DEPENDENCY RATIO		
Demographics	**Population**	**Core indicator**

1. <u>**INDICATOR**</u>

(a) **Name:** Dependency Ratio

(b) **Brief Definition**: The dependency ratio relates the number of children (0-14 years old) and older persons (65 years or over) to the working-age population (15-64 years old).

(c) **Unit of Measurement**: Per hundred persons aged 15-64.

(d) **Placement in the CSD Indicator Set**: Demographics/Population

2. <u>**POLICY RELEVANCE**</u>

(a) **Purpose**: Dependency ratios indicate the potential effects of changes in population age structures for social and economic development, pointing out broad trends in social support needs.

(b) **Relevance to Sustainable/ Unsustainable development (theme/sub-theme):** By relating the group of the population most likely to be economically dependent (net consumers) to the group most likely to be economically active (net producers), changes in the dependency ratio provide an indication of the potential social support requirements resulting from changes in population age structures. In addition, the ratio highlights the potential dependency burden on workers and indicates the shifts in dependency from a situation in which children are dominant to one in which older persons outnumber children as the demographic transition advances (that is, the transition from high mortality and high fertility, to low mortality and low fertility). A high dependency ratio indicates that the economically active population and the overall economy face a greater burden to support and provide the social services needed by children and by older persons who are often economically dependent. A high youth dependency ratio, for instance, implies that higher investments need to be made in schooling and child-care.

As fertility levels decline, the dependency ratio falls initially because the proportion of children decreases while the proportion of the population of working age increases. The period when the dependency ratio declines is known as the “window of opportunity” when a “demographic dividend” may be reaped because society has a growing number of potential producers relative to the number of consumers. However, as fertility levels continue to decline, dependency ratios eventually increase because of the proportion of working age starts declining and the proportion of older persons continues to increase. As populations grow older, increases in old-age dependency ratios are indicators of the added pressures that social security and public health systems have to withstand.

The need to ensure access to basic services, such as education and health, as well as to ensure the economic security of children and older persons has been emphasized in many international conferences and summits, including the World Summit for Children (1990), the International Conference on Population and Development (1994), the World Summit for Social Development (1995), The United Nations Millennium Declaration and the World Assembly on Ageing (2002).

(c) International Conventions and Agreements: None

(d) International Targets/Recommended Standards: International agreements do not specify targets in terms of values of the dependency ratio. However, in 2005, 66 per cent of Governments were concerned about the size of their working-age population and for 52 per cent reported that population ageing represented an issue of major concern (DESA, *World Population Policies 2005*).

(e) Linkages to Others Indicators: This indicator reflects the cumulative effect of past demographic dynamics in terms of fertility and mortality and is also related to past trends in the population growth by age.

3. METHODOLOGICAL DESCRIPTION

(a) Underlying Definitions and Measurements Methods: The dependency ratio refers to the number of children aged 0 to 14 years plus the number of persons aged 65 years or over per 100 persons aged 15 to 64 years:

Dependency Ratio =100 x (Population (0-14) + Population (65+)) / Population (15-64)

The dependency ratio can be disaggregated into: (1) the youth dependency ratio, which is the number of children aged 0-14 per 100 persons aged 15-64, and (2) the old-age dependency ratio, which is the number of persons aged 65 or over per 100 persons aged 15-64. The dependency ratio, also referred to as total dependency ratio, is the sum of the youth and old-age dependency ratios. Some studies employ other age groups in calculating dependency ratios, for instance 0-19 years to represent the population of children or the population aged 60 or over to represent the population of older persons.

(b) Limitations of the Indicators: The dependency ratio is an approximation to the ratio of net consumers to net producers. As a proxy for that ratio, the dependency ratio suggests that children under age 15 as well as persons aged 65 or over are economically dependent. In many populations, however, people do not stop being economically active at age 65, nor is it true that all persons aged 15-64 are economically active. Although older persons often require economic support from others, in many societies they have economic resources of their own and provide support to their adult children. Furthermore, as the period of training for a productive life increases, most adolescents and young adults remain in school and out of the labour force, effectively extending the period of young-age dependency well beyond age 15. Whenever available, direct estimates of net producers and net consumers can be used for a more precise assessment and analysis of economic dependency.

4. ASSESSMENT OF DATA

(a) Data needed to compile the indicator: The information on population classified by age that is necessary to calculate the dependency ratio is usually derived from censuses or demographic surveys. The United Nations recommends that countries undertake population censuses every 10 years.

(b) National and international data availability and sources: In recent decades, most countries have carried out population censuses. National and sub-national census and survey data are available for the large majority of countries from national sources and publications, and are reported to the Statistics Division of the Department of Economic and Social Affairs (DESA) of the United Nations Secretariat by national statistical offices. For all countries, census and survey data are evaluated and, if necessary, adjusted by the Population Division of the Department of Economic and Social Affairs (DESA) as part of the analysis carried out in preparation of the official United Nations population estimates and projections.

(c) Data references: Past, current and projected dependency ratios are calculated for all countries by the Population Division of DESA and appear in the biennial United Nations publication, *World Population Prospects*.

5. AGENCIES INVOLVED IN THE DEVELOPMENT OF THE INDICATOR

(a) Lead Agency: The lead agency is the United Nations Department of Economic and Social Affairs (DESA). The contact point is the Director, Population Division, DESA; fax no. (1 212) 963 2147.

(b) Other Contributing Organizations: None

6. REFERENCES

(a) Readings:

United Nations, *World Population Prospects: The 2006 Revision*, vol. I: *Comprehensive Tables*. http://www.un.org/esa/population/publications/wpp2006/wpp2006.htm

United Nations, *World Population Policies 2005* (United Nations publication, Sales No. E.06.XIII.5, 2006).

(b) Internet site: http://www.un.org/esa/population/unpop.htm