and well-being of mankind, it is suggested that contacts between biological scientists and vital and health statisticians be maintained and expanded and that full advantage be taken of this co-operation through frequent and continuing consultations between authorities concerned with the statistics of civil registrations and biologists on matters of common interest.

"4. The participants are aware of the fact that a large part of the duties of civil registration authorities is of a legal and administrative nature and that the procedures for the collection of vital statistical information were not, and cannot be, merely designed to meet the needs of human biologists, but they are also acutely aware of the fact that any progress in human biological sciences can have wide repercussions in other disciplines, like demography, whose import for the social and economic welfare of the population is well known.

"5. Progress towards meeting the needs of human biologists may take the form of altering existing procedures which should, of course, be assessed in a context of local situations. They can, however, often be achieved through rather simple means, without drastically changing established systems. A variety of measures will be found useful to that effect and some of them can be outlined in very broad terms:

(a) Supplementing the information available on routine records by linkage with other records relating to the same individual;

(b) Reconstruction of segments of biological families through record linkage so as to permit longitudinal studies over a number of generations;

(c) Recording of such items of information as are required to identify consanguineous marriages, in order to make possible the assessment of their effects on the survival, health and growth of offspring;

(d) Setting up partial or complete registers of population groups of genetic and medical interest such as twins, people suffering from hereditary diseases, congenital malformations, malignancies;

(e) Introduction into vital and health statistics programmes of additional items of information required for analysis or linkage, as well as special tabulations as may be needed;

(f) Better and more extensive exploitation of data useful to assess fertility patterns and differentials;

(g) Facilitating the estimation of doses delivered to patients during medical X-ray work, for example by keeping in X-ray departments appropriate records of normal practices, types of equipment, etc.:

(h) Improvement of basic quality of data by such means as are appropriate, including removal of ambiguities in terminology and in the structure of the questions, querying imprecise replies, making the certifying physicians and other informants more aware of their responsibilities;

(i) Developing a list of pathological conditions of genetic significance which could usefully supplement the International Classification of Diseases;

(j) Taking such initiative as may be necessary to ease the limitations to the accessibility of the records for research purposes.

"6. However simple, many of the developments which can be envisaged will require thoughtful consideration before being adopted. The import of some of the results which can be anticipated will be mainly limited to the country in which they will be obtained and therefore parallel studies are not to be discouraged. There may, however, also be investigations of a general validity and for some of these, in view of their cost, possible duplication should be avoided. It is therefore felt to be useful that the discussions initiated at the Seminar be continued not only within the various countries but also, on a restricted scale, at the international level under the aegis of the sponsoring organizations, so as to advise administrations and research workers of current developments in different countries, and so enable them to co-ordinate such activities, with a view to making the best possible use of available resources.

"7. The present state of development of human biology requires flexibility of approach, and the contribution of vital and health statistics to genetic and radiation studies will have to be judged on results which may not emerge immediately. Some of the possible approaches will prove more fruitful than others, but increasing knowledge in these fields is bound to be of the greatest social benefit."
