METHODOLOGICAL NOTES

All data refer to the resident population of the Czech Republic, irrespective of citizenship. Since 2001, the figures also include (in accordance with the Population and Housing Census 2001) foreigners with long-term stay (i.e. the stay based on visa over 90 days, as stipulated by Act No. 326/1999 Coll.) and foreigners with granted asylum status (in compliance with Act No. 325/1999 Coll.). Since 1st May 2004, in accordance with amendment No. 326/1999 Coll., the figures include citizens of the European Union with temporary stay on the territory of the Czech Republic, and citizens of other countries with long-term stay. The data contain also information on events (marriages, births and deaths) of permanent residents of CR that occurred abroad.

The results of data processing for regions and areas comply with the constitutional Act No. 347/1997 Coll. on the establishment of higher self-governing territories (and its amendments No. 176/2001 Coll. and No. 135/2011 Coll.), Act No. 387/2004 Coll. on changes of regional boundaries, and the classification CZ-NUTS introduced by the CZSO provision from 27th April 1999. Since 1st January 2008, in accordance with the Eurostat system of classifications, the level of districts NUTS 4 is replaced by LAU classification (Local Administrative Units), namely by level LAU 1. All regional breakdowns refer to situation as of 1st January of the given year.

In all tables the 'age' (in terms of years, months, weeks or days) refers to completed age.

Population and vital statistics in the CR for 1921–2010
The retrospective of population and vital statistics encompasses events, which took place on the territory of the CR. By 1929, the number of deaths under 1 month of age had been measured instead of the number of deaths under 28 days of age. As of 1st July 1954, internal and external migration relating to the CR has been encompassing all persons (including foreigners) with permanent residence in the CR and of 1st January 2001 all persons with permanent residence in the CR and foreigners with 90-days-and-over visa and foreigners with asylum status granted. Since 1st May 2004, the figures include also citizens of the European Union with temporary stay on the territory of the Czech Republic, and citizens of other countries with long-term stay.

A. Population and vital statistics: overview
Towns (a total of 593, incl. Praha) are those that enjoyed the status of town (were governed by municipal authorities) on 1st January 2010.

B. Marriages
Except table B.02, all tables are territorially classified by residence of groom.

D. Births
Decree No. 11/1988 of the Ministry of Health of the CSR from 22nd January 1988 defines a live-born child as a child fully expelled or removed out of the mother's body, who gives a sign of life and whose birth weight is (a) 500 g or more, or (b) lower than 500 g, if it survives 24 hours after delivery. The signs of life include respiration, heartbeat, umbilicus pulsation or active movement of muscles, even if umbilical cord is not interrupted or placenta delivered. A stillborn child is a child fully expelled or removed out of the mother's body, not showing any sign of life and whose birth weight is 1,000 g or more.

E. Abortions
The tables listing abortions are prepared from a set of individual data taken over by the CZSO from the Institute of Health Information and Statistics of the CR. The abortion is termination of pregnancy in which (a) the foetus does not show any sign of life and its birth weight is below 1,000 g or cannot be measured if the pregnancy takes less than 28 weeks, (b) the foetus shows at least one of the signs of life and its birth weight is below 500 g, but it does not live longer than 24 hours after delivery, (c) the foetal egg without a foetus or gestational decidua is removed out of the female's uterus. Considered as abortions are also cases of termination of ectopic pregnancy or induced abortions carried out as stipulated in special regulations. The former were included under induced abortions in 1988 to 1991 and under other abortions as of 1992. On 1st January 1994, the Ministry of Health of the CR introduced new printed forms with more detailed nomenclatures of the marital status and education of women and these were applied in the processing without any adjustment.

G. Deaths by cause
The tables are arranged by the primary cause of death. On 1st January 1994 the 10th decennial revision of the International Statistical Classification of Diseases and Related Health Problems (ICD-10) was put into use in the Czech Republic by Act 278/1992 of the Czech National Council. Since 1st January 2009 the

second edition of the 10th revision of International Statistical Classification of Diseases including updates 2004-2008 has come into force in the CR. The organization responsible for its use in practice is the Institute of Health Information and Statistics of the Czech Republic. The number of deaths in XIX chapter is equal to the number of deaths in XX chapter, as it is different classification of deaths by external causes. In XIX chapter deaths are classified by the primary cause (table G.05), while in chapter XX (table G.06) by the mechanism of death (formerly supplementary classification E - External causes of injury and poisoning).

H. Migration
Migration for a higher self-governing territorial unit is defined as the sum of the volume for lower self-governing territorial units plus migration between lower self-governing territorial units. Gross migration is the sum of immigration and emigration within a given self-governing territorial unit. Internal migration not includes cases of migrating between town planning districts of the capital city of Prague.

INDICATORS

All indicators included in this publication refer to one calendar year. The calculation of indicators is based on demographic events or population, which refer to the same calendar year. The population used for calculation of rates is the population at mid-year, defined as population as of 1ˢᵗ July of a given year.

Late foetal mortality rate
The number of stillbirths per 1,000 total births.

Infant mortality rate
The number of deaths under 1 year of age per 1,000 live births.

Neonatal mortality rate
The number of deaths under 28 days of age per 1,000 live births.

Perinatal mortality rate
The number of stillbirths and deaths under 7 days of age per 1,000 total births.

Fertility rate by age (Age-specific fertility rate - f_x)
The number of live births born to women at particular age (age group) per 1,000 women at given age (age group).

Total fertility rate *(the sum of fertility rates by age)*
The average number of children that would be born alive to a woman with presumption that age-specific fertility rates of a given year remain unchanged during her childbearing period (age 15-49).

$$TFR = \sum_{15}^{49} f_x = \sum_{15}^{49} \frac{N_x^v}{P_x^f}$$

Gross reproduction rate
The average number of girls that would be born alive to a woman with presumption that age-specific fertility rates of a given year remain unchanged during her childbearing period (age 15-49).

$$GRR = \sum_{15}^{49} f_x^f = \sum_{15}^{49} \frac{N_x^{v,f}}{P_x^f}$$

Net reproduction rate
The average number of girls that would be born alive to a woman and will survive until the age of her mother assuming that age-specific fertility and mortality rates of a given year remain unchanged during her childbearing period (age 15-49).

$$NRR = \sum_{15}^{49} \left(f_x^{\check{z}} \cdot \frac{L_x^{\check{z}}}{100000} \right)$$

Abortion rate by age (Age-specific abortion rate - a_x)
The number of abortions of women at particular age (age group) per 1,000 women at given age (age group).

Total abortion rate *(the sum of abortion rates by age)*
The average number of abortions per woman assuming that age-specific abortion rates of a given year remain unchanged during her childbearing period (age 15-49).

$$TAR = \sum_{15}^{49} a_x = \sum_{15}^{49} \frac{A_x}{P_x^f}$$

Induced abortion rate by age (Age-specific induced abortion rate - a_x^i)
The number of induced abortions of women at particular age (age group) per 1,000 women at given age (age group).

Total induced abortion rate *(the sum of induced abortion rates by age)*
The average number of induced abortions per woman assuming that age-specific induced abortion rates of a given year remain unchanged during her childbearing period (age 15-49).

$$TAR^i = \sum_{15}^{49} a_x^i = \sum_{15}^{49} \frac{A_x^i}{P_x^f}$$

Pregnancy rate by age (Age-specific pregnancy rate)
The number of pregnancies of women (the sum of live births, stillbirths and abortions) at given age (age group) per 1,000 women at given age (age group).

Total pregnancy rate (the sum of pregnancy rates by age)
The average number of pregnancies per woman with presumption that age-specific pregnancy rates of a given year remain unchanged during her childbearing period (age 15-49).

$$TPR = \sum_{15}^{49} \frac{A_x + N_x^v + N_x^d}{P_x^f}$$

Mortality rate by sex and age
The number of deaths of particular sex and at particular age (age group) per 1,000 population of given sex and at given age (age group).

Mortality rate by sex, age and chapter of causes of death
The number of deaths of particular sex and at particular age (age group) by particular chapter of causes of death per 100,000 population of given sex and at given age (age group).

NUPTIALITY LIFE TABLES INDICATORS

One-absorption-state nuptiality life tables are based on the numbers of people (P^s) by age, sex and marital state (s – single) as of 1st January of a year and the numbers of marriages (S^s), deaths (D^s) and migrants (E^s, I^s) of single population by age, sex and year of born (z) during an analysed year. The age (x) means the age at the beginning of the year. The nuptiality life tables are calculated from the second main group of demographic events, separately for single males and females. Only events from year 15 till 49 are significant.

The entry characteristic of the tables is **the first-marriage probability** by sex and age which measures the risk of contracting a first marriage during a year:

$$q_x^m = \frac{^zS^s}{P_x^s - 0,5 \cdot {}^zD^s - 0,5 \cdot {}^zE^s + 0,5 \cdot {}^zI^s}$$

Table number of single (l_x^m) – the hypothetical number of single individuals at a given age and sex; the table root (l_{15}) is 100,000.

$$l_{x+1}^m = l_x^m - d_x^m \qquad\qquad l_{50}^m = l_{49}^m - 0,5 \cdot d_{49}^m$$

Table number of marriages (d_x^m) – the hypothetical number of marriages of single people at a given age and sex during a year.

$$d_x^m = l_x^m \cdot q_x^m$$

The final characteristic of tables is the table number of single at an exact age of 50 ($l_{50'}$), resp. the share of people (from the table root) who would entry the first marriage till the day of their 50th birthday with the presumption of unchangeable first-marriage probabilities of a given year.

The total first marriage rate: $\quad TFMR^s = 1 - \dfrac{l_{50'}}{l_{15}}$

The mean age at first marriage is derived from age distribution of a table function d_x^m:

$$\overline{x^s} = \frac{\sum_{15}^{49} (x+1) \cdot d_x^m}{\sum_{15}^{49} d_x^m}$$

COMPLETE LIFE TABLES INDICATORS

The complete mortality life tables are calculated from the third main group of demographic events, separately for males and females. There are based on the numbers of people (P) by age and sex as of 1st July of a year and the numbers of deaths (D) by age and sex during an analysed year.

Death probability (q_x)
The probability that an individual at the exact age of x will die in a given period, i.e. will die before the exact age of x+1.

$$q_x = 1 - e^{m_x}$$

The function q_x is derived from the age-specific mortality rates (m_x) according the formula above. After equalization the function is further adjusted by Gompertz-Makeham formula (method of King-Hardy).

Table number of survivors (l_x)
The hypothetical number of individuals alive at the exact age of x out of 100,000 live births (table root - l_0), given the mortality conditions of the reference period.

$$l_{x+1} = (1 - q_x) \cdot l_x$$

Table number of deaths (d_x)
The hypothetical number of individuals who die at the age of x.

$$d_x = l_x - l_{x+1}$$

Table number of person-years (L_x)
The hypothetical average number of individuals alive at the age of x; calculated as the average of two subsequent table numbers of survivors (except for the age of 0). At the age of 0, the 'α' informs what is the ratio of infant deaths born in the given year from all infant deaths in analysed year.

$$L_x = \frac{l_x + l_{x+1}}{2} \qquad\qquad L_0 = l_0 - \alpha \cdot d_0$$

Auxiliary indicator (T_x)
The number of years of life to be lived by the table generation (not of an individual) at a given age.

$$T_x = T_{x+1} + L_x$$

Life expectancy (e_x)
Indicate the expected remaining life duration with presumption of unchangeable mortality conditions of a given year. It is a synthetic indicator displaying mortality conditions of a given year in all age groups.

$$e_x^0 = \frac{T_x}{l_x}$$