



SAMPLE REGISTRATION SYSTEM STATISTICAL REPORT 2014



**OFFICE OF THE REGISTRAR GENERAL &
CENSUS COMMISSIONER, INDIA
MINISTRY OF HOME AFFAIRS
GOVERNMENT OF INDIA
NEW DELHI**

**SAMPLE REGISTRATION SYSTEM
STATISTICAL REPORT 2014
(Field work period: 2015-16)**

**OFFICE OF THE REGISTRAR GENERAL &
CENSUS COMMISSIONER, INDIA
MINISTRY OF HOME AFFAIRS
GOVERNMENT OF INDIA
NEW DELHI**

P R E F A C E

The Sample Registration System (SRS) in India is the largest demographic survey in the world covering about 1.7 million households and 7.5 million population. It has continued to be the main source of information in fertility and mortality indicators both at the State and National levels. Apart from the large sample size and geographical spread in most of the Districts, the system has a unique feature of dual recording, which involves retrospective half-yearly surveys. The continuous enumeration and retrospective surveys are followed by the process of matching of the two records and subsequent field verification of unmatched and partially matched events. The system provides a cross check on the correctness and completeness of the events of birth and death listed by the two independent functionaries.

2. Based on the dual record system, the SRS has been providing reliable estimates of fertility and mortality on a regular basis from 1971 onwards. It includes data on population composition by broad age groups, sex and marital status, fertility and mortality levels, for India and bigger States (with population 10 million and above) separately for rural and urban areas. Certain items of demographic interest such as mean age at effective marriage for females, interval between current and previous live birth and also distribution of live births by birth order have continued to form part of the SRS report. The sex ratio at birth has been included in this Report. Moreover, in order to facilitate effective tracking of Millennium Development Goals (MDGs) on under-five mortality, the estimates of under-five mortality for India and bigger States separately for rural and urban also by sex have been introduced in this Report.

3. The present Report is the first in the series that has been prepared based on data collected from new SRS sample units selected on the 2011 Census frame. Apart from the fertility and mortality indicators, this Report includes data on crude birth rate, crude death rate and infant mortality rates at Natural Division (group of contiguous districts) level for the first time. The fieldwork and data processing has been completely automated for the first time in 45 years. It has been our endeavour to release the report of a particular year by year end of the succeeding year. However, adhering to this timeline during unit replacement period was a big challenge as one additional survey namely Baseline was to be conducted before half yearly survey was undertaken in the same time line. Nevertheless, we have succeeded in restricting the delay to a few months only.

4. The SRS has been a joint effort of the Central and State Governments. This study has been made possible with the active involvement of staff and officers of the Directorates of Economics & Statistics of Kerala and Maharashtra as well as the staff and officers of the Directorates of Census Operations, Map Division and the SRS Wing of the Vital Statistics Division at the headquarters. I am thankful to all of them. I must specially place on record my appreciation of the efforts put in by Shri Rajeev Kumar, SRO, Shri Jagat Singh, SI Grade-I, Shri Ravi Kant, SI Grade-II, Ms. Prabha Agarwal, DEO and Shri R.S. Kar, DEO in the preparation of this Report supervised by Shri Rohit Bhardwaj, Deputy Registrar General under the overall guidance of Shri Kameshwar Ojha, Addl. RGI.

(SAILESH)

Additional Secretary & Registrar General of India

CONTENTS

	Page
List of statements	ix- xii
List of charts	xiii
Definitions	xv-xvi
Figures at a glance, India – 2014	xvii-xix
National level trends for few core indicators 2009-14	xxi
Executive Summary	xxiii-xxiv
Map - Birth rate by NSS Natural Division, 2014	xxv
Map - Death rate by NSS Natural Division, 2014	xxvii
Map - Infant mortality rate by NSS Natural Division, 2014	xxix
Chapter 1- Introduction	1-10
Chapter 2 - Population Composition	11-29
Chapter 3 - Estimates of Fertility Indicators	30-66
Chapter 4 - Estimates of Mortality Indicators	67-89

Detailed Tables

1.	Percentage distribution of estimated population by age-group, sex and residence, 2014	93-104
2.	Percentage distribution of population by sex, marital status and age-group, 2014	105-127
3.	Fertility Indicators, 2014	128-134
4.	Fertility indicators by level of education of women, 2014	135-157
5.	Percentage distribution of live births by order of birth, 2014	158-164
6.	Percentage distribution of current live births by birth interval, 2014	165-166
7.	Percentage distribution of current live births by birth interval and birth order, 2014	167-173
8.	Age-specific death rate by sex and residence, 2014	174-196
9.	Child (Aged 0-4 years) and infant mortality indicators, 2014	174-196
10.	Percentage distribution of deaths to total deaths by residence, sex and age-group, 2014	197-208
11.	Birth rate, death rate and infant mortality rate by NSSO natural division, 2014	209-211

Tables on Trend

12.	Annual estimates of Birth rate by residence, India and bigger States, 2009-14	214
13.	Annual estimates of Death rate by sex, India and bigger States, 2009-14	215
14.	Annual estimates of Infant mortality rate by sex, India and bigger States, 2009-14	216
15.	Annual estimates of Total Fertility rate by residence, India and bigger States, 2009-14	217
16.	Sex ratio at birth (female per 1000 male) by residence, India and bigger States, 2008-10 to 2012-14	218
17.	Percent of live births where the mothers received medical attention at delivery either at Government hospitals or at Private hospitals, India and bigger States, 2009-14	219
18.	Percent of deaths where medical attention received before death was either at Government hospitals or at Private hospitals, India and bigger States, 2009-14	220

Annexure

I	Map of natural divisions	223
II	List of natural divisions along with their districts	225-239

LIST OF STATEMENTS

		Page
General		
1	Number of sample units at different replacement period	2
2	Number of sample units and population covered, India, States and union territories, 2014	6
Population Composition		
3	Percentage distribution of population by broad age groups to total population by sex and residence, India, 2014	12
4	Percentage of population in the age group 0-4 years to total population by sex and residence, India and bigger States, 2014	15
5	Percentage of population in the age group 0-14 years to total population by sex and residence, India and bigger States, 2014	17
6	Percentage of population in the age group 15-59 years to total population by sex and residence, India and bigger States, 2014	19
7	Percentage of population in the age group 60 years and above to total population by sex and residence, India and bigger States, 2014	21
8	Percentage distribution of population by marital status and sex, India and bigger States, 2014	23
9	Percentage distribution of population age 10+ by marital status and sex, India and bigger States, 2014	24
10	Percentage distribution of female age 10+ by marital status and residence, India and bigger States, 2014	25
11	Percentage distribution of female age 15+ by marital status and residence, India and bigger States, 2014	26
12	Percentage of females by age at effective marriage and by residence, India and bigger States, 2014	27
13	Mean age at effective marriage of female by residence, India and bigger States, 2014	28

Fertility Indicators		Page
14	CBR (Crude birth rate) by residence, India and bigger States, 2014	31
15	Percent change in average crude birth rate between 2002-04 and 2012-14 by residence, India and bigger States	33
16	Sex ratio (female per 1000 male) at birth by residence, India and bigger States 2012-14	35
17	GFR (General fertility rate) by residence, India and bigger States, 2014	37
18	Percentage change in average GFR (General fertility rate) between 2002-04 and 2012-14, by residence, India and bigger States	40
19	ASFRs (Age specific fertility rates) by residence, 2014	41
20	Percentage change in age specific fertility rates by residence between 2002-04 and 2012-14, India	43
21	ASFRs (Age specific fertility rates), India and bigger States, 2014	44
22	Percentage distribution of cumulative fertility by age group, India and bigger States, 2014	45
23	Mean age of fertility and associated standard deviation, India and bigger States, 2014	47
24	TFR (Total fertility rate) by residence, India and bigger States, 2014	48
25	Percentage change in average TFR (Total fertility rate) between 2002-04 and 2012-14 by residence, India and bigger States	51
26	GRR (Gross reproduction rate) by residence, India and bigger States, 2014	52
27	ASMFRs (Age specific marital fertility rates) by residence, India 2014	53
28	ASMFRs (Age specific marital fertility rates) India and bigger States, 2014	54
29	TMFRs (Total marital fertility rates) by residence, India and bigger States, 2014	55

		Page
30	Percentage change in average Total Marital Fertility rate (TMFR) between 2002-04 and 2012-14 by residence, India and bigger States	56
31	Percentage female population in the age group 15-49 by level of education, India and bigger States, 2014	57
32	GFR (General fertility rate) by level of education of women, India and bigger States, 2014	58
33	ASFR (Age specific fertility rate) by level of education of women and residence, India, 2014	59
34	TFR (Total fertility rate) by level of education of women, India and bigger States, 2014	60
35	Percentage distribution of current live births by birth order, India and bigger States, 2014	62
36	Percentage distribution of current live births by birth order and residence, India and bigger States, 2014	63
37	Percentage distribution of second and higher order live births by interval, India and bigger States, 2014	64
38	Percentage distribution of second and higher order live births by interval and residence, India and bigger States, 2014	65
39	Percentage distribution of live births by type of medical attention received by the mother at delivery by residence, India and bigger States, 2014	66

Mortality Indicators

40	CDR (Crude death rate) by residence, India and bigger States, 2014	68
41	Percentage change in average crude death rate between 2002-04 and 2012-14, by residence, India and bigger States	70
42	CDR (Crude death rate) by sex and residence, India, 2014	72
43	CDR (Crude death rate) by sex, India and bigger States, 2014	72
44	Percentage distribution of deaths by broad age groups, India and bigger States, 2014	73
45	Percentage of infant deaths to total deaths by residence, India and bigger States, 2014	74

	Page	
46	IMR (Infant mortality rate) by sex and residence, India and bigger States, 2014	75
47	Percentage change in average IMR (Infant mortality rate) between 2002-04 and 2012-14 by residence, India and bigger States	78
48	Neo-natal mortality rate and percentage share of neo-natal deaths to infant deaths by residence, India and bigger States, 2014	79
49	Early neo-natal mortality rate and percentage share of early neo-natal deaths to infant deaths by residence, India and bigger States, 2014	80
50	Peri-natal mortality rate and Still birth rates by residence, India and bigger States, 2014	81
51	Percentage of deaths in the age group 0-4 years to total deaths by residence, India and bigger States, 2014	82
52	Estimated death rate for children age 0-4 years by sex and residence, India and bigger States, 2014	83
53	Under-five Mortality Rate by sex and residence, India and bigger States, 2014	84
54	Death rates for children age 5-14 years by sex and residence, India and bigger States, 2014	86
55	Death rate for persons age 15-59 years by sex and residence, India and bigger States, 2014	87
56	Death rate for persons age 60 years and above by sex and residence, India and bigger States, 2014	88
57	Percentage distribution of deaths by type of medical attention received before death by residence, India and bigger States, 2014	89

LIST OF CHARTS

		Page
1.	Flow chart	10
2.	Percentage distribution of population by broad age-groups and residence, India, 2014	13
2A.	Population Pyramid, India, 2014	14
3.	Percentage of child population (0-4 years) to total population by residence, India and bigger States, 2014	16
4.	Percentage of population age 0-14 years to total population by residence, India and bigger States, 2014	18
5.	Percentage of population age 15-59 years to total population by residence, India and bigger States, 2014	20
6.	Percentage of population age 60+ to total population by residence, India and bigger States, 2014	22
7.	Mean age at effective marriage of female by residence, India, 2014	29
8.	CBR (Crude birth rate) by residence, India and bigger States, 2014	32
9.	Distribution of bigger States by values of birth rate for rural and urban areas, 2014	34
10.	Sex ratio at birth by residence, India and bigger States, 2012-2014	36
11.	GFR (General fertility rate) by residence, India and bigger States, 2014	38
12.	Distribution of bigger States by values of GFR (General fertility rate) for rural and urban areas, 2014	39
13.	ASFRs (Age-specific fertility rates) by residence, India, 2014	42
14.	Percentage cumulative ASFRs by residence, India, 2014	46
15.	TFR (Total fertility rate) by residence, India and bigger States, 2014	49
16.	Distribution of bigger States by values of TFR (Total fertility rate) for rural and urban areas, 2014	50
17.	TFR (Total fertility rate) by level of education of women by residence, India, 2014	61
18.	CDR (Crude death rate) by residence, India and bigger States, 2014	69
19.	Distribution of bigger States by values of death rate for rural and urban areas, 2014	71
20.	IMR (Infant mortality rate) by residence, India and bigger States, 2014	76
21.	Distribution of bigger States by IMR (Infant mortality rate) for rural and urban areas, 2014	77
22.	U5MR (Under-five Mortality Rate) by residence, India and bigger States, 2014	85

DEFINITIONS

Crude birth rate (CBR)	=	$\frac{\text{Number of live births during the year}}{\text{Mid-year population}} \times 1000$
Age-specific fertility rate (ASFR)	=	$\frac{\text{Number of live births in a particular age-group}}{\text{Mid-year female population of the same age-group}} \times 1000$
General fertility rate (GFR)	=	$\frac{\text{Number of live births in a year}}{\text{Mid-year female population in the age-group (15-49) years}} \times 1000$
Total fertility rate (TFR)	=	$\frac{5 \times \sum_{15-19}^{45-49} \text{ASFR}}{1000}$
Gross reproduction rate (GRR)	=	$\frac{5 \times \sum_{15-19}^{45-49} \text{ASFR for female live births}}{1000}$
Age-specific marital fertility rate (ASMFR)	=	$\frac{\text{Number of live births in a particular age-group}}{\text{Mid-year married female population of the same age-group}} \times 1000$
General marital fertility rate (GMFR)	=	$\frac{\text{Number of live births in a year}}{\text{Mid-year married female population in the age-group (15-49) year}} \times 1000$
Total marital fertility rate (TMFR)	=	$\frac{5 \times \sum_{15-19}^{45-49} \text{ASMFR}}{1000}$
Crude death rate (CDR)	=	$\frac{\text{Number of deaths during the year}}{\text{Mid-year population}} \times 1000$

$$\text{Age-specific mortality rate (ASMR)} = \frac{\text{Number of deaths in a particular age-group}}{\text{Mid-year population of the same age-group}} \times 1000$$

Under-five Mortality Rate = The under-five mortality is the probability (${}_5q_0$) that a child born in a specific year or time period will die before reaching the age of five, subject to current age specific mortality rates. It is expressed as a rate per 1,000 live births.

$$\text{Infant mortality rate (IMR)} = \frac{\text{Number of infant deaths during the year}}{\text{Number of live births during the year}} \times 1000$$

Infant mortality rate comprises of two parts viz. Neo-natal mortality rate and Post neo-natal mortality rate. The neo-natal mortality rate also comprises of two parts viz. Early neo-natal mortality rate and late neo-natal mortality rate. These are defined as:

$$\text{Neo-natal mortality rate (NMR)} = \frac{\text{Number of infant deaths of < than 29 days during the year}}{\text{Number of live births during the year}} \times 1000$$

$$\text{Early neo-natal mortality rate} = \frac{\text{Number of infant deaths of < than 7 days during the year}}{\text{Number of live births during the year}} \times 1000$$

$$\text{Late neo-natal mortality rate} = \frac{\text{Number of infant deaths of 7 days to < than 29 days during the year}}{\text{Number of live births during the year}} \times 1000$$

$$\text{Post neo-natal mortality rate (PNMR)} = \frac{\text{Number of infant deaths of 29 days to < than one year during the year}}{\text{Number of live births during the year}} \times 1000$$

$$\text{Peri-natal mortality rate (PMR)} = \frac{\text{Number of still births and infant deaths of < than 7 days during the year}}{\text{Number of live births and still births during the year}} \times 1000$$

$$\text{Still birth rate (SBR)} = \frac{\text{Number of still births during the year}}{\text{Number of live births and still births during the year}} \times 1000$$