

#### **Table 4 - Demographic Yearbook 2022**

Table 4 presents, for each country or area of the world, basic vital statistics for the period 2018 - 2022: live births, crude birth rate, deaths, crude death rate, rate of natural increase, infant deaths, infant mortality rate, life expectancy at birth by sex and total fertility rate.

**Description of variables:** The vital events and rates shown in this table are defined as follows<sup>1</sup>:

Live birth is the complete expulsion or extraction from its mother of a product of conception, irrespective of the duration of pregnancy, which after such separation breathes or shows any other evidence of life such as beating of the heart, pulsation of the umbilical cord, definite movement of voluntary muscles, whether or not the umbilical cord has been cut or the placenta is attached; each product of such a birth is considered live born.

Death is the permanent disappearance of all evidence of life at any time after live birth has taken place (post-natal cessation of vital functions without capability of resuscitation).

Infant deaths are deaths of live born infants under one year of age.

Life expectancy at birth is defined as the average number of years of life for males and females if they continued to be subject to the same mortality experienced in the year(s) to which these life expectancies refer.

The total fertility rate is the average number of children that would be born alive to a hypothetical cohort of women if, throughout their reproductive years, the age-specific fertility rates remained unchanged. The standard method of calculating the total fertility rate is the sum of the age-specific fertility rates.

Crude birth rates and crude death rates presented in this table are calculated using the number of live births and the number of deaths obtained from civil registers. These civil registration data are used only if they are considered reliable (estimated completeness of 90 per cent or more).

Similarly, infant mortality rates presented in this table are calculated using the number of live births and the number of infant deaths obtained from civil registers. If, however, the registration of births or infant deaths for any given country or area is estimated to be less than 90 per cent complete, the rates are not calculated.

For some countries, the data and rates presented in this table are based on vital statistics data sourced from censuses or demographic surveys.

**Rate computation:** The crude birth and death rates are the annual number of each of these vital events per 1 000 mid-year population. Infant mortality rate is the annual number of deaths of infants under one year of age per 1 000 live births in the same year.

Rates of natural increase are the difference between the crude birth rate and the crude death rate. It should be noted that the rates of natural increase presented here may differ from the population growth rates presented in table 3 as rates of natural increase do not take net international migration into account while the population growth rates do.

Crude birth rates, crude death rates and infant mortality rates that appear in this table have been calculated by the United Nations Statistics Division, unless otherwise noted. Exceptions include official estimated rates for India, which were based on the sample registration system. Rates calculated by the United Nations Statistics Division presented in this table have been limited to those countries or areas having a minimum number of 30 events (for live births, deaths or infant deaths) in a given year.

**Reliability of data:** Rates calculated on the basis of registered vital statistics which are considered unreliable (estimated to be less than 90 per cent complete) are not calculated. Estimated rates, prepared by individual countries or areas, are presented whenever applicable.

The designation of vital statistics as being either reliable or unreliable is discussed in general in section 4.2 of the Technical Notes. The technical notes for tables 9, 15 and 18 provide specific information on reliability of statistics on live births, infant deaths, and deaths, respectively.

The values shown for life expectancy in this table come from official life tables. It is assumed that, if necessary, the basic data (population and deaths classified by age and sex) have been adjusted for deficiencies before their use in constructing the life tables.

**Limitations:** Statistics on births, deaths and infant deaths are subject to the same qualifications as have been set forth for vital statistics, in general, in section 4 of the Technical Notes and in the technical notes for individual tables presenting detailed data on these events (table 9, live births; table 15, infant deaths; table 18, deaths).

In assessing comparability, it is important to take into account the reliability of the data used to calculate the rates, as discussed above.

The problem of obtaining precise correspondence between numerator (births and deaths) and denominator (population for crude birth and death rates) as regards the inclusion or exclusion of armed forces, refugees, displaced persons and other special groups is particularly difficult where vital rates are concerned.

It should also be noted that crude rates are particularly affected by the age-sex structure of the population. Infant mortality rates, and to a much lesser extent crude birth rates and crude death rates, are affected by the variation in the definition of a live birth and tabulation procedures.

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## NOTES

<sup>1</sup> *Principles and Recommendations for a Vital Statistics System Revision 3*, Sales No. E.13.XVII.10, United Nations, New York, 2014.