Concept Note
Regional demographic training workshop on evaluation of age and sex data
27 May – 3 June 2022, virtual

Background
As part of the proclamation of the Asia and Pacific Civil Registration and Vital Statistics (CRVS) Decade (2015-2024), governments in the region requested that further regional action be taken to support the improvement of CRVS systems and the production of vital statistics. Goal three of the regional action framework calls for the production and dissemination of accurate, complete and timely vital statistics (including on causes of death). One of the targets under this goal further expands that nationally representative statistics - using registration records or other valid administrative data - should allow for key disaggregation, namely by age, sex, geographic area, administrative subdivisions and other subgroups and characteristics of the vital event.

Demographic statistics, whether produced using population censuses, registration data or other administrative data sources or household surveys may be subject to error which can impact the accuracy of statistics. Therefore, appraisal of demographic data is an essential task for data users, to take into consideration any potential errors or biases that may impact the accuracy of the estimates being produced. Underpinning the three components of population change (fertility, mortality and migration) are age and sex distributions of a population.

ESCAP Statistics Division will run a regional training workshop for member states on the demographic evaluation of age and sex data collected in national censuses.

Mode of delivery
The intention is to run the workshop as a mixed-mode and virtual training session to facilitate participation from across the region and to most effectively work with intensive hands-on practical exercises.

Taking these two considerations into account, it is proposed to offer instructional material via pre-recorded video, allowing participants to download and work through that material in their own time in the week preceding the scheduled workshop.

The interactive part of the workshop will be structured around a set of three groups of staggered practical workshops to allow participants to select the time most convenient for them. The workshops are intended to be relatively small (perhaps no more than 20-30 participants per group), with a number of facilitators available to engage synchronously with the participants in each group.
During the workshop sessions, participants will be expected to attempt a set of analytical exercises using data from their own country’s most recent census (and, if possible, CRVS data on the age distribution of mothers giving rise to registered births in a year close to that most recent census) to consolidate their understanding of the instructional material, and to gain experience in applying the knowledge gained to data relevant to their own country. For those participants who cannot access their own census data, datasets for training purposes will be made available.

**Syllabus for instructional material, and delivery**

The instructional material will be delivered by means of pre-recorded video lectures, combined with demonstration using Excel where appropriate. The material will follow, broadly, that presented in *Tools for Demographic Estimation*, an online resource produced by the IUSSP with funding from UNFPA, and will cover the topics below. In addition, the workshop will cover the assessment of ages of mother giving birth from census and CRVS data, and offer an introduction to the assessment of ages at death from census and CRVS data.

**Pre-recorded videos to be viewed in advance**

**Part 1: Getting started (10 mins)**

i. Short introductory video to the workshop: Welcome and housekeeping

ii. Explanation of data requirements necessary for the workshop

**Part 2: Evaluation of age and sex data (2.5 hours)**

i. Age data from a single census or survey
   a. Age heaping and miscoding
   b. Analysis by single years of age and 5-year age groups
   c. Graphical evaluation (and NOT wasting time doing population pyramids!)
   d. Summary diagnostics: Whipple’s and Myers’ Indices (and their limitations)
   e. Age ratios

ii. Sex data from a single census or survey
   a. Sex ratios by single years of age and 5-year age groups
   b. Sex ratio at birth

iii. Analysis of data using multiple censuses or surveys
   a. Graphical cohort analysis
   b. Cohort survival

iv. Comparison of data with data from other sources and population projections

**Part 3: Evaluation of age and sex data relating to births and deaths (2.5 hours)**

i. Brief description of Beers’ interpolation formula

ii. Ages of mothers giving birth as recorded in a census, survey, or CRVS
   a. Preparation of data
   b. Derivation of a counterfactual estimate of annual births (by 5-year age group of mother) from the UNWPP tabulations using Beers’ interpolation formula
   c. Comparison of ages of mothers giving birth from census, survey, or CRVS data with the counterfactual from the UNWPP

iii. Age of those dying as recorded in a census or CRVS
   a. Preparation of data
   b. Derivation of a counterfactual estimate of annual deaths (by 5-year age group) from the UNWPP tabulations using Beers’ interpolation formula
c. Comparison of ages at death from census, or CRVS data with the counterfactual from the UNWPP

A rough indication of timing would be that Part 1 would be about 10 minutes; Part 2 about 2.5 hours; Part 3 about 2.5 hours. Videos for Parts 2 and 3 will be separated into discrete entities according to the headings.

Videos will be recorded (probably using Teams, or Opencast) and saved as mp4 files for maximum compatibility.

Practical workshops, plenary sessions, and consultations (three 2.5-hour long practical workshops)

To allow for consolidation of the material covered, a variety of synchronous engagements are envisaged. Primarily, these will be structured as the time-staggered workshops mentioned above, with three 2.5-hour long practical workshops being run for each time-zone group.

The practical workshops will be facilitated by 2 or 3 people with domain expertise, and will be based around a set of sequential exercises that will take participants through the analysis process outlined in Part 3 of the instructional material. Participants will be expected to make use of census data from their own country; however, data (probably from South African and Zimbabwean censuses) will be made available for those who cannot access their own census data.

Given the intended small number of participants in each of the three time-zone groups, the idea is for the facilitators to be able to offer one-on-one and small group guidance and assistance to participants by means of break-out rooms (one per facilitator).

However, in addition to these workshops, as the proposed schedule below indicates, it is intended to bring all the participants together (regardless of time-zone) for two hour-long plenary sessions where the principal facilitator will be able to reflect on the progress made and answer common queries or issues that may have arisen during the three time-zone grouped workshops.

Finally, there will be a consultation session with the principal facilitator (and other facilitators as needed) for three hours after the plenary sessions.

Timetable and schedule

Taking the instructional and practical components together, the following schedule and timetable is proposed.

09 May 2022   Part 1 video released, together with a text document and template outlining the data required to be compiled by participants

16 May 2022   Part 2 video released to participants to work through in their own time. During this week, the relevant practical exercises will be made available to participants

23 May 2022   Part 3 video released to participants to work through in their own time. During this week, the relevant practical exercises will be made available to participants

The synchronous aspects of the workshop will then run from 27 May-3 June 2022 as per the schedule below. All times are Bangkok. Participants will be requested to select whether to be in Group A, B or C for the practical workshops.
<table>
<thead>
<tr>
<th>Day</th>
<th>Time (BKK)</th>
<th>Description</th>
<th>Participants</th>
</tr>
</thead>
<tbody>
<tr>
<td>27 May (Fri)</td>
<td>13.00 – 14:00</td>
<td>Opening of workshop and explanations</td>
<td>All (plenary)</td>
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<td></td>
<td>09:00 – 11:30</td>
<td>Workshop 1</td>
<td>Group A</td>
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<td>13:30 – 16:00</td>
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<td>Group B</td>
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<td>17:00 – 19:30</td>
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<td>Group C</td>
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<td>30 May (Mon)</td>
<td>10:00 – 11:00</td>
<td>Check-in; commentary on Workshop 1</td>
<td>All (plenary)</td>
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<td>13:30 – 16:00</td>
<td>Consultation appointments</td>
<td>All (15 minute slots by appointment)</td>
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<td>31 May (Tues)</td>
<td>09:00 – 11:30</td>
<td>Workshop 2</td>
<td>Group A</td>
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<td>13:30 – 16:00</td>
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<td>Group B</td>
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<td>17:00 – 19:30</td>
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<td>Group C</td>
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<tr>
<td>1 June (Weds)</td>
<td>10:00 – 11:00</td>
<td>Check-in; commentary on Workshop 2</td>
<td>All (plenary)</td>
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<td>Consultation appointments</td>
<td>All (15 minute slots by appointment)</td>
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<td>2 June (Thurs)</td>
<td>09:00 – 11:30</td>
<td>Workshop 3</td>
<td>Group A</td>
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<td>Closing of workshop</td>
<td>All (plenary)</td>
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<td>3 June (Fri)</td>
<td>13:30 – 16:00</td>
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<td>Group B</td>
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<td>Group C</td>
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