

**Indicators for the 2nd cycle of review and appraisal of RIS/MIPAA  
2007-2012**

(A suggestion from MA:IMI)

European Centre Vienna

**April 2011**

The indicators cover four main topics: demography, income and wealth, labour market participation, and social protection and financial sustainability. As far as possible, the indicators are gendered and compare old age with other age categories. The list includes core indicators which we envisage as most important, and are internationally comparable and available for the majority of UNECE Member States. Resources and data availability permitting, they can be supplemented by additional indicators.

## 1. Demographic indicators

Definition	Sources/Availability
Population size	<i>UN World Population Prospects: the 2008 Revision</i>
Population changes: Natural Growth, Overall growth	
Total Fertility Rate	<i>UN World Population Prospects: the 2008 Revision, Eurostat</i>
Population by aggregate age groups: 0-14, 15-64, 65+, 80+	<i>UN World Population Prospects: the 2008 Revision</i>
Demographic Dependency Ratios	
Life expectancy at birth and at age 65 by sex	<i>Un Life Tables (UN World Population Prospects: the 2008 Revision), Eurostat</i>
Health-adjusted life expectancy (HALE), disability-free life expectancy (DFLE) at birth and at age 65 by sex	<i>WHO, Eurostat</i>

## 2. Income and wealth indicators

Definition	Sources/Availability
Mean disposable income by age groups (i.e. 25-54, 55-64, 65-74, 75+)	<i>Eurostat, OECD, National Statistics</i> <i>For countries with no available survey data on income and poverty the World Bank Poverty Database has information on the percentage of population living below the national poverty line and below the international poverty line (i.e. \$1/day)</i>
Relative disposable income	
Relative income poverty rate, at 60% median threshold, by age group	
<u>Instrumental</u> Existence of minimum income guarantee for older people (i.e. social pension)	<i>MISSOC, National Strategy Reports on Adequate and Sustainable Pensions, Other national sources</i>

## 3. Labour market participation indicators

Definition	Sources/Availability
<u>Labour force participation rates</u> of workers aged 55-64 compared to total population or other reference group (i.e. prime age: 25-54)	<i>ILO Labour Statistics, Eurostat</i>
<u>Employment rates</u> for older workers aged 55-64 compared to total population or other reference group (i.e. prime age: 25-54)	
<u>Unemployment rates</u> by age groups: 55-64 in comparison to total population or other reference group (i.e. prime age: 25-54)	
Average effective labour market exit age	<i>Eurostat, OECD, National Statistics</i>
<u>Instrumental</u> (i) Existence of mandatory retirement age (ii) Existence of flexible retirement corridors at national level (iii) Existence of age limits to the application	<i>MISSOC, National Strategy Reports on Adequate and Sustainable Pensions, Other national sources</i>

of dismissal laws (iv) Existence of protection laws against forced retirement	
--	--

#### 4. Social protection and financial sustainability indicators

Definition	Sources/Availability
Public pension spending as % of GDP and in % of all social expenditure (past, current and future)	<i>Eurostat, OECD, National Statistics</i>
System dependency ratio (SDR) in public pension schemes	<i>National Administrative Sources</i>
Take-up ratio	<i>National Statistics</i>
Public pension benefit ratio	<i>National Statistics</i>
<u>Instrumental</u> (i) Age differential in statutory retirement age (ii) Contribution base for family and child caring times	<i>MISSOC, National Strategy Reports on Adequate and Sustainable Pensions, Other national sources</i>

### Methodological Notes

#### 1. Demographic indicators

##### Population changes (Natural Growth, Overall growth):

- Population Growth Rate = Average annual rate of population change (per cent) = Average exponential rate of growth of the population over a given period. It is calculated as  $\ln(P_t/P_0)/t$  where t is the length of the period. It is expressed as a percentage.
- Rate of Natural Increase = Crude birth rate minus the crude death rate. Represents the portion of population growth (or decline) determined exclusively by births and deaths
- Difference = (Population Growth Rate - Rate of Natural Increase) = Net Migration Rate

##### Total Fertility Rate of a population (TFR):

The average number of children that would be born to a woman over her lifetime if she were to experience the current age-specific fertility rates through her lifetime. It is obtained by summing the age-specific rates for a given time-point.

##### Demographic Dependency Ratios:

- Young age dependency ratio (YADR) = ratio of population aged 0-14 per hundred population 15-64
- Old age dependency ratio (OADR) = ratio of population aged 65+ per hundred population 15-64
- Total dependency ratio (TDR) = ratio of population aged 0-14 and 65+ per hundred population 15-64

##### Life Expectancy at Certain Ages:

- The average number of years of life expected by a hypothetical cohort of individuals who would be subject during all their lives to the mortality rates of a given period. It is expressed as years. (UN definition).

- The mean number of years still to be lived by a person who has reached a certain exact age, if subjected throughout the rest of his or her life to the current mortality conditions (age-specific probabilities of dying). (Eurostat definition).

#### **Disability-Free Life Expectancy (DFLE):**

The proposed indicator Healthy Life Years (HLY) measures the number of remaining years that a person of a specific age is still expected to live in a healthy condition. A healthy condition is defined by the absence of limitations in functioning/disability. Therefore, the indicator is also called disability-free life expectancy - DFLE). The healthy life years indicator is calculated at two ages: at birth and at 65. (Eurostat definition).

#### **Healthy Life Expectancy (HALE):**

Average number of years that a person can expect to live in "full health" by taking into account years lived in less than full health due to disease and/or injury. Healthy life expectancy (HALE) at birth adds up expectation of life for different health states, adjusted for severity distribution making it sensitive to changes over time or differences between countries in the severity distribution of health states. (WHO Definition)

## **2. Income and wealth indicators**

#### **Mean disposable income:**

With disposable income we refer from now on to equivalised household income: the total household income divided by a factor (the equivalence scale) taking into account that households needs increase with household size but not in a proportional way, and assigning different weights to different household members with different age. A standard equivalence scale adopted in internationally comparable statistics on income distribution is the "OECD modified" equivalence scale, which equals to: i.e.  $scale = (1 * household\ head) + (0.5 * number\ of\ each\ additional\ adult) + (0.3 * number\ of\ children\ aged\ below\ 14)$ . Values are supposed to be expressed in purchasing power standards whenever required.

#### **Relative Disposable Income:**

The relative disposable income for a given age group is defined as the ratio between the average disposable income for that age group and the average disposable income of the total population, expressed as percentage.

#### **Relative Income Poverty rate:**

The relative income poverty rate is defined as the ratio between the number of poor people in any given age group and the population in the same age group, expressed as a percentage. The poor are defined as those individuals whose equivalised household income is below the poverty line, which is set (in line with standard international statistics on income distribution) equal to the 60% of the median national equivalised household income (the income level above/below which lies the 50% of the population when individuals are ranked according to equivalised household income).

#### **Minimum Income Guarantee:**

Any contributory minimum pension scheme (or supplement, or minimum income guarantee targeted to individuals in or close to retirement age) for different household types (e.g. singles, vs. couples, with and without children). Also eventual non-contributory support schemes targeted to individuals in (or close to) retirement age should be mentioned.

## **3. Labour market participation indicators**

#### **Labour force participation rate:**

The labour force participation rate for any given age group is defined as the ratio between the

labour force (the sum of the number of unemployed and the number of employed persons) and the population in the same age group, expressed as percentage. The adoption of the ILO standard definition of unemployment is recommended (the unemployed are defined as those people who have not worked more than one hour during a short reference period, e.g. the current week or day, but who are available for and actively seeking work).

**Employment rate:**

The employment rate for any given age group is defined as the ratio between the number of persons employed and the population in the same age group, expressed as percentage.

**Unemployment rate:**

The unemployment rate for any given age group is defined as the ratio between the number of unemployed persons and the labour force in the same age group, expressed as percentage.

**Average effective labour market exit age:**

The average effective labour market exit age is defined as the average age at which individuals withdraw permanently from the labour force.

**Instrumental indicators:**

- i) Existence of mandatory retirement age
- ii) Existence of age limits to the application of dismissals law
- iii) Existence of age-related reasons to force people out of work
- iv) Existence of protection laws against forced retirement

Based on institutional information stating: i) whether it is compulsory to retire at a given age; ii) whether law on collective or individual dismissals cannot apply to a selected number of persons for age-related reasons; iii) whether it is possible to fire workers because of their age; iv) whether there is any law protecting workers against the risk of being forced to retire involuntary.

#### **4. Social protection and financial sustainability indicators**

**System dependency ratio (SDR) in public pension schemes:**

$SDR = \text{number of pensioners} / \text{number of insured workers}$

**Take-up Ratio:**

Number of pensioners receiving public pensions relative to the population aged 65+

**Public pension benefit ratio:**

Calculated as the ratio between the average pension benefit and the economy-wide average wage.

**Age differential in statutory retirement age:**

(Between men and women)

**Contribution base for family and child caring times:**

How family and child care does / does not count for pension benefit calculations