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Forty-seventh plenary session
(Neuchâtel, Switzerland, 14-16 June 1999)

Report of the May 1999 ECE-Eurostat
Joint Work Session on Demographic Projections

I. Introduction

1. The ECE-Eurostat Joint Work Session on Demographic Projections was held in Perugia, Italy, from 3-7 May 1999 at the invitation of the National Institute of Statistics of Italy (ISTAT), and with topical assistance of Statistics Netherlands, Statistics Norway, the Netherlands Interdisciplinary Demographic Institute and the U.S. Bureau of the Census.

2. The meeting was attended by over 90 participants from national statistical institutes, demographic research institutes, universities, and other institutions representing the following countries: Armenia, Austria, Belgium, Bosnia and Herzegovina, Bulgaria, Canada, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Iceland, Ireland, Israel, Italy, Latvia, Lithuania, Luxembourg, Netherlands, Norway, Poland, Portugal, Romania, Russian Federation, Slovenia, Slovak Republic, Spain, Sweden, Switzerland, The former Yugoslav Republic of Macedonia, Turkey, United Kingdom and the United States. The United Nations Population Division also attended.

3. Opening statements were made by Mr. Paolo Garonna, Director-General of ISTAT, Mr. Brunello Castellani, Advisor to the Province of Perugia, Mr. John Kelly of the UN/ECE, and Mr. Aarno Laihonon of Eurostat.

4. Mr. Chris Shaw (United Kingdom) was elected Chair of the meeting, and Mr. Sergey Tsvetarsky (Bulgaria) was elected Vice-Chair. The meeting endorsed the Organizers' proposals for persons who could serve as Session Organizers and Discussants for each session.

5. The following study topics were considered in special sessions at the meeting:

- Latest international population projections for the ECE region (Session Organizer: Mr. Harri Cruijssen, Statistics Netherlands)
- Households (Session Organizer: Mr. Nico Keilman, Statistics Norway)
- Fertility (Session Organizer: Ms. Maria Pia Sorvillo, ISTAT)
- Mortality (Session Organizer: Mr. Harri Cruijssen, Statistics Netherlands)
- International migration (Session Organizer: Mr. John Long, U.S. Bureau of the Census)
- Internal migration (Session Organizer: Mr. Leo Van Wissen, Netherlands Interdisciplinary Demographic Institute)
- Uncertainty, users and uses of demographic projections (Session Organizer: Mr. Joop De Beer, Statistics Netherlands)
- Conclusions and recommendations of the work session (Eurostat and the ECE secretariat).

In total almost 50 working papers were submitted, of which 80% was presented and discussed.

6. The main conclusions reached by the participants at the meeting are presented in the Annex (in English only).

II. Recommendations for future work

7. The meeting also recommended that the Conference make provision for a similar type of ECE-Eurostat joint meeting on demographic projections to be included in its work programme in approximately five years' time. It recommended, therefore, that the following text be included in the Conference's work programme:

Work session on demographic projections (2003/2004, jointly with Eurostat), to consider the following topics:

- i) Latest international, national and sub-national population and household projections;
- ii) New approaches and experiences in estimating, analysing and projecting trends and patterns of fertility, mortality, migration and household structures and dynamics;
- iii) Accuracy and uncertainty in international, national and sub-national population and household projections;
- iv) Documentation and dissemination strategies;
- v) Users and uses of projections; and

vi) Evaluation and use of projections software.

(Planning and preparatory work for the meeting to commence in 2002/2003 by the ECE secretariat and Eurostat, in cooperation with interested NSIs and research and university institutes).

III. Concluding remarks

8. The meeting expressed gratitude to ISTAT and CESD-Roma for the excellent facilities and infrastructure that they had provided for the meeting, both of which had contributed significantly to the success of the meeting. They also expressed appreciation to Statistics Netherlands, Statistics Norway, the Netherlands Interdisciplinary Demographic Institute and the U.S. Bureau of the Census for the important topical assistance and inputs that they had made to the meeting.

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Annex

A. Summaries of the main conclusions reached at each session

1. Summaries of the main issues which were discussed under the seven substantive agenda items listed in para. 5 of the report of the meeting were prepared. However, they were too detailed to include in the report of the meeting. They were distributed to participants after the meeting, and are also available in the more extensive version of the report of the meeting which is available on the meeting's Web site:

<http://www.unece.org/stats/documents/1999.05.projections.htm>

B. Recommendations for the future

2. The participants also recommended the following during discussion of the substantive agenda items, which they felt would be useful for guiding future work in the field of projections:

General recommendations

- That overviews of various aspects of latest national population forecasts in the ECE region (i.e. key-assumptions, data series and projection methods used), including those made by international organisations, be regularly collected and distributed. The participants proposed that Eurostat take the initiative to explore the possibilities for such a survey.
- To share and exchange information on projection methodologies. NSIs and research institutes that prepare official population projections should ensure that detailed accounts of the methodology used for the elaboration of such projections are published and made available to interested users.
- To further encourage international efforts to integrate population, household, labour market and educational projections.
- In analysing trends of demographic variables (i.e. fertility, mortality and internal and international migration), efforts should be made to consider their interrelations with relevant socio-economic, institutional and political factors that may provide insight about future developments in population dynamics.
- To investigate the feasibility of preparing a set of "Guiding Manuals" on the methodology for making national and sub-national population projections in the ECE region. The manuals should be based on "best practices" and expert opinion. Special attention should be devoted to projection methodologies and dissemination strategies. The participants recommended that Eurostat take the initiative and lead in starting this study, and that it report on progress made regularly in its Working Party on Projections meetings.

On fertility

- NSIs are encouraged to try to disseminate on a timely basis data on fertility levels and trends, and particularly data that allow estimates of cohort fertility indicators by parity to be obtained. In countries where the civil registration system gathers information on birth order that does not coincide with the parity of the mother, then NSIs should try to adjust the data accordingly and to publish the adjusted data in a form that allows adjusted (or true) parity and age-specific cohort fertility rates to be calculated.
- Considerable attention needs to be paid to the analysis of changes in the timing and ultimate levels of childbearing. Priority should be given to studies that examine the relationship between cohort fertility trends and ongoing generational changes in enrolment and educational attainment, working careers and lifestyles, and intentions and values.

On mortality

- NSIs should produce and make available annual data on deaths by single years of age, preferably by exact age and year of birth, up to and including age 99 (i.e. with an open-ended interval of 100+). The same strategy should be followed in publishing data on the population. In preparing life tables, NSIs are encouraged to use single years of age and to provide specific information about the method that is used to close the life table.
- Efforts to improve and enhance cause-of-death specific mortality projection models should be continued and encouraged. The reliability and international comparability of data series on cause-of-death specific mortality should be examined more thoroughly.
- Ongoing international research is needed to analyse and project old-age mortality and excess male mortality.

On internal migration

- The multi-regional cohort component model was viewed as the most appropriate instrument to use for making sub-national population projections.
- NSIs should be encouraged to make available information on internal moves by origin and destination (including intra-regional moves), age and sex at a detailed regional level, according to the data needs of the multi-regional cohort component model. The regional level should reflect the settlement structure of the country to the greatest extent possible. "City regions" and other relevant areal units could be created by aggregation of the relevant units.
- Projection models for internal migration should include non-demographic information linked to the determinants of moving. In this respect, two types of factors should be taken into account, namely, factors related to the economic system (e.g. regional production, labour market, education) and factors related to consumption (e.g. the housing market and amenities).

On international migration

- International migration assumptions should be made by taking into account developments in inflows and outflows separately, and by groups of migrants, according to country of origin, destination and citizenship.
- NSIs are encouraged to apply the new UN recommendations on international migration statistics.

On households:

- That NSIs be encouraged to prepare national and sub-national household or family projections at least twice per decade.
- That efforts to improve the quality of data on families and households be further strengthened. To the extent that these aspects are thought to be important in the countries, special attention should be given to consensual unions. In view of ongoing and future aging processes in most countries, emphasis should also be given to institutional households. Data on both stocks and flows should be considered in this regard.
- That current patterns on household and family structures and the changes therein be analyzed, both at the level of the individual's position in the household/family, and that of the household/family as a group. Interrelationships with educational and labour market processes, and the link with the population's housing situation should be explored, whenever possible.

On uncertainty and the use of forecasts:

- That NSIs be encouraged to explicitly state the arguments for choosing the values for the high and low variants for fertility, mortality and migration. Internationally comparative analyses of uncertainty would be very useful.
- NSIs are encouraged to analyze errors in their historical projections. Attention should be paid to the errors in the base population by age and sex, the projected age/sex structure, and assumptions on fertility, mortality and migration. Regional details should also be included, when possible.
- NSIs should encourage users to take into account the uncertainty that is found in population projections.
- NSIs are encouraged to experiment with probabilistic projection methods and to promote research on their improvement. In doing this, the aim should be not only to quantify uncertainty but also to reduce it by making use of substantive demographic insights.

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