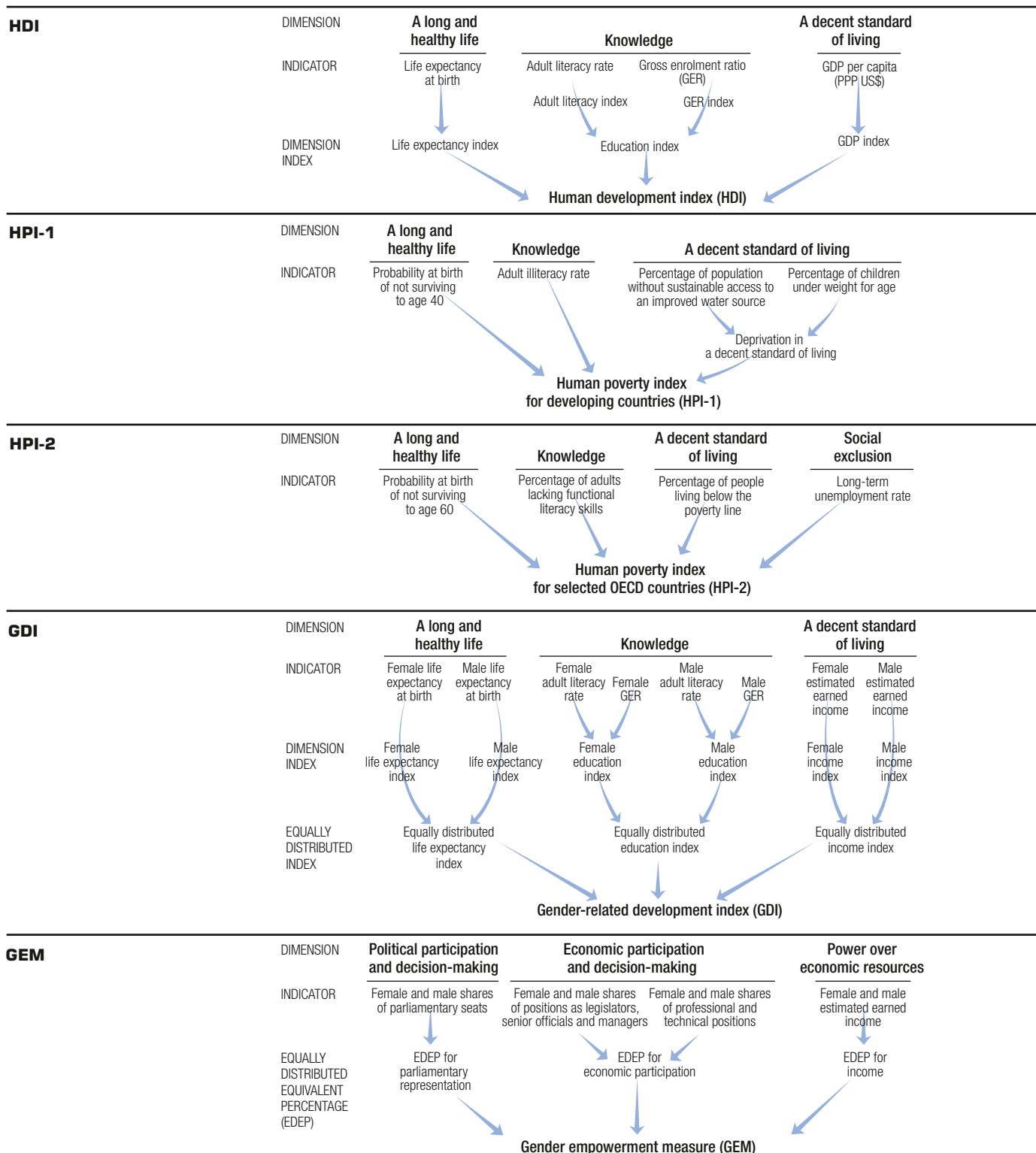


Calculating the human development indices

The diagrams here summarize how the five human development indices used in the *Human Development Report* are constructed, highlighting both their similarities and their differences. The text on the following pages provides a detailed explanation.

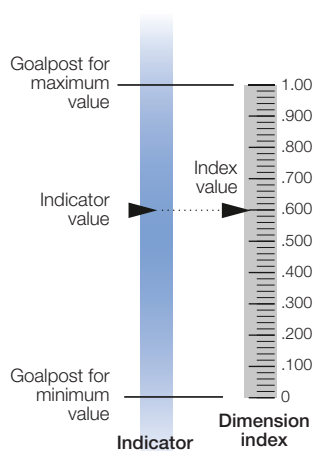


The human development index (HDI)

The HDI is a summary measure of human development. It measures the average achievements in a country in three basic dimensions of human development:

- A long and healthy life, as measured by life expectancy at birth.
- Knowledge, as measured by the adult literacy rate (with two-thirds weight) and the combined primary, secondary and tertiary gross enrolment ratio (with one-third weight).
- A decent standard of living, as measured by GDP per capita in purchasing power parity (PPP) terms in US dollars.

Before the HDI itself is calculated, an index needs to be created for each of these dimensions. To calculate these indices—the life expectancy, education and GDP indices—minimum and maximum values (goalposts) are chosen for each underlying indicator.



Performance in each dimension is expressed as a value between 0 and 1 by applying the following general formula:

$$\text{Dimension index} = \frac{\text{actual value} - \text{minimum value}}{\text{maximum value} - \text{minimum value}}$$

The HDI is then calculated as a simple average of the dimension indices. The box at right illustrates the calculation of the HDI for a sample country.

Goalposts for calculating the HDI

Indicator	Maximum value	Minimum value
Life expectancy at birth (years)	85	25
Adult literacy rate (%)	100	0
Combined gross enrolment ratio (%)	100	0
GDP per capita (PPP US\$)	40,000	100

Calculating the HDI

This illustration of the calculation of the HDI uses data for Brazil.

1. Calculating the life expectancy index

The life expectancy index measures the relative achievement of a country in life expectancy at birth. For Brazil, with a life expectancy of 70.8 years in 2004, the life expectancy index is 0.764.

$$\text{Life expectancy index} = \frac{70.8 - 25}{85 - 25} = 0.764$$

2. Calculating the education index

The education index measures a country's relative achievement in both adult literacy and combined primary, secondary and tertiary gross enrolment. First, an index for adult literacy and one for combined gross enrolment are calculated. Then these two indices are combined to create the education index, with two-thirds weight given to adult literacy and one-third weight to combined gross enrolment. For Brazil, with an adult literacy rate of 88.6% in 2004 and a combined gross enrolment ratio of 86% in 2004, the education index is 0.876.

$$\text{Adult literacy index} = \frac{88.6 - 0}{100 - 0} = 0.886$$

$$\text{Gross enrolment index} = \frac{86 - 0}{100 - 0} = 0.857$$

$$\begin{aligned} \text{Education index} &= \frac{2}{3} (\text{adult literacy index}) + \frac{1}{3} (\text{gross enrolment index}) \\ &= \frac{2}{3} (0.886) + \frac{1}{3} (0.857) = 0.876 \end{aligned}$$

3. Calculating the GDP index

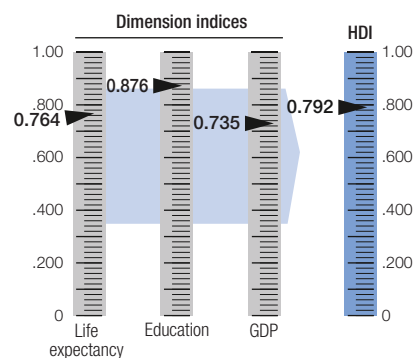
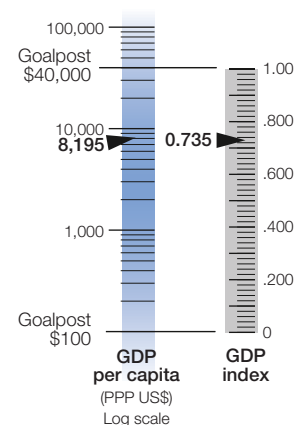
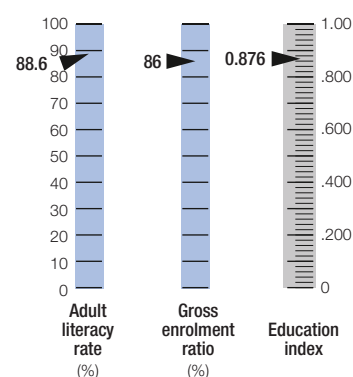
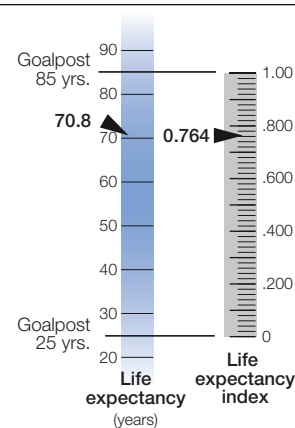
The GDP index is calculated using adjusted GDP per capita (PPP US\$). In the HDI income serves as a surrogate for all the dimensions of human development not reflected in a long and healthy life and in knowledge. Income is adjusted because achieving a respectable level of human development does not require unlimited income. Accordingly, the logarithm of income is used. For Brazil, with a GDP per capita of \$8,195 (PPP US\$) in 2004, the GDP index is 0.735.

$$\text{GDP index} = \frac{\log(8,195) - \log(100)}{\log(40,000) - \log(100)} = 0.735$$

4. Calculating the HDI

Once the dimension indices have been calculated, determining the HDI is straightforward. It is a simple average of the three dimension indices.

$$\begin{aligned} \text{HDI} &= \frac{1}{3} (\text{life expectancy index}) + \frac{1}{3} (\text{education index}) \\ &\quad + \frac{1}{3} (\text{GDP index}) \\ &= \frac{1}{3} (0.764) + \frac{1}{3} (0.876) + \frac{1}{3} (0.735) = 0.792 \end{aligned}$$



The human poverty index for developing countries (HPI-1)

While the HDI measures average achievement, the HPI-1 measures *deprivations* in the three basic dimensions of human development captured in the HDI:

- A long and healthy life—vulnerability to death at a relatively early age, as measured by the probability at birth of not surviving to age 40.
- Knowledge—exclusion from the world of reading and communications, as measured by the adult illiteracy rate.
- A decent standard of living—lack of access to overall economic provisioning, as measured by the unweighted average of two indicators, the percentage of the population without sustainable access to an improved water source and the percentage of children under weight for age.

Calculating the HPI-1 is more straightforward than calculating the HDI. The indicators used to measure the deprivations are already normalized between 0 and 100 (because they are expressed as percentages), so there is no need to create dimension indices as for the HDI.

Originally, the measure of deprivation in a decent standard of living also included an indicator of access to health services. But because reliable data on access to health services are lacking for recent years, in this year's Report deprivation in a decent standard of living is measured by two rather than three indicators—the percentage of the population without sustainable access to an improved water source and the percentage of children under weight for age.

The human poverty index for selected OECD countries (HPI-2)

The HPI-2 measures deprivations in the same dimensions as the HPI-1 and also captures social exclusion. Thus it reflects deprivations in four dimensions:

- A long and healthy life—vulnerability to death at a relatively early age, as measured by the probability at birth of not surviving to age 60.
- Knowledge—exclusion from the world of reading and communications, as measured by the percentage of adults (ages 16–65) lacking functional literacy skills.
- A decent standard of living—as measured by the percentage of people living below the income poverty line (50% of the median adjusted household disposable income).
- Social exclusion—as measured by the rate of long-term unemployment (12 months or more).

Calculating the HPI-1

1. Measuring deprivation in a decent standard of living

An unweighted average of two indicators is used to measure deprivation in a decent standard of living.

$$\text{Unweighted average} = 1/2 (\text{population without sustainable access to an improved water source}) + 1/2 (\text{children under weight for age})$$

A sample calculation: Namibia

Percentage of population without sustainable access to an improved water source = 13%

Percentage of children under weight for age = 24%

$$\text{Unweighted average} = 1/2 (13) + 1/2 (24) = 18.5\%$$

2. Calculating the HPI-1

The formula for calculating the HPI-1 is as follows:

$$\text{HPI-1} = [1/3 (P_1^\alpha + P_2^\alpha + P_3^\alpha)]^{1/\alpha}$$

Where:

P_1 = Probability at birth of not surviving to age 40 (times 100)

P_2 = Adult illiteracy rate

P_3 = Unweighted average of population without sustainable access to an improved water source and children under weight for age

$\alpha = 3$

A sample calculation: Namibia

$P_1 = 45.4\%$

$P_2 = 15.0\%$

$P_3 = 18.5\%$

$$\text{HPI-1} = [1/3 (45.4^3 + 15.0^3 + 18.5^3)]^{1/3} = 32.5$$

Calculating the HPI-2

The formula for calculating the HPI-2 is as follows:

$$\text{HPI-2} = [1/4 (P_1^\alpha + P_2^\alpha + P_3^\alpha + P_4^\alpha)]^{1/\alpha}$$

Where:

P_1 = Probability at birth of not surviving to age 60 (times 100)

P_2 = Percentage of adults lacking functional literacy skills

P_3 = Percentage of population below income poverty line (50% of median adjusted household disposable income)

P_4 = Rate of long-term unemployment (lasting 12 months or more)

$\alpha = 3$

A sample calculation: Australia

$P_1 = 7.7\%$

$P_2 = 17.0\%$

$P_3 = 14.3\%$

$P_4 = 0.9\%$

$$\text{HPI-2} = [1/4 (7.7^3 + 17.0^3 + 14.3^3 + 0.9^3)]^{1/3} = 12.8$$

Why $\alpha = 3$ in calculating the HPI-1 and HPI-2

The value of α has an important impact on the value of the HPI. If $\alpha = 1$, the HPI is the average of its dimensions. As α rises, greater weight is given to the dimension in which there is the most deprivation. Thus as α increases towards infinity, the HPI will tend towards the value of the dimension in which deprivation is greatest (for Namibia, the example used for calculating the HPI-1, it would be 45.4, equal to the probability at birth of not surviving to age 40).

In this Report the value 3 is used to give additional but not overwhelming weight to areas of more acute deprivation. For a detailed analysis of the HPI's mathematical formulation, see Sudhir Anand and Amartya Sen's "Concepts of Human Development and Poverty: A Multidimensional Perspective" and the technical note in *Human Development Report 1997* (see the list of selected readings at the end of this technical note).

The gender-related development index (GDI)

While the HDI measures average achievement, the GDI adjusts the average achievement to reflect the *inequalities* between men and women in the following dimensions:

- A long and healthy life, as measured by life expectancy at birth.
- Knowledge, as measured by the adult literacy rate and the combined primary, secondary and tertiary gross enrolment ratio.
- A decent standard of living, as measured by estimated earned income (PPP US\$).

The calculation of the GDI involves three steps. First, female and male indices in each dimension are calculated according to this general formula:

$$\text{Dimension index} = \frac{\text{actual value} - \text{minimum value}}{\text{maximum value} - \text{minimum value}}$$

Second, the female and male indices in each dimension are combined in a way that penalizes differences in achievement between men and women. The resulting index, referred to as the equally distributed index, is calculated according to this general formula:

$$\text{Equally distributed index} = \left\{ \left[\text{female population share} (\text{female index}^{1-\epsilon}) \right] + \left[\text{male population share} (\text{male index}^{1-\epsilon}) \right] \right\}^{1/(1-\epsilon)}$$

ϵ measures the aversion to inequality. In the GDI $\epsilon = 2$. Thus the general equation becomes:

$$\text{Equally distributed index} = \left\{ \left[\text{female population share} (\text{female index}^{-1}) \right] + \left[\text{male population share} (\text{male index}^{-1}) \right] \right\}^{1/1-2}$$

which gives the harmonic mean of the female and male indices.

Third, the GDI is calculated by combining the three equally distributed indices in an unweighted average.

Goalposts for calculating the GDI

Indicator	Maximum value	Minimum value
Female life expectancy at birth (years)	87.5	27.5
Male life expectancy at birth (years)	82.5	22.5
Adult literacy rate (%)	100	0
Combined gross enrolment ratio (%)	100	0
Estimated earned income (PPP US\$)	40,000	100

Note: The maximum and minimum values (goalposts) for life expectancy are five years higher for women to take into account their longer life expectancy.

Calculating the GDI

This illustration of the calculation of the GDI uses data for Thailand.

1. Calculating the equally distributed life expectancy index

The first step is to calculate separate indices for female and male achievements in life expectancy, using the general formula for dimension indices.

FEMALE	MALE
Life expectancy: 74.0 years	Life expectancy: 66.7 years
Life expectancy index = $\frac{74.0 - 27.5}{87.5 - 27.5} = 0.776$	Life expectancy index = $\frac{66.7 - 22.5}{82.5 - 22.5} = 0.737$

Next, the female and male indices are combined to create the equally distributed life expectancy index, using the general formula for equally distributed indices.

FEMALE	MALE
Population share: 0.509	Population share: 0.491
Life expectancy index: 0.776	Life expectancy index: 0.737
Equally distributed life expectancy index = $\left\{ [0.509 (0.776^{-1})] + [0.491 (0.737^{-1})] \right\}^{-1} = 0.756$	

2. Calculating the equally distributed education index

First, indices for the adult literacy rate and the combined primary, secondary and tertiary gross enrolment ratio are calculated separately for females and males. Calculating these indices is straightforward, since the indicators used are already normalized between 0 and 100.

FEMALE	MALE
Adult literacy rate: 90.5%	Adult literacy rate: 94.9%
Adult literacy index: 0.905	Adult literacy index: 0.949
Gross enrolment ratio: 74.0%	Gross enrolment ratio: 73.4%
Gross enrolment index: 0.740	Gross enrolment index: 0.734

Second, the education index, which gives two-thirds weight to the adult literacy index and one-third weight to the gross enrolment index, is computed separately for females and males.

$$\text{Education index} = 2/3 (\text{adult literacy index}) + 1/3 (\text{gross enrolment index})$$

$$\text{Female education index} = 2/3 (0.905) + 1/3 (0.740) = 0.850$$

$$\text{Male education index} = 2/3 (0.949) + 1/3 (0.734) = 0.877$$

Finally, the female and male education indices are combined to create the equally distributed education index.

FEMALE	MALE
Population share: 0.509	Population share: 0.491
Education index: 0.850	Education index: 0.877
Equally distributed education index = $\left\{ [0.509 (0.850^{-1})] + [0.491 (0.877^{-1})] \right\}^{-1} = 0.863$	

3. Calculating the equally distributed income index

First, female and male earned income (PPP US\$) are estimated (for details on this calculation, see the addendum to this technical note). Then the income index is calculated for each gender. As for the HDI, income is adjusted by taking the logarithm of estimated earned income (PPP US\$):

$$\text{Income index} = \frac{\log(\text{actual value}) - \log(\text{minimum value})}{\log(\text{maximum value}) - \log(\text{minimum value})}$$

FEMALE	MALE
Estimated earned income (PPP US\$): 6,036	Estimated earned income (PPP US\$): 10,214
Income index = $\frac{\log(6,036) - \log(100)}{\log(40,000) - \log(100)} = 0.684$	Income index = $\frac{\log(10,214) - \log(100)}{\log(40,000) - \log(100)} = 0.772$

Calculating the GDI continues on next page

Calculating the GDI (continued)

Second, the female and male income indices are combined to create the equally distributed income index:

FEMALE	MALE
Population share: 0.509	Population share: 0.491
Income index: 0.684	Income index: 0.772

$$\text{Equally distributed income index} = \{[0.509 (0.684^{-1})] + [0.491 (0.772^{-1})]\}^{-1} = \mathbf{0.725}$$

4. Calculating the GDI

Calculating the GDI is straightforward. It is simply the unweighted average of the three component indices—the equally distributed life expectancy index, the equally distributed education index and the equally distributed income index.

$$\begin{aligned} \text{GDI} &= 1/3 (\text{life expectancy index}) + 1/3 (\text{education index}) + 1/3 (\text{income index}) \\ &= 1/3 (0.756) + 1/3 (0.863) + 1/3 (0.725) = \mathbf{0.781} \end{aligned}$$

Why $\epsilon = 2$ in calculating the GDI

The value of ϵ is the size of the penalty for gender inequality. The larger the value, the more heavily a society is penalized for having inequalities.

If $\epsilon = 0$, gender inequality is not penalized (in this case the GDI would have the same value as the HDI). As ϵ increases towards infinity, more and more weight is given to the lesser achieving group.

The value 2 is used in calculating the GDI (as well as the GEM). This value places a moderate penalty on gender inequality in achievement.

For a detailed analysis of the GDI's mathematical formulation, see Sudhir Anand and Amartya Sen's "Gender Inequality in Human Development: Theories and Measurement," Kalpana Bardhan and Stephan Klasen's "UNDP's Gender-Related Indices: A Critical Review" and the technical notes in *Human Development Report 1995* and *Human Development Report 1999* (see the list of selected readings at the end of this technical note).

The gender empowerment measure (GEM)

Focusing on women's opportunities rather than their capabilities, the GEM captures gender inequality in three key areas:

- Political participation and decision-making power, as measured by women's and men's percentage shares of parliamentary seats.
- Economic participation and decision-making power, as measured by two indicators—women's and men's percentage shares of positions as legislators, senior officials and managers and women's and men's percentage shares of professional and technical positions.
- Power over economic resources, as measured by women's and men's estimated earned income (PPP US\$).

For each of these three dimensions, an equally distributed equivalent percentage (EDEP) is calculated, as a population-weighted average, according to the following general formula:

$$\text{EDEP} = \left\{ \left[\frac{\text{female population share (female index}^{1-\epsilon})}{\text{male population share (male index}^{1-\epsilon})} \right]^{1/\epsilon} + 1 \right\}^{-1}$$

ϵ measures the aversion to inequality. In the GEM (as in the GDI) $\epsilon = 2$, which places a moderate penalty on inequality. The formula is thus:

$$\text{EDEP} = \left\{ \left[\frac{\text{female population share (female index}^{-1})}{\text{male population share (male index}^{-1})} \right] + 1 \right\}^{-1}$$

For political and economic participation and decision-making, the EDEP is then indexed by dividing it by 50. The rationale for this indexation: in an ideal society, with equal empowerment of the sexes, the GEM variables would equal 50%—that is, women's share would equal men's share for each variable.

Where a male or female index value is zero, the EDEP according to the above formula is not defined. However, the limit of EDEP, when the index tends towards zero, is zero. Accordingly, in these cases the value of the EDEP is set to zero.

Finally, the GEM is calculated as a simple average of the three indexed EDEPs.

Calculating the GEM

This illustration of the calculation of the GEM uses data for Argentina.

1. Calculating the EDEP for parliamentary representation

The EDEP for parliamentary representation measures the relative empowerment of women in terms of their political participation. The EDEP is calculated using the female and male shares of the population and female and male percentage shares of parliamentary seats according to the general formula.

FEMALE	MALE
Population share: 0.511	Population share: 0.489
Parliamentary share: 36.5%	Parliamentary share: 63.5%

$$\text{EDEP for parliamentary representation} = \left\{ \left[\frac{0.511 (36.5^{-1})}{0.489 (63.5^{-1})} \right] + 1 \right\}^{-1} = 46.07$$

Then this initial EDEP is indexed to an ideal value of 50%.

$$\text{Indexed EDEP for parliamentary representation} = \frac{46.07}{50} = 0.921$$

2. Calculating the EDEP for economic participation

Using the general formula, an EDEP is calculated for women's and men's percentage shares of positions as legislators, senior officials and managers, and another for women's and men's percentage shares of professional and technical positions. The simple average of the two measures gives the EDEP for economic participation.

FEMALE	MALE
Population share: 0.511	Population share: 0.489
Percentage share of positions as legislators, senior officials and managers: 25.4%	Percentage share of positions as legislators, senior officials and managers: 74.6%
Percentage share of professional and technical positions: 54.7%	Percentage share of professional and technical positions: 45.3%

$$\text{EDEP for positions as legislators, senior officials and managers} = \left\{ \left[\frac{0.511 (25.4^{-1})}{0.489 (74.6^{-1})} \right] + 1 \right\}^{-1} = 37.46$$

$$\text{Indexed EDEP for positions as legislators, senior officials and managers} = \frac{37.46}{50} = 0.749$$

$$\text{EDEP for professional and technical positions} = \left\{ \left[\frac{0.511 (54.7^{-1})}{0.489 (45.3^{-1})} \right] + 1 \right\}^{-1} = 49.67$$

$$\text{Indexed EDEP for professional and technical positions} = \frac{49.67}{50} = 0.993$$

The two indexed EDEPs are averaged to create the EDEP for economic participation:

$$\text{EDEP for economic participation} = \frac{0.749 + 0.993}{2} = 0.871$$

3. Calculating the EDEP for income

Earned income (PPP US\$) is estimated for women and men separately and then indexed to goalposts as for the HDI and the GDI. For the GEM, however, the income index is based on unadjusted values, not the logarithm of estimated earned income. (For details on the estimation of earned income for men and women, see the addendum to this technical note.)

FEMALE	MALE
Population share: 0.511	Population share: 0.489
Estimated earned income (PPP US\$): 9,258	Estimated earned income (PPP US\$): 17,518
Income index = $\frac{9,258 - 100}{40,000 - 100} = 0.230$	Income index = $\frac{17,518 - 100}{40,000 - 100} = 0.437$

The female and male indices are then combined to create the equally distributed index:

$$\text{EDEP for income} = \left\{ \left[\frac{0.511 (0.230^{-1})}{0.489 (0.437^{-1})} \right] + 1 \right\}^{-1} = 0.299$$

4. Calculating the GEM

Once the EDEP has been calculated for the three dimensions of the GEM, determining the GEM is straightforward. It is a simple average of the three EDEP indices.

$$\text{GEM} = \frac{0.921 + 0.871 + 0.299}{3} = 0.697$$

TECHNICAL NOTE 1 ADDENDUM

Female and male earned income

Despite the importance of having gender-disaggregated data on income, direct measures are unavailable. For this Report crude estimates of female and male earned income have therefore been derived.

Income can be seen in two ways: as a resource for consumption and as earnings by individuals. The use measure is difficult to disaggregate between men and women because they share resources within a family unit. By contrast, earnings are separable because different members of a family tend to have separate earned incomes.

The income measure used in the GDI and the GEM indicates a person's capacity to earn income. It is used in the GDI to capture the disparities between men and women in command over resources and in the GEM to capture women's economic independence. (For conceptual and methodological issues relating to this approach, see Sudhir Anand and Amartya Sen's "Gender Inequality in Human Development" and, in *Human Development Report 1995*, chapter 3 and technical notes 1 and 2; see the list of selected readings at the end of this technical note.)

Female and male earned income (PPP US\$) are estimated using the following data:

- Ratio of the female nonagricultural wage to the male nonagricultural wage.
- Male and female shares of the economically active population.
- Total female and male population.
- GDP per capita (PPP US\$).

Key

W_f/W_m = ratio of female nonagricultural wage to male nonagricultural wage
 EA_f = female share of economically active population
 EA_m = male share of economically active population
 S_f = female share of wage bill
 Y = total GDP (PPP US\$)
 N_f = total female population
 N_m = total male population
 Y_f = estimated female earned income (PPP US\$)
 Y_m = estimated male earned income (PPP US\$)

Note

Calculations based on data in the technical note may yield results that differ from those in the indicator tables because of rounding.

Estimating female and male earned income

This illustration of the estimation of female and male earned income uses 2004 data for the Netherlands.

1. Calculating total GDP (PPP US\$)

Total GDP (PPP US\$) is calculated by multiplying the total population by GDP per capita (PPP US\$).

Total population: 16,282 (thousand)
 GDP per capita (PPP US\$): 31,789
 Total GDP (PPP US\$) = 16,282 (31,789) = 517,586,944 (thousand)

2. Calculating the female share of the wage bill

Because data on wages in rural areas and in the informal sector are rare, the Report has used nonagricultural wages and assumed that the ratio of female wages to male wages in the nonagricultural sector applies to the rest of the economy. The female share of the wage bill is calculated using the ratio of the female nonagricultural wage to the male nonagricultural wage and the female and male percentage shares of the economically active population. Where data on the wage ratio are not available, a value of 75% is used.

Ratio of female to male nonagricultural wage (W_f/W_m) = 0.815
 Female percentage share of economically active population (EA_f) = 44.0%
 Male percentage share of economically active population (EA_m) = 56.0%

$$\text{Female share of wage bill } (S_f) = \frac{W_f/W_m (EA_f)}{[W_f/W_m (EA_f)] + EA_m} = \frac{0.815 (44.0)}{[0.815 (44.0)] + 56.0} = 0.391$$

3. Calculating female and male earned income (PPP US\$)

An assumption has to be made that the female share of the wage bill is equal to the female share of GDP.

Female share of wage bill (S_f) = 0.391
 Total GDP (PPP US\$) (Y) = 517,586,944 (thousand)
 Female population (N_f) = 8,202 (thousand)

$$\text{Estimated female earned income (PPP US$)} (Y_f) = \frac{S_f (Y)}{N_f} = \frac{0.391 (517,586,944)}{8,202} = 24,652$$

Male population (N_m) = 8,080 (thousand)

$$\text{Estimated male earned income (PPP US$)} (Y_m) = \frac{Y - S_f (Y)}{N_m} = \frac{517,586,944 - [0.391 (517,586,944)]}{8,080} = 39,035$$

Selected readings

- Anand, Sudhir, and Amartya Sen. 1994. "Human Development Index: Methodology and Measurement." Occasional Paper 12. United Nations Development Programme, Human Development Report Office, New York. (HDI)
- . 1995. "Gender Inequality in Human Development: Theories and Measurement." Occasional Paper 19. United Nations Development Programme, Human Development Report Office, New York. (GDI, GEM)
- . 1997. "Concepts of Human Development and Poverty: A Multi-dimensional Perspective." In United Nations Development Programme, *Human Development Report*

1997 Papers: Poverty and Human Development. New York. (HPI-1, HPI-2)

Bardhan, Kalpana, and Stephan Klasen. 1999. "UNDP's Gender-Related Indices: A Critical Review." *World Development* 27 (6): 985–1010. (GDI, GEM)

United Nations Development Programme. 1995. *Human Development Report 1995*. New York: Oxford University Press. Technical notes 1 and 2 and chapter 3. (GDI, GEM)

———. 1997. *Human Development Report 1997*. New York: Oxford University Press. Technical note 1 and chapter 1. (HPI-1, HPI-2)

———. 1999. *Human Development Report 1999*. New York: Oxford University Press. Technical note. (HDI, GDI)

TECHNICAL NOTE 2

A human development index by income groups

The human development index (HDI) provides a composite snapshot of the national average of three important indicators of human well-being (see *Technical note 1*). But it does not capture variations around the average linked to inequality. This year's Report presents for the first time an HDI by income quintiles. The new measure, intended both to address a major human development issue and to stimulate discussion, points to large inequalities between rich and poor in many countries.

The HDI by income quintiles disaggregates performance by income quintile for 15 countries. Full details of the methodology used are in a background paper prepared for this year's Report (Grimm and others 2006). This technical note provides a brief summary.

Methodology

Construction of the HDI by income quintiles follows the same procedure as for the standard HDI. Life expectancy, school enrolment, literacy and income per capita data from household surveys are used to calculate the three dimension indices—health, education and income—by income quintile.

Data for the index are drawn from a variety of sources. For developing countries household income surveys are used to calculate the education and gross domestic product (GDP) indices for each quintile, and Demographic and Health Surveys are used to calculate the life expectancy index. Because the two data sets do not cover the same households, the information from the surveys is linked by approximating income for households in the Demographic and Health

Surveys using variables that are available in both sets of surveys. The correlation between household income per capita and a set of household characteristics available in both surveys is estimated and used to generate a proxy for the income of households in the Demographic and Health Surveys. These characteristics include household structure, education and age of the household head, area of residence, housing characteristics and the like.

For the two developed countries in the study, Finland and the United States, GDP and education data are from the Luxembourg Income Study, and income and life expectancy data are from published empirical work.

Data for the construction of the index are derived as follows.

Life expectancy

Calculations are based on infant mortality data from Demographic and Health Surveys. Infant mortality has proven a reliable proxy for overall mortality patterns and thus for life expectancy. Infant mortality rates for each income quintile are applied to Ledermann model life tables (a tool for estimating life expectancy based on the historical relationship between life expectancy and infant mortality).

The education index

The education index is based on adult literacy and school enrolment data. Adult literacy data are available directly from the household income surveys for each income quintile. To calculate the quintile-specific gross enrolment index, the combined gross enrolment ratio for each quintile is calculated. Each individual ages

The work on the human development index by income group was undertaken by Michael Grimm, Kenneth Harttgen, Stephan Klasen and Mark Misselhorn, with inputs from Teresa Munzi and Tim Smeeding from the Luxembourg Income Study team.

5–23 attending school or university, whether general or vocational, is considered enrolled. The quintile-specific gross enrolment index is then calculated using the same minimum and maximum values that are used in calculating the standard HDI.

GDP index

The GDP index is calculated using the income variable from the household income survey. For conceptual reasons and because of measurement errors, mean income per capita calculated from the household income surveys can be very different from GDP per capita from national accounts data, which are used to calculate the GDP index in the standard HDI. To eliminate differences in national price levels, household income per capita calculated from the household income surveys is expressed in US dollars in purchasing power parity (PPP) terms using conversion factors based on price data from the latest International Comparison Program surveys provided by the World Bank. This income per capita is then rescaled using the ratio between the household income variable and GDP per capita expressed in PPP (taken from the standard HDI).

Finally, these data are rescaled to the same average as that of the standard HDI for the relevant year. The HDI by income quintiles is then calculated according to the standard formula (see *Technical note 1*):

$$\frac{\text{Life expectancy index} + \text{education index} + \text{GDP index}}{3} = \text{Human development index}$$

This calculation is carried out for each quintile.

Issues for discussion

The HDI by income quintiles exercise provides a simple, intuitive and transparent approach for measuring important human development disparities within countries. It provides a useful composite indicator for tracking inequalities in income and wider inequalities in opportunity

linked to health and education. However, the use of the HDI model to examine national inequalities raises a number of conceptual and methodological problems.

Consider first the relationship between income and the other indicators. The HDI by income quintiles measures annual incomes, which fluctuate considerably due to shocks and to lifecycle developments. Taking an annual average snapshot of the income of a household in, say, the poorest quintile can obscure very large dynamic changes over time. This produces additional methodological problems, not least because linking more stable health and education outcomes to fluctuating incomes can bias the results.

Data quality in the household surveys presents another set of problems. These problems are addressed here by the simplifying assumptions outlined above and explained in more detail in Grimm and others (2006). But aligning demographic and health survey and household income survey data is inherently problematic, and other approaches are possible. For developed countries, data quality is a less immediate problem. But cross-country comparisons remain difficult. In the case of Finland and the United States the assessment of life expectancy by income groups is based on data for the early 1990s linked to current incomes. However, data constraints mean that the income measure differs from that used for the other two components. In addition, Luxembourg Income Study data do not contain enrolment data, which must then be proxied by attainment data.

One final concern relates to the scale of inequality. In proportionate terms, differences between the rich and poor are much larger in the income dimension than in the health and education dimension. Arguably, smaller differences in health and education might, however, be just as important from a human development point of view and should therefore attract a greater weight in the HDI by income quintiles than they currently have. These are broader methodological issues inherent in such composite indices that will be investigated in future Reports.

TECHNICAL NOTE 3

Measuring risk in lack of access to water and sanitation

Access to water and sanitation is a matter of life and death. But what are the parameters of risk associated with not having access? Given the scale of illness and death associated with the problem, that question has received surprisingly little attention.

Chapter 1 sets out the results of a research exercise looking at the risks associated with deprivation in access to water and sanitation. The approach borrows from analytical techniques used in medical and economic research to examine the relationship between behaviour or treatment and health outcomes. It focuses on the association between access to specific types of water and sanitation infrastructure and changes in the risk of illness or premature death. More specifically, the exercise captures how access to water and sanitation affects the risk of neonatal (0–1 months) and post-neonatal (1–12 months) mortality, as well as the risk of diarrhoea, the leading water-related cause of death in children.

Data

Data for the research are derived from Demographic and Health Surveys, which collect information on a wide set of socioeconomic variables at the individual, household and community levels and are usually conducted every five years to allow comparison over time. Each survey sample consists of 5,000–30,000 households. The samples are not longitudinal by design, but they are representative at the national, urban and rural levels. Although Demographic and Health Surveys' primary focus is women ages 15–49, they also collect information on several demographic indicators for all members of the household, including children.

Some 22 surveys from 18 countries were used to construct the data set (table 1). Surveys conducted in or since 2000 were used in most

cases to include the most recent information available. For the analysis here, children were the primary unit of analysis.

Methodology

The methodology follows a two-step approach. First, the elements that affect the chance of survival in different stages of life were identified, disentangling the effects of individual, household and community characteristics that contribute to mortality and illness. For neonatal mortality the main variable was defined as a discrete indicator with two values: zero if the child is alive and one if the child died during the first month of life. For diarrhoea a discrete outcome approach was used, with a one indicating a diarrhoeal episode within the two weeks

Table 1 Country coverage

Country	Year	Sample size
Bangladesh	1999–2000	6,368
Benin	2001	5,349
Cameroon	2004	8,125
Egypt	1995 2000	12,135 11,467
Ethiopia	2000	10,873
Gabon	2000	4,405
Ghana	2003	3,844
Guatemala	1998–99	4,943
Haiti	2000	6,685
Indonesia	2002–03	16,206
Mali	2001	13,097
Morocco	2003–04	6,180
Nepal	2001	6,931
Nicaragua	2001	6,986
Peru	1996 2000	17,549 13,697
Uganda	2000–01	7,113
Viet Nam	1997 2002	1,775 1,317
Zambia	2001–02	6,877
Zimbabwe	1999	3,643

prior to the interview. A logit model was then estimated in both cases (box 1).

A different model and different outcome variable were used to estimate the impact of specific elements on post-neonatal survival. All children older than one month were included, with the outcome variable indicating the occurrence of death between the 2nd and 11th months of life. A Cox proportional hazard model was then used to estimate the chances of survival.

At each step a set of control variables was used to identify the effects of specific characteristics. The control variables include individual variables (such as the sex of the child, birth intervals and whether the child was breastfed), household variables (such as type of dwelling, education of the mother and wealth of the household as measured by an asset index) and community-level variables (such as urban or rural, region of residence and so on). A regression analysis was then conducted to isolate the specific risks associated with each type of sanitation and water facility, using the absence of water and sanitation infrastructure as the reference scenario.

Typically, the wealth of households is measured by a standard asset index, which measures possessions such as vehicles and televisions as well as access to water and sanitation. Since the main interest of the study is the effect of water and sanitation infrastructure on health outcomes, an asset index that excludes these variables was constructed. Following standard procedures, eight household assets were included to calculate the first principal component, which was then used to construct a standardized index. This index was then used to divide households into wealth quintiles.

Finally, the robustness of the research was further tested. In particular, the mortality study was expanded using propensity score matching to check for endogeneity of the outcome variable or unobserved characteristics that may be correlated with access to water and sanitation.

Most of the results are shown and discussed in chapter 1. For further details, refer to the background papers prepared for this year's Report by Fuentes, Pfütze and Seck.¹

Note

1 Fuentes, Pfütze and Seck 2006a, 2006b.

Box 1

Technical model for measuring risk

Two basic statistical methods were used to capture the risk underlying access to water and sanitation.

For neonatal mortality and incidence of diarrhoea, a standard logit model was used. Logit estimations are used when the outcome variable has two possible values (thus logits are often referred to as binary models). The two possible outcomes are labelled as failure ($Y = 0$) or success ($Y = 1$).

Parameters in logit estimations can be interpreted as the change in probability associated with a unit increase in the independent variables. The resulting parameters thus show the change in probability of the event conditional on the individual, household and community characteristics.

Formally, in the logit model the dependent variable Y_i is assumed to follow a Bernoulli distribution conditional on the vector of explanatory variable X_i . The probability of success is written as

$$P(Y_i = 1 | x_i) = \Lambda(x_i, \beta) \text{ and } P(Y_i = 0 | x_i) = 1 - \Lambda(x_i, \beta)$$

with $\Lambda(z) = (1 + \exp^{-z})^{-1}$ being the cumulative distribution function of the logistic model.

The conditional density can be written as

$$f(y_i | x_i) = \Lambda(x_i, \beta)^{y_i} [1 - \Lambda(x_i, \beta)]^{1-y_i}.$$

The log likelihood function becomes

$$l(\beta) = \sum_{i=1}^n \log f(y_i | x_i) = \sum_{y_i=1} \log \Lambda(x_i, \beta) + \sum_{y_i=0} \log [1 - \Lambda(x_i, \beta)].$$

The maximum likelihood estimate $\hat{\beta}$ of β is the value that maximizes the log likelihood function $l(\beta)$.

For the determinant factors in post-neonatal mortality a more elaborate estimation framework is needed because of the problem of censored observations. The data used do not contain observations for the entire period of analysis for all children. For example, a child who is four months old at the time of the interview and dies at the age of five months will not be recorded by the survey as a death; this characteristic creates a bias that needs to be corrected. One way to address this problem is to restrict the sample to children who were at least 12 months old at the time of the interview. However, this would eliminate a considerable number of observations. Instead, a hazard model is used to account for censoring issues. Based on the extensive literature on mortality, a Cox proportional hazard model is applied. The model is a semi-parametric estimation, given that the underlying hazard rate is not modelled by some functional form. This model has only one requisite structural assumption: the effect of the covariates on the relative hazard rate must be constant over the period under consideration.

Formally, the (conditional) hazard function of the Cox model given a k -dimensional vector of covariates (X) can be written as

$$\lambda(t | X) = \lambda_0(t) \exp(\beta' X),$$

where $\beta' = (\beta_1, \beta_2, \dots, \beta_k)'$ is the vector of parameters (proportional change in the hazard function) and $\lambda_0(t)$ is the baseline hazard function.

The parameters β' can be estimated without estimating $\lambda_0(t)$ using maximum likelihood. If i denotes the index of ordered failure times t_i ($i = 1, 2, \dots, N$), d_i the number of observations that fail at t_i , D_i the set of observations at t_i and R_i the risk set, the partial log likelihood function can be written as

$$l(\beta) = \sum_{i=1}^N d_i [\beta' X_i - \ln \sum_{j \in R_i} \exp(\beta' X_j)].$$

Definitions of statistical terms

Armed forces, total Strategic, land, naval, air, command, administrative and support forces. Also included are paramilitary forces such as the gendarmerie, customs service and border guard, if these are trained in military tactics.

Arms transfers, conventional Refers to the voluntary transfer by the supplier (and thus excludes captured weapons and weapons obtained through defectors) of weapons with a military purpose destined for the armed forces, paramilitary forces or intelligence agencies of another country. These include major conventional weapons or systems in six categories: ships, aircraft, missiles, artillery, armoured vehicles and guidance and radar systems (excluded are trucks, services, ammunition, small arms, support items, components and component technology and towed or naval artillery under 100-millimetre calibre).

Births attended by skilled health personnel The percentage of deliveries attended by personnel (including doctors, nurses and midwives) trained to give the necessary care, supervision and advice to women during pregnancy, labour and the postpartum period; to conduct deliveries on their own; and to care for newborns.

Birthweight, infants with low The percentage of infants with a birthweight of less than 2,500 grams.

Carbon dioxide emissions Anthropogenic (human originated) carbon dioxide emissions stemming from the burning of fossil fuels, gas flaring and the production of cement. Emissions are calculated from data on the consumption of solid, liquid and gaseous fuels; gas flaring; and the production of cement.

Cellular subscribers (also referred to as cellular mobile subscribers) Subscribers to an automatic public mobile telephone service that provides access to the public switched telephone network using cellular technology. Systems can be analogue or digital.

Children reaching grade 5 The percentage of children starting primary school who eventually attain grade 5 (grade 4 if the duration of primary school is four years). The estimates are based on the reconstructed cohort method, which uses data on enrolment and repeaters for two consecutive years.

Children under age five with diarrhoea receiving oral rehydration and continued feeding The percentage of children (ages 0–4) with diarrhoea in the two weeks preceding the survey who received either oral

rehydration therapy (oral rehydration solutions or recommended homemade fluids) or increased fluids and continued feeding.

Condom use at last high-risk sex The percentage of men and women who have had sex with a nonmarital, noncohabiting partner in the last 12 months and who say they used a condom the last time they did so.

Consumer price index, average annual change in Reflects changes in the cost to the average consumer of acquiring a basket of goods and services that may be fixed or may change at specified intervals.

Contraceptive prevalence rate The percentage of married women (including women in union) ages 15–49 who are using, or whose partners are using, any form of contraception, whether modern or traditional.

Contributing family worker Defined according to the 1993 International Classification by Status in Employment (ICSE) as a person who works without pay in an economic enterprise operated by a related person living in the same household.

Crime, people victimized by The percentage of the population who perceive that they have been victimized by certain types of crime in the preceding year, based on responses to the International Crime Victims Survey.

Debt service, total The sum of principal repayments and interest actually paid in foreign currency, goods or services on long-term debt (having a maturity of more than one year), interest paid on short-term debt and repayments to the International Monetary Fund.

Earned income (PPP US\$), estimated Roughly derived on the basis of the ratio of the female nonagricultural wage to the male nonagricultural wage, the female and male shares of the economically active population, total female and male population and GDP per capita (in purchasing power parity terms in US dollars; see *PPP*). For details on this estimation, see *Technical note 1*.

Earned income, ratio of estimated female to male The ratio of estimated female earned income to estimated male earned income. See *earned income (PPP US\$), estimated*.

Economic activity rate, female The share of the female population ages 15 and older who supply, or are

available to supply, labour for the production of goods and services.

Education expenditure, current public Spending on goods and services that are consumed within the current year and that would need to be renewed the following year, including such expenditures as staff salaries and benefits, contracted or purchased services, books and teaching materials, welfare services, furniture and equipment, minor repairs, fuel, insurance, rents, telecommunications and travel.

Education expenditure, public Includes both capital expenditures (spending on construction, renovation, major repairs and purchases of heavy equipment or vehicles) and current expenditures. See *education expenditure, current public*.

Education index One of the three indices on which the human development index is built. It is based on the adult literacy rate and the combined gross enrolment ratio for primary, secondary and tertiary schools. See *literacy rate, adult*, and *enrolment ratio, gross combined, for primary, secondary and tertiary schools*. For details on how the index is calculated, see *Technical note 1*.

Education levels Categorized as pre-primary, primary, secondary or tertiary in accordance with the International Standard Classification of Education (ISCED). *Pre-primary education* (ISCED level 0) is provided at such schools as kindergartens and nursery and infant schools and is intended for children not old enough to enter school at the primary level. *Primary education* (ISCED level 1) provides the basic elements of education at such establishments as primary and elementary schools. *Secondary education* (ISCED levels 2 and 3) is based on at least four years of previous instruction at the first level and provides general or specialized instruction, or both, at such institutions as middle schools, secondary schools, high schools, teacher training schools at this level and vocational or technical schools. *Tertiary education* (ISCED levels 5–7) refers to education at such institutions as universities, teachers colleges and higher level professional schools—requiring as a minimum condition of admission the successful completion of education at the second level or evidence of the attainment of an equivalent level of knowledge.

Electricity consumption per capita Refers to gross production in per capita terms and includes consumption by station auxiliaries and any losses in transformers that are considered integral parts of the station. Also included is total electric energy produced by pumping installations without deduction of electric energy absorbed by pumping.

Employment by economic activity, female Female employment in industry, agriculture or services as defined according to the International Standard Industrial Classification (ISIC) system (revisions 2 and 3). *Industry* refers to mining and quarrying, manufacturing, construction and public utilities (gas, water and electricity). *Agriculture* refers to activities in agriculture, hunting, forestry and fishing. *Services* refer to

wholesale and retail trade; restaurants and hotels; transport, storage and communications; finance, insurance, real estate and business services; and community, social and personal services.

Energy use, GDP per unit of The ratio of GDP (in 2000 PPP US\$) to commercial energy use, measured in kilograms of oil equivalent. This ratio provides a measure of energy efficiency by showing comparable and consistent estimates of real GDP across countries relative to physical inputs (units of energy use). See *GDP (gross domestic product)* and *PPP (purchasing power parity)*.

Enrolment ratio, gross The number of students enrolled in a level of education, regardless of age, as a percentage of the population of official school age for that level. The gross enrolment ratio can be greater than 100% as a result of grade repetition and entry at ages younger or older than the typical age at that grade level. See *education levels*.

Enrolment ratio, gross combined, for primary, secondary and tertiary schools The number of students enrolled in primary, secondary and tertiary levels of education, regardless of age, as a percentage of the population of official school age for the three levels. See *education levels* and *enrolment ratio, gross*.

Enrolment ratio, net The number of students enrolled in a level of education who are of official school age for that level, as a percentage of the population of official school age for that level. See *education levels*.

Environmental treaties, ratification of After signing a treaty, a country must ratify it, often with the approval of its legislature. Such process implies not only an expression of interest as indicated by the signature, but also the transformation of the treaty's principles and obligations into national law.

Exports, high-technology Exports of products with a high intensity of research and development. They include high-technology products such as in aerospace, computers, pharmaceuticals, scientific instruments and electrical machinery.

Exports, manufactured Defined according to the Standard International Trade Classification to include exports of chemicals, basic manufactures, machinery and transport equipment and other miscellaneous manufactured goods.

Exports of goods and services The value of all goods and other market services provided to the rest of the world. Included is the value of merchandise, freight, insurance, transport, travel, royalties, licence fees and other services, such as communication, construction, financial, information, business, personal and government services. Excluded are labour and property income and transfer payments.

Exports, primary Defined according to the Standard International Trade Classification to include exports of food, agricultural raw materials, fuels and ores and metals.

Fertility rate, total The number of children that would be born to each woman if she were to live to the end of her child-bearing years and bear children at each age in accordance with prevailing age-specific fertility rates.

Foreign direct investment, net inflows of Net inflows of investment to acquire a lasting management interest (10% or more of voting stock) in an enterprise operating in an economy other than that of the investor. It is the sum of equity capital, reinvestment of earnings, other long-term capital and short-term capital.

Fuel consumption, traditional Estimated consumption of fuel wood, charcoal, bagasse (sugar cane waste), and animal and vegetable wastes.

GDP (gross domestic product) The sum of value added by all resident producers in the economy plus any product taxes (less subsidies) not included in the valuation of output. It is calculated without making deductions for depreciation of fabricated capital assets or for depletion and degradation of natural resources. Value added is the net output of an industry after adding up all outputs and subtracting intermediate inputs.

GDP (US\$) Gross domestic product converted to US dollars using the average official exchange rate reported by the International Monetary Fund. An alternative conversion factor is applied if the official exchange rate is judged to diverge by an exceptionally large margin from the rate effectively applied to transactions in foreign currencies and traded products. See *GDP (gross domestic product)*.

GDP index One of the three indices on which the human development index is built. It is based on gross domestic product per capita (in purchasing power parity terms in US dollars; see *PPP*). For details on how the index is calculated, see *Technical note 1*.

GDP per capita (PPP US\$) Gross domestic product (in purchasing power parity terms in US dollars) divided by midyear population. See *GDP (gross domestic product)*, *PPP (purchasing power parity)* and *population, total*.

GDP per capita (US\$) Gross domestic product in US dollar terms divided by midyear population. See *GDP (US\$)* and *population, total*.

GDP per capita annual growth rate Least squares annual growth rate, calculated from constant price GDP per capita in local currency units.

Gender empowerment measure (GEM) A composite index measuring gender inequality in three basic dimensions of empowerment—economic participation and decision-making, political participation, and decision-making and power over economic resources. For details on how the index is calculated, see *Technical note 1*.

Gender-related development index (GDI) A composite index measuring average achievement in the three basic dimensions captured in the human development index—a long and healthy life, knowledge and a decent standard of living—adjusted to account for inequalities

between men and women. For details on how the index is calculated, see *Technical note 1*.

Gini index Measures the extent to which the distribution of income (or consumption) among individuals or households within a country deviates from a perfectly equal distribution. A Lorenz curve plots the cumulative percentages of total income received against the cumulative number of recipients, starting with the poorest individual or household. The Gini index measures the area between the Lorenz curve and a hypothetical line of absolute equality, expressed as a percentage of the maximum area under the line. A value of 0 represents perfect equality, a value of 100 perfect inequality.

GNI (gross national income) The sum of value added by all resident producers in the economy plus any product taxes (less subsidies) not included in the valuation of output plus net receipts of primary income (compensation of employees and property income) from abroad. Value added is the net output of an industry after adding up all outputs and subtracting intermediate inputs. Data are in current US dollars converted using the *World Bank Atlas* method.

Health expenditure per capita (PPP US\$) The sum of public and private expenditure (in purchasing power parity terms in US dollars), divided by the population. Health expenditure includes the provision of health services (preventive and curative), family planning activities, nutrition activities and emergency aid designated for health, but excludes the provision of water and sanitation. See *health expenditure, private*; *health expenditure, public*; and *PPP (purchasing power parity)*.

Health expenditure, private Direct household (out of pocket) spending, private insurance, spending by non-profit institutions serving households and direct service payments by private corporations. Together with public health expenditure, it makes up total health expenditure. See *health expenditure per capita (PPP US\$)* and *health expenditure, public*.

Health expenditure, public Current and capital spending from government (central and local) budgets, external borrowings and grants (including donations from international agencies and nongovernmental organizations) and social (or compulsory) health insurance funds. Together with private health expenditure, it makes up total health expenditure. See *health expenditure per capita (PPP US\$)* and *health expenditure, private*.

HIPC completion point The date at which a country included in the Debt Initiative for Heavily Indebted Poor Countries (HIPC) successfully completes the key structural reforms agreed on at the HIPC decision point, including developing and implementing a poverty reduction strategy. The country then receives the bulk of its debt relief under the HIPC Initiative without further policy conditions.

HIPC decision point The date at which a heavily indebted poor country (HIPC) with an established track record of good performance under adjustment programmes supported by the International Monetary

Fund and the World Bank commits, under the Debt Initiative for Heavily Indebted Poor Countries, to undertake additional reforms and to develop and implement a poverty reduction strategy.

HIV prevalence The percentage of people ages 15–49 who are infected with HIV.

Human development index (HDI) A composite index measuring average achievement in three basic dimensions of human development—a long and healthy life, knowledge and a decent standard of living. For details on how the index is calculated, see *Technical note 1*.

Human poverty index (HPI-1) for developing countries A composite index measuring deprivations in the three basic dimensions captured in the human development index—a long and healthy life, knowledge and a decent standard of living. For details on how the index is calculated, see *Technical note 1*.

Human poverty index (HPI-2) for selected high-income OECD countries A composite index measuring deprivations in the three basic dimensions captured in the human development index—a long and healthy life, knowledge and a decent standard of living—and also capturing social exclusion. For details on how the index is calculated, see *Technical note 1*.

Illiteracy rate, adult Calculated as 100 minus the adult literacy rate. See *literacy rate, adult*.

Immunization, one-year-olds fully immunized against measles or tuberculosis One-year-olds injected with an antigen or a serum containing specific antibodies against measles or tuberculosis.

Imports of goods and services The value of all goods and other market services received from the rest of the world. Included is the value of merchandise, freight, insurance, transport, travel, royalties, licence fees and other services, such as communication, construction, financial, information, business, personal and government services. Excluded are labour and property income and transfer payments.

Income poverty line, population below The percentage of the population living below the specified poverty line:

- \$1 a day—at 1985 international prices (equivalent to \$1.08 at 1993 international prices), adjusted for purchasing power parity.
- \$2 a day—at 1985 international prices (equivalent to \$2.15 at 1993 international prices), adjusted for purchasing power parity.
- \$4 a day—at 1990 international prices, adjusted for purchasing power parity.
- \$11 a day (per person for a family of three)—at 1994 international prices, adjusted for purchasing power parity.
- National poverty line—the poverty line deemed appropriate for a country by its authorities. National estimates are based on population-weighted subgroup estimates from household surveys.

- 50% of median income—50% of the median adjusted disposable household income. See *PPP (purchasing power parity)*.

Income or consumption, shares of The shares of income or consumption accruing to subgroups of population indicated by deciles or quintiles, based on national household surveys covering various years. Consumption surveys produce results showing lower levels of inequality between poor and rich than do income surveys, as poor people generally consume a greater share of their income. Because data come from surveys covering different years and using different methodologies, comparisons between countries must be made with caution.

Infant mortality rate See *mortality rate, infant*.

Internally displaced people People or groups of people who have been forced or obliged to flee or to leave their homes or places of habitual residence, in particular as a result of or to avoid the effects of armed conflict, situations of generalized violence, violations of human rights or natural or human-made disasters, and who have not crossed an internationally recognized state border

Internet users People with access to the worldwide network.

Labour force All people employed (including people above a specified age who, during the reference period, were in paid employment, at work, self-employed or with a job but not at work) and unemployed (including people above a specified age who, during the reference period, were without work, currently available for work and seeking work).

Legislators, senior officials and managers, female Women's share of positions defined according to the International Standard Classification of Occupations (ISCO-88) to include legislators, senior government officials, traditional chiefs and heads of villages, senior officials of special-interest organizations, corporate managers, directors and chief executives, production and operations department managers and other department and general managers.

Life expectancy at birth The number of years a newborn infant would live if prevailing patterns of age-specific mortality rates at the time of birth were to stay the same throughout the child's life.

Life expectancy index One of the three indices on which the human development index is built. For details on how the index is calculated, see *Technical note 1*.

Literacy rate, adult The percentage of people ages 15 and older who can, with understanding, both read and write a short, simple statement related to their everyday life.

Literacy rate, youth The percentage of people ages 15–24 who can, with understanding, both read and write a short, simple statement related to their everyday life.

Literacy skills, functional, people lacking The share of the population ages 16–65 scoring at level 1 on the prose literacy scale of the International Adult Literacy Survey. Most tasks at this level require the reader to locate a piece of information in the text that is identical to or synonymous with the information given in the directive.

Malaria prevention, children under age five The percentage of children under age five sleeping under insecticide-treated bednets.

Malaria treatment, children under age five with fever The percentage of children under age five who were ill with fever in the two weeks before the survey and received antimalarial drugs.

Market activities Defined according to the 1993 revised UN System of National Accounts to include employment in establishments, primary production not in establishments, services for income and other production of goods not in establishments. See *non-market activities* and *work time, total*.

Mortality rate, infant The probability of dying between birth and exactly one year of age, expressed per 1,000 live births.

Mortality rate, under-five The probability of dying between birth and exactly five years of age, expressed per 1,000 live births.

Mortality ratio, maternal The annual number of female deaths from pregnancy-related causes per 100,000 live births.

Mortality ratio, maternal adjusted Maternal mortality ratio adjusted to account for well documented problems of underreporting and misclassification of maternal deaths, as well as estimates for countries with no data. See *mortality ratio, maternal*.

Mortality ratio, maternal reported Maternal mortality ratio as reported by national authorities. See *mortality ratio, maternal*.

Medium-variant projection Population projections by the United Nations Population Division assuming medium-fertility path, normal mortality and normal international migration. Each assumption implies projected trends in fertility, mortality and net migration levels, depending on the specific demographic characteristics and relevant policies of each country or group of countries. In addition, for the countries highly affected by the HIV/AIDS epidemic, the impact of HIV/AIDS is included in the projection. The United Nations Population Division also publishes low- and high-variant projections. For more information, see <http://esa.un.org/unpp/assumptions.html>.

Military expenditure All expenditures of the defence ministry and other ministries on recruiting and training military personnel as well as on construction and purchase of military supplies and equipment. Military assistance is included in the expenditures of the donor country.

Nonmarket activities Defined according to the 1993 revised UN System of National Accounts to include household maintenance (cleaning, laundry and meal preparation and cleanup), management and shopping for own household; care for children, the sick, the elderly and the disabled in own household; and community services. See *market activities* and *work time, total*.

Official aid Grants or loans that meet the same standards as for official development assistance (ODA) except that recipient countries do not qualify as recipients of ODA. These countries are identified in part II of the Development Assistance Committee (DAC) list of recipient countries, which includes more advanced countries of Central and Eastern Europe, the countries of the former Soviet Union and certain advanced developing countries and territories. See *official development assistance (ODA), net*.

Official development assistance (ODA), net Disbursements of loans made on concessional terms (net of repayments of principal) and grants by official agencies of the members of the Development Assistance Committee (DAC), by multilateral institutions and by non-DAC countries to promote economic development and welfare in countries and territories in part I of the DAC list of aid recipients. It includes loans with a grant element of at least 25% (calculated at a discount rate of 10%).

Official development assistance (ODA), per capita of donor country Official development assistance granted by a specific country divided by the country's total population. See *official development assistance (ODA), net*.

Official development assistance (ODA) to basic social services ODA directed to basic social services, which include basic education (primary education, early childhood education and basic life skills for youth and adults), basic health (including basic health care, basic health infrastructure, basic nutrition, infectious disease control, health education and health personnel development) and population policies and programmes and reproductive health (population policy and administrative management; reproductive health care; family planning; control of sexually transmitted diseases, including HIV/AIDS; and personnel development for population and reproductive health). Aid to water supply and sanitation is included only if it has a poverty focus.

Official development assistance (ODA) to least developed countries See *official development assistance (ODA), net* and country classifications for least developed countries.

Official development assistance (ODA), untied Bilateral ODA for which the associated goods and services may be fully and freely procured in substantially all countries and that is given by one country to another.

Patents granted to residents Refers to documents issued by a government office that describe an invention and create a legal situation in which the patented invention can normally be exploited (made, used, sold, imported) only by or with the authorization of the

patentee. The protection of inventions is generally limited to 20 years from the filing date of the application for the grant of a patent.

Physicians Includes graduates of a faculty or school of medicine who are working in any medical field (including teaching, research and practice).

Population growth rate, annual Refers to the average annual exponential growth rate for the period indicated. See *population, total*.

Population, total Refers to the de facto population, which includes all people actually present in a given area at a given time.

Population, urban The midyear population of areas classified as urban according to the criteria used by each country, as reported to the United Nations. See *population, total*.

PPP (purchasing power parity) A rate of exchange that accounts for price differences across countries, allowing international comparisons of real output and incomes. At the PPP US\$ rate (as used in this Report), PPP US\$1 has the same purchasing power in the domestic economy as \$1 has in the United States.

Private flows, other A category combining non-debt-creating portfolio equity investment flows (the sum of country funds, depository receipts and direct purchases of shares by foreign investors), portfolio debt flows (bond issues purchased by foreign investors) and bank and trade-related lending (commercial bank lending and other commercial credits).

Probability at birth of not surviving to a specified age Calculated as 1 minus the probability of surviving to a specified age for a given cohort. See *probability at birth of surviving to a specified age*.

Probability at birth of surviving to a specified age The probability of a newborn infant surviving to a specified age if subject to prevailing patterns of age-specific mortality rates.

Professional and technical workers, female Women's share of positions defined according to the International Standard Classification of Occupations (ISCO-88) to include physical, mathematical and engineering science professionals (and associate professionals), life science and health professionals (and associate professionals), teaching professionals (and associate professionals) and other professionals and associate professionals.

Refugees People who have fled their country because of a well founded fear of persecution for reasons of their race, religion, nationality, political opinion or membership in a particular social group and who cannot or do not want to return. *Country of asylum* is the country in which a refugee has filed a claim of asylum but has not yet received a decision or is otherwise registered as an asylum seeker. *Country of origin* refers to the claimant's nationality or country of citizenship.

Research and development expenditures Current and capital expenditures (including overhead) on creative, systematic activity intended to increase the stock of knowledge. Included are fundamental and applied research and experimental development work leading to new devices, products or processes.

Researchers in R&D People trained to work in any field of science who are engaged in professional research and development (R&D) activity. Most such jobs require the completion of tertiary education.

Royalties and licence fees, receipts of Receipts by residents from nonresidents for the authorized use of intangible, nonproduced, nonfinancial assets and proprietary rights (such as patents, trademarks, copyrights, franchises and industrial processes) and for the use, through licensing agreements, of produced originals of prototypes (such as films and manuscripts). Data are based on the balance of payments.

Sanitation facilities, improved, population with sustainable access to The percentage of the population with access to adequate excreta disposal facilities, such as a connection to a sewer or septic tank system, a pour-flush latrine, a simple pit latrine or a ventilated improved pit latrine. An excreta disposal system is considered adequate if it is private or shared (but not public) and if it can effectively prevent human, animal and insect contact with excreta.

Science, math and engineering, tertiary students in The share of tertiary students enrolled in natural sciences; engineering; mathematics and computer sciences; architecture and town planning; transport and communications; trade, craft and industrial programmes; and agriculture, forestry and fisheries. See *education levels*.

Seats in parliament held by women Refers to seats held by women in a lower or single house or an upper house or senate, where relevant.

Smoking, prevalence among adults of The percentage of men and women who smoke cigarettes.

Telephone mainlines Telephone lines connecting a customer's equipment to the public switched telephone network.

Tenure, households with access to secure Households that own or are purchasing their homes, are renting privately or are in social housing or subtenancy.

Terms of trade The ratio of the export price index to the import price index measured relative to a base year. A value of more than 100 means that the price of exports has risen relative to the price of imports.

Tuberculosis cases, prevalence The total number of tuberculosis cases reported to the World Health Organization. A tuberculosis case is defined as a patient in whom tuberculosis has been bacteriologically confirmed or diagnosed by a clinician.

Tuberculosis cases cured under DOTS The percentage of estimated new infectious tuberculosis cases cured under DOTS, the internationally recommended tuberculosis control strategy.

Tuberculosis cases detected under DOTS The percentage of estimated new infectious tuberculosis cases detected (diagnosed in a given period) under DOTS, the internationally recommended tuberculosis control strategy.

Under-five mortality rate See *mortality rate, under-five*.

Under height for age, children under age five Includes moderate and severe stunting, defined as more than two standard deviations below the median height for age of the reference population.

Under weight for age, children under age five Includes moderate underweight, defined as more than two standard deviations below the median weight for age of the reference population, and severe underweight, defined as more than three standard deviations below the median weight.

Undernourished people People whose food intake is chronically insufficient to meet their minimum energy requirements.

Unemployment Refers to all people above a specified age who are not in paid employment or self-employed, but are available for work and have taken specific steps to seek paid employment or self-employment.

Unemployment, long-term Unemployment lasting 12 months or longer. See *unemployment*.

Unemployment rate The unemployed divided by the labour force (those employed plus the unemployed). See *unemployment* and *labour force*.

Unemployment rate, youth Refers to unemployment between the ages of 15 or 16 and 24, depending on the national definition. See *unemployment*.

Water source, improved, population without sustainable access to Calculated as 100 minus the percentage of the population with sustainable access to an improved water source. Unimproved sources include vendors, bottled water, tanker trucks and unprotected wells and springs. See *water source, improved, population with sustainable access to*.

Water source, improved, population with sustainable access to The share of the population with reasonable access to any of the following types of water supply for drinking: household connections, public standpipes, boreholes, protected dug wells, protected springs and rainwater collection. *Reasonable access* is defined as the availability of at least 20 litres a person per day from a source within 1 kilometre of the user's dwelling.

Women in government at ministerial level Includes deputy prime ministers and ministers. Prime ministers were included when they held ministerial portfolios. Vice-presidents and heads of ministerial-level departments or agencies were also included when exercising a ministerial function in the government structure.

Work time, total Time spent on market and nonmarket activities as defined according to the 1993 revised UN System of National Accounts. See *market activities* and *nonmarket activities*.

Statistical references

- Charmes, Jacques. 2006.** Correspondence on time use. June. Paris.
- Fuentes, Ricardo, Tobias Pfützte, and Papa Seck. 2006a.** "Does Access to Water and Sanitation Affect Child Survival? A Five Country Analysis." Background paper for *Human Development Report 2006*. United Nations Development Programme, Human Development Report Office, New York.
- . **2006b.** "A Logistic Analysis of Diarrhea Incidence and Access to Water and Sanitation." Background paper for *Human Development Report 2006*. United Nations Development Programme, Human Development Report Office, New York.
- Goldschmidt-Clermont, Luisella, and Elisabetta Pagnossin-Aligisakis. 1995.** "Measures of Unrecorded Economic Activities in Fourteen Countries." Background paper for *Human Development Report 1995*. United Nations Development Programme, Human Development Report Office, New York.
- Grimm, M., K. Harttgen, S. Klasen and M. Misselhorn. 2006.** "A Human Development Index by Income Groups." Background paper for *Human Development Report 2006*. United Nations Development Programme, Human Development Report Office, New York.
- Gwatkin, Davidson, Shea Rutstein, Kiersten Johnson, Eldaw Abdalla Suliman, Adam Wagstaff, and Agbessi Amouzou. 2005.** *Socioeconomic Differences in Health, Nutrition, and Population*. Second edition. Washington, D.C.: World Bank.
- Harvey, Andrew S. 1995.** "Market and Non-Market Productive Activity in Less Developed and Developing Countries: Lessons from Time Use." Background paper for *Human Development Report 1995*. United Nations Development Programme, Human Development Report Office, New York.
- . **2001.** "National Time Use Data on Market and Non-Market Work by Both Women and Men." Background paper for *Human Development Report 2001*. United Nations Development Programme, Human Development Report Office, New York.
- Heston, Alan, Robert Summers, and Bettina Aten. 2001.** Correspondence on data from the Penn World Table 6.0. March. Philadelphia, Penn.
- . **2002.** "Penn World Tables Version 6.1." University of Pennsylvania, Center for International Comparisons, Philadelphia. [<http://pwt.econ.upenn.edu/>]. Accessed March 2005.
- IBGE (Brazilian Institute for Geography and Statistics). 2005.** Pesquisa Nacional por Amostra de Domicílios 2004. Brasília. [http://www.ibge.gov.br/home/estatistica/populacao/trabalhoerendimento/pnad2004/sintese_pnad2004.pdf]. Accessed August 2006.
- IISS (International Institute for Strategic Studies). 2006.** *The Military Balance 2005–2006*. London: Routledge, Taylor and Francis Group.
- ILO (International Labour Organization). 2005a.** *Estimates and Projections of the Economically Active Population, 1980–2020*. Fifth edition, revision 2. Database. Geneva.
- . **2005b.** *Key Indicators of the Labour Market*. Fourth edition. CD-ROM. Geneva. [www.ilo.org/kilm/]. Accessed April 2006.
- . **2006a.** *Database on International Labour Standards (ILOLEX)*. Geneva. [www.ilo.org/ilolex/english/docs/declworld.htm]. Accessed August 2006.
- . **2006b.** *LABORSTA Database*. Geneva. [<http://laborsta.ilo.org>]. Accessed April 2006.
- Internal Displacement Monitoring Centre. 2006.** "Global Statistics." Geneva. [www.internal-displacement.org]. Accessed May 2006.
- IPU (Inter-Parliamentary Union). 2005.** Correspondence on women in government at the ministerial level. March. Geneva.
- . **2006a.** Correspondence on women in national parliaments. May. Geneva.
- . **2006b.** Correspondence on year women received the right to vote and to stand for election and year first woman was elected or appointed to parliament. July. Geneva.
- . **2006c.** *Parline Database*. Geneva. [www.ipu.org]. Accessed July 2006.
- Kennedy, John F. 1962.** Remarks in Pueblo, Colorado, August 17. *The Public Papers of the Presidents of the United States*. Washington, DC: National Archives and Records Administration.
- LIS (Luxembourg Income Study). 2006.** "Relative Poverty Rates for the Total Population, Children and the Elderly." Luxembourg. [www.lisproject.org/keyfigures/povertytable.htm]. Accessed May 2006.
- Milanovic, Branko. 2002.** Correspondence on income, inequality and poverty during the transition from planned to market economy. March. World Bank, Washington, D.C.
- OECD-DAC (Organisation for Economic Co-operation and Development, Development Assistance Committee). 2006a.** Correspondence on official development assistance disbursed. May. Paris.
- . **2006b.** DAC Journal: Development Cooperation 2006 Report. Paris.
- . **2006c.** *DAC Online*. Database. Paris.
- OECD (Organisation for Economic Co-operation and Development). 2006a.** Correspondence on employment rates. May. Paris.
- . **2006b.** Correspondence on long-term unemployment rates. May. Paris.
- . **2006c.** Correspondence on unemployment rates. May. Paris.
- OECD (Organisation for Economic Co-operation and Development) and Statistics Canada. 2000.** *Literacy in the Information Age: Final Report on the IALS*. Paris.
- . **2005.** *Learning a Living by Earning Skills: First Results of the Adult Literacy and Life Skills Survey*. Paris.
- Ruen, Ren, and Chen Kai. 1995.** "China's GDP in U.S. Dollars Based on Purchasing Power Parity." Policy Research Working Paper 1415. World Bank, Washington, D.C.
- Sen, Amartya. 1999.** *Development as Freedom*. New York: Oxford University Press.
- SIPRI (Stockholm International Peace Research Institute). 2006a.** *SIPRI Yearbook: Armaments, Disarmaments and International Security*. Oxford, U.K.: Oxford University Press.
- . **2006b.** Correspondence on arms transfers. March. Stockholm.
- . **2006c.** Correspondence on military expenditure data. May. Stockholm.
- Smeeding, Timothy M. 1997.** "Financial Poverty in Developed Countries: The Evidence from the Luxembourg Income Study." Background paper for *Human Development Report 1997*. United Nations Development Programme, Human Development Report Office, New York.

- Smeeding, Timothy M., Lee Rainwater, and Gary Burtless. 2000.** "United States Poverty in a Cross-National Context." In Sheldon H. Danziger and Robert H. Haveman, eds., *Understanding Poverty*. New York: Russell Sage Foundation; and Cambridge, Mass.: Harvard University Press.
- Stateg. 2006.** Correspondence on gross enrolment ratio for Luxembourg. May. Luxembourg.
- UN (United Nations). 2002.** Correspondence on time use surveys. Department of Economic and Social Affairs. Statistics Division. February. New York.
- . **2005a.** Correspondence on life expectancy at birth. Department of Economic and Social Affairs, Population Division. March. New York.
- . **2005b.** *World Population Prospects 1950–2050: The 2004 Revision*. Database. Department of Economic and Social Affairs, Population Division. New York.
- . **2006a.** Correspondence on traditional fuel use. Department of Economic and Social Affairs, Statistics Division. March. New York.
- . **2006b.** Correspondence on urban population. Department of Economic and Social Affairs, Population Division. New York.
- . **2006c.** Millennium Indicators Database. Department of Economic and Social Affairs, Statistics Division, New York. [http://mdgs.un.org]. Accessed July 2006.
- . **2006d.** "Multilateral Treaties Deposited with the Secretary-General." New York. [http://untreaty.un.org]. Accessed August 2006.
- . **2006e.** *World Urbanization Prospects: The 2005 Revision*. Department of Economic and Social Affairs, Population Division. New York.
- . **2006f.** Correspondence on energy consumption. Department of Economic and Social Affairs, Statistics Division. March. New York.
- UNAIDS (Joint United Nations Programme on HIV/AIDS). 2006.** Correspondence on HIV prevalence. May. Geneva.
- UNDP (United Nations Development Programme). 2005a.** *Bosnia and Herzegovina Human Development Report 2005*. Sarajevo.
- . **2005b.** *Ethnic and Cultural Diversity: Citizenship in a Plural State*. National Human Development Report for Guatemala. Guatemala City.
- . **2005c.** *Linking Industrialization with Human Development*. National Human Development Report for Kenya. Nairobi.
- . **2005d.** *Towards Human Development with Equity*. National Human Development Report for China. Beijing.
- UNESCO (United Nations Educational, Scientific and Cultural Organization). 1997.** "International Standard Classification of Education 1997." Paris. [www.uis.unesco.org/TEMPLATE/pdf/iscsed/ISCED_A.pdf]. Accessed May 2006.
- UNESCO (United Nations Educational, Scientific and Cultural Organization) Institute for Statistics. 1999.** *Statistical Yearbook*. Montreal.
- . **2003.** Correspondence on adult and youth literacy rates. March. Montreal.
- . **2005.** Correspondence on adult and youth literacy rates. March. Montreal.
- . **2006a.** Correspondence on adult and youth literacy rates. April. Montreal.
- . **2006b.** Correspondence on education expenditure data. May. Montreal.
- . **2006c.** Correspondence on gross and net enrolment ratios and children reaching grade 5. May. Montreal.
- . **2006d.** Correspondence on students in science, engineering, manufacturing and construction. May. Montreal.
- UNHCR (Office of the United Nations High Commissioner for Refugees). 2006.** Correspondence on refugees by country of asylum and country of origin. May. Geneva.
- UNICEF (United Nations Children's Fund). 2004.** *State of the World's Children 2005*. New York.
- . **2005.** *State of the World's Children 2006*. New York.
- UNODC (United Nations Office on Drugs and Crime). 2004.** Correspondence on data on crime victims. March. Vienna.
- UN-OHRLS (United Nations Office of the High Representative for the Least Developed Countries, Landlocked Developing Countries and Small Island Developing States). 2006.** "List of Least Developed Countries." [www.un.org/special-rep/ohrls/ldc/list.htm]. Accessed June 2006.
- WHO (World Health Organization). 2006a.** "Core Health Indicators." Geneva. [www3.who.int/whosis/core/core_select.cfm]. June 2006.
- . **2006b.** Correspondence on health expenditure. May. Geneva.
- . **2006c.** *World Health Statistics 2006*. Geneva.
- . **2006d.** *Global Tuberculosis Control: WHO Report 2006*. Geneva. [www.who.int/tb/publications/global_report/en/index.html]. Accessed July 2006.
- WIPO (World Intellectual Property Organization). 2006.** "Patents Granted by Office (1985 to 2004)." Geneva. [http://wipo.int/ipstats/en/statistics/patents/source/granted_national_table.csv]. Accessed May 2006.
- World Bank. 2003.** *World Development Indicators 2003*. CD-ROM. Washington, D.C.
- . **2005.** *World Development Indicators 2005*. CD-ROM. Washington, D.C.
- . **2006.** *World Development Indicators 2006*. CD-ROM. Washington, D.C.

Classification of countries

Countries in the human development aggregates

High human development (HDI 0.800 and above)		Medium human development (HDI 0.500–0.799)		Low human development (HDI below 0.500)	
Antigua and Barbuda	Seychelles	Albania	Nepal	Angola	
Argentina	Singapore	Algeria	Nicaragua	Benin	
Australia	Slovakia	Armenia	Occupied Palestinian Territories	Burkina Faso	
Austria	Slovenia	Azerbaijan	Pakistan	Burundi	
Bahamas	Spain	Bangladesh	Papua New Guinea	Central African Republic	
Bahrain	Sweden	Belarus	Paraguay	Chad	
Barbados	Switzerland	Belize	Peru	Congo, Dem. Rep. of the	
Belgium	Tonga	Bhutan	Philippines	Côte d'Ivoire	
Bosnia and Herzegovina	Trinidad and Tobago	Bolivia	Russian Federation	Djibouti	
Brunei Darussalam	United Arab Emirates	Botswana	Saint Lucia	Eritrea	
Bulgaria	United Kingdom	Brazil	Saint Vincent and the Grenadines	Ethiopia	
Canada	United States	Cambodia	Samoa (Western)	Gambia	
Chile	Uruguay	Cameroon	São Tomé and Príncipe	Guinea	
Costa Rica	(63 countries or areas)	Cape Verde	Saudi Arabia	Guinea-Bissau	
Croatia		China	Solomon Islands	Haiti	
Cuba		Colombia	South Africa	Kenya	
Cyprus		Comoros	Sri Lanka	Lesotho	
Czech Republic		Congo	Sudan	Malawi	
Denmark		Dominica	Suriname	Mali	
Estonia		Dominican Republic	Swaziland	Mauritania	
Finland		Ecuador	Syrian Arab Republic	Mozambique	
France		Egypt	Tajikistan	Niger	
Germany		El Salvador	Thailand	Nigeria	
Greece		Equatorial Guinea	Timor-Leste	Rwanda	
Hong Kong, China (SAR)		Fiji	Tunisia	Senegal	
Hungary		Gabon	Turkey	Sierra Leone	
Iceland		Georgia	Turkmenistan	Tanzania, U. Rep. of	
Ireland		Ghana	Uganda	Togo	
Israel		Grenada	Ukraine	Yemen	
Italy		Guatemala	Uzbekistan	Zambia	
Japan		Guyana	Vanuatu	Zimbabwe	
Korea, Rep. of		Honduras	Venezuela, RB	(31 countries or areas)	
Kuwait		India	Viet Nam		
Latvia		Indonesia	(83 countries or areas)		
Lithuania		Iran, Islamic Rep. of			
Luxembourg		Jamaica			
Malaysia		Jordan			
Malta		Kazakhstan			
Mauritius		Kyrgyzstan			
Mexico		Lao People's Dem. Rep.			
Netherlands		Lebanon			
New Zealand		Libyan Arab Jamahiriya			
Norway		Macedonia, TFYR			
Oman		Madagascar			
Panama		Maldives			
Poland		Moldova, Rep. of			
Portugal		Mongolia			
Qatar		Morocco			
Romania		Myanmar			
Saint Kitts and Nevis		Namibia			

Note: The following UN member countries are not included in the human development aggregates because the HDI cannot be computed for them: Afghanistan, Andorra, Iraq, Kiribati, the Democratic Republic of Korea, Liberia, Liechtenstein, Marshall Islands, the Federated States of Micronesia, Montenegro, Monaco, Nauru, Palau, San Marino, Serbia, Somalia and Tuvalu.

Countries in the income aggregates

High income (GNI per capita of \$10,066 or more in 2004)	Middle income (GNI per capita of \$826–\$10,065 in 2004)	Low income (GNI per capita of \$825 or less in 2004)
Andorra	Albania	Afghanistan
Australia	Algeria	Bangladesh
Austria	Angola	Benin
Bahamas	Antigua and Barbuda	Bhutan
Bahrain	Argentina	Burkina Faso
Belgium	Armenia	Burundi
Brunei Darussalam	Azerbaijan	Cambodia
Canada	Barbados	Cameroon
Cyprus	Belarus	Central African Republic
Denmark	Belize	Chad
Finland	Bolivia	Comoros
France	Bosnia and Herzegovina	Congo
Germany	Botswana	Congo, Dem. Rep. of the
Greece	Brazil	Côte d'Ivoire
Hong Kong, China (SAR)	Bulgaria	Eritrea
Iceland	Cape Verde	Ethiopia
Ireland	Chile	Gambia
Israel	China	Ghana
Italy	Colombia	Guinea
Japan	Costa Rica	Guinea-Bissau
Korea, Rep. of	Croatia	Haiti
Kuwait	Cuba	India
Liechtenstein	Czech Republic	Kenya
Luxembourg	Djibouti	Korea, Dem. Rep.
Malta	Dominica	Kyrgyzstan
Monaco	Dominican Republic	Lao People's Dem. Rep.
Netherlands	Ecuador	Lesotho
New Zealand	Egypt	Liberia
Norway	El Salvador	Madagascar
Portugal	Equatorial Guinea	Malawi
Qatar	Estonia	Mali
San Marino	Fiji	Mauritania
Saudi Arabia	Gabon	Moldova, Rep. of
Singapore	Georgia	Mongolia
Slovenia	Grenada	Mozambique
Spain	Guatemala	Myanmar
Sweden	Guyana	Nepal
Switzerland	Honduras	Nicaragua
United Arab Emirates	Hungary	Niger
United Kingdom	Indonesia	Nigeria
United States	Iran, Islamic Rep. of	Pakistan
(41 countries or areas)	Iraq	Papua New Guinea
	Jamaica	Rwanda
	Jordan	São Tomé and Príncipe
	Kazakhstan	Senegal
	Kiribati	Sierra Leone
	Latvia	Solomon Islands
	Lebanon	Somalia
	Libyan Arab Jamahiriya	Sudan
	Lithuania	Tajikistan
	Macedonia, TFYR	
	Malaysia	
	Maldives	
	Marshall Islands	
	Mauritius	
	Mexico	
	Micronesia, Fed. Sts.	
	Montenegro ^a	
	Morocco	
	Namibia	
	Northern Mariana Islands	
	Occupied Palestinian Territories	
	Oman	
	Palau	
	Panama	
	Paraguay	
	Peru	
	Philippines	
	Poland	
	Romania	
	Russian Federation	
	Saint Kitts and Nevis	
	Saint Lucia	
	Saint Vincent and the Grenadines	
	Samoa (Western)	
	Serbia ^a	
	Seychelles	
	Slovakia	
	South Africa	
	Sri Lanka	
	Suriname	
	Swaziland	
	Syrian Arab Republic	
	Thailand	
	Tonga	
	Trinidad and Tobago	
	Tunisia	
	Turkey	
	Turkmenistan	
	Ukraine	
	Uruguay	
	Vanuatu	
	Venezuela, RB	
	(93 countries or areas)	

Note: Income aggregates use World Bank classification (effective 1 July 2005) based on gross national income (GNI) per capita. They include the following countries or areas that are not UN member states and therefore not included in the HDI tables: high income, Aruba, Bermuda, Cayman Islands, Faeroe Islands, French Polynesia, Greenland, Guam, Isle of Man, Macao, China (SAR), Netherlands Antilles, New Caledonia, Puerto Rico and Virgin Islands (U.S.); middle income, American Samoa. These countries or areas are included in the aggregates by income level. UN member countries Nauru and Tuvalu are not included because of lack of data.

^a The income classification and aggregates based on it refer to Serbia and Montenegro before it separated into two independent states in June 2006.

Countries in the major world aggregates

Developing countries

Afghanistan
Algeria
Angola
Antigua and Barbuda
Argentina
Bahamas
Bahrain
Bangladesh
Barbados
Belize
Benin
Bhutan
Bolivia
Botswana
Brazil
Brunei Darussalam
Burkina Faso
Burundi
Cambodia
Cameroon
Cape Verde
Central African Republic
Chad
Chile
China
Colombia
Comoros
Congo
Congo, Dem. Rep. of the
Costa Rica
Côte d'Ivoire
Cuba
Cyprus
Djibouti
Dominica
Dominican Republic
Ecuador
Egypt
El Salvador
Equatorial Guinea
Eritrea
Ethiopia
Fiji
Gabon
Gambia
Ghana
Grenada
Guatemala
Guinea
Guinea-Bissau

Guyana
Haiti
Honduras
Hong Kong, China (SAR)
India
Indonesia
Iran, Islamic Rep. of
Iraq
Jamaica
Jordan
Kenya
Kiribati
Korea, Dem. Rep.
Korea, Rep. of
Kuwait
Lao People's Dem. Rep.
Lebanon
Lesotho
Liberia
Libyan Arab Jamahiriya
Madagascar
Malawi
Malaysia
Maldives
Mali
Marshall Islands
Mauritania
Mauritius
Mexico
Micronesia, Fed. Sts.
Mongolia
Morocco
Mozambique
Myanmar
Namibia
Nauru
Nepal
Nicaragua
Niger
Nigeria
Occupied Palestinian Territories
Oman
Pakistan
Palau
Panama
Papua New Guinea
Paraguay
Peru
Philippines

Qatar
Rwanda
Saint Kitts and Nevis
Saint Lucia
Saint Vincent and the Grenadines
Samoa (Western)
São Tomé and Príncipe
Saudi Arabia
Senegal
Seychelles
Sierra Leone
Singapore
Solomon Islands
Somalia
South Africa
Sri Lanka
Sudan
Suriname
Swaziland
Syrian Arab Republic
Tanzania, U. Rep. of
Thailand
Timor-Leste
Togo
Tonga
Trinidad and Tobago
Tunisia
Turkey
Tuvalu
Uganda
United Arab Emirates
Uruguay
Vanuatu
Venezuela, RB
Viet Nam
Yemen
Zambia
Zimbabwe

Least developed countries ^a

Afghanistan
Angola
Bangladesh
Benin
Bhutan
Burkina Faso
Burundi

(137 countries or areas)

Cambodia
Cape Verde
Central African Republic
Chad
Comoros
Congo, Dem. Rep. of the
Djibouti
Equatorial Guinea
Eritrea
Ethiopia
Gambia
Guinea
Guinea-Bissau
Haiti
Kiribati
Lao People's Dem. Rep.
Lesotho
Liberia
Madagascar
Malawi
Maldives
Mali
Mauritania
Mozambique
Myanmar
Nepal
Niger
Rwanda
Samoa (Western)
São Tomé and Príncipe
Senegal
Sierra Leone
Solomon Islands
Somalia
Sudan
Tanzania, U. Rep. of
Timor-Leste
Togo
Tuvalu
Uganda
Vanuatu
Yemen
Zambia

(50 countries or areas)

Central and Eastern Europe and the Commonwealth of Independent States (CIS)

Albania
Armenia
Azerbaijan
Belarus
Bosnia and Herzegovina
Bulgaria
Croatia
Czech Republic
Estonia
Georgia
Hungary
Kazakhstan
Kyrgyzstan
Latvia
Lithuania
Macedonia, TFYR
Moldova, Rep. of
Montenegro ^b
Poland
Romania
Russian Federation
Serbia ^b
Slovakia
Slovenia
Tajikistan
Turkmenistan
Ukraine
Uzbekistan

(28 countries or areas)

Organisation for Economic Co-operation and Development (OECD)

Australia
Austria
Belgium
Canada
Czech Republic
Denmark
Finland
France
Germany
Greece
Hungary

(24 countries or areas)

Iceland
Ireland
Italy
Japan
Korea, Rep. of
Luxembourg
Mexico
Netherlands
New Zealand
Norway
Poland
Portugal
Slovakia
Spain
Sweden
Switzerland
Turkey
United Kingdom
United States

(30 countries or areas)

High-income OECD countries

Australia
Austria
Belgium
Canada
Denmark
Finland
France
Germany
Greece
Iceland
Ireland
Italy
Japan
Korea, Rep. of
Luxembourg
Netherlands
New Zealand
Norway
Portugal
Spain
Sweden
Switzerland
United Kingdom
United States

(24 countries or areas)

^a UN classification based on UN-OHRLS 2006.

^b Regional aggregates are based on data for Serbia and Montenegro before it separated into two independent states in June 2006.

Developing countries in the regional aggregates

Arab States

Algeria
Bahrain
Djibouti
Egypt
Iraq
Jordan
Kuwait
Lebanon
Libyan Arab Jamahiriya
Morocco
Occupied Palestinian Territories
Oman
Qatar
Saudi Arabia
Somalia
Sudan
Syrian Arab Republic
Tunisia
United Arab Emirates
Yemen
(20 countries or areas)

East Asia and the Pacific

Brunei Darussalam
Cambodia
China
Fiji
Hong Kong, China (SAR)
Indonesia
Kiribati
Korea, Dem. Rep.
Korea, Rep. of
Lao People's Dem. Rep.
Malaysia
Marshall Islands
Micronesia, Fed. Sts.
Mongolia
Myanmar
Nauru
Palau
Papua New Guinea
Philippines
Samoa (Western)
Singapore
Solomon Islands
Thailand
Timor-Leste
Tonga
Tuvalu
Vanuatu
Viet Nam
(28 countries or areas)

South Asia

Afghanistan
Bangladesh
Bhutan
India
Iran, Islamic Rep. of
Maldives
Nepal
Pakistan
Sri Lanka
(9 countries or areas)

Latin America and the Caribbean

Antigua and Barbuda
Argentina
Bahamas
Barbados
Belize
Bolivia
Brazil
Chile
Colombia
Costa Rica
Cuba
Dominica
Dominican Republic
Ecuador
El Salvador
Grenada
Guatemala
Guyana
Haiti
Honduras
Jamaica
Mexico
Nicaragua
Panama
Paraguay
Peru
Saint Kitts and Nevis
Saint Lucia
Saint Vincent and the Grenadines
Suriname
Trinidad and Tobago
Uruguay
Venezuela, RB
(33 countries or areas)

Southern Europe

Cyprus
Turkey
(2 countries or areas)

Sub-Saharan Africa

Angola
Benin
Botswana
Burkina Faso
Burundi
Cameroon
Cape Verde
Central African Republic
Chad
Comoros
Congo
Congo, Dem. Rep. of the
Côte d'Ivoire
Equatorial Guinea
Eritrea
Ethiopia
Gabon
Gambia
Ghana
Guinea
Guinea-Bissau
Kenya
Lesotho
Liberia
Madagascar
Malawi
Mali
Mauritania
Mauritius
Mozambique
Namibia
Niger
Nigeria
Rwanda
São Tomé and Príncipe
Senegal
Seychelles
Sierra Leone
South Africa
Swaziland
Tanzania, U. Rep. of
Togo
Uganda
Zambia
Zimbabwe
(45 countries or areas)

Indicator table	Indicator
12	secondary
26	female ratio
26	ratio of female to male
	Environmental treaties, ratification of
21	Cartagena Protocol on Biosafety
21	Convention on Biological Diversity
21	Framework Convention on Climate Change
21	Kyoto Protocol to the Framework Convention on Climate Change
	Exports
16	high technology
16	of goods and services
16	manufactured
16	primary
F	
1a, 5	Fertility rate, total
18	Foreign direct investment, net inflows of
21	Fuel consumption, traditional
G	
1	GDP index
	GDP per capita
14	annual growth rate
14	in US\$
1, 1a, 14	in PPP US\$
14	highest value during 1975–2004
14	year of highest value
	GDP, total
14	in PPP US\$ billions
14	in US\$ billions
	Gender empowerment measure (GEM)
25	value and rank
	Gender-related development index (GDI)
24	HDI rank minus GDI rank
24	value and rank
H	
	Health expenditure
6	per capita
6	private
6, 19	public
1a, 9	HIV prevalence
	Human development index (HDI)
1	GDP per capita rank minus HDI rank
2	trends in, since 1975
1	value and rank
	Human poverty index (HPI-1)

Indicator table	Indicator
3	rank minus income poverty rank
3	value and rank
	Human poverty index (HPI-2)
4	rank minus income poverty rank
4	value and rank
	Human rights instruments, status of major international
30	Convention against Torture and Other Cruel, Inhuman or Degrading Treatment or Punishment
30	Convention on the Elimination of All Forms of Discrimination against Women
30	Convention on the Rights of the Child
30	International Convention on the Elimination of All Forms of Racial Discrimination
30	International Convention on the Prevention and Punishment of the Crime of Genocide
30	International Covenant on Civil and Political Rights
30	International Covenant on Economic, Social and Cultural Rights
I	
3	Illiteracy rate, adult
	Immunized, one-year olds fully
6	against measles
6	against tuberculosis
8	poorest 20%
8	richest 20%
16	Imports of goods and services
	Income, estimated earned
24	female
24	male
25	ratio of female to male
	Income inequality measures
15	Gini index
15	income ratio, richest 10% to poorest 10%
15	income ratio, richest 20% to poorest 20%
	Income or consumption, share of
15	poorest 10%
15	poorest 20%
15	richest 10%
15	richest 20%
10	Infant mortality rate
8	poorest 20%
8	richest 20%
22	Internally displaced people
13	Internet users
L	
	Labour rights conventions, status of fundamental

Indicator table **Indicator**

31	Abolition of child labor
31	Elimination of discrimination in respect of employment and occupation
31	Elimination of forced and compulsory labor
31	Freedom of association and collective bargaining
25	Legislators, senior officials and managers, female
1, 1a, 10	Life expectancy at birth
24	female
24	male
1	Life expectancy index
1, 1a, 12	Literacy rate, adult
24, 26	female
26	female as % of male
24	male
12	Literacy rate, youth
26	female
26	female as % of male
4	Literacy skills, functional, population lacking

M

	Malaria
9	prevention, children under age five using insecticide-treated bed nets
9	treatment, children under age five with fever treated with antimalarial drugs
	Maternal mortality ratio
10	adjusted
10	reported
19	Military expenditure
29	Ministerial level, women in government at

O

	Official development assistance (ODA) disbursed, net
17	as % of GNI
17	per capita of donor country
17	to basic social services
17	to least developed countries
17	total
17	untied bilateral
	Official development assistance (ODA) received (net disbursements)
18	as % of GDP
18	per capita
18	total
6	Oral rehydration and continued feeding, children with diarrhoea receiving

Indicator table **Indicator**

P

13	Patents, granted to residents
6	Physicians
	Population
5	ages 65 and above
5	annual growth rate
1a, 5	total
5	under age 15
5	urban
	Poverty, income
3	population living below \$1 a day
3	population living below \$2 a day
4	population living below \$4 a day
4	population living below \$11 a day
4	population living below 50% of median income
3	population living below national poverty line
18	Private flows, other
25	Professional and technical workers, female

R

	Refugees
22	by country of asylum
22	by country of origin
	Research and development (R&D)
13	expenditures
13	researchers in
13	Royalties and licence fees, receipts of

S

7	Sanitation, population with sustainable access to improved
12	Science, engineering, manufacturing and construction, tertiary students in
25	Seats in parliament held by women
29	lower or single house
29	upper house or senate
	Smoking, adult prevalence of
9	men
9	women
	Survival
3	probability at birth of not surviving to age 40
4	probability at birth of not surviving to age 60
	probability at birth of surviving to age 65
10	female
10	male

T

13	Telephone mainlines
16	Trade, terms of

Indicator table **Indicator**

	Tuberculosis cases
9	cured under DOTS
9	detected under DOTS
9	total

U

1a, 10	Under-five mortality rate
8	poorest 20%
8	richest 20%
7	Under height for age, children
8	poorest 20%
8	richest 20%
1a, 7	Undernourished population
3, 7	Under weight for age, children
20	Unemployed people
4	Unemployment, long-term
20	men
20	women
	Unemployment rate
21	average annual
20	female % of male
20	total
	youth
20	female % of male
20	total

V

29	Vote, year women received right to
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Indicator table **Indicator**

W

	Water source, improved
1a, 7	population with sustainable access to
3	population without sustainable access to
	Women's economic and political participation
25	female legislators, senior officials and managers
25	female professional and technical workers
25	seats in parliament held by women
29	lower or single house
29	upper house or senate
29	women in government at ministerial level
29	year first woman elected or appointed to parliament
29	year women received right to stand for election
29	year women received right to vote
	Work time
	men
28	market activities
28	non-market activities
28	total
	total
28	market activities
28	non-market activities
	women
28	as % of male
28	market activities
28	non-market activities
28	total

Index to Millennium Development Goal indicators in the indicator tables

Goals and targets from the Millennium Declaration	Indicators for measuring progress	Indicator table
Goal 1 Eradicate extreme poverty and hunger		
Target 1 Halve, between 1990 and 2015, the proportion of people whose income is less than \$1 a day	1. Proportion of population below \$1 (PPP) a day 2. Poverty gap ratio (incidence × depth of poverty) 3. Share of poorest quintile in national consumption	3 15
Target 2 Halve, between 1990 and 2015, the proportion of people who suffer from hunger	4. Prevalence of underweight children under five years of age 5. Proportion of population below minimum level of dietary energy consumption	3, 7 1a ^a , 7 ^a
Goal 2 Achieve universal primary education		
Target 3 Ensure that, by 2015, children everywhere, boys and girls alike, will be able to complete a full course of primary schooling	6. Net enrolment ratio in primary education 7. Proportion of pupils starting grade 1 who reach grade 5 8. Literacy rate of 15- to 24-year-olds	1a, 12 12 12
Goal 3 Promote gender equality and empower women		
Target 4 Eliminate gender disparity in primary and secondary education, preferably by 2005, and in all levels of education no later than 2015	9. Ratio of girls to boys in primary, secondary and tertiary education 10. Ratio of literate women to men ages 15–24 11. Share of women in wage employment in the non-agricultural sector ^b 12. Proportion of seats held by women in national parliaments	26 ^c 26 ^d 29
Goal 4 Reduce child mortality		
Target 5 Reduce by two-thirds, between 1990 and 2015, the under-five mortality rate	13. Under-five mortality rate 14. Infant mortality rate 15. Proportion of one-year-old children immunized against measles	1a, 10 10 6
Goal 5 Improve maternal health		
Target 6. Reduce by three-quarters, between 1990 and 2015, the maternal mortality ratio	16. Maternal mortality ratio 17. Proportion of births attended by skilled health personnel	10 6
Goal 6 Combat HIV/AIDS, malaria and other diseases		
Target 7 Have halted by 2015 and begun to reverse the spread of HIV/AIDS	18. HIV prevalence among pregnant women 15–24 ^e 19. Condom use rate of the contraceptive prevalence rate 19a. Condom use at last high-risk sex 19b. Percentage of 15- to 24-year-olds with comprehensive correct knowledge of HIV/AIDS 19c. Contraceptive prevalence rate 20. Ratio of school attendance of orphans to school attendance of non-orphans ages 10–14	9 6
Target 8 Have halted by 2015 and begun to reverse the incidence of malaria and other major diseases	21. Prevalence and death rates associated with malaria 22. Proportion of population in malaria-risk areas using effective malaria prevention and treatment measures 23. Prevalence and death rates associated with tuberculosis 24. Proportion of tuberculosis cases detected and cured under directly observed treatment short course (DOTS)	9 ^f 9 ^g 9
Goal 7 Ensure environmental sustainability		
Target 9 Integrate the principles of sustainable development into country policies and programmes and reverse the loss of environmental resources	25. Proportion of land area covered by forest 26. Ratio of area protected to maintain biological diversity to surface area 27. Energy use (kilograms of oil equivalent) per \$1 GDP (PPP) 28. Carbon dioxide emissions per capita and consumption of ozone-depleting chlorofluorocarbons (CFCs) 29. Proportion of population using solid fuels	21 ^h 21 ⁱ
Target 10 Halve, by 2015, the proportion of people without sustainable access to safe drinking water and sanitation	30. Proportion of population with sustainable access to an improved water source, urban and rural 31. Proportion of population with access to improved sanitation, urban and rural	1a ^j , 7 ^j 7 ^k

(continued on next page)

Index to Millennium Development Goal indicators in the indicator tables

(continued)

Goals and targets from the Millennium Declaration	Indicators for measuring progress	Indicator table
Target 11 By 2020, to have achieved a significant improvement in the lives of at least 100 million slum dwellers	32. Proportion of households with access to secure tenure	
Goal 8 Develop a global partnership for development		
Target 12 Develop further an open, rule-based, predictable, non-discriminatory trading and financial system. Includes a commitment to good governance, development, and poverty reduction—both nationally and internationally	<i>Official development assistance (ODA)</i> 33. Net ODA, total and to least developed countries, as a percentage of OECD/DAC donors' gross national income (GNI) 34. Proportion of total bilateral, sector-allocable ODA of OECD/DAC donors to basic social services (basic education, primary health care, nutrition, safe water and sanitation) 35. Proportion of bilateral ODA of OECD/DAC donors that is untied	17 ^l 17
Target 13 Address the special needs of the least developed countries. Includes: tariff- and quota-free access for least-developed countries' exports; enhanced programme of debt relief for HIPC countries and cancellation of official bilateral debt; and more generous ODA for countries committed to poverty reduction	36. ODA received in landlocked countries as proportion of their gross national incomes 37. ODA received in small island developing states as proportion of their gross national incomes <i>Market access</i> 38. Proportion of total developed country imports (by value and excluding arms) from developing countries and from the least developed countries, admitted free of duties 39. Average tariffs imposed by developed countries on agricultural products and textiles and clothing from developing countries 40. Agricultural support estimate for OECD countries as a percentage of their gross domestic product 41. Proportion of ODA provided to help build trade capacity	17
Target 14 Address the special needs of landlocked countries and small island developing states		
Target 15 Deal comprehensively with the debt problems of developing countries through national and international measures in order to make debt sustainable in the long term	<i>Debt sustainability</i> 42. Total number of countries that have reached their HIPC decision points and number that have reached their HIPC completion points (cumulative) 43. Debt relief committed under HIPC Debt Initiative 44. Debt service as a percentage of exports of goods and services	18
Target 16 In cooperation with developing countries, develop and implement strategies for decent and productive work for youth	45. Unemployment rate of 15- to 24-year-olds, male and female and total	20 ^m
Target 17 In cooperation with pharmaceutical companies, provide access to affordable essential drugs in developing countries	46. Proportion of population with access to affordable essential drugs on a sustainable basis	
Target 18 In cooperation with the private sector, make available the benefits of new technologies, especially information and communications	47. Telephone lines and cellular subscribers per 100 people 48a. Personal computers in use per 100 people 48b. Internet users per 100 people	13 ⁿ 13

- a** Tables 1a and 7 present this indicator as undernourished people as a percentage of total population.
- b** Table 27 includes data on female employment by economic activity.
- c** Table presents female (net or gross) enrolment ratio as a percentage of male ratio for primary, secondary and tertiary education levels separately.
- d** Table presents data on female youth literacy data as a percentage of male rate.
- e** Tables 1a and 9 present HIV prevalence among people ages 15–49.
- f** Table includes data on children under age five using insecticide-treated bed nets, and children under age five with fever treated with antimalarial drugs.
- g** Table includes data on tuberculosis cases per 100,000 people.
- h** Table presents this indicator as GDP per unit of energy use (2000 PPP US\$ per kilogram of oil equivalent).
- i** Table includes data on carbon dioxide emissions per capita.
- j** Tables 1a and 7 include data on population with sustainable access to an improved water source for urban and rural combined.
- k** Table includes data on population with sustainable access to improved sanitation for urban and rural combined.
- l** Table includes data on official development assistance (ODA) to least developed countries as a percentage of total ODA.
- m** Table includes data on unemployment rate of 15- to 24-year-olds as total and female rate as a percentage of male rate for OECD countries only.
- n** Table presents telephone lines and cellular subscribers separately.

