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## Conference of European Statisticians

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**Outcomes of the in-depth reviews carried out by the Conference of European Statisticians Bureau****In-depth review of statistics related to population ageing****Note by the secretariat***Summary*

The present note is an updated version of the in-depth review paper on statistics related to population ageing, prepared by the secretariat. The plenary session of the Conference of European Statisticians discussed the first version of the paper in June 2012 to provide input to the review. The Bureau of the Conference of European Statisticians conducted the in-depth review at its meeting in November 2012. The Bureau reviews each year selected statistical areas in depth. The purpose of the reviews is to improve coordination of statistical activities in the region of the United Nations Economic Commission for Europe, identify gaps or duplication of work and address emerging issues.

The note has been revised based on the discussion held at the review. The note outlines the policy challenges related to population ageing and the statistical issues related to its measurement, describes the relevant international and national statistical activities and proposes future action to the statistical community.

The outcome of the review is provided in document ECE/CES/2013/9/Add.1.

## **I. Introduction**

1. At the February 2012 meeting, the CES Bureau selected statistics related to population ageing for an in-depth review and requested the secretariat to prepare a paper to provide the basis for the review. The secretariat has prepared this note to provide basis for the in-depth review of statistics related to population ageing, and revised it based on the discussion held at the review.
2. The present paper outlines the policy challenges related to population ageing and the statistical issue related to its measurement, describes the relevant international statistical activities and proposes future action by the statistical community.
3. The paper incorporates input received from the discussion at the CES 2012 plenary session and from international agencies and countries whose activities it describes.

## **II. Increasing policy relevance of population ageing**

4. As the world population is passing through the demographic transition – the transformation of a population characterized by large families and short lifespans into a population of small families and long lifespans – the distinctive trait of this century is going to be ageing. Ageing has a profound impact on a broad range of economic, political and social processes, affecting virtually all domains of society.
5. The effects of ageing are already strongly felt in many UNECE countries where the large generations born during the baby boom are beginning to retire. There are significant cross-country differences in the rate of population ageing. Thus the scale of the measures required for adaptation is not the same across countries. Nevertheless, all countries will need to adapt, and this poses challenges.
6. The urge to utilise the labour resources of older people is among the key policy responses that entails great potential for the opportunities of ageing. As people remain healthy, active and autonomous for longer, they can continue to contribute actively to economic, social and family life over more years and can share their experience. Longer lives are, after all, among the greatest achievements of modern times.
7. Governments and international organizations have recognised the need to tackle the challenges and benefit more from the opportunities of ageing. In 2002, countries of the UNECE adopted their Regional Implementation Strategy for the Madrid International Plan of Action on Ageing (the global action plan) where they committed to action in ten key areas. The Strategy attempts to cover the entire spectrum of domains that are affected by ageing and where government action can make a difference. While addressing each domain, the Strategy is holistic, requiring that the concerns of different age-groups are systematically considered in all areas and levels of policymaking. The adoption of this Strategy reflects the broad consensus on the course of government action in response to population ageing in the UNECE region.
8. To base these actions on evidence, reliable data on the relevant issues needs to be available by age and sex. The importance of appropriate measurement of ageing and its consequences is further emphasised in the context of monitoring the implementation of the agreed Strategy. UNECE member countries reinforced this commitment in the ministerial declaration “Ensuring a society for all ages: promoting quality of life and active ageing” adopted at the review of the Strategy at the Ministerial Conference on Ageing in Vienna in September 2012.

### III. The scope of ageing-related statistics

9. While the phenomenon of population ageing is demographic, its consequences cut across all spheres of society. Statistics related to ageing are thus cross-cutting and concern all areas of social and demographic statistics as well as government finance and public sector statistics. Statistics in other domains than demography do not focus on the process of ageing as such. They inform about the situation of people at different age, the timing of important transitions in people's lives and about services and expenditures that target different age-groups.

10. Measurement of the demographic parameters is the core element of ageing-related statistics. Basic data on population age structure are collected by censuses and updated by vital statistics. The age structure of the population holds a lot of information about the present, past and the future; indicators based on the proportions or ratios of age-groups as well as the median age are the standard measures describing the ageing of any particular population. The same applies to projections used for forecasting the population size and age structure and to the life expectancy at birth and at different ages, derived from mortality statistics. Long time series of these data are available for most countries.

11. Longer lives influence the structure of an individual's entire life course. In the context of population ageing, the life course transitions in later life are of particular policy relevance. First, concerning the change in health status, the crucial question is whether the gained years of life are spent in good health or in disability and dependence. To measure this, there are health expectancies that adjust the conventional life expectancy measures for disability or indicate the number of healthy years for an average individual under current mortality and morbidity conditions. The extent and type of health care and services needed and used vary greatly with age and need to be measured adequately.

12. Another key area is living arrangements. The type of household where a person lives carries important information on the extent and type of services a person may require, on the way resources are shared and consumed. Characteristics such as economic well-being and housing conditions usually pertain to the whole household. Presence of other household members in addition to the nuclear family (a couple with or without children) may constitute either an additional resource, for example, as a provider of childcare or household work or add to the responsibilities, for example, through a need for care. From the perspective of older people and population ageing, the issue of living alone or in a household with other persons becomes a particularly important determinant of well-being as well as intergenerational transfers (financial and in-kind) among household members.

13. Retirement marks an important status transition in both the economic and social sense. Measurement of the age at which this transition is made, the income and well-being of people before and after, and the measurement of economic activity by age, including those above 65, represent crucial statistical information for reforms in the labour market and pension systems. The shrinking and ageing of the working-age population (conventionally defined 15-64) have a profound impact on the labour market. Monitoring unemployment, part-time work, persons following different pathways of exit from the labour market and the effective entry and exit ages to the labour market are important for monitoring the ageing-related labour market policies. Education statistics need to capture lifelong learning that can influence older persons' employability and well-being.

14. Population ageing influences the way in which a society redistributes resources among its members through social protection systems. A successful adaptation to ageing requires monitoring the functioning and financial sustainability of these systems. The related statistics include replacement rates of pensions, population involved in different

pension and health insurance schemes as well as public spending on pensions, health care and long-term care.

15. Promotion of active ageing is among the key policy responses to population ageing. Beside the measurement of economic activity and retirement, the monitoring of active ageing policies requires statistics on volunteering work and lifestyles that allow people to remain healthy and autonomous longer.

## **IV. International activities**

### **A. United Nations Population Division**

16. The United Nations Population Division prepares demographic estimates and projections for all countries and areas of the world as well as urban and rural areas and major cities, which serve as the standard and consistent set of population figures. These are broadly used throughout the United Nations system, by other international organizations and governments. The estimates and projections provide the basis of population-related figures in many internationally developed sets of statistical indicators.

17. In addition to the biennial updates of population estimates and projections, occasional statistical reports are prepared with a focus on ageing. Beside demographic data, the latest such report from 2007<sup>1</sup> included data on labour force participation and illiteracy of the population aged 65 and older as well as on the statutory pensionable age.

### **B. World Health Organization**

18. The World Health Organization (WHO) European Office hosts the Health for All<sup>2</sup> database that includes, among others, detailed data on population and mortality by age and sex. WHO mortality databases also contain detailed mortality by cause of death and life expectancy estimates at various ages.<sup>3</sup> Moreover, a detailed age breakdown of hospital discharges (a proxy for morbidity), including for higher age groups, is available in the WHO European Hospital Morbidity database<sup>4</sup>, adding altogether capacity to assess disease impacts on health at different ages. The WHO European Office has started to work with WHO Headquarters and other WHO Regions on guidelines and assessment tools for monitoring age-friendly policies at community (city) level. This includes work on indicators for monitoring age profiles on community level.

19. The WHO European Office jointly with Eurostat and OECD collects other statistics related to health care resources (e.g. for long-term care) and activities (e.g. immunization against influenza among older people), that may further add to the capacity to analyse the health needs of ageing populations. This collaborative effort aims to improve the quality and coverage of health information and reduce the burden of country reporting

20. WHO Headquarters coordinates a global Survey on Ageing and Adult Health (SAGE), which is a longitudinal study of ageing in six low and middle-income countries<sup>5</sup>.

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<sup>1</sup> United Nations 2007. World Population Ageing 2007. New York: United Nations.

<sup>2</sup> European Health for All database available at <http://data.euro.who.int/hfadb>.

<sup>3</sup> European Detailed Mortality database available at: <http://data.euro.who.int/dmdb>

<sup>4</sup> European Hospital Morbidity database available at <http://data.euro.who.int/hmdb>

<sup>5</sup> China, Ghana, India, Mexico, Russian Federation and South Africa. See [www.who.int/healthinfo/systems/sage](http://www.who.int/healthinfo/systems/sage).

It also collaborates with European surveys on ageing and health such as COURAGE (a survey in three European countries), and longitudinal surveys such as SHARE (see section H.3).

### C. Organisation for Economic Co-operation and Development

21. The Working Party on Private Pensions and its Task Force on Pension Statistics of the Organisation for Economic Co-operation and Development (OECD) launched the Global Pension Statistics project (GPS) in 2002 that permit inter-country comparisons of current statistics and indicators on key aspects of retirement systems across OECD and non-OECD countries. OECD prepares country profiles on private pensions systems, which include relevant demographic and macroeconomic data, pension fund data and description of the pension system.

22. OECD publishes the series *Pensions at a Glance* that provides a wide range of indicators for comparing pension policies and the outcomes of these policies between OECD countries. It includes indicators such as average earnings, public pension expenditures, life expectancy and the dependency ratio, as well as expected relative pension values, replacement rates and pension wealth at different individual levels of earnings for mandatory pension schemes and many other statistical parameters of pension systems. In its series *Education at a Glance*, OECD also occasionally provides some relevant data on employment of older age groups 55-64 by educational level.

23. OECD has been carrying out two waves of country reviews of the labour market situation of older workers: the first phase took place in 2003-2005 and the second phase started in 2011.<sup>6</sup> As part of that process, OECD has supplemented the standard labour market statistics on older workers (e.g. participation rates, employment rates and unemployment rates) published in the *OECD Employment Outlook*<sup>7</sup> with a range of indicators developed specifically for this project, such as effective retirement age, retention rates, measures of seniority wages, hiring rates, inactivity by reason and incidence of different forms of working conditions.

### D. European Commission

24. Eurostat collects and hosts in its databases statistics on many areas relevant to ageing in the European Union Member States and Associated States. The recent publication *Active ageing and solidarity between generations: a statistical portrait of the European Union 2012* collects this into one report, covering demographic statistics, labour market, transition to retirement, health and healthcare, living conditions, income and participation in society. The data in all these areas are presented by age groups and are available in Eurostat's online database.

25. Based on its annual demographic data collections, every year Eurostat computes for all European countries a set of harmonized demographic indicators referring to ageing, such as median age, dependency ratios and life expectancies. In particular, for a large number of countries (EU Member States and Candidate Countries plus EFTA countries) annual life tables by single age are available at both national and regional level. The regional dimension is not represented in other comparable datasets. These data are input also for the computation by Eurostat of harmonized indicators of disability-free life expectancy

<sup>6</sup> [www.oecd.org/els/employment/olderworkers](http://www.oecd.org/els/employment/olderworkers)

<sup>7</sup> [www.oecd.org/employment/outlook](http://www.oecd.org/employment/outlook)

(healthy life years) at birth, at age 50 and at age 65. All these data are freely available in the Eurostat database.

26. Eurostat also provides data for the *EU Demography Reports* (2008 and 2010) that are designed to inform EU policy debate on coping with consequences of population ageing. Among others, these reports provide data on population age structures, labour statistics for age groups particularly relevant from the ageing perspective and on pension expenditure.

27. Every three years, Eurostat produces and releases population projections by single year and single age (up to age 100+) for 31 countries (all the EU Member States and EFTA countries). The projections at national level are usually followed by regional level projections for the same set of countries, where Eurostat ensures the consistency of the figures at the two geographical levels. The Eurostat Population Projections (EUROPOP) at national level are a fundamental official input to the assessment of the long-term sustainability of public finances, while those at regional level are an important element for the report that the European Commission submits regularly to the EU Council and to the European Parliament about the progress made towards socio-economic cohesion at regional level. The level of age disaggregation of both datasets, freely available in the Eurostat database, allows the computation of prospective ageing-related indicators.

28. In 2010, the Economic and Financial Affairs Council (ECOFIN Council) of the European Union mandated the Economic Policy Committee (EPC) to update its age-related expenditure projections by autumn 2012 based on a new population projection by Eurostat. The long-term age-related expenditure projections provide an indication of the timing and scale of changes in economic developments that could result from an ageing population in a 'no-policy change' scenario. *The 2012 Ageing Report*, presented to the ECOFIN council in May 2012, details the expenditure projections covering pensions, health care, long-term care, education and unemployment transfers for all EU Member States. A statistical annex gives a country-by-country overview of the main assumptions and results.<sup>8</sup>

## **E. European Centre for Social Welfare Policy and Research, Vienna**

29. The European Centre for Social Welfare Policy and Research, Vienna (ECV) works on indicators for monitoring implementation of the UNECE Regional Strategy for the Madrid International Plan of Action on Ageing. Indicators have been developed in the domains of demography, income and wealth, labour market and labour market participation, and social protection and financial sustainability. Much of the data are collected through international sources where availability for other countries than members of EU and OECD is weak. In 2007 and 2009, UNECE facilitated additional data collection from national sources for these indicators. The data are published in the country profiles available online.<sup>9</sup> Subsequently, the lists of long-term care indicators and gender-specific indicators for mainstreaming ageing have been established.

30. This work is carried out in consultation with the intergovernmental Working Group on Ageing at UNECE, which consists of representatives of government agencies responsible for the national implementation of the UNECE Strategy and thus provides a direct link to the data users. The indicators are linked to the specific commitments that UNECE countries have agreed upon in the Strategy.

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<sup>8</sup> [http://ec.europa.eu/economy\\_finance/publications/european\\_economy/2012/2012-ageing-report\\_en.htm](http://ec.europa.eu/economy_finance/publications/european_economy/2012/2012-ageing-report_en.htm)

<sup>9</sup> [www.monitoringris.org](http://www.monitoringris.org)

## **F. The Active Ageing Index project**

31. The European Commission Directorate General for Employment, Social Affairs and Inclusion, UNECE and ECV are jointly implementing the project Active Ageing Index, linked to the European Year of Active Ageing and Solidarity between Generations.

32. The Index should allow measuring the extent to which older people can realise their full potential in terms of total and healthy life expectancy, participation in the economy, in social and cultural life and in terms of independent living. The project aims at building a consensus on the key domains that need to be considered, on the relevant indicators, on a benchmark level for each of the indicators and on a weighting method to build a composite indicator that should be relevant for wide variety of countries. Composite indicators could also be calculated for subsets of indicators, making it easier to identify the domains in which most progress is required. The launch of the Index for EU countries is scheduled for December 2012.

## **G. Statistical Committee of the Commonwealth of Independent States**

33. The Statistical Committee of the Commonwealth of Independent States (CIS-Stat) is preparing methodological recommendations on a statistical study of socio-demographic aspects of population ageing based on the data of current statistics and the population census. Besides that, CIS-Stat intends to carry out the following activities:

- (a) Publish a statistical pocketbook on population ageing in the CIS countries;
- (b) Developing a database related to the topics of the Madrid International Plan of Action on Ageing for the CIS countries;
- (c) Review the best international practices of recording and analysis of indicators of pension systems;
- (d) Review the best international practices in studying living standards of the elderly.

## **H. Internationally coordinated surveys in the United Nations Economic Commission for Europe region**

### **1. Generations and Gender Survey**

34. In 2000, UNECE launched the Generations and Gender Surveys – panel surveys of nationally representative samples of 18-79 year-old population with an interval of three years between each panel wave. The main goal is to improve understanding of demographic and social developments and of the factors that influence these developments, with particular attention to relationships between children and parents (generations) and those between partners (gender).

35. The Survey takes a multi-disciplinary approach. Among the covered topics, the following are particularly relevant for studying older age-groups: retirement, material living conditions, income, family relations, extent and quality of the support network, subjective health status and disability, intergenerational transfers, satisfaction with different life domains and perceived loneliness. The large sample sizes in the order of 10,000 individuals in each country allow the production of detailed statistics and analyses by age.

36. The surveys are conducted in 20 countries: Austria, Belgium, Bulgaria, Czech Republic, Estonia, France, Georgia, Germany, Hungary, Italy, Japan, Lithuania, Netherlands, Norway, Poland, Romania, Russian Federation, Sweden, Australia and Japan.

In many of them, the implementing agency is the national statistical office. Harmonised micro-data files are available for 15 countries. An online tabulation tool provides quick access to simple tabulations and analyses.<sup>10</sup>

## **2. European Union Statistics on Income and Living Conditions**

37. The European Union Statistics on Income and Living Conditions (EU-SILC) is an instrument in the European Statistical System (ESS) aiming at collecting timely and comparable cross-sectional and longitudinal multidimensional micro-data on income, poverty, social exclusion and living conditions. The project was launched in 2003 and has been implemented in the 27 EU countries, Croatia, Iceland, Norway, Switzerland and Turkey. It provides cross-sectional data on income, poverty, social exclusion and other living conditions as well as longitudinal data pertaining to individual-level changes over time, observed typically over a four-year period.

38. EU-SILC does not rely on a common questionnaire or a survey but on the idea of a framework. The latter defines the harmonised lists of target primary (annual) and secondary (every four years or less frequently) variables to be transmitted to Eurostat; common guidelines and procedures; common concepts (household and income) and classifications aimed at maximising comparability of the information produced. Eurostat provides access to the micro-data.<sup>11</sup>

## **3. Survey of Health, Ageing and Retirement in Europe**

39. The Survey of Health, Ageing and Retirement in Europe (SHARE) is a multidisciplinary and cross-national panel survey on health, socio-economic status and social and family networks. The survey is implemented by a network of research institutes and is supported by the European Commission. SHARE has a multi-disciplinary approach aims at providing the full picture of the different aspects of the ageing process.

40. The surveys are conducted in 15 countries: Austria, Belgium, the Czech Republic, Denmark, France, Germany, Greece, Ireland, Israel, Italy, the Netherlands, Poland, Spain, Sweden and Switzerland. The sample sizes in different countries range from one to four thousand individuals aged 50 and over. Harmonised micro-data files are available through the project's website<sup>12</sup>.

## **4. United Nations Department of Economic and Social Affairs / United Nations Population Fund surveys on ageing**

41. The United Nations Department of Economic and Social Affairs (UNDESA) and the United Nations Population Fund (UNFPA) coordinated and supported the implementation of harmonised surveys on ageing by national statistical offices of Armenia, Kazakhstan, the Republic of Moldova and Tajikistan in 2007-2011. These surveys collected information on the situation of older persons with the objective to identify areas for policy interventions.

## **5. Other relevant surveys**

42. National statistical offices in many countries implement Time Use Surveys that in ten-year intervals provide rich information on the time use of adult population, including older persons. These surveys are particularly suitable for measuring unpaid work and non-market production and well-being at different stages of life course.

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<sup>10</sup> [www.ggp-i.org](http://www.ggp-i.org)

<sup>11</sup> [http://epp.eurostat.ec.europa.eu/portal/page/portal/microdata/eu\\_silc](http://epp.eurostat.ec.europa.eu/portal/page/portal/microdata/eu_silc)

<sup>12</sup> [www.share-project.org](http://www.share-project.org)

43. European Social Surveys are designed to chart and explain the interaction between Europe's changing institutions and the attitudes, beliefs and behaviour patterns of its populations. They are conducted every two years as cross-sectional surveys covering all adult age-groups. The Surveys are funded by the European Commission, national research councils and ministries, and the European Science Foundation.

44. Eurostat manages the European Health Interview Survey (EHIS) to measure the health status, life style (health determinants) and health care services use of over 15 year-old EU citizens on a harmonised basis and with a high degree of comparability among member states. The survey contains around 130 questions with background variables on demography and socio-economic status. EHIS is to be held every five years with the first round of the EHIS having taken place in 2006-2009 in the EU Members States. The second round will start around 2014.<sup>13</sup>

45. Eurofound (the European Foundation for the Improvement of Living and Working Conditions) carries out European Working Conditions Surveys that allow studying issues related to the ageing workforce, and the European Quality of Life Surveys that examine issues such as employment, income, education, housing, family, health, work-life balance, life satisfaction in European Union member and candidate countries. The small sample size of these surveys limits the statistics that can reliably be produced for different age groups.

## V. Selected national experience

### A. Activities of Statistics Canada

46. As the national statistical agency, Statistics Canada is responsible for a number of data sources on a wide range of social issues, including some which deal directly with population aging and many which include data elements related to the topic. These include sources which require direct data collection, such as the Census of Population and a range of complimentary household surveys, and others which involve the use of administrative data, such as the Vital Statistics program and the Population Estimates program. Together, these data sources support the monitoring of population ageing and various associated issues and challenges, such as labour force participation and transition to retirement, income and wealth, health and care-giving and volunteering.

47. Increasingly, emphasis has been placed on the greater exploitation of administrative data and various strategies to integrate data from multiple sources, including record linkage, demographic projections and micro-data simulation. This is the result of multiple pressures, including financial constraints, declining response rates and concerns about respondent burden.

48. Statistics Canada also produces in-depth analysis related to population ageing. Recent examples include projections of the labour force, analysis of key trends related to the transition from work to retirement and an examination of informal caregiving for seniors with health conditions. This analysis complements policy analysis conducted by Federal Departments responsible for particular programs, such as the Old Age Security program or the Guaranteed Income Supplement and by provincial governments responsible for areas such as health care.

<sup>13</sup> [http://ec.europa.eu/health/data\\_collection/tools/mechanisms/index\\_en.htm#fragment0](http://ec.europa.eu/health/data_collection/tools/mechanisms/index_en.htm#fragment0)

## B. Coordination efforts in the United States

49. The Federal Interagency Forum on Aging-Related Statistics<sup>14</sup> in the United States (established in 1986) can be seen as a good example of national-level cooperation of agencies that provide ageing-related data. The Forum's goal is to bring together U.S. Federal agencies that share common interest in improving ageing-related data. To date, the Forum has played a key role by critically evaluating existing data resources and limitations, stimulating new database development, encouraging cooperation and data sharing among its 14 member Federal agencies, and preparing collaborative statistical reports.<sup>15</sup> The Forum's principal publication, *Older Americans: key indicators of well-being*, published periodically, provides a comprehensive, easy-to-understand picture of the older population's health, finances, and well-being. The report is intended to provide a compendium of indicators drawn from the most reliable official statistics. The indicators are categorized into five broad groups: population, economics, health status, health risks and behaviours, and health care.<sup>16</sup>

50. The Aging Integrated Database<sup>17</sup> of the United States Administration of Aging and the Health Indicators Warehouse of the Department of Health and Human Services are two examples of consolidating access to available statistics on ageing to a single entry point.<sup>18</sup> <sup>19</sup> Such endeavours can greatly enhance the accessibility of ageing-related statistics and promote its use. It could also promote the need for a more streamlined presentation of ageing-related statistics and help to get these statistics into policymaking.

## C. Surveys of health, ageing and retirement in the United States

51. Several surveys of the ageing population are conducted periodically in the United States. The Health and Retirement Study (HRS) follows more than 20,000 U.S. men and women over 50. First launched in 1992, this multidisciplinary, longitudinal study is a leading resource for data on the combined health and economic conditions of older Americans.<sup>20</sup>

52. Other principal surveys of the ageing population in the U.S. include the National Health Interview Survey Supplements on Aging (SOA) and the Longitudinal Studies of Aging (LSOA). The Supplement on Aging (SOA) is conducted periodically in conjunction with the National Health Interview Survey. The SOA is designed to characterize the health and social status of people 55 years of age and over in the United States; to provide information about how psychosocial and environmental factors interact with health factors to influence the aging individual; and to provide a knowledge base for investigating issues of prevention and postponement of disability and dependency.<sup>21</sup> The SOA provides the baseline for the LSOA. Also conducted periodically, the LSOA is a prospective nationally

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<sup>14</sup> [www.agingstats.gov](http://www.agingstats.gov).

<sup>15</sup> See [http://www.agingstats.gov/agingstatsdotnet/main\\_site/default.aspx](http://www.agingstats.gov/agingstatsdotnet/main_site/default.aspx).

<sup>16</sup> See

[http://www.agingstats.gov/agingstatsdotnet/Main\\_Site/Data/2012\\_Documents/Docs/EntireChartbook.pdf](http://www.agingstats.gov/agingstatsdotnet/Main_Site/Data/2012_Documents/Docs/EntireChartbook.pdf).

<sup>17</sup> [www.agidnet.org](http://www.agidnet.org).

<sup>18</sup> In 2012, the U.S. Administration of Aging was restructured as the U.S. Administration of Community Living. This effort is the realization of efficiencies in utilizing Federal demographic and social data older adults and persons with intellectual and developmental disabilities to address research needs.

<sup>19</sup> See <http://healthindicators.gov>

<sup>20</sup> [www.nia.nih.gov/health/publication/growing-older-america-health-and-retirement-study](http://www.nia.nih.gov/health/publication/growing-older-america-health-and-retirement-study).

<sup>21</sup> [www.cdc.gov/nchs/soa/soa2.htm](http://www.cdc.gov/nchs/soa/soa2.htm).

representative cohort study of civilian non-institutionalized persons 70 years of age and over at the time of their SOA interview.<sup>22</sup>

53. The National Survey of Older American Act Participants provides information on a collection of annual national surveys of recipients of Older Americans Act program services reporting on service quality and consumer-reported outcomes. The instruments also measure special needs characteristics of the people who receive services such as physical and social functioning.<sup>23</sup>

## VI. Issues and challenges

54. The information presented in this review highlights general issues and challenges for consideration by the international community for future developments in statistics related to population ageing.

### A. Production and dissemination of data by age

#### 1. Tabulation by age

55. Published statistics can inform on ageing and its impact when they are tabulated by age; however, a great deal of social statistics are not. Even when applied, the particular aggregate age-groups used for a given topic vary across countries. In part, this may be related to differences in life expectancy across countries. For example, countries may need to oversample persons aged 85 or older who are mentally and physically eligible to participate in the survey in order to produce robust statistical estimates. In these cases, relevant sampling weights need to be adjusted and applied to account for oversampling. Where funds or technical support is not available, oversampling may not be possible and thereby affect the availability of tabulations of older age groups.

56. Aggregate age-groups used in the tabulations may also vary across countries by topic (and across different sources on the same topic) due to age-defined differences in culture, economy, social roles and public policies. For example, age eligibility for retirement or other social supports varies across countries. Thus, a standard age tabulation on employment status may have different implications across countries.

57. In other cases, the rationale for differences in aggregate age-groups across countries on a given topic is not clear. The use of the cut-off points of 60 or 65 as a marker for older population and 80 or 85 for the very old are among the common examples. As another example, data on the unemployment of older workers could pertain to 55-64 year-olds, available for most countries, but also to open-ended age-groups of 50, 55 or 60 and over. At the same time, data on time use can be found for the age group 45-64.

58. Where possible, improvements can be achieved by adhering to commonly agreed age-groups that could make data more easily comparable across countries and topics. Additionally, in designing survey samples, it would be important to plan for a sufficient number of observations in the age groups that are critical for measuring ageing-related issues.

<sup>22</sup> [www.cdc.gov/nchs/isoa/isoa2.htm](http://www.cdc.gov/nchs/isoa/isoa2.htm).

<sup>23</sup> [www.agidnet.org](http://www.agidnet.org).

## 2. Years elapsed and years remaining

59. In the context of longer lives, the meaning of conventional and legally set age-markers of life-course transitions such as the age of retirement at 65 (a legal standard in many UNECE countries) is changing as the proportion of the population surviving long past that age is increasing. This is leading to new ways of thinking about age that focus on the years of life ahead rather than on the years elapsed since birth. Indeed, reporting the expected number of years ahead is aligned with behaviours connected with life planning. Indicators such as the proportion of population with remaining years of life below 15 years are gaining ground in comparative representation of the ageing process in the UNECE region.<sup>24</sup>

60. Such new measures could become an important complement to the conventional chronological age in describing population ageing and its consequences. Regular production and publication of this kind of indicators would contribute in itself to a change in thinking about population ageing. For example, while the conventionally measured median age of the population is projected to increase impressively, the decrease in the population average remaining years of life is going to be rather minimal.<sup>25</sup> The statistical community would need to investigate the possibility of producing and disseminating such indicators on a regular basis.

## B. Dispersion of ageing-related statistics

### 1. Different departments and organizations

61. Information on ageing-relevant issues is scattered across different domains and sources. In national statistical offices, they are managed in different departments and international organizations deal with different ageing-related domains according to their mandates. Furthermore, in many countries, statistics on pensions, social security payments and health services are produced outside statistical offices.

### 2. Different publications and databases

62. With the exception of rare specialised publications, statistics on ageing are dispersed across different publications and online access is not optimised for accessing data on specific age groups. The user would need time to find out for each type of statistics the availability by age and the age-groups used in the tabulations. Coordination efforts such as those described in section V.B of this paper can greatly enhance the accessibility of ageing-related statistics and promote its use.

## C. Data gaps

63. Current international work on developing and collecting data on ageing-related indicators has revealed large data gaps in many pertinent areas related to ageing. In a recent production of a statistical annex to a regional report on ageing, the UNECE Statistical Division identified 20 indicators that could be provided for a large majority of its member countries. While the availability of data on population, life expectancy and labour force

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<sup>24</sup> Sanderson W, Scherbov S 2008. Rethinking age and aging. Population Bulletin 63 (4). Vienna Institute of Demography, International Institute for Applied Systems Analysis. European Demographic Data Sheet 2010. Available at [www.oeaw.ac.at/vid/datasheet](http://www.oeaw.ac.at/vid/datasheet).

<sup>25</sup> Lutz W, Sanderson W, Scherbov S 2008. The coming acceleration of global population ageing. Nature 451: 716-719.

participation by age is universal, other key measures such as unemployment at age 55-64, average effective labour market exit age, poverty and living in a one-person household by age was not available for most non-OECD countries. For many other indicators that have been identified for monitoring the UNECE strategy on ageing, data are scarce for the EU and OECD countries as well. For example, although progress has been made, gaps remain in U.S. aging data. Data gaps include informal caregiving, residential care, elder abuse, functioning and disability, pensions (particularly defined contribution pensions), mental health and substance abuse among older adults and end of life.

64. As a rule, the original data sources contain information on age. For many indicators, the production of the necessary figures would only require additional tabulation of an already collected survey or administrative dataset. In other areas, such as the measurement of lifelong learning, volunteering or healthy lifestyles and intergenerational transfers and support, data collection would need to be undertaken or strengthened.

#### **D. Measurement of institutional population**

65. A significant proportion of the older population lives in institutions and is not captured with household surveys that specifically exclude collective households, such as care and residential homes. For example, in the Netherlands in 2009, the share of population aged 65 and over receiving formal care in institutions is 6.6 per cent, and 19.2 per cent among those 85 years and older. However, in Portugal for the same year, we have just 0.9 per cent of over-65's in institutional care and 1.8 per cent of over-80 year olds.<sup>26</sup> In both cases, these figures exclude those receiving care in hospitals, and represents a subset of the total institutional population, which includes other types of living quarters.

66. Part of the differences between the figures for different countries is likely to be due to differences in sources and definitions of this data. Variation exists between the data available from different countries, and the available tabulations, highlighting the need for harmonisation in this area. The United Nations recommends that national censuses collect and publish figures on institutional population. Whilst censuses provide valuable information on the size and basic characteristics of the institutional population, they are carried out infrequently, at ten-year interval, and cannot possibly have the richness of content like household surveys.

67. Institutional population differs from the population in private households in many ways. From the point of view of active ageing policies, older people who remain in their homes are more likely to continue to be engaged and participate in their communities. To understand the situation of people at different age and its change over the life course, the statistical community would need to explore how to improve the coverage of institutional households in relevant data collection and how to harmonise related definitions.

#### **E. Need for subjective measures**

68. To understand the situation of different age groups of the population and to design policies that affect them, governments also need information on subjective perceptions of

<sup>26</sup> Data from OECD Health Data 2012. Long-term care institutions refer to nursing and residential care facilities (HP.2) which provide accommodation and long-term care as a package. They include specially designed institutions or hospital-like settings where the predominant service component is long-term care and the services are provided for people with moderate to severe functional restrictions.

well-being. Although objective conditions do influence subjective perception, they are far from determining these perceptions. For many types of behaviour, the effect of perceived conditions may be larger than that of the objectively measured conditions.

69. Using the subjective indicators involves challenges of measurement, interpretation and comparability. In part, challenges of subjective well-being indices relate to the cultural relevance and comparative weighting of index components. However, research on measuring such subjective perceptions has produced questions and scales that are increasingly well established in measuring satisfaction with different life domains, including measurement of emotional well-being. Recent work on the measurement of quality of life in EU and OECD has recommended using subjective measures alongside objective ones for providing an adequate picture of quality of life. Government statistical agencies would need to progress in collecting data and producing sufficiently credible measures, which then can be incorporated as appropriate into indices used to monitor subjective well-being of the population, including older persons.

## **F. Need for longitudinal data**

70. Longitudinal data grasp the dynamic character of the ageing process; allow measuring change over time, reactions to changes in the institutional environment and to specific policies. Such data are also indispensable for measuring linkages between different life domains and testing behavioural hypotheses. Longitudinal studies can give answers to questions concerning change that cross-sectional studies cannot. Recent developments in ageing-related data collection have increasingly considered these needs and advantages. GGS and SHARE as well as several national studies on ageing are designed as panel surveys.<sup>27</sup> EU-SILC also includes a panel component.

71. Longitudinal data are challenging to collect and manage. First, longitudinal surveys are more expensive than cross-sectional ones because of the need to keep track, maintain commitment and locate the panel respondents at each consecutive wave. In addition to this, data processing and cleaning involves additional complexity. Furthermore, confidentiality concerns must be managed appropriately to ensure that the personal information needed for keeping track of the panel member or linking data from a census or administrative sources corresponds to the legal requirements.

72. In many countries, national statistical offices would be among the few organizations in a position to meet these challenges adequately. There is a potential to extend existing internationally coordinated longitudinal studies to cover more countries. Indicators of change based on longitudinal data could be increasingly used in descriptive statistical publications. Longitudinal aspect would need to be seriously considered in new data collection initiatives related to the measurement of ageing.

## **VII. Recommended action**

### **A. Task force**

73. Create a joint task force of statisticians and policymakers to develop recommendations to statistical offices for improving and harmonising the collection and

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<sup>27</sup> Health and Retirement Study (HRS) of the United States and the English Longitudinal Study of Ageing (ELSA) are among the best known.

dissemination of ageing-related data. This task force should bridge the work on monitoring indicators for the UNECE ageing strategy with regular work in national statistical offices. The task force could take as its starting point the work of the expert group on the Active Ageing Index.<sup>28</sup>

## **B. Dashboard of indicators**

74. The outcome of this work could be a dashboard of indicators recommended to statistical offices for regular production. These indicators should rely on existing mechanisms of statistical data collection. The new requirement would be to produce and disseminate the data in the way that supports ageing-related policymaking.

## **C. Consolidation of ageing-related statistics**

75. The task force should also explore modalities of how to consolidate ageing-related statistics, provide recommendations on issues such as common entry points to the various ageing-related sources on the web and ageing-related chapters in regular statistical publications, and demonstrate existing good practices.

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<sup>28</sup> At its meeting on 5-6 February 2013 in Luxembourg, the CES Bureau established the Task Force on Ageing-related Statistics and approved its terms of reference (available at: [www.unece.org/stats/ToS.html](http://www.unece.org/stats/ToS.html)).