

## Training Workshop on

# New Approaches and Methods of Population Forecasting

National University of Singapore, Singapore

5 - 16 March, 2001

### *Course Outline*

#### **Introduction and Information**

The final goal of this course will be the preparation of probabilistic projections for at least several countries, so the course will be also aimed at the following:

1. Giving participants introduction into probabilistic population projections. This will be a first presentation that will briefly discuss current ways of making projections by many national agencies, UN, etc. It would be very nice if participants could also outline the procedures that are used in their offices in making projections. Thus there could be immediately a short discussion on the issue. Then Dr Scherbov will explain what are the ways to cope with the uncertainty and discuss the issue of probabilistic projections, mainly those that are based on the expert opinions. He will outline the procedure and show what type of questions we can answer using probabilistic population projections. He could give a number of examples from world population projections, projections for different countries such as Austria, Germany, European Union, South Africa etc. There could be a discussion on the data requirements and what technique could be used to provide the required data.

2. The next several days will be devoted to the following issues related to the preparation of baseline data for probabilistic projections. The knowledge of life table technique, some other demographic technique and Excel is crucial here.

All participants for the 2-week training course will need to complete and return to the Asian MetaCentre a *questionnaire* (please download questionnaire) to help the trainers in assessing the extent of knowledge of participants in the issues. This is important in tailoring this course for the participants. Additional Excel and demographic topics may be taught if it is deemed necessary.

3. If (or after) initial requirements are met, there will be a discussion on the following topics.

3.1 Graduation of population by single year

3.2 Mortality analysis

3.2.1 Extending of age-specific mortality rates to high ages, smoothing and graduation by single years of age. It is supposed that participants will be able to work on data themselves.

3.2.2 Smoothing and graduation of fertility

3.2.3 Graduation of migration

4. By the end of the first week to the beginning of the second week, participants should be able to prepare baseline data in a proper format. At the beginning of the second week, participants will also try to prepare assumptions for the future trends in fertility, mortality and migration required to run projections. Probabilistic projections for some of the countries will be tried out. Projections are to be made on the national level. Then there will be a lot of room for the discussion of the results. Participants could also work further with the results of the projections. These results could be presented as the preliminary population projections during the last two days of the training workshop.

### **Important Data to Bring**

Participants should bring with them the following data:

1. Population by age and sex for the baseline year (the year from which we start the projections)
2. Age-specific fertility rates for the baseline year.
3. Age-sex specific mortality rates for the baseline year.
4. Age-sex specific net migration for the baseline year.

The data should be on the national level. It would be also good to have somewhat more historical data series, that will help us to develop the scenarios. If some of the data described above are missing, different approaches will have to be used generate the missing data. In this case aggregated data such as life expectancies by sex and total fertility rates have to be provided. Populations by age and sex for the baseline year are required data.

It is preferable to have data by single year of age, since the projection will be performed by single year of age.

## Provisional Program

<b>Monday 5</b>	<b>Tuesday 6</b>	<b>Wednesday 7</b>	<b>Thursday 8</b>	<b>Friday 9</b>
<p>Introduction to Probabilistic Projection</p> <p>Major demographic technique used for conducting probabilistic projections and data requirements. Discussion of available data.</p>	<b>Public Holiday</b>	<p>Preparation of baseline data. Implementation of basic demographic technique with Excel (: life tables, conventional projections etc.). Advanced features of Excel. Use of advanced functions.</p>	<p>Graduation and smoothing of data.</p> <p>Parameterized models in mortality, fertility and migration analysis.</p>	<p>The use of MORTPAK.</p> <p>Finalizing baseline data, and putting them in a format suitable for probabilistic projections.</p> <p>Further work on the baseline</p>
<b>Monday 12</b>	<b>Tuesday 13</b>	<b>Wednesday 14</b>	<b>Thursday 15</b>	<b>Friday 16</b>
<p>Defining ranges of uncertainty. Analysis of historical data. Defining scenarios for fertility, mortality and migration.</p>	<p>Preparation of probabilistic projections.</p>	<p>Analysis and discussion of results of probabilistic projections. Participants will be provided with the results of projections and will have to analyze these results.</p> <p>Participants could make a short presentation about the way projections are conducted in their countries.</p>	<p>Presentation at Seminar Room B, Shaw Foundation Building</p>	<p>Presentation at Seminar Room B, Shaw Foundation Building</p>

Morning Tea Break: 10:30 am - 11:00 am

Afternoon Tea Break: 3:30 pm - 4:00 pm

Lunch: 12:30 pm - 2:00 pm