

# Millennium Development Goals and Karnataka

A Status Report August 2015



Centre for Budget and Policy Studies



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## **Abbreviations**

AIDS	Acquired Immunodeficiency Syndrome
ANC	Ante-Natal Care
ANM	Auxiliary Nurse Midwife
API	Annual Parasite Index
ASHA	Accredited Social Health Activist
AWC	Anganwadi Centres
AWW	Anganwadi Worker
AYY	Antodaya Anna Yojana
BPL	Below Poverty Line
BSS	Behavioural Surveillance Survey
CES	Consumer Expenditure Survey
DISE	District Information System for Education
DLHS	District Level Household Survey
DPEP	District Primary Education Programme
EDPT	Early Detection and Prompt Treatment
ESCAP	Economic and Social Commission for Asia and the Pacific
FSW	Female Sex Worker
GER	Gross Enrolment Rate
GIS	Geographic Information System
GPI	Gender Parity Index
GSDP	Gross State Domestic Product
HDI	Human Development Index
HIV	Human Immunodeficiency Virus
HLWC	High-Level Working Committee
HMIS	Health Management Information System
ICDS	Integrated Child Development Services
ICT	Information and Communication Technologies
ICTC	Integrated Counselling and Testing Centre
IDU	Intravenous Drug User
IFA	Iron-Folic Acid
IMNCI	Integrated Management of Neonatal and Childhood Illnesses

IMR	Infant Mortality Rate
IPCC	International Panel on Climate Change
IT	Information Technology
JSY	Janani Suraksha Yojana
JNNURM	Jawaharlal Nehru National Urban Renewal Mission
KSAPS	Karnataka State AIDS Prevention Society
KSRLM	Karnataka State Rural Livelihood Mission
LPG	Liquefied Petroleum Gas
MDG	Millennium Development Goals
MGNREGA	Mahatma Gandhi National Rural Employment Generation Act
MLA	Member of the Legislative Assembly
MMRP	Modified Mixed Reference Period
MNRC	Modified Nutritional Rehabilitation Centres
MoHFW	Ministry of Health and Family Welfare
MoSPI	Ministry of Statistics and Programme Implementation
MoWCD	Ministry of Women and Child Development
MP	Member of Parliament
MPCE	Monthly Per Capita Expenditure
MRP	Mixed Reference Period
MSM	Men who have Sex with Men
NACP	National AIDS Control Programme
NER	Net Enrolment Ratio
NFHS	National Family Health Survey
NFSM	National Food Security Mission
NHM	National Health Mission
NRHM	National Rural Health Mission
NRLM	National Rural Livelihood Mission
NSS	National Sample Survey
NSSO	National Sample Survey Organisation
NVBDCP	National Vector Borne Disease Control Programme
PDS	Public Distribution System
PGR	Poverty Gap Ratio
PHCR	Poverty Head Count Ratio
PIP	Project Implementation Plan
PNC	Postnatal Care
RMSA	Rashtriya Madhyamik Shiksha Abhiyan
RNTCP	Revised National Tuberculosis Control Programme
RSoC	Rapid Survey on Children
SC	Scheduled Caste
SHG	Self-Help Group
SIMS	State Information Management Systems
SJSRY	Swarna Jayanti Shahari Rozgaar Yojana

SRS	Sample Registration System
SSA	Sarva Shiksha Abhiyan
ST	Scheduled Tribe
STI	Sexually Transmitted Infection
ТВ	Tuberculosis
TRAI	Telecom Regulatory Authority of India
U5MR	Under-five Mortality Rate
U-DISE	Unified-District Information System for Education
UMS	Urban Malaria Scheme
UN	United Nations
UNESCO	United Nations Educational, Scientific and Cultural Organisation
UNFPA	United Nations Population Fund
UNICEF	United Nations Children's Emergency Fund
URP	Uniform Reference Period
UT	Union Territory
WGEEP	Western Ghats Ecology Expert Panel
WHO	World Health Organisation





Goal 1:	Ś	Eradicate Extreme Poverty and Hunger
Goal 2:	Ô	Achieve Universal Primary Education
Goal 3:	Ç	Promote Gender Equality and Empower Women
Goal 4:	Ĩ	Reduce Child Mortality
Goal 5:	Î.	Improve Maternal Health
Goal 6:	•	Combat HIV/AIDS, Malaria and TB
Goal 7:	R	Ensure Environmental Sustainability
Goal 8:	Ĩ	Develop Global Partnership for Development

#### Millennium Development Goals

Karnataka is India's ninth largest state and is home to 5.05% of India's population. The state has 30 districts and four revenue divisions. It is rich and diverse in natural resources. Karnataka has seen a lot of progress in the last few decades due to its booming information technology (IT) sector. The capital city, Bengaluru, is known as the Silicon Valley of India. Recent Swachh Bharat Rankings released by the Ministry of Urban Development showed that four cities from Karnataka were among the top 10 clean cities in India with Mysuru being crowned the cleanest.<sup>1</sup>

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<sup>&</sup>lt;sup>1</sup> Released by the Press Information Bureau, Government of India, Ministry of Urban Development on 8/8/15 http://pib.nic.in/ newsite/PrintRelease.aspx?relid=124639, accessed 10/08/15

*Karnataka has been a frontrunner in its use of IT for administration in various sectors.* 

Karnataka's Economic Survey 2014-15 (Economic Survey of Karnataka 2014-15, 2015) estimates that its Gross State Domestic Product (GSDP) at constant (2004–05) prices is expected to grow at 7.0% and rise from ₹ 3,21,455 crore in 2013–14 to ₹ 3,44,106 crore in 2014–15. Its Per Capita State Income (i.e. per capita NSDP) at current prices is estimated at ₹ 1,00,594 during 2014–15 as against ₹ 89,545 in 2013–14, indicating an increase of 13.5%, one of the highest reported by any Indian state during this period. This increase is largely attributed to the contribution of the service sector.

Karnataka has been a frontrunner in its use of IT for administration in various sectors. For example, there is the SAKALA Act that provides guarantee of citizen-related services in the state within a stipulated time limit. Under this act, a citizen can request for a service and monitor its status on the website or through a mobile phone. Sixty-three departments offer services under this scheme, which range from applying for a driver's license to permission for new water supply to a building to enrolment of children at the local Anganwadi centre. In the education sector, the government extensively uses IT for teacher recruitment as well as teacher transfers. This has made the once cumbersome process more transparent and efficient. It provides the applicants access, transparency and choice based on pre-defined merit and priority criteria. In the health sector, the Karnataka government has two health insurance schemes, viz. the Yeshasvini (for all rural co-operatives) and the Vajpayee Arogyashree (for the Below Poverty Line population in rural and urban areas) aimed at preventing catastrophic health expenditure amongst the poor. In 2013-14, the Yeshasvini scheme had 34.5 lakh enrolees in the state, and more than 62,067 surgeries and 99,000 out-patient visits have been availed under the scheme.<sup>2</sup>

However, this economic prosperity and efficient administration have not necessarily translated themselves fully into human development, as pointed out by the Indian Human Development Index (HDI) report released in 2011. Karnataka was ranked twelfth in the country in terms of HDI. The report pointed out that although Karnataka was doing very well in the income sector, it was still not amongst the best when it came to education, gender empowerment and health. For example, only 68.13% females were literate as against 82.5% of men in the state, as per the 2011 Census. Although the state has registered growth in literacy for both males (85.1%) and females (71.7%) since then, as per the recently released NFHS IV data for 2015–16, there is no reduction in the gender disparity. What is even more worrying is that Karnataka's sex ratio has witnessed a decline from 1028 females per 1000 males in 2005-06 to 979 females per 1000 males in 2015-16. It is disheartening to note that the sex ratio among children in the 0-6 age group has declined from 946 per 1000 in 2001 to 943 per 1000 in 2011, as per the Census figures. This is further corroborated by National Family Health Survey figures that report a decline in sex ratio for children born in the last five years from 922 in 2005-06 to 910 in 2015-16.

There is also an unequal development in the state, with the southern districts, which have always been relatively more advanced, having also benefited more by the economic upturn. All eight districts listed as high-priority districts (those districts that are in the bottom 25% among all districts in the state according to a composite health index, in the state) continue to belong to the northern belt of Karnataka.<sup>3</sup> There is also evidence of marginalisation of the Scheduled Castes (SC) and Scheduled Tribes (ST) in the state. A study of 16 villages in rural Mysuru found that women from general castes or Other Backward Classes (OBC) were more likely to have institutional deliveries than those belonging to SC or ST (Adamson

<sup>&</sup>lt;sup>2</sup> http://www.yeshasvini.kar.nic.in/achieve.htm, accessed on 12/8/15.

<sup>&</sup>lt;sup>3</sup> Released by the Press Information Bureau, Government of India, Ministry of Health and Family Welfare on 24/5/15,http://pib.nic. in/newsite/PrintRelease.aspx?relid=118620, accessed 12/8/15. The districts are Gadag, Vijayapura, Bagalkot, Ballari, Koppal, Kalaburagi, Yadgir and Raichur.

et al., 2012). Another paper based on a benefit incidence analysis of the utilisation data (from DLHS Round 3) for Janani Suraksha Yojana (JSY), a cash transfer scheme of institutional delivery among BPL families, also suggested that the upper echelon of the BPL families are the real beneficiaries (Jha and Sharma, 2014). Karnataka's challenges, therefore, lie in bringing about inclusive development.

Karnataka. thus. presents а somewhat contradictory picture where economic prosperity and administrative reforms have not been matched by the social and educational indicators. Inequalities across regions and social groups have also failed to be evened out significantly. The real challenge, then, is to bring about the policies and interventions that address these gaps. This report analyses the progress of the state with respect to the Millennium Development Goals and documents its achievement in the past 15 years while highlighting the challenges, especially from the perspective of the next 15 years after the adoption by India, in September 2015, of the UN Sustainable Development Goals.

In this report, each goal has been discussed in a separate section, with the last section giving a summative analysis, taking all the indicators into account. An attempt has been made to use all available statistics collected from reliable sources; however, certain gaps still remain due to the lack of data. In certain cases, data is not available at all while in certain others it is not accessible within the public domain. The analysis has used the all-India average and the status in three other southern and one western (Maharashtra) states as comparators. Wherever possible, district-level analyses have been undertaken to bring out intra-state variations to the fore.



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## **MDG 1: Eradicate Extreme Poverty and Hunger**

High levels of poverty are associated with poor quality of life, deprivation of life's necessities, malnutrition, illiteracy, low human resource development and social marginalisation (Millennium Development Goals, India Country Report, 2015). Hence, the first goal among the eight MDGs is to eradicate extreme poverty and hunger. Poverty has always been a cause of great concern in India, where, according to the latest United Nations report, nearly 300 million people live in extreme poverty (India and the MDGs: Towards a sustainable future for all, 2015). Table 1 gives details of the first goal of the MDG along with the indicators adopted.

Table 1:	Millennium	Development	<b>Coal 1</b>
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Goal 1: Eradicate Extreme Poverty and Hunger						
Target 1. Reduce to half, between 1990 and 2015, the proportion of people whose income is less than one dollar per day	<ol> <li>Indicators</li> <li>Poverty Head Count Ratio</li> <li>Poverty Gap Ratio</li> <li>Share of the poorest quintile in national consumption</li> </ol>					
Target 2. Reduce to half, between 1990 and 2015, the proportion of people who suffer from hunger	4. Prevalance of underweight children under 3 years of age					

## Indicator: Poverty Head Count Ratio (PHCR)

The Poverty Head Count Ratio is used to measure the incidence of poverty and is defined as the number of poor people living below the official poverty line as set by the Government of India. The all-India poverty line, using the Tendulkar Methodology,<sup>4</sup> is defined as ₹ 816 per capita per month for rural areas and ₹ 1000 per capita per month for urban areas (in 2011–12).

The Planning Commission of India computes the poverty estimates at national and state level on the basis of the household consumer expenditure surveys conducted by National Sample Survey Organisation (NSSO) on a quinquennial or decadal basis. The NSSO computes the Monthly Per Capita Consumer Expenditure on the basis of Uniform Reference Period (URP), Mixed Reference Period (MRP) and Modified Mixed Reference Period (MMRP).<sup>5</sup> In Karnataka, the Directorate of Economic and Statistics of Government of Karnataka estimates the incidence of district-wise poverty from pooled NSS samples.

<sup>&</sup>lt;sup>4</sup> In December 2005, the Planning Commission constituted an Expert Group under the Chairmanship of Prof Suresh D. Tendulkar to review the methodology for estimation of poverty. As per the Tendulkar Methodology, the poverty line has been expressed in terms of MPCE (monthly per capita consumption expenditure) based on a Mixed Reference Period.

<sup>&</sup>lt;sup>5</sup> Uniform Reference Period (URP): This is the measure of MPCE obtained by the NSS consumer expenditure survey (CES) when household consumer expenditure on each item is recorded for a reference period of the 'last 30 days' (preceding the date of survey).

Mixed Reference Period (MRP): This is the measure of MPCE obtained by the CES when household consumer expenditure on items of clothing and bedding, footwear, education, institutional medical care and durable goods is recorded for a reference period of the 'last 365 days', and expenditure on all other items is recorded with a reference period of the 'last 30 days'.

Modified Mixed Reference Period (MMRP): This is the measure of MPCE obtained by the CES when household consumer expenditure on edible oil, eggs, fish and meat, vegetables, fruits, spices, beverages, refreshments, processed food, paan, tobacco and intoxicants is recorded for a reference period of the 'last 7 days', and for all other items, the reference periods used are the same as in case of MRP

The MDG 1 states that the percentage of people below poverty line should be reduced to half of its 1990 level by 2015. The National PHCR was 45.3% in 1993–94 and it reduced to 21.9% in 2011–12. The overall PHCR in Karnataka has reduced by 28.6 percentage points from 49.5% in 1993–94 to 20.9% in 2011–12, which is below the national average. Clearly, the state has achieved its MDG goal well before 2015 (Figure 2).

In India, for 2011–12, the poverty head count ratio estimates were 25.7% and 13.7% in rural and urban areas respectively (Millennium Development Goals, India Country Report, 2015). In rural Karnataka, the incidence of poverty declined from 56.6% in 1993–1994 to 24.5% in 2011–2012. In urban areas, it declined from 34.2% to 15.3% during the same timeframe (Economic Survey of Karnataka, 2013–14). Going by the trends, the rural and urban PHCR are likely to be at 22.3% and 13.9% respectively in 2015 (Figure 3).

Due to the interstate price differentials, the PHCRs for states are calculated based on the state-specific poverty lines. In 2011-12, Goa, Kerala, Himachal Pradesh, Sikkim and Punjab were the five states performing well in terms of lowest PHCR (lower than the all-India level) and Chhattisgarh, Jharkhand, Manipur, Arunachal Pradesh and Bihar were amongst the worst-performing states (PHCR above the India-level estimate). Karnataka, with slightly better figures, stands close to the all-India average (Figure 4). In 2011–12, Goa had the lowest PHCR of 5.09% and Chhattisgarh the highest (39.93%) among the states and Karnataka figured on the lower side, close to the all India average, at 21.9%.



Figure 2: Poverty Head Count Ratio – Karnataka vs All India

Source: Economic Survey of Karnataka (Estimates are based on MRP of distribution of monthly per capita consumption expenditure of the National Sample Survey), MDG Country Report.



#### Figure 3: Trend in Poverty Head Count Ratio (PHCR) - Rural and Urban Karnataka

Source: Estimates based on Economic Survey of Karnataka (2012-13), Millennium Development Goals, India Country Report (2015)



Figure 4: State-wise Poverty Head Count Ratio, 2011-12

Source: Planning Commission of India, Press Note on Poverty Estimates (2011–12)

Estimates of incidence of poverty for the years 1993–94, 2004–05 and 2011–12 have been used to compare the performance of Karnataka in terms of reducing PHCR with its neighbouring four states – Tamil Nadu, Andhra Pradesh, Kerala and Maharashtra. In 2011–12, Kerala had the lowest PHCR (7.05%) and Karnataka had the highest PHCR (20.91%) among the five states. Andhra Pradesh has reduced its incidence of

poverty by the highest percentage points (by 35.4 percentage points) from its 1993–94 level. This is followed by Tamil Nadu (by 33.32 percentage points), Maharashtra (by 30.45 percentage points) and Karnataka (by 28.59 percentage points). All the five states had performed well and were successful in reducing the PHCR to less than half of their 1993–94 level, which is below the all India average of 21.9% (Figure 5).



Figure 5: Karnataka Poverty Head Count Ratio in comparison with Tamil Nadu, Kerala, Andhra Pradesh and Maharashtra

Source: Planning Commission of India, Press Note on Poverty Estimates (2011–2012)

District-wise data on the incidence of poverty in rural and urban areas of Karnataka is available for the years 2004-05, 2009-10, 2011-12 (Economic Survey of Karnataka, 2013-14). An analysis of districts' performance in reducing the incidence of poverty from their 2004-05 level and comparing the PHCR with the state average provides interesting results. The districts performing well are defined as those that not only reduced their PHCR by more than half of their 2004-05 level, but which was also lower than the state average. The districts performing poorly are those in which the incidence of poverty actually increased from 2004-05 level and was also more than the state average.

In 2011–12, the incidence of poverty exceeding 35% in rural areas was high in the districts of Raichur, Kalaburagi, Koppal, Chitradurga and Dharwad. The urban incidence of poverty exceeding 35% is high in the districts of Raichur, Chitradurga, Bagalkot, Bidar, Haveri and Ballari. However, Raichur, Kalaburagi, Chitradurga, Haveri and Bagalkot have reduced their poverty level considerably from 2004 to 2011 and therefore can be considered as better performers when it comes to assessing the change over a period of time. From that perspective, Tumakuru, Shivamogga, Bidar, Udupi, Koppal and Dharwad were districts performing poorly, as PHCR in either rural or urban or both has increased over time (2004-11).



#### Figure 6: Districts performing poorly – Increase in incidence of poverty

Source: Economic Survey of Karnataka (2011-12, 2013-14)

Davanagere, Uttara Kannada, Kolar, Bengaluru, Kodagu and Dakshina Kannada were among the districts performing well, where the rural PHCR has declined to less than half of its 2004–05 level. In 2011–12, the rural PHCR in these districts was below the state estimate. Davanagere reported the highest reduction in rural PHCR (by 47.8 percentage points) in 2011–12. Districts like Gadag, Hassan, Mandya, Chamarajanagar were among the districts performing well where the incidence of poverty in urban areas reduced considerably from 2004–05 to 2011–12. High incidence of poverty is mostly concentrated in the northern districts but new pockets are emerging and demand attention, e.g., its fast-rising incidence level in the otherwise prosperous district of Udupi. Districts such as Mandya have been able to reduce urban poverty level by a considerable amount over time (from 50.5% in 2004–05 to 4.1% in 2011– 12). This can perhaps be attributed to a variety of factors, including the high level of public as well as private expenditure on irrigation, its closeness to Bengaluru and therefore greater access to services, as well as a higher level of industrialisation.





Source: Economic Survey of Karnataka, 2011-12, 2013-14

## Indicator: Poverty Gap Ratio (PGR)

The Poverty Gap Ratio (PGR) measures the depth of poverty whereas the Poverty Head Count Ratio indicates the incidence or spread of poverty. Poverty Gap Ratio is defined as the gap by which the mean consumption of the poor falls short of the poverty line (Millennium Development Goals, India Country Report, 2015). Therefore, a lower PGR indicates an improvement in the condition of the poor. The national and state-wise Poverty Gap Ratio estimates, based on MRP consumption distribution, are available for both rural and urban areas for the years 2004–05 and 2011–12.

The all-India PGR declined in both rural and urban areas between 2004–05 and 2011–12. In 2004–05, the national rural PGR was 9.6, which declined to

5.05 in 2011–12. The urban PGR also reduced from 6.07 to 2.7 over the same period (Table 2).



## Table 2: Poverty Cap Ratio (MRP consumption distribution) – Karnataka vs All India

Source: Planning Commission, Millennium Development Goals, India Country Report (2015)

Karnataka had also shown a decline in PGR during 2004–05 and 2011–12. During 2004–05 to 2011–12, the PGR in rural Karnataka declined from 6.5 to 3.26 and the urban PGR reduced from 6.19 to 3.09. Both the rural and urban poverty gap ratio reduced by nearly 50% in Karnataka, which indicates that not only has the number of poor decreased, the condition of the poor has improved over this time span (Table 2).

State-wise analysis of the poverty gap ratio shows that most states were successful in reducing the

rural and urban poverty gap ratio (Figure 8). Karnataka had the highest urban PGR (3.09) in 2011–12 compared to the four neighbouring states – Andhra Pradesh, Tamil Nadu, Kerala, and Maharashtra. Andhra Pradesh and Kerala had the lowest poverty gap ratio in rural and urban areas. Maharashtra had the highest rural PGR (4.65) in 2011–12. However, all five states were successful in reducing PGR to nearly half of their 2004–05 level (Figure 9). Data on poverty gap ratio is not available at the district level in Karnataka.



Figure 8: Poverty Cap Ratio – High- and low-performing states in India (2011–12)

Source: Planning Commission (now renamed as NITI Aayog)

### Figure 9: Poverty Cap Ratio – Karnataka and its neighbouring states



Source: Reproduced from Millennium Development Goals, India Country Report (2015)

## Indicator: Share of the Poorest Quintile in National Consumption

Share of the poorest quintile in national consumption is the share of the total consumption that accrues to the poorest quintile of the population and is expressed in percentage (United Nations, 2003). The bottom 20% of the population is referred to as the poorest quintile when ranked by income or consumption levels. According to the Uniform Reform Period Method, the share of the poorest quintile in total consumption for the state of Karnataka in rural areas was 10.87% in 2009–10 and it declined to 9.9% in 2011–12. For urban areas, the indicator declined from 7.48% to 6.97% during the same timelines (Figure 10).

In 2011–12, Karnataka, along with Andhra Pradesh, at 9.9% reports the highest share for the poorest quintile of total consumption in rural areas. For urban areas, Karnataka (5.9%) has the lowest figure. With a four-point difference, the rural–urban gap is also the highest in Karnataka. This indicates that amidst all neighbouring states, the level of inequality in consumption among the poor in rural and urban areas and in general is relatively the highest in Karnataka. Among Karnataka's neighbouring states, Kerala (7.3%) has the lowest figure for the poorest quintile of total consumption in rural areas and at 6.6% the second highest in urban areas and the lowest level of inequality in consumption (Figure 11).

Figure 10: Share of the poorest quintile (bottom 20% of population) in national consumption (based on Uniform Reform Period)



Source: Reproduced from Millennium Development Goals – India Country Report (2015)

Figure 11: Share of the Poorest Quintile in National Consumption (URP Method): Karnataka and its Neighbouring States (2011–2012)



Source: Reproduced from the Millennium Development Goals, India Country Report (2015)

## Indicator: Prevalence of Underweight Children under Three Years of Age

Poverty and hunger leads to poor nutritional intake among people, leading to malnourishment. Malnourishment is more common among women and children in developing countries (Young, 2002). The early years, especially the first five years of life, are crucial in determining the future health of the child. Undernourished children are most susceptible to various infectious diseases which affect the child's mental and physical growth permanently.

Under MDG, the target has been set to reduce the proportion of underweight children aged less than three years to half of its 1990-91 level by 2015. The data for this indicator is available for all-India level and for different states from three rounds of National Family Health Survey (NFHS). However, data on this indicator is not available for the reference age group for all the time periods. The NFHS 1 only has data on underweight children between 0-35 months and 0-47 months. The NFHS 2 has data on the indicator for underweight children between 0-35 months and the NFHS 3 has the data for children in the age-groups of 0-35 months and 0-59 months. The latest NFHS 4 has data for children below five years. Thus the survey results are only comparable for the age group 0-35 months.

In India, the percentage of underweight children under three years of age declined from 51.5% in 1992-93 to 42.6% in 1998-99 and further to 40.4% by 2005-06. Similarly, in Karnataka, the percentage of underweight children reduced steadily from 46.45 to 38.3 to 33.3% in the same timelines (Figure 12). Based on NFHS-3 data, Figure 13 depicts the percentage of children under three years of age who are stunted and wasted. The data indicates that in Karnataka, there has been a slow and steady reduction in percentage of underweight children less than three years of age. For children under the age of five, NFHS 4 tells us that 35.2% are underweight for their age. This figure is slightly lower than 37.6% in 2005-06 (NFHS 3) (Figure 14).



Figure 12: Percentage of underweight children – Karnataka

### Source: National Family Health Survey (NFHS) 3 (2005-06)



### Figure 13: Nutritional status of children in Karnataka

Source: National Family Health Survey (NFHS 3) (2005–06)

## Figure 14: Children under 5 years who are underweight (percentage)



Source: National Family Health Survey 4 (2015-2016)

According to the NFHS 3, in 2005–06 Kerala had the lowest percentage of underweight children below three years of age (21.2%), while Karnataka had the highest percentage of underweight children amongst Karnataka, Tamil Nadu, Maharashtra, Kerala and Andhra Pradesh (Figure 15). The greatest reduction in percentage of underweight children was in Tamil Nadu where the figure was 40.7% in 1992– 93 and reduced to 25.9% in 2005–06.

Another parallel source of information about women and children are the DLHS and RSoC surveys. The District Level Household and Facility Survey (DLHS) is a national-level health survey conducted by the Ministry of Health & Family Welfare (MoHFW) with the main objective of providing reproductive and child care related data at district level and has published its fourth round results in 2012-13. Table 3 shows the percentages for degrees of malnutrition (stunted, wasted, underweight) in children below five years. Though not comparable to NFHS data, as the age-groups of the children are not specified except for the broad category of under-five in this table, this data suggests that there is a decline in the number of underweight children. However, regarding nutritional status, DLHS provides data on anaemia status by haemoglobin levels for different age groups, which reveals alarming information. Seventy-six per cent of children aged 6-59 months have anaemia, with 14%



#### Figure 15: Proportion (%) of underweight children (<3 years) - Karnataka and neighbouring states

Source: National Family Health Survey (NFHS 3) (2005-06)

having severe anaemia. Sixty per cent of females in the age-group of 6–19 years, 50% of males in the same age group, 50% of adolescents (15–19 years) and 60% of pregnant women suffer from anaemia. If the above trends in anaemia are considered, the state is treading a dangerous path with a major portion of its people suffering malnutrition symptoms.

### Table 3: Nutritional status of children below 5 years

		DLHS 4		NFHS 4		
Percentage of children aged 0–59 months	Total	Rural	Urban	Total	Rural	Urban
who are stunted (Height for age below -2SD)	29.9	29.1	31.3	36.2	38.5	32.6
who are severely stunted (Height for age below -3SD)	16	15.7	16.4			
who are wasted (Weight for height below -2SD)		27	25.4	26.1	26.9	24.8
who are severely wasted (Weight for height below -3SD)		14.5	12.7	10.5	11	9.7
who are underweight (Weight for age below -2SD)	29.7	29.6	29.8	35.2	37.7	31.5
who are severely underweight (Weight for age below -3SD)		12.1	11			

Source: District Level Household & Facility Survey 4 (2012-13) & National Family Health Survey 4 (2015-2016) - Karnataka Factsheets

A Rapid Survey on Children (RSoC) was conducted in 2013–14 by the Ministry of Women & Child Development (MoWCD), with support from UNICEF, with the aim of strengthening the database on women and children. The RSoC is a rich source of information regarding services provided for children, especially through the ICDS programme. A few indicators supportive to the nutritional status among children less than three years of age is provided in Table 4. This data also helps to understand the government's efforts to address malnutrition among children.

In Karnataka, nearly 90% of the mothers of children aged 0–35 months are aware of the supplementary food services at Anganwadi

centres. This is second-highest next to Andhra Pradesh among its neighbouring states and more than the national average. Similarly, not only in awareness but also in service utilisation, Karnataka (56%) trails behind Andhra Pradesh (60%) in the percentage of the mothers of children aged 0-35 months availing of supplementary food services at Anganwadi centres. With 40%, Karnataka tops among the neighbouring states on percentage of children aged 6-35 months who received supplementary nutrition for 21 or more days in the month prior to the survey and is way above the national average of 22%. Furthermore, Karnataka stands close to the neighbouring states and above the national average on issues related to

service delivery through Anganwadi centres. The current nutrition scenario depicts that the state continues to strengthen the ICDS system and its services for improving the malnutrition status in the state. However, the widespread anaemic status among children, adolescents and pregnant women shows the need for population-wide interventions beyond the ICDS system to enhance other aspects of the nutrition cycle.

Particulars	Karnataka	Tamil Nadu	Kerala	Andhra Pradesh	Maharashtra	India
Mothers of children aged 0–35 months aware of supplementary food services at AWCs	89.4	81.7	83.2	93.5	80.5	85.1
Mothers of children aged 0–35 months aware of health check-up services at AWCs	57.2	30.8	50.2	56.7	44.4	29.4
Mothers of children aged 0–35 months aware of nutrition and health education services at AWC	16.6	29.7	41	54.8	20	17.2
Percentage of children aged 0–35 months availing of supplementary food services from Anganwadi centres	56.3	42.3	43.2	60.3	51.4	49.2
Percentage of children aged 6–35 months who received supplementary nutrition for 21 or more days in the month prior for survey	40.3	33.8	24.2	24.6	35.1	21.3
Anganwadi centres providing supplementary nutrition	95.2	98.3	100	99.5	99.6	96.7
Anganwadi centres providing health check up	88.4	65	56.2	88.3	79.8	60.8
Anganwadi centres providing nutrition and health education	85.9	77.6	89.8	92.0	87.3	64.7
Coverage of children aged 0–35 months for supplementary food	79.2	77	72.9	89.8	82.6	78.3

Table 4: Selected indicators on ICDS service delivery in	n Karnataka,	, neighbouring s	tates and	l India
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Source: Rapid Survey on Children (2013-14) - National & State Factsheets

Under Goal 1 (to eradicate extreme poverty and hunger) Karnataka shows a trend similar to India for both indicators. The data reveals that like the nation, Karnataka has also achieved the goal of reducing poverty to half of its 1993 level well before 2015. Though there is remarkable difference in the rural and urban areas and among districts within the state, it is important for the state to maintain the steady decline. To accelerate the poverty decline, the future initiatives are to be designed addressing the inter-district variations. Similarly, though the percentage of underweight children under three years of age is decreasing at a slow and steady rate, Karnataka is unlikely to reach the goal of reducing the proportion of people who suffer from hunger to half of its 1993 level within 2015. Apart from general interventions, the state needs to address the challenge through well-thought-out, focused actions targeting the most under-privileged, and specific areas.

## MDG 2: Achieving Universalisation of Primary Education

Education is critical for achieving significant levels of human development. It enables a person to develop capabilities of various kinds, facilitates decision-making and opens up new opportunities. Viewed as a collective phenomenon, education generates huge and highly significant externalities at societal level. Given its importance at the individual and societal level, the UN Millennium Declaration listed achieving universal primary education as one of its goals, which the signatory countries promised to achieve by 2015. The goal and its indicators are given in Table 5.

### Table 5: Millennium Development Goal 2

#### **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 education

- Indicators 1. Net enrolment ratio
- (NER) 2. Proportion of pupils starting Grade I who
- reach Grade V (Survival Rate)
- 3. Literacy rate of 15–24 year olds

## **General Trends in Total Enrolment**

In 2013–14, the number of students in Karnataka enrolled in primary (Grades I to V) and upper primary (Grades VI to VIII) were 53,52,623 and 29,70,933 respectively. The number of primary and upper-primary students in Karnataka constitutes about 4.04% and 4.47% respectively of the total number of primary and upperprimary students in India.



Karnataka has performed better than the national average in all the three indicators: NER, Survival Rate and Literacy Rate in 2013–14.

Kerala, Maharashtra, and Tamil Nadu have registered greater NER, Survival Rate and Literacy Rate.

Karnataka is unlikely to achieve universalisation of primary education by 2015 because:

- A majority of its districts have registered NER less than the state average in 2013–14.
- Two-thirds of districts in Karnataka faced poor survival rate in 2013–14.

There was better performance in terms of literacy rate but the growth rate per year is slow

At primary level, the number of boys enrolled has decreased from 28,56,389 in 2008–09 to 27,62,999 in 2013–14: a negative growth rate of 0.54% per year. The number of girls enrolled has reduced from 26,79,645 in 2008–09 to 25,89,624 in 2013–14: a negative growth rate of 0.56% per year. An examination of the ageappropriate population for primary level (6–10 years) in Karnataka reveals that the population has registered a negative growth rate of 1.71%

	2005-06	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14
Gross Enrolment Ratio Primary	93.58	107.9	107.1	102.9	108.6	102.9	101
Gross Enrolment Ratio Upper Primary	56.54	69.9	69.1	88.7	71.5	88.7	91.8
Net Enrolment Ratio Primary	83.97	98.6	99.2	87.8	99.8	87.8	92.3
Net Enrolment Ratio Upper Primary	48.46	60	60.9	74.6	61.7	74.6	82.9

Figure 16: Gross Enrolment Ratio & Net Enrolment Ratio in Karnataka over the last few years

Source: Unified District Information System for Education (U-DISE), State Report Cards, respective years

per year (boys, 1.60% per year and girls, 1.81% per year).<sup>6</sup> Thus, the decrease in primary enrolment of boys and girls can be attributed to the negative growth rate of age-appropriate population registered in Karnataka during this period.

At upper-primary level, the number of boys enrolled has increased from 11,76,874 in 2008-09 to 15,40,650 in 2013-14: a positive growth rate of 5.15% per year. The number of girls enrolled has increased from 10,95,392 in 2008-09 to 14,30,283 in 2013-14: a positive growth rate of 5.10% per year. These annual growth rates in upper-primary enrolment were higher than the growth rate registered at the national level. This can be attributed to the increase in the transition rate from primary to upper-primary level from 91.80% in 2008-09 to 94.3% in 2013–14,7 despite Karnataka's negative age-appropriate population growth for the age-group 11-13 years.8 The age-appropriate population for boys and girls registered a negative annual growth rate of -1.08% and -1.03% respectively in this period. Only a few states such as Gujarat, Uttar Pradesh, Bihar, Sikkim, Jharkhand and Meghalaya were able to register a per-year growth rate higher than Karnataka's in the upper-primary enrolment during this period.

For the primary level, the Gross Enrolment Ratio (GER) of the state has shown an increasing

trend in general till 2012–13, except for the year 2010–11. The Net Enrolment Ratio (NER) has also shown a corresponding pattern but was short of achieving universal enrolment. For upper-primary level, the Gross Enrolment Ratio (GER) of the state has shown an increasing trend in general except for the year 2011–12. The Net Enrolment Ratio has also shown a corresponding pattern but the state is far from achieving universal enrolment (Figure 16).

# Indicator: Net Enrolment Ratio for Primary

The Net Enrolment Ratio for primary level is defined as the percentage of students in the agegroup of 6–11 years in regular school out of the total children in the same age group. As a result, NER for primary level shows the age-appropriate enrolment at the primary level. In 2013–14, the NER at the national level was 88.08%, an increase of about 4.16 per cent points from 2008–09. On the other hand, Karnataka's NER

<sup>&</sup>lt;sup>6</sup> The number of boys in the age-appropriate population (6–10 years) in Karnataka has reduced from 30,51,664 in 2001 to 25,63,000 in 2011. Similarly, the number of girls in the age-appropriate population (6–10 years) in Karnataka has reduced from 29,53,519 in 2001 to 24,18,000 in 2011 (Refer Annexure Table 3).

<sup>7</sup> Refer to Annexure Table 4.

<sup>&</sup>lt;sup>8</sup> The number of boys in the age-appropriate population (for 11–13 years) in Karnataka has reduced from 18,04,149 in 2001 to 16,09,000 in 2011. Similarly, the number of girls in the age-appropriate population (11–13 years) in Karnataka has reduced from 17,29,301 in 2001 to 15,52,000 in 2011 (Refer Annexure Table 3).

for primary level has declined from 98.6% in 2008 to 92.3% in 2013; and the GER for primary level has declined from 107.9% in 2008 to 101% in 2013 (Figure 16). The difference between the two ratios (GER and NER), which has reduced from 9.3% in 2008 to 8.7% in 2013, highlights the fall in incidence of under-aged and overaged enrolment at the primary level. In sum, the decline in NER, GER and the difference between the two ratios indicates an undesirable trend of increase in the number of out-of-school children in the 6–11 years age group.

It should be noted that this trend observed in NER is not unique to Karnataka. An examination of the NER for primary level of the neighbouring states, Maharashtra (86.4%), Andhra Pradesh (78.3%), Tamil Nadu (86.7%), and Kerala (85.8%), reveals the same declining trend, with the exception of Kerala. Both Andhra Pradesh and Tamil Nadu have witnessed a greater decline in NER since 2008–09, than Karnataka. Kerala is the only state that has managed to register a positive per year change of 5.23% between 2008 and 2013. The better performance of Kerala



### Figure 17: Growth rate per year of enrolment of boys and girls in primary school (2008–2013) – States

Source: District Information System for Education (DISE) - State Report Cards (2008-09 and 2013-14)

Figure 18: Growth rate per year of enrolment of boys and girls in upper-primary school (2008–2013) – States



Source: District Information System for Education (DISE) - State Report Cards (2008-09 & 2013-14)

may be due to a favourable transition rate of 98% registered in 2008–09, which is significantly higher than the transition rate (91.80%) observed in Karnataka.<sup>9</sup>

Within Karnataka, the NER for the period from 2008–09 to 2013–14 was available for 26 districts. Out of the 26 districts, 10 districts, namely Dakshina Kannada, Udupi, Gadag, Davanagere, Raichur, Bagalkot, Bidar, Vijayapura, and Kalaburagi, as shown in Table 7, registered an NER greater than the state average of 92.3% in 2013–14. Bidar, Vijayapura and Kalaburagi

registered an NER of 100% in 2013–14, indicating that all children in the age-group 6–11 years were enrolled in the regular school system. It is also important to note that districts such as Gadag, Davanagere, Raichur and Bagalkot have witnessed negative per-year change in NER during the period 2008–09 to 2013–14 despite

<sup>&</sup>lt;sup>9</sup> The comparison of transition rate from primary to upper primary between Kerala and Karnataka was made using the transition rate of 2008–09 to infer the better performance of Kerala as the transition rate from primary to upper primary for Kerala is not available for 2013–14. Here, we assume that the transition rate for Kerala would not vary significantly from 2008–09.
being able to register an NER greater than the state average. This is probably due to the lessthan-desirable level of transition rate and retention rate of all the 26 districts of Karnataka (refer to Appendix Tables VII and VIII).

Sixteen districts witnessed an NER that was less than the state average in 2013–14. Kolar district registered the lowest NER in Karnataka with 51.4% in 2013–14. Shivamogga was the second-lowest with an NER of 76.8%. The remaining fourteen districts were able to register NERs of greater than 80% in 2013–14. Out of the 16 districts, Bengaluru Rural district reported the highest annual growth rate in NER at primary level (22.80%). However, the re-structuring of the Bengaluru Rural district in 2006–07 could have had a role in this upward shift. Apart from Bengaluru Rural district, Mandya (3.59%), Hassan (2.76%), Chamarajanagar (2.62%), Kodagu (0.86%) and Mysuru (0.28%) registered a positive annual change in NER (Table 7). Overall, the status of enrolment at the primary level is a cause of concern in Karnataka as its NER has declined from 98.6% in 2008-09 to 92.3% in 2013-14. In addition, the district-level perusal reveals that one-third of its districts have registered an NER less than 90% and another one-third of districts less than 95% in 2013-14. These statistics, when viewed in conjunction with the less-than-desirable transition and survival rates at the district level, indicate that Karnataka will not be able to meet the MDG of ensuring that all age-appropriate children (6-10 years) be enrolled in primary education by 2015. In addition, the problem is exacerbated as the enrolment in government schools has decreased in 2013-14 compared to 2012-13 (refer to Appendix Table V). In sum, the state government has to design policies that incorporate the increased role of private schools in primary and upper-primary enrolment to meet its MDG.

States below	the nationa	al average	States above the national average				
State	NER	Per-Year Growth Rate (2008–2013)	State	NER	Per-Year Growth Rate (2008–2013)		
Jammu and Kashmir	69	-4.59	Odisha	89.1	-1.12		
Daman and Diu	75.6	-0.07	Bihar	91.7	NA		
Haryana	77.7	1.42	West Bengal	92.1	1.50		
Puducherry	77.8	-1.45	Delhi	92.3	0.31		
Chandigarh	78.1	-3.38	Karnataka	92.3	-1.06		
Andhra Pradesh	78.3	-0.23	Madhya Pradesh	93.7	NA		
Lakshadweep	79.1	-1.07	Chhattisgarh	93.8	-0.71		
Rajasthan	79.5	NA	Meghalaya	95.3	NA		
Dadra and Nagar Haveli	79.6	NA	Jharkhand	96.5	NA		
A & N Islands	80.91	3.52	Goa	97.5	12.20		
Gujarat	82.9	-0.60	Nagaland	99.4			
Sikkim	83.5	-2.47					
Uttarakhand	83.5	-1.41					
Himachal Pradesh	83.7	-1.35					
Punjab	85.7	7.26					
Kerala	85.8	5.23					
Maharashtra	86.4	-0.30					
Tamil Nadu	86.7	-2.11					
Uttar Pradesh	87	-1.82					
India	88.08						

#### Table 6: Details of NER and per-year change (%) in NER - States (2013-14)

Source: District Information on School Education (DISE), State Report Cards (2008–09 & 2013–14), National University of Educational Planning and Administration (NUEPA), New Delhi

Districts below the state average			Districts above the state average				
Districts	NER (2013-14)	Per-Year Change (%) (2008–2013)	Districts	NER (2013-14)	Per-Year Change (%) (2008–2013)		
Kolar	51.4	-0.19	Dakshina Kannada	93.1	2.01		
Shivamogga	76.8	-1.78	Udupi	93.1	5.41		
Mandya	81.3	3.59	Yadgir	93.1	NA		
Ramanagara	83.3	NA	Gadag	93.7	-1.05		
Chamarajanagar	85.3	2.62	Davanagere	94.6	-0.33		
Hassan	85.3	2.76	Raichur	96.5	-0.58		
Mysuru	85.3	0.28	Bagalkot	97.7	-0.38		
Kodagu	87.7	0.86	Bidar	100	0.00		
Chikkaballapura	87.8	NA	Vijayapura	100	0.00		
Chitradurga	88.3	0.81	Kalaburagi	100	3.06		
Bengaluru Rural	89.5	22.80					
Ballari	90	-1.67					
Koppal	90.4	-1.60					
Dharwad	90.7	-1.55					
Chikkamagaluru	91.1	3.36					
Haveri	92.2	-1.30					
Karnataka	92.3	-1.06					

### Table 7: Details of NER and per-year change (%) in NER – Districts in Karnataka (2013–14)

Source: District Information on School Education (DISE), State Report Cards (2008–09 and 2013–14), National University of Educational Planning and Administration (NUEPA), New Delhi

# Indicator: Survival Rate – Ratio of Grade V to Grade I

One of the impediments in achieving and maintaining a high NER in any state/district is the drop-out of students between Grade I and Grade V. Children in the age-group 6–11 years drop out/discontinue their education due to various reasons including cultural and/or socio-economic factors, or even school-related factors. The survival rate, as measured by ratio of students in Grade V to students in Grade I, is an indicator of the efficiency of the system, and helps understand the degree of drop-out/ discontinuation problem in primary education.

The national survival rate has improved from 0.82 in 2008–09 to 0.99 in 2013–14 (DISE,

various years). Sixteen out of thirty-four states/ UTs registered a survival rate greater than the national average. Among the neighbouring states, Karnataka and Andhra Pradesh were the only states that had a survival rate of less than one. Maharashtra, Kerala and Tamil Nadu were able to register a survival rate of greater or equal to one despite experiencing negative movement in their survival rate from 2008–09 to 2013–14. Karnataka was not able to accomplish a similar survival rate as it dropped from 0.93 in 2008-09 to 0.90 in 2013-14. Andhra Pradesh, which has registered a survival rate marginally higher (0.02) than Karnataka, was able to improve its survival rate by 0.10 points over the same time period (Figure 19).

### Table 8: Ratio of Grade V to Grade I (survival rate), 2008-2013 - States

State/UT	2008-09	2009-10	2010-11	2011-12	2013-14
A & N Islands	1.07	1.02	1.06	1.00	1.00
Andhra Pradesh	0.83	0.85	0.86	0.86	0.92
Arunachal Pradesh	0.37	0.41	0.43	0.50	0.58
Assam	0.59	0.71	0.62	0.63	0.72
Bihar	0.49	0.58	0.69	0.86	0.92
Chandigarh	1.03	1.15	1.12	1.21	1.26
Chhattisgarh	0.72	0.81	0.86	0.91	1.06
Dadra & Nagar Haveli	0.81	0.97	0.95	0.98	0.98
Daman & Diu	0.87	0.88	0.93	0.90	1.01
Delhi	0.86	0.93	1.00	1.06	1.17
Goa	1.10	1.14	1.21	1.02	0.97
Gujarat	0.87	0.92	0.88	0.90	1.04
Haryana	0.82	0.86	0.95	0.97	1.03
Himachal Pradesh	1.02	1.01	1.00	1.03	1.11
Jammu & Kashmir	0.89	0.88	0.82	0.76	0.76
Jharkhand	0.58	0.62	0.74	0.77	0.84
Karnataka	0.93	0.98	0.97	0.97	0.90
Kerala	1.26	1.30	1.29	1.14	1.05
Lakshadweep	1.01	1.64	1.18	1.08	2.47
Madhya Pradesh	0.78	0.78	0.83	0.96	0.99
Maharashtra	0.88	0.91	0.97	1.00	1.02
Manipur	0.53	0.56	0.61	0.62	0.61
Meghalaya	0.49	0.55	0.53	0.46	0.54
Mizoram	0.72	0.76	0.63	0.65	0.63
Nagaland	0.70	0.70	0.70	0.74	0.86
Orissa	0.83	0.86	0.82	0.87	0.97
Puducherry	0.99	1.10	1.00	1.05	1.02
Punjab	0.93	0.92	0.80	0.88	1.00
Rajasthan	0.61	0.63	0.64	0.74	0.86
Sikkim	0.87	0.92	0.78	1.04	1.32
Tamil Nadu	1.01	1.06	1.05	1.05	1.00
Tripura	1.00	0.93	0.95	0.93	1.05
Uttar Pradesh	0.81	0.80	0.85	0.83	0.82
Uttarakhand	0.80	0.82	0.80	0.81	0.88
West Bengal	0.79	0.69	0.73	0.75	1.40
India	0.82	0.87	0.86	0.88	0.99

Source: Calculated from enrolment numbers of Grade I and Grade V provided in District Information on School Education (DISE), District Report Cards (2008 and 2013), National University of Educational Planning and Administration (NUEPA), New Delhi

Note: The ratio of Grade V to Grade I is calculated using the total enrolment in Grade I and V for respective years. Therefore, the ratio is not based on cohorts tracked over a time period. This may result in an upward bias due to the presence of repeaters or enrolment of over-age children in Grade I and V.

Districts	2008-09	2013-14
Bagalkot	0.80	0.85
Bengaluru Rural	1.01	0.89
Bengaluru Urban North	0.95	0.98
Bengaluru Urban South	0.87	0.82
Belagavi+	1.01	0.92
Belgaum Chikkodi	0.91	0.87
Ballari	0.86	0.85
Bidar	0.89	0.84
Chamarajanagar	1.01	0.95
Chikkaballapura	1.00	0.93
Chikkamagaluru	1.09	0.98
Chitradurga	1.01	0.95
Dakshina Kannada	1.03	1.01
Davanagere	0.95	0.95
Dharwad	0.97	0.90
Gadag	0.93	0.89
Hassan	1.04	0.99
Haveri	0.97	0.93
Kalaburagi	0.82	0.82
Kodagu	0.99	1.03
Kolar	1.01	1.02
Koppal	0.84	0.85
Mandya	0.99	0.99
Mysuru	1.05	0.98
Raichur	0.75	0.85
Ramanagara	1.00	0.97
Shivamogga	1.03	1.01
Tumakuru	1.08	1.00
Tumakuru Madhugiri	1.07	0.95
Udupi	1.05	1.01
Uttara Kannada	1.06	1.05
Uttara Kannada Sirsi	NA	1.03
Vijayapura	0.83	0.78
Yadgir	0.68	0.79
Karnataka	0.93	0.90

Source: Calculated from enrolment numbers of Grade I and Grade V provided in District Information on School Education (DISE), District Report Cards (2008 and 2013), National University of Educational Planning and Administration (NUEPA), New Delhi

Note: The ratio of Grade V to Grade I is calculated using the total enrolment in Grade I and V for respective years. Therefore, the ratio is not based on cohorts tracked over a time period. This may result in an upward bias due to the presence of repeaters or enrolment of over-age children in Grade I and V.

A closer examination of the district-level survival rate in Karnataka reveals that 26 districts registered a survival rate less than one in 2013–14 (Table 9). Only nine districts were able to experience positive change in the survival rate during 2008–2013 (Figure 20). The predominance of poor survival rate in a majority of the districts coupled with negative change in survival rate between 2008 and 2013 makes it even more unlikely for Karnataka to be able to achieve universal education as envisaged in MDG by 2015; unless, of course, appropriate measures to cap the drop-out or discontinuation of primary education are put in place on an urgent basis.





Note: 1. Superscript \* indicates that the survival rate in a particular state has reduced but is still above 1.

2. Symbol + indicates that the survival rate of a particular state has reduced from above or equal 1 in 2008–09 to below 1 in 2013–14.

Source: District Information System for Education (DISE) - State Report Card (2008-09 & 2013-14)

Figure 20: Overall change in Survival Rate during 2008–2013 – Districts in Karnataka



Note: 1. Superscript\* indicates that the survival rate in a particular district has reduced but is still above 1.

2. Symbol + indicates that the survival rate of a particular district has reduced from above or equal 1 in 2008-09 to below 1 in 2013-14.

Source: District Information on School Education (DISE), State Report Cards (2008–09 and 2013–14), National University of Educational Planning and Administration (NUEPA), New Delhi

### Indicator: Literacy Rate of 15–24 Year Olds

The literacy rate of 15–24 year olds is the percentage of population that can read and write and understand a short simple statement of everyday life (MDG India Country Report, 2015). National Sample Survey datasets were used from Rounds 61 and 66 to estimate the number of literate persons in the population in the age group 15–24 years old. At the national level, the percentage of literates has increased by 1.19% per year from 2004–05 to 2011–12.

The overall literacy rate at the national level is 87.94% with about six states and two union territories registering a literacy rate lower than the national average. All the other remaining states have been able to register a literacy rate higher than national average and ranging between 89.08% (Gujarat) and 100% (Daman & Diu). Further, the rural–urban divide as measured by the ratio of literacy rate in rural areas to that in urban areas has also improved over the six-year period at the national level. The literacy rate in urban areas is about 9% higher than in rural areas (Table 10).

States/UTs below the national average			States/UTs above the national average						
State/UT 2009 10		Ratio of Urban L Ra	f Rural– .iteracy .te	Overall change in Literacy	State/UT	2009- 10	Ratio of Rural- Urban Literacy Rate		Overall change in Literacy
		2004- 05	2009- 10	Rate since 2004–05 (%)			2004- 05	2009- 10	Rate since 2004–05 (%)
Bihar	71.43	0.72	0.78	11.05	Gujarat	89.08	0.86	0.90	4.40
Rajasthan	82.36	0.80	0.90	19.72	Jammu and Kashmir	89.31	0.90	0.94	8.04
Jharkhand	82.83	0.72	0.90	15.04	Arunachal Pradesh	89.56	0.87	0.91	9.02
Uttar Pradesh	82.90	0.84	0.97	15.84	Karnataka	90.34	0.85	0.90	8.14
Madhya Pradesh	83.12	0.77	0.84	11.25	West Bengal	90.43	0.86	0.94	10.01
Dadra & Nagar Haveli	84.58	0.85	0.83	8.68	Punjab	91.67	0.97	0.99	4.68
Andhra Pradesh	86.79	0.80	0.90	16.48	Haryana	91.84	0.95	1.01	5.87
Odisha	87.72	0.83	0.93	14.17	Chhattisgarh	92.67	0.85	0.94	12.82
					Assam	93.63	0.96	0.99	6.74
					Chandigarh	95.28	0.74	1.06	1.61
					Uttarakhand	95.38	0.92	1.11	7.29
					Delhi	96.21	0.99	1.04	4.28
					Tripura	96.33	1.00	0.99	2.28
					Maharashtra	96.37	0.95	0.97	4.53
					Manipur	97.21	0.96	0.99	3.04
					Himachal Pradesh	98.13	1.12	1.03	3.44
					Tamil Nadu	98.21	0.95	0.98	3.96
					Mizoram	98.57	1.00	0.99	-0.91
					Puducherry	98.75	0.97	1.02	1.86
					Goa	98.79	1.05	1.01	1.14
					Sikkim	98.87	0.95	0.99	4.89
					Lakshadweep	99.16	1.02	1.02	0.41
					Nagaland	99.55	0.95	0.99	9.81
					Meghalaya	99.68	0.98	1.01	7.94
					A&N Islands	99.84	0.99	1.00	4.24
					Kerala	99.84	0.99	1.00	1.39
					Daman & Diu	100.00	0.96	1.00	3.48
India	87.94	0.84	0.91	9.51					

### Table 10: Details of Literacy Rate – States/Union Territories (UTs)

Source: National Sample Survey Organisation (NSSO) 61st and 66th round (2004–05 & 2009–10)

Among the neighbouring states, Andhra Pradesh has registered the lowest literacy rate of 86.79% in 2011–12. This is followed by Karnataka at 90.34%, Maharashtra (96.37%), Tamil Nadu (98.21%), and then Kerala (99.84%) with the highest literacy rate of the five. Despite experiencing the second-highest overall change in literacy rate in the entire country, Andhra Pradesh has the lowest literacy rate among the southern states.

Figure 21 depicts the predicted literacy rate of India, Andhra Pradesh, Karnataka, Tamil Nadu, Maharashtra and Kerala. Given the per year growth rate witnessed between 2004–05 and 2009–10, Maharashtra, Kerala, Andhra Pradesh and Tamil Nadu are likely to achieve 100% literacy rate by 2015–16. On the other hand, Karnataka is likely to be around 98% by 2015–16. Andhra Pradesh, which lagged behind Karnataka in 2009–10, could outpace Karnataka by 2015–16 in terms of literacy rate. However, both the states are likely to be in a better position relative to the national average as the likely literacy rate in 2015–16 at the national level is 92%.

The recently released NFHS IV data on literacy for 2015–16 shows that Karnataka has not been able to reach this predicted level. Only about 72% of women and 85% of men were reported to be literate in 2015–16, this being lower than expected. Urban-rural divides continue, the divide being much sharper for women. Ninety per cent of men and nearly 82% of women were reported to be literate in urban areas as against about 81% of men and 64% of women in rural areas, in 2015-16. Overall, Karnataka needs to worry about accelerating the pace of increasing the proportion of literate people and schooled men and women. The state should also invest in training of teachers and officials, and its school facilities to achieve the universalisation of primary education with quality.





Note: The predictions are based on the per-year growth rate calculated using the estimates figures from the National Sample Survey Organisation (NSSO), 61st and 66th round reports (2004–05 & 2009–10)

### MDG 3: Promoting Gender Equality and Empowerment of Women

Gender refers not simply to social constructs of women and men, but the relationship between them, and for this reason, influences all social institutions and interactions. Gender equity is not merely about a notional parity between women and men but also in terms of attributing power and voice to the women. It is believed, and truly so, that gender equity and women's empowerment is critical for development not only because these concepts deal with and promote greater freedom and autonomy to women to pursue a life of well-being but also because it is known to have inter-generational effects.

The third MDG seeks to eliminate gender disparity in primary and secondary education, preferably by 2005, and in all levels of education no later than 2015. Education is seen as an important agent of empowerment for women, for its intrinsic and instrumental values and its role in enhancing the capabilities and widening the choices for a woman. Access to education as a component of human development also influences access to other services that contribute to human development such as better health care and economic opportunities, amongst others. Education being the key indicator here, it is also important to look at access to employment and key decision-making roles. Therefore, the indicators that the MDGs assume for gender equality and empowerment range from educational indicators to political and workforce participation. There are four key indicators as listed by the MDGs (Table 11).

### Table 11: Millennium Development Goal 3

### 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

#### Indicators 1. Ratio of girls to boys in primary, secondary and tertiary education

2. Ratio of literate women to men, 15–24 years old 3. Share of women in wage

 Share of women in wage employment in the nonagricultural sector
 Proportion of seats held by women in Parliament

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- 1. Gender parity exists at primary, secondary and tertiary level in Karnataka.
- 2. Ratio of literate females to literate males has improved by 0.10 points from 2004–05 to 2011–12. However, the ratio for the urban sector has witnessed a drop of 0.05 per cent points during the same period.
- 3. Work participation of women in the non-agricultural sector has increased in the urban sector but dropped in the rural sector, resulting in overall stagnation (0.29 in both 2004–05 and 2011–12) in the work participation rate.
- There is dismal representation of women in the state assembly. However, the representation is 43% in the rural local bodies in the state. The contradictory picture reveals the lack of voice for women in higher decisionmaking institutions.

### Indicator: Ratio of Girls to Boys in Primary, Secondary and Tertiary Education

In order to understand the gender gap in education, the MDGs examine the Gender Parity Index (GPI) of the Gross Enrolment Ratio (GER). The Gender Parity Index (GPI) is the ratio of the number of female students enrolled at primary, secondary and tertiary levels of education to the corresponding number of male students in each level. The Gross Enrolment Ratio (GER) is the number of pupils enrolled in a given level of education, regardless of age, expressed as a percentage of the population in the theoretical age group for the same level of education. The GPI of GER is the ratio of GER of girls to that of boys in primary, secondary and tertiary education. It only informs whether there are equal numbers of boys and girls in the regular schooling system or not.

Karnataka has been credited for being a reform oriented state with considerable progress in the area of education. As is evident from Figure 22, Karnataka has maintained a good GPI-GER of close to one from 2004–05 to 2011–12 in primary education, i.e., for Grades I to V, in regular schools. On the other hand, the GPI-GER for secondary, higher secondary and tertiary education in Karnataka registered an increase for the same period. An incredibly positive trend is visible in GPI-GER of secondary and higher secondary education, where the GPI-GER in 2011-12 is more than one, which shows that there are marginally more girls enrolled in secondary and higher secondary than boys in Karnataka. This is important, keeping in mind the fact that a considerable number of girls drop out of school during this period owing to a variety of reasons such as lack of infrastructural facilities in schools, care-giving roles and domestic work, and child marriage, amongst others. Karnataka has made impressive improvements in the GPI-GER for tertiary education; this is heartening to see as tertiary educational access still remains extremely restrictive for women.

Amongst its neighbouring states (Table 18), only the state of Kerala has a consistently higher GPI in all levels of education in comparison to Karnataka. However, Karnataka is indeed on track with the MDG when it comes to GPI-GER.



Figure 22: CPI in primary, secondary, higher secondary and tertiary level education, Karnataka

Source: Millennium Development Goals, India Country Report (2015)

	<b>GPI Primary</b>	y Grades I-V	GPI Seconda Secondary C	ary & Higher Grades X–XII	GPI Te	<b>GPI Tertiary</b>	
State/UT	2004-05	2011-12	2004-05	2011-12	2004-05	2012-13	
Andhra Pradesh	1.01	1.02	0.82	1.01	0.59	0.78	
Arunachal Pradesh	0.89	0.96	0.82	0.91	0.63	0.9	
Assam	0.99	1.04	0.79	1.19	0.7	0.99	
Bihar	0.75	0.98	0.48	0.93	0.38	0.8	
Chhattisgarh	0.94	0.97	0.68	0.93	0.59	0.9	
Goa	0.98	0.97	0.98	1	1.37	1.2	
Gujarat	0.87	1.01	0.78	0.82	0.78	0.79	
Haryana	1.06	1.09	0.88	1.06	0.91	0.96	
Himachal Pradesh	0.99	1.01	0.93	1	0.93	1.02	
Jammu and Kashmir	0.98	1.04	0.81	0.94	0.93	1.03	
Jharkhand	0.84	1.02	0.67	0.98	0.61	0.95	
Karnataka	0.98	0.98	0.94	1.05	0.81	0.94	
Kerala	1	1	1.04	1.07	1.22	1.42	
Madhya Pradesh	0.95	1.04	0.64	0.72	0.52	0.65	
Maharashtra	1	0.99	0.91	0.95	0.72	0.88	
Manipur	0.96	1.04	0.93	0.99	0.79	0.99	
Meghalaya	1.03	1.04	1.04	1.21	0.83	1.02	
Mizoram	0.93	0.94	1.02	1.04	0.61	0.98	
Nagaland	0.98	1	0.98	1.02	0.89	0.71	
Odisha	0.97	0.98	0.67	0.84	0.26	0.85	
Punjab	1.08	1	1.02	1.03	1.2	1.09	
Rajasthan	0.93	0.99	0.48	0.73	0.57	0.8	
Sikkim	0.99	1	1.01	1.2	0.75	1.21	
Tamil Nadu	0.98	1.02	0.98	1.13	0.76	0.85	
Tripura	0.96	1.01	0.88	0.96	0.72	0.71	
Uttar Pradesh	0.94	1.03	0.68	0.84	0.74	1	
Uttarakhand	1.01	1.02	0.83	0.98	0.96	1.05	
West Bengal	0.99	1.03	0.78	1.09	0.61	0.78	
A&N Islands	0.98	1	1.05	0.99	1.42	1.22	
Chandigarh	0.9	1.04	1.15	1.02	1.49	1.14	
Dadra & Nagar Haveli	0.93	0.99	0.73	0.9	0.15	1.31	
Daman and Diu	0.88	0.96	1.03	1.37	1.82	2.06	
Delhi	1.11	1.03	1.13	1.03	1.3	1.03	
Lakshadweep	0.89	0.96	1.1	0.92	-		
Puducherry	0.87	0.98	0.99	1.09	0.96	0.86	
India	0.95	1.01	0.79	0.93	0.71	0.89	

### Table 12: GPI of GER in primary, secondary and tertiary education – States, India

Source: Millennium Development Goals, India Country Report (2015)

## Indicator: Ratio of Literate Women to Men, 15–24 years old

The Census of India defines a literate person as one having the ability to read and write with understanding in any one language. Over the past decade, the definition of literacy according to UNESCO has moved beyond just reading and writing skills to incorporate a person's ability to understand and employ printed information in daily activities at home, at work and in the community, to achieve one's goals and to develop one's knowledge and potential. UNESCO distinguishes between literacy as a skill and literacy as a set of culturally and socially determined practices. The MDGs take the ratio of literate women to men between the age group of 15–24 (youth literacy) as an indicator for the same.



### Figure 23: Literacy rates in the Indian population above age 15 years

Source: Calculated from (i) Per-1000 distribution of persons of 15 years and above by general educational level for each state/UT, National Sample Survey Organisation Report No. 566: Status of education and vocational training of India, National Sample Survey Organisation, 68th Round, June 2012; and (ii) Per 1000 distribution of persons of age 15 years and above of different religious groups by levels of general education for each state/UT, National Sample Survey Organisation, 68th Round, June 2010, Sample Survey Organisation, 66th Round, Persons of age 15 years and above of different religious groups by levels of general education for each state/UT, National Sample Survey Organisation, 66th Round, Report No. 552: Employment and unemployment situation among major religious groups in India, National Sample Survey Organisation, 66th Round Report, June 2010.

The literacy rates among those aged 15+ years as per the NSS 66th Round, 2010, and 68th Round, 2012, shows that there is consistent increase in the literacy level and the gap between male and female literacy rates in rural, urban and general is declining steadily (Figure 23). In Karnataka, a similar decline in the gap between male and female literacy rate, in the age group 15–49 years old, is observed between 2004–05 and 2015–16. The NFHS-4 data shows a remarkable decline in the gap between male and female literacy rate (15–49 years) by 14 per cent points in 2015–16, where female literacy rate in the past decade has increased from 59.7% to 71.7%.<sup>10</sup>

<sup>&</sup>lt;sup>10</sup>National Family Health Survey 4 data (Karnataka Fact Sheets), 2005– 06 and 2015–16, considers a cohort in the age group 15–49 years.

States/Union Territories	2004-05			2011-12			
	Ratio of Literate Women to Literate Men			Ratio of Literate Women to Literate Men			
	Total	Rural	Urban	Total	Rural	Urban	
Maharashtra	0.78	0.79	0.77	0.85	0.87	0.83	
Andhra Pradesh	0.85	0.80	0.95	0.79	0.77	0.84	
Karnataka	0.85	0.83	0.90	0.89	0.92	0.85	
Kerala	1.04	1.07	0.92	1.01	1.03	0.97	
Tamil Nadu	0.94	0.98	0.90	1.03	1.03	1.03	
India	0.77	0.75	0.80	0.80	0.78	0.84	

### Table 13: Ratio of literate women to men in selected States (15-24 years)

Source: National Sample Survey Organisation (NSSO), 61st and 66th Round Reports (2004-05 & 2009-10)

The ratio of literate women to men in the age group of 15-24 years has increased in Karnataka between 2004-05 and 2009-10 and the state has continued to maintain a ratio which is much above the national average. The state has shown commendable progress in the ratio of literate women to men in the rural areas with an increase of 0.10 percentage points, but what is worrying is a drop in the indicator for urban areas. This could possibly be because of the high level of migration to the urban spaces and focus of interventions targeted mainly towards the rural areas. The neighbouring states like Kerala and Tamil Nadu have fared better by managing to have a ratio above 1, meaning that there are more literate women in these states in comparison to men (Table 13).

### Indicator: Share of Women in Wage Employment in the Non-Agricultural Sector

The indicator 'Share of Women in Wage Employment in the Non-Agricultural Sector' is defined as the share of female workers in the non-agricultural sector expressed as a percentage of total employment in the sector. This indicator is sensitive to the access that women have to labour markets in the economy. This access is not only an important factor for empowerment outcomes but also the basic human right of equal employment opportunity.

Only 19.3% of wage workers in the nonagricultural sector in India were women in 2011-12. Although this number was an increase from 18.6% in 2004-05, it is lower than 16 other states in the country. Among the neighbouring states except Maharashtra, the share of women in wage employment in the non-agricultural sector is lowest in Karnataka, and what is startling is the fact that the indicator has remained the same at 20.9 from 2004-05 to 2011-12 (Figure 24). However, the share of women in wage employment in the non-agricultural sector in Karnataka has been more than the national share since 2004-05. What needs to be reiterated here is that the national share has increased from 2004-05 but Karnataka exhibits stagnancy. This stagnancy is even more alarming when disaggregated numbers from rural and urban Karnataka are considered. The participation of women's workforce in the non-agricultural sector in rural Karnataka has declined from 2004-05 to 2011-12 while their participation in urban Karnataka has increased. Karnataka also has the least number of women participating in the non-agrarian workforce in comparison to the other neighbouring states of Kerala, Andhra Pradesh and Tamil Nadu (Table 14).

States/Union Territories	2004-05			2011-12		
	Rural	Urban	Total	Rural	Urban	Total
Andhra Pradesh	24.3	22.7	23.5	27.5	19.3	22.9
Karnataka	22.3	20.1	20.9	17.3	23.3	20.9
Kerala	27.4	27.7	27.5	31.9	28.3	30.8
Maharashtra	17.5	21.9	20.7	16.1	21.6	20.1
Tamil Nadu	25.5	24.6	25	42.9	22.6	32.5
India	17.9	19.2	18.6	19.9	18.7	19.3

Table 14: Share of women in wage employment in the non-agricultural sector in Karnataka and neighbouring states

Source: Millennium Development Goals, India Country Report (2015)

It is also important to point out here that though the indicator of share of women in wage employment in the non-agricultural sector is crucial, this indicator alone does not cover many critical aspects related to women's employment. Firstly, it does not capture the differential in wages earned by women and men. Secondly, by virtue of measuring women's participation in the non-agrarian sector, it ignores women's participation in the agrarian and the informal sector where women tend to be concentrated in countries like ours. Thirdly, and most importantly, work force participation in non-agricultural sector is oblivious to the double burden of work faced by women both inside and outside the home, and it is likely to be so till the time care-work gets included in national accounting practices.





Source: Millennium Development Goals, India Country Report (2015)

### Indicator: Proportion of Seats Held by Women in Parliament

India has debated equality for women at the various levels of decision-making ever since the inception of the republic. The idea backing the demand for representation of women in all decision-making bodies is the need for creating a 'critical mass' and 'gender balance' in political decision-making, one important step towards political empowerment of women. Table 15: Number of Women MPs in Lok Sabha in Various States in India

Lok Sabha		Lok Sabha						
State	2009	2014						
	Percentage of Women Members	Percentage of Women Members						
Andhra Pradesh	11.90	7.14						
Assam	15.38	15.38						
Chandigarh	0.00	0.00						
Chhattisgarh	18.18	9.09						
Gujarat	15.38	15.38						
Jammu & Kashmir	0.00	16.67						
Karnataka	3.57	3.57						
Madhya Pradesh	21.43	14.29						
Maharashtra	6.25	6.25						
Punjab	30.77	7.69						
Tamil Nadu	2.56	10.26						
Bihar	10.00	7.50						
Kerala	0.00	5.00						
Delhi	14.29	14.29						
Odisha	0.00	9.52						
West Bengal	16.67	33.33						
Uttarakhand	0.00	20.00						
Uttar Pradesh	16.25	16.25						
Haryana	NA	NA						
Meghalaya	NA	NA						
Rajasthan	12.00	4.00						
Total	10.87	11.23						

Source: Election Commission of India

Women's representation in the South Asian region in national legislatures has been found to be hovering at around 9%. In India, within the provincial/state legislatures, it is still lower, at

around 4%. This is despite the fact that India has had a few women in positions of power at key levels. Currently, the total percentage of elected women representatives in the Rajya Sabha, the upper house, is 9.8% and in the Lok Sabha, the lower house, it is 11%. Women's representation among Lok Sabha members is the lowest for Karnataka among the five neighbouring states (Table 15).

The representation of women members from Karnataka is as low as 3.57% in Lok Sabha (one of the lowest in India) and zero in Rajya Sabha. The disappointing state of affairs for women's representation continues with the state legislative assembly as well, where women form only 2.68% of total seats (Figure 25). The dismal representation in the two national legislature houses and state assembly is confounding. However, Karnataka has been at the forefront when it comes to representation of women at the local level. As a result, at present there are 39,318 elected women members at the GPs, which is about 43% of the total elected members in the local bodies in the state.

The poor representation of women in parliament and state assemblies is not limited to Karnataka state alone. The representation of women at the national parliament was only 11.23% in 2014. West Bengal is the only state reporting 33% women MPs out of its allocated number of seats in Lok Sabha.

Parity indicators are only the first step in a move towards gender equality. Parity with men does not automatically alter the discriminations



Figure 25: Number of women members in Karnataka State Assembly

Source: Election Commission of India

inherent in a patriarchal social structure and resultant gender relations. Therefore, the indicators should move beyond a simplistic measurement of parity and representation. However, even on parity indicators, though Karnataka is progressing towards achieving the MDG of eliminating gender disparity in primary and secondary education, it is far from meeting those in non-agriculture employment and political participation.

### **MDG 4: Reduce Child Mortality**

Childmortalitystatistics are generally considered credible sources in indicating a country's health and socio-economic conditions. It is estimated that about 29,000 children under the age of five die every day, mainly from preventable causes, of which more than 70% of the deaths every year are attributable to six causes: diarrhoea, malaria, neonatal infection, pneumonia, preterm delivery, or lack of oxygen at birth.<sup>11</sup>

Globally, we are seeing a downward trend in under-five mortality rates. The under-five mortality rate has dropped from 90 deaths per 1,000 live births in 1990 to 48 in 2012 (UNICEF, 2013). Approximately 50% of all under-five deaths occur in five countries: India, Pakistan, Nigeria, China and the Democratic Republic of Congo. More crucially, India alone accounts for about 22% of these deaths. Table 16 gives details of the fourth MDG and its indicators.

### Table 16: Millennium Development Goal 4

Goal 4: Reduce Child Mo	ortality
Target 5: Reduce by	<ol> <li>Indicators</li> <li>Under-Five Mortality</li></ol>
two thirds, between	Rate (U5MR) <li>Infant Mortality Rate</li>
1990 and 2015,	(IMR) <li>Proportion of one-year-</li>
the under-five	old children immunised
mortality rate.	against measles

### **Indicator: Under-Five Mortality Rate**

Under-five mortality rate (U5MR) is defined as the probability of a child per 1,000 newborns dying before the age of five years. In India, approximately 2.1 million children below the age of five die every year with more than half of these deaths occurring in children below 28 days of age, accounting for a quarter of annual infant deaths, worldwide (Sharma, 2008). Child survival in India has been attributed to many factors, including education level, age and nutrition levels of the mother, environmental factors and deliveries attended by skilled health personnel (UNICEF, 2012).

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In 2013, Karnataka stood sixth in the country in terms of under-five and infant mortality rates.

The state with the lowest mortality rates in 2013 was Kerala with a U5MR of 12 and an IMR of 12 (U5MR – Under-5 Mortality Rate; IMR – Infant Mortality Rate).

The state with the highest U5MR in 2013 was Assam with 73. Assam and MP also had the highest IMRs (54).

According to DLHS 4, only three states had measles immunisation above 90%. These were Goa (94.1%), Kerala (91.6%) and Sikkim (94.9%).

In 2015–2016, Karnataka had an Under-5 Mortality Rate of 32; it was 39 for rural and 23 for urban areas.

Mortality rates among females have largely been higher than for males (SRS).

<sup>11</sup>UNICEF, http://www.unicef.org/mdg/childmortality.html

The data obtained from the Sample Registration System (SRS) and the National Family Health Survey (NFHS) estimate that the under-five mortality rate in India has decreased from an estimated 125 deaths per 1,000 live births in 1990 to 49 per 1,000 live births in 2013. This represents a notable decrease although still marginally short of India's MDG target of 42. Karnataka, as of 2015, had an under-five mortality rate of 32 deaths per 1,000 live births, down from an estimated 94 in 1990, which is a 65.95% decrease (Figure 26).



Figure 26: Trends in Under-Five Mortality Rates in India and Karnataka (1990–2015)

Source: National Family Health Survey 1, 2, 3, 4; Sample Registration System (SRS)



#### Figure 27: Under-Five Mortality Rate targets in a few select states

Source: Sample Registration System, Millennium Development Goals, India Country Report (2015)

India is likely to achieve a U5MR of 46 by 2015,<sup>12</sup> missing the target of 42 by 4 points. Karnataka, which has a U5MR of 32 in 2015, is very close to the target of 31. Among neighbouring states, Tamil Nadu has already achieved the U5MR target of 34 while Kerala is on track to achieve its

target of 11 by 2015. Andhra Pradesh is likely to miss out on its target of 33 while Maharashtra is on course to achieve the state target of 25.

<sup>&</sup>lt;sup>12</sup>Likely achievements were calculated based on data from the last five years, i.e., 2009 onwards.

According to data from the report *Human Development, Performance of Districts, Taluks and Urban Local Bodies in Karnataka, 2014 – A Snapshot,* 2014, Udupi (13), Bengaluru Urban (17), Dakshina Kannada (22), Hassan (23) and Chikkamagaluru (25) had the lowest U5MR and Raichur (77), Koppal (66), Ballari (63), Gadag (57), Yadgir (56) and Kalaburagi (56) showed the highest U5MR (Figure 28). According to an article that estimates the U5MR for 597 districts for 2001–2012 (Ram et al., 2013), in Karnataka the highest rates of decline over 12 years have been attributed to the districts of Udupi (68.3%), Bengaluru Urban (63.8%), Chikkamagaluru (63.2%) and Hassan (61%). The districts with the lowest rates of decline were in Raichur (4.1%), Kodagu (28.3%), Kalaburagi (34.1%) and Yadgir (34.1%). The reasons for this uneven distribution in mortality rates are multi-dimensional, which include maternal education, maternal nutrition, mother's socioeconomic status, availability of health facilities and baby's birth weight and immunisation status among other things.





Source: Ram, U., P. Jha, F. Ram et al. (2013), Human Development, Performance of Districts, Taluks and Urban Local Bodies in Karnataka (2014)



Figure 29: Trends in Infant Mortality Rates in Karnataka and India (1990–2015)

Source: National Family Health Survey 1, 2, 3, 4, Sample Registration System (SRS)

### **Indicator: Infant Mortality Rate**

The Infant Mortality Rate (IMR) is defined as the probability of dying between birth and one year of age, expressed per 1,000 live births.<sup>13</sup> As per the SRS and MoSPI, India has seen a 50% decline in IMR from 80 in 1990 to 40 in 2013. Karnataka, during the same period, has seen a decline from 70 to 31, a 55.71% decline. The NFHS 4 estimated the IMR in Karnataka to be 28 in 2015. Andhra Pradesh and Karnataka have the same IMR target of 23.34. In 2013, Andhra Pradesh had an IMR of 39 while Karnataka stood at 31. Tamil Nadu, in 2013, had an IMR of 21 and a target of 19.66. Similarly, Maharashtra is likely to be close to the target of 19.33. Kerala, whose target is 5.33, is likely to miss out. The states of Assam (51) and Madhya Pradesh (54) with the highest levels of IMR as of 2013 are likely to miss out on their respective targets too (Figure 30).

#### Figure 30: Comparison of 2013 IMR with 2015 targets in select states



Sample Registration System (SRS), Millennium Development Goals, India Country Report (2015)



### Figure 31: District-wise Infant Mortality Rates in Karnataka (2011-12)

Source: Human Development, Performance of Districts, Taluks and Urban Local Bodies in Karnataka,2014 – A Snapshot, Sample Registration System (SRS), Millennium Development Goals, India Country Report (2015)

<sup>13</sup> http://www.unicef.org/infobycountry/stats\_popup1.html

According to data from the report Human Development, Performance of Districts, Taluks and Urban Local Bodies in Karnataka, 2014 – A Snapshot, 2014, in 2011-12, the districts with the highest infant mortality rates were Raichur (67), Koppal (58), Ballari (55), Gadag (50) and Kalaburagi (49). The districts with the lowest infant mortality rates were Udupi (11), Bengaluru Urban (15), Dakshina Kannada (19) and Hassan (19.5). In the same year, SRS estimated Karnataka's average IMR to be 32. This means that at least 18 districts were above the Karnataka average. Tumakuru, Vijayapura, Chamarajanagar, Kolar and Chikkaballapura all had an estimated IMR of 34, which was close to the Karnataka average. Chikkamagaluru, Hassan, Dakshina Kannada, Bengaluru Urban and Udupi have all achieved Karnataka targets (Figure 31).

### Indicator: Proportion of One-Year-Old Children Immunised against Measles

The proportion of one-year-old children immunised against measles indicates the proportion of children under one year of age who have received at least one dose of measlescontaining vaccine.<sup>14</sup> This indicator is expressed as a percentage. Measles immunisation is seen as an important indicator for it provides a measure of the coverage and quality of health care in a region. In addition, it acts as a determinant as to how many children have been immunised against other diseases like BCG, DPT and polio since the measles vaccine is given after the other vaccines.





Source: National Family Health Survey 4 (2015-16)



Figure 33: District-wise measles immunisation in Karnataka (2012–13)

Source: District Level Household Survey 4 (2011-13)

<sup>&</sup>lt;sup>13</sup> Definition as per UN, http://mdgs.un.org/unsd/mi/wiki/4-3-Proportion-of-1-year-old-children-immunised-against-measles. ashx

While looking at India as a whole, NFHS3 (2005-06) estimated that the number of children vaccinated against measles was 58.8%. Recent information for states is available from the NFHS-4 survey (2015) in which Karnataka's measles coverage stood at 82.4%. As per the recent RSoC (2013-2014), 87.4% children aged 12-24 months received their first dose of measles vaccine. With an achievement of 82.4% in 2015. Karnataka misses the target by approximately 18%. Another surprising fact is that DLHS-4 estimated Karnataka's measles coverage to be 89.6% in 2012-13. This number has since gone down to 82.4%, according to the NFHS-4 factsheet. When comparing Karnataka with neighbouring states (NHFS-4), Andhra Pradesh stands at 89.4% while Tamil Nadu's proportion is 85.1%. Sikkim and Goa have done very well with above 90% immunisation rates (Figure 32). Districts which had the highest measles vaccination coverage in 2013 were Hassan (96.7%), Chikkaballapura (96.6%), Bengaluru Urban (96.2%) and Bengaluru Rural (95.5%). Districts with the lowest measles coverage were Yadgir (80.8%), Kalaburagi (82.4%), Chitradurga (83.8%) and Bagalkot (86%) (Figure 33).

Karnataka has missed out but is close to meeting the under-five and infant mortality targets. The steep decline in the child mortality rates and the positioning close to target is perhaps thanks to the effective implementation of programmes under the National Rural Health Mission and the National Urban Health Mission, which aim to prioritise healthcare access to women and children. The real challenge now lies in maintaining and improving these rates to achieve the targets by following safe child-care practices.

### **MDG 5: Improve Maternal Health**

Globally, just two countries, i.e., India (50,000 deaths, 17%) and Nigeria (40,000 deaths, 14%) accounted for one-third of all maternal-health-related deaths (WHO, UNICEF, UNFPA, The World Bank and The United Nations Population Division, 2014). Further, the leading causes of maternal deaths were severe bleeding (27%), infections (11%), obstructed labour (9%), blood clots/ embolism (3%), pregnancy-induced high blood pressure (14%), abortion complications (8%) and pre-existing conditions (28%).<sup>15</sup> Table 17 gives us the indicators assessed in Goal 5.

### Table 17: Millennium Development Goal 5

### **Goal 5: Improve Maternal Health**

Target 6: Reduce by three quarters, between 1990 and 2015, the maternal mortality ratio Indicators 1. Maternal Mortality Ratio (MMR) 2. Proportion of births attended by skilled health personnel

### **Indicator: Maternal Mortality Ratio**

Maternal Mortality Ratio (MMR) is defined as 'the death of a woman while pregnant or within 42 days of termination of pregnancy, irrespective of the duration and site of the pregnancy, from any cause related to or aggravated by the pregnancy or its management but not from accidental or incidental causes'.<sup>16</sup>

According to the Sample Registration System (SRS) and the National Family Health Survey (NFHS), India's maternal mortality rate has



At 133, Karnataka had the highest MMR amongst the southern states in 2013 against the target of 79 in 2015.

The percentage of institutional births has gone up in Karnataka from 64.7 in 2005– 06 to 94.3 in 2015–16

The districts which have performed well in maternal mortality indicators are Udupi, Dakshina Kannada, Bengaluru Urban, Chikkamagaluru and Hassan. Raichur, Koppal and Ballari have been poor performers.

States which had the highest proportion of women who had full ANC check-ups were Goa (71%), Kerala (70.3%) and Sikkim (70.3%). Nagaland (9.7%) had the lowest.

reduced from an estimated 437 deaths per 100,000 live births in 1990 to 167 in 2013. This represents a 61.8% decline. At the same time, Karnataka has managed to reduce its MMR from an estimated 316 in 1990 to 133 in 2013, representing a decline of 57.9%. India is likely to achieve a figure of 149, missing the 2015 target by around 40 points.<sup>17</sup> Karnataka also looks like it will miss the target by approximately 30 points (Figure 34).

 $<sup>^{15}</sup>$  Maternal mortality – Fact sheet N°348, http://www.who.int/mediacentre/factsheets/fs348/en/ Retrieved on 27.8.2015

<sup>&</sup>lt;sup>16</sup>WHO, Health Statistics and information systems http://www.who. int/healthinfo/statistics/indmaternalmortality/en/Retrieved on 27.8.2015

 $<sup>^{\</sup>rm 17}$  Likely achievements were calculated based on data from 2006 onwards.



Figure 34: Trends in Maternal Mortality Ratio (1990–2015) in India and Karnataka

Source: National Family Health Survey 1, 2, 3, Sample Registration System (SRS)



### Figure 35: Comparison of 2013 MMR estimates with 2015 target, select states

Source: Sample Registration System (SRS), Millennium Development Goals, India Country Report (2015)

Amongst its neighbouring states, Karnataka had the highest MMR. In 2013, Kerala at 61 had achieved its MDG target of 69.8 and had the lowest MMR in the country. Maharashtra is close to achieving its target of 58.6. However, Andhra Pradesh (92) and Tamil Nadu (79) may miss out on their targets. The highest maternal mortality ratio belonged to Assam at 300 in 2013. It will miss out on its target of 136 (Figure 35).

According to the data from the report *Human Development, Performance of Districts,Taluks and Urban Local Bodies in Karnataka, 2014 – A Snapshot,* 2014, the districts with the highest maternal mortality ratios in 2011–12 were Raichur (244), Koppal (236), Ballari (227) and Gadag (215). Districts with the lowest mortality ratios were Udupi (50), Bengaluru Urban (73), Dakshina Kannada (89) and Chikkamagaluru (94) (Figure 36). Only Udupi and Bengaluru Urban had lower MMRs than the state average.

### Indicator: Proportion of Births Attended by Skilled Health Personnel

Defined by the UN, percentage of births attended by skilled health personnel is the

percentage of deliveries attended by health personnel trained in providing life-saving obstetric care, including giving the necessary supervision, care and advice to women during pregnancy, labour and the post-partum period; conducting deliveries on their own; and caring for new-borns. The indicator provides a measure of a health system to adequately care for pregnant women, reducing maternal and infant related deaths. While there is no prescribed target for this indicator, it is desirable to achieve a 100% in order to reduce maternal deaths to its prescribed values.

According to the NFHS-4 surveys, the proportion of births attended by skilled health personnel was 93.9% in Karnataka for the year 2015. According to the India Country Report on MDGs (2015), India would reach 77% in 2015. When comparing Karnataka with its neighbouring states, Tamil Nadu (99.3%) had the highest proportion of women who underwent delivery under the care of skilled health personnel. Andhra Pradesh stood at 92.2%. Goa stood at 94% while Telangana was 91.4% (Figure 38).

Figure 36: District-Wise Maternal Mortality Ratio in Karnataka (2011–12)



Source: Human Development, Performance of Districts, Taluks and Urban Local Bodies in Karnataka, 2014 – A Snapshot, Millennium Development Goals, India Country Report (2015)



Figure 37: Proportion of births attended by skilled health personnel in Karnataka (1998–2015)

Source: District Level Household Survey 1, 2, 3, 4; National Family Health Survey 4 (Karnataka Factsheets)



### Figure 38: Proportion of births attended by skilled health personnel in select states (2015)

Source: National Family Health Survey 4, State Factsheets



Figure 39: District-wise proportion of births attended by skilled health personnel in Karnataka

Source: District Level Household Survey 4 (2012–13)

As per DLHS 4, the districts of Hassan, Ramanagara and Dakshina Kannada have done particularly well, achieving over 99% in this measure. Udupi stands at 98.8% and Mysuru at 98.7%. The worst-performing districts have been Raichur (80.8%), Kalaburagi (82.8%), Koppal (83.1%) and Yadgir (83.6%). It should be noted that Raichur and Koppal also have the highest MMR in the state (Figure 39).

While looking at other indicators for gauging safe pregnancies, the proportion of women who had ANC visits has increased significantly since 2007-08 (DLHS 3). This includes women who received any antenatal check-up and women who had three or more ANC visits. The proportion of women who underwent institutional delivery was estimated at 94.3% in 2015, up from 65.1% (2007-08). For mothers who received post-natal care within two days of delivery, the average within the state was 65.6% (2015), while in 2007-08, it was 68.4%. The proportion of women who received full antenatal care went down to 32.9% (2015) from 51.1% (2007-08). Similarly, the percentage of women who consumed 100 or more IFA tablets also went down from 64.1% (2007-08) to 45.3% (2015) (Figure 40).

DLHS 4 estimates that Dharwad (18.7%), Koppal (18.9%), Ballari (19.9%) and Gadag (22.2%) had the lowest proportion of women who received full antenatal care<sup>18</sup> while Bengaluru Urban (74.4%), Chamarajanagar (74.2%), Tumakuru (72.9%) and Mandya (69.5%) had the highest proportion. Yadgir (72.2%), Ballari (72.7%), Haveri (73.4%) and Raichur (75.5%) were districts with the lowest proportion of pregnant women who had at least three ANC visits, while Hassan (98.4%), Dakshina Kannada (97.9%), Tumakuru (97.6%) and Bengaluru Urban (97.2%) had the highest proportion.

The Rapid Survey of Children (RSoC) survey (2013–2014) data provides critical indicators on service delivery to pregnant women and to mothers of newborns. The data in Table 18 shares critical areas for the programme implementers to act upon to improve performance.

<sup>&</sup>lt;sup>18</sup> Full antenatal care is defined as women who have at least three visits for antenatal check-up, have received one TT injection and have consumed 100 IFA tablets or adequate amount of syrup.



### Figure 40: Status of other maternal health related indicators in Karnataka

Source: District Level Household & Facility Survey 3 & 4; National Family Health Survey 4 (Karnataka Factsheets)

### Table 18: Selected indicators on reproductive and child-care services in Karnataka

Indicators	Total (%)	Rural (%)	Urban (%)
Visited at least once during pregnancy by ANM	35.7	42.2	24.7
Visited at least once during pregnancy by AWW	48.7	57.3	34.2
Visited at least once during pregnancy by ASHA	40	55.8	13.3
Received ANC at Anganwadi Centre	13.1	16.9	6.7
Received ANC at government health facility	53.3	55.4	49.7
Received ANC at private health facility	54.9	53	58.2
Stayed at health facility after delivery for 48 hours or more	79	78.6	79.7
Received PNC within 48 hours of discharge/delivery (all)	75.6	74.2	77.9
Newborns who received first check up within 24 hours of birth/discharge	52.2	54.1	49
Visited by primary health worker (AWW/ANM/ASHA) at home within one week of delivery/discharge from health institutions	85.4	85.5	85.2
Availed benefits from national programme for safe motherhood (JSY)	56.9	63.6	44.2

Source: Rapid Survey on Children (2013-14)

Though the state has achieved appreciable success in reducing child mortality, similar success has not been seen in improving maternal mortality. One needs to understand the reasons for this, as neonatal mortality and maternal mortality often go hand in hand. Karnataka is doing well in terms of providing trained personnel for undertaking deliveries (93.9%) and in terms of providing a good number of schemes for a safer delivery (Thayi Bhagya,<sup>19</sup> Janani Suraksha Yojana (JSY),<sup>20</sup> Prasooti Araike,<sup>21</sup>

Madilu Kits<sup>22</sup>). The question then remains on what else needs to be done to improve dismal maternal mortality figures in the state.

<sup>&</sup>lt;sup>19</sup> For more information, please visit Directorate of Health & Family Welfare http://karhfw.gov.in/nrhm/PrTHAYI\_BHAGYA.aspx

<sup>&</sup>lt;sup>20</sup> For more information on the JSY, refer the National Health Mission, http://nrhm.gov.in/nrhm-components/rmnch-a/maternal-health/ janani-suraksha-yojana/background.html

 $<sup>^{21}</sup>$  More on the Prasooti Araike can be found at http://karhfw.gov.in/nrhm/Pr<br/>Prasooti%20 Araike.aspx

<sup>&</sup>lt;sup>22</sup> Madilu Kits are constituted of 19 items including soaps, towels mosquito nets, etc. For detailed description, please visit http:// karhfw.gov.in/nrhm/PrMADILU.aspx

### MDG 6: Combat HIV/AIDS, Malaria, Tuberculosis

### Table 19: Millennium Development Goal 6

Goal 6: Combat HIV/AIDS, Malaria and TB	
Target 7: Have halted by 2015 and begun to reverse the spread of HIV/AIDS	<ol> <li>Indicators</li> <li>HIV prevalence among pregnant women aged 15-24 years</li> <li>Ratio of Condom Use Rate to Contraceptive Prevalence Rate</li> <li>Condom use during last high-risk sex act</li> <li>Percentage of population aged 15-24 years with comprehensive, correct knowledge of HIV/AIDS</li> </ol>
Target 8: Have halted by 2015 and begun to reverse the incidence of malaria and other major diseases.	<ol> <li>Annual Parasite Incidence Rate (API) per 1000</li> <li>Deaths due to malaria</li> <li>Tuberculosis prevalence per lakh population</li> <li>Tuberculosis mortality per lakh population</li> </ol>

Infectious diseases have always been one of the chief problems in our country with its high population density and temperate climate. Use of antibiotics and preventive health programmes by government to combat infectious diseases has achieved success. However, this is often plagued by the problems of increased demand due to population growth, poverty and underfunding. The MDG 6 measures the prevalence of HIV/AIDS, malaria and tuberculosis (TB) to gauge the country's progress in its fight against infectious diseases (Table 19).

### **HIV/AIDS**

Going by AIDS Control estimates, the HIV/AIDS prevalence in Karnataka stood at 0.52% in 2011, which is higher than the national prevalence



### Figure 41: HIV prevalence (%) 2007–2011 estimates in Karnataka

Source: HIV Sentinel Survey, 2012-13

(0.27%) and fifth highest in the country, the highest prevalence being 1.22% in Manipur. HIV prevalence estimates in percentage terms have shown a decrease from 0.67% in 2007 to 0.52% in 2011 in the state amongst the 15-49 year olds (Figure 41). This decrease in prevalence is seen in both men and women. Prevalence was higher amongst men 15-49 years at 0.62% as compared to women (0.43%) in 2011. Looking at specific risk groups from 2003 to 2012-13, Female Sex Workers (FSW) and Men who have Sex with Men (MSM) are those with highest prevalence of HIV/AIDS in the state. In 2010–11, the prevalence amongst FSW was estimated to be 5.1%, while it was a little higher at 5.36% in MSM (HIV Sentinel Surveillance) (Figure 42). One of the obvious reasons for the high prevalence among the high-risk groups may be the criminality associated with both the groups: both sex-work and homosexuality are illegal. This limits their opportunity to come forward for accessing preventive and curative measures.

### Indicator: HIV Prevalence among Pregnant Women Aged 15–24 Years

The prevalence of HIV/AIDS in the general population is best judged by looking at prevalence in pregnant women, which has decreased from 1.43% in 2003 to 0.53% in

2012–13 in Karnataka (Figure 41). In Karnataka, the prevalence of HIV/AIDS among pregnant women aged 15–24 years has decreased from 1.57% in 2005 to 0.51% in 2012–13 (Figure 43). This is higher than the national estimate of 0.32%. The highest prevalence is seen in Nagaland (1.16%). Karnataka and Andhra Pradesh have the same prevalence of 0.51%, which is higher than their neighbours, Tamil Nadu (0.31%), Maharashtra (0.30%) and Kerala (0.06%).

As per the HIV Sentinel Surveillance Report, 2012–13, HIV prevalence of higher than 1% among ANC clients is reported from Mandya and Chamarajanagar districts. Sixteen districts have reported an HIV prevalence between 0.5% to 0.9% and 12 districts have reported less than 0.5%. In terms of absolute numbers, according to Karnataka State AIDS Prevention Society (KSAPS) data, 1295 ANC clients (15–49 years) were detected positive for HIV in the state, of which 701 mothers were aged 15–24 years, which is 54.1% of all women detected positive.

### Indicator: Ratio of Condom Use Rate to Contraceptive Prevalence Rate among Currently Married Women, 15–49 Years (Percentage)

The indicator depicts the percentage of





Source: HIV Sentinel Surveillance 2012-13 - A Technical Brief.

ANC - Ante Natal Care, FSW - Female Sex Worker, MSM - Male Sex Worker, IDU - Intravenous Drug User



Figure 43: HIV/AIDS prevalence among pregnant women aged 15-24 years in Karnataka (2004-13)

Source: HIV Sentinel Surveillance 2012–13, National MDG Report, 2015

currently married women aged 15–49 years using condoms of the total number of women using contraceptives in a given year. According to NFHS3 (2005–06) the condom use rate in India was 5.2% among women aged 15–49 years old. The highest condom usage was seen in

Figure 44: Condom Use Rate, Currently Married Women Aged 15–49 Years, in Karnataka (2015)



Source: National Family Health Survey 4 (2015–16)

Delhi (22.9%), Uttarakhand (15.7%) and Punjab (15.5%). The lowest was reported for Andhra Pradesh (0.5%) followed by Mizoram and Karnataka.

According to the NFHS-4 factsheet, Karnataka state's Condom Prevalence Rate is currently 1.3%. Amongst Karnataka's neighbouring states, Goa's use of condoms is highest at 7.1%, while Tamil Nadu, Andhra Pradesh and Telangana are all below 1% (Figure 44).

Looking at usage of condoms by currently married women aged 15–44 years within Karnataka, Dakshina Kannada (4.8%), Kodagu (4.5%) and Hassan are the highest users of condoms while Yadgir (0.1%), Raichur (0.4%) and Bagalkot (0.4%) were the lowest users of condoms (DLHS-4, district fact sheets) (Figure 45).



### Figure 45: District-wise condom use rate among currently married women in Karnataka (2012–13)

Source: District Level Household & Facility Survey 4, District Fact Sheets

Figure 46: Condom use during last high-risk sex act (%) – Proportion of population aged 15–24 years that used condoms during last sex with non-regular partner



Source: Behavioural Surveillance Survey in Millennium Development Goal, - India Country Report (2015)

### Indicator: Condom Use during Last High-Risk Sex Act

This indicator measures the proportion of population aged 15–24 years who used a condom during their most recent sex with a nonregular partner. The Behavioural Surveillance Survey (BSS), which looks at the changes in knowledge and behaviour patterns amongst different risk groups about HIV/AIDS, is the source of information for this indicator. As per the condom promotion impact survey, 2010, it is estimated that nationally, 74% of the population aged 15–24 years used a condom during their last sex act with a non-regular partner; which is an increase of 20% since 2006.

In Karnataka, a comparison of 2006 and 2009 by the Behavioural Surveillance Survey shows an increase of almost 6% in condom use from 2006 to 2009. Of its neighbouring states, Andhra Pradesh and Maharashtra both have registered a larger improvement in the indicator as compared to Karnataka (Figure 46). However, Karnataka was at a higher measure to begin with (81.1%) in 2006. According to data obtained from KSAPS, more than 2.6 crore condoms have been distributed to high-risk groups through outreach staff, STI clinics or drop-in centres during 2014–15 in the state. A total of 12.6 lakh high-risk individuals have confirmed the use of condoms during their last sex act in the state.<sup>23</sup>

### Indicator: Percentage of Population Aged 15–24 Years with Comprehensive, Correct Knowledge of HIV/AIDS<sup>24</sup>

This indicator is also derived from the findings of the BSS conducted in 2001, 2006 and 2009. The national estimate for the proportion of population aged 15–24 years with comprehensive, correct knowledge of HIV/AIDS was 32.9%, an improvement of over 22.2%, in 2001. This, however, seems not to be the case for the six states which were part of the BSS survey. The percentage of youth with a comprehensive, correct knowledge of HIV/AIDS has declined in all states surveyed except Tamil Nadu. In Karnataka, the percentage has decreased from 23% in 2006 to 10% in 2009 (Figure 47).

When we look at the findings from the NFHS 4 survey, 9.5% women have comprehensive knowledge of HIV/AIDS in Karnataka. According to the NFHS 4 (2015) survey findings in Karnataka, 50% women as compared to 65.9% men said that the risk of AIDS can be reduced by using condoms. As per DLHS 4, 44.8% said that the risk of HIV/AIDS can be reduced by limiting sex to one uninfected partner; while 59.7% women knew that HIV/AIDS can be transmitted from mother to baby. All of the above point to the need to focus on increasing the awareness

<sup>&</sup>lt;sup>23</sup> Source: State Information Management Systems (SIMS), Karnataka State AIDS Prevention Society (KSAPS)

<sup>&</sup>lt;sup>24</sup> Comprehensive, correct knowledge about HIV transmission and prevention is construed as 'percentage of population aged 15–24 years who could correctly identify the two major ways of preventing the sexual transmission of HIV (consistent condom use and having one faithful, uninfected sex partner), who reject the two most common local misconceptions about HIV transmission (transmission of HIV/AIDS through mosquito bites and sharing of meals with HIV/AIDS patients), and who know that a healthylooking person can transmit HIV.





Source: Behavioural Surveillance Survey in Millennium Development Goals, India Country Report (2015)

on HIV/AIDS among the general public, and especially among women on specific issues.

The prevalence of HIV in Karnataka is decreasing according to 2011 estimates. This is evidenced by the declining prevalence in the percentage of pregnant women detected positive with HIV/AIDS. Hence, Karnataka has achieved a reversal of trend in prevalence of HIV/AIDS. The use of condoms by currently married women is low in Karnataka and needs to improve. The percentage of people who used condoms during their last high-risk sex act has improved. However, the percentage of population with



HIV prevalence has shown a decrease in all risk groups, pointing to a successful trend reversal at national and Karnataka level.

Annual Parasite Index and deaths due to malaria have decreased in the last few decades. However, a few pockets of infection remain in the state.

TB prevalence rates (WHO estimates) at national level show a decrease in TB prevalence rates from 465 per lakh (1990) to 211 per lakh population in 2013. However, there is no state-level data available.

comprehensive, correct knowledge of HIV/AIDS is dismal in Karnataka and has in fact decreased from 2006 to 2009.

### Malaria

Malaria is ever present in India, with 95% of its population living in malaria-endemic areas.<sup>25</sup> It is caused by the protozoa Plasmodium, with P. falciparum and P. vivax being its more severe forms. It is spread by the bite of the Anopheles mosquito infected by these organisms. According to the National Vector Borne Disease Control Programme (NVBDCP), it was estimated that in 1995 there were about two million cases of malaria in India. This incidence has gradually declined to about less than a million in the last two decades. In 2013, there were 8.8 lakh cases of malaria in India, of which more than 50% (4.6 lakh) cases were due to P. falciparum. In that year, Odisha (2,28,858 cases), Chhattisgarh (1, 10,145 cases) and Jharkhand (97,746 cases) have contributed to almost 50% of the total number of cases in India. Karnataka reported 13,302 cases of malaria in 2013: roughly 1.5% of India's total cases, of which 967 cases were due to P. falciparum.

Over the years, the total number of cases of malaria in Karnataka has decreased from

<sup>&</sup>lt;sup>28</sup> National Vector Borne Disease Control Programme, http://nvbdcp. gov.in/malaria3.html



### Figure 48: No. of total and falciparum malaria cases in Karnataka, 2000–2014

Source: Karnataka State Malaria Control Programme





Source: Karnataka State Malaria Control Programme

1,09,118 in 2001 to 14,794 in 2014, a decrease of 86% since 2001 (Figure 48). This decrease is also seen in the number of P. falciparum cases of malaria. Malaria is endemic in 12 of the 30 districts here, namely Ballari, Vijayapura, Bagalkot, Chitradurga, Dharwad, Gadag, Haveri, Kolar, Koppal, Kalaburagi, Yadgir and Raichur, along with Mangaluru and Udupi towns.<sup>26</sup> Dakshina Kannada and Udupi districts alone accounted for 66% of the total malaria cases reported in 2014.<sup>27</sup>

# Indicator: Annual Parasite Index (API):

This is defined as the number of cases of malaria per 1000 population in a year. The API for India

was 0.72 in 2013, a consistent decline from 1995, when it was 3.29.<sup>28</sup> The API in Karnataka has also consistently declined from 3.9 in 2001 to 0.3 in 2014 (Figure 49). Karnataka has successfully reversed its trend in malarial infections.

In 2013, the highest API was observed for Mizoram at 10.8, Meghalaya (7.8), Odisha (5.3), Arunachal Pradesh (4.8), and Dadra and Nagar Haveli (4.4), while Kerala, Manipur, Bihar, Himachal Pradesh and Delhi all had an API of

<sup>&</sup>lt;sup>26</sup> Karnataka NVBDCP PIP 2014-15, downloaded from http://nrhm. gov.in/nrhm-in-state/state-program-implementation-plans-pips/ karnataka.html on 17.6.2015

 $<sup>^{\</sup>rm 27}$  According to data obtained from the Karnataka State Malaria Control programme.

<sup>28</sup> http://nvbdcp.gov.in/malaria3.html





Source: National Vector Borne Disease Control Programme (NVBDCP), Millennium Development Goals, India Country Report (2015)

zero in 2013. Amongst Karnataka's neighbouring states, Maharashtra had a higher API of 0.4 as compared to Karnataka, Tamil Nadu and Andhra Pradesh whose API was 0.2 (Figure 50). According to the Karnataka State National Vector Borne Disease Control Programme (NVBDCP) PIP 2014–15, an API of less than 1 has been achieved in all districts except in Dakshina Kannada and Udupi due to high incidences of malaria in Mangaluru and Udupi towns.

### Indicator: Deaths Due to Malaria

In 2013, a total of 440 malaria deaths were registered all over the country. This number was 1151 in 1995 and since then has consistently declined. In 2013 the highest number of deaths were reported in Maharashtra (80), followed by Odisha (67), Meghalaya (62), Madhya Pradesh (49), Chhattisgarh (43) and Gujarat (38). Karnataka and Tamil Nadu did not register any deaths in 2013. Kerala registered three deaths and Andhra Pradesh had two deaths in 2013. Karnataka had no deaths due to malaria in 2011, 2012 and 2013. Though the number of deaths due to malaria in the state has declined since 2002, a spurt in infection and two deaths were reported in 2014 (Figure 51). Both of these deaths took place in Dakshina Kannada district. Intensive measures still need to be taken to control infections and prevent any more deaths.

Karnataka has consistently reduced the incidence of malaria in the last decade and successfully reversed the trend in its incidence. However, the infection still rears its ugly head



Figure 51: Number of deaths due to Malaria in Karnataka (2000–2014)

Source: Karnataka State Malaria Control Programme



Figure 52: Number of total and new cases of TB in Karnataka 2003–2014

Source: Revised National Tuberculosis Control Programme (RNTCP) - Annual reports and Karnataka state quarterly reports

in some pockets of the state like in Dakshina Kannada and Udupi districts, preventing it from achieving an API of less than one in all 30 districts. Acquiring total eradication of malaria in the state is a possibility in the near future.

### **Tuberculosis**

Tuberculosis (TB) is an infectious disease caused by Mycobacterium tuberculosis. TB has the reputation of being one of the oldest diseases in recorded history and also as one of the most difficult diseases to treat, mainly due to its long treatment schedule resulting in high levels of defaulters. The TB bacillus can affect almost any part of the human body, the most common casualty being the lungs, causing pulmonary TB.

According to WHO estimates, the prevalence of TB in India was 195 per lakh population in 2014, with an incidence of 167 per lakh population.<sup>29</sup> TB estimates are currently obtained either

 <sup>29</sup> TB Burden – India, WHO Estimates, https://extranet.who.int/sree/ Reports?op=Replet&name=%2FWHO\_HQ\_Reports%2FG2%2FPRO D%2FEXT%2FTBCountryProfile&ISO2=IN&LAN=EN&outtype=html
 <sup>30</sup> The new cases of TB include New Sputum-Positive (NSP), New from the Revised National Tuberculosis Control Programme (RNTCP) notification data, the WHO or from the Global Burden of Diseases. A study comparing these three estimates states the differences in the methodologies of estimation and therefore corresponding variance in the estimates. The notification of cases under the RNTCP is characterised by under-reporting of cases as a large number of patients are treated by private providers and not reported. There are also no studies that give us an estimate of the number of cases that go unreported.

State-level data on TB is available from state quarterly reports on RNTCP. This data consists of all the patients who, after having been diagnosed with tuberculosis, have registered for treatment and depicts a lot of fluctuation in the total number of cases of TB registered as well as in the new cases<sup>30</sup> registered from 2003 till 2014.<sup>31</sup>

The data shows a decrease in the number of new cases of sputum-positive, sputum-negative as well as extra-pulmonary cases of TB from 56,332 in 2011 to 48,344 in 2014 (Figure 52). This same trend is seen in the total number of cases registered, i.e., new cases, as well as those of relapse, failure and retreatment. This follows the national pattern, where a reduction in TB incidence and prevalence can be seen.

<sup>&</sup>lt;sup>30</sup> The new cases of TB include New Sputum-Positive (NSP), New Sputum-Negatives (NSN) and New Extra-Pulmonary (NEP) cases registered for that year.

<sup>&</sup>lt;sup>31</sup> Data obtained from RNTCP Annual Reports years 2003–2014, as well as from Karnataka state quarterly reports for 2014.


Figure 53: TB incidence and prevalence rate estimates (2003-2014) in Karnataka

Source: Estimates calculated based on Revised National Tuberculosis Control Programme (RNTCP) – Annual reports and Karnataka State quarterly reports

### Indicator: TB Prevalence Rate

The incidence rate, per lakh population, for TB was calculated by dividing the number of new cases (new sputum-positive cases, new sputum-negative and new extra-pulmonary cases), by the projected population for that year, per 100,000 population. The incidence rate shows a decrease from 92.2 per lakh in 2011 to 76.1 per lakh in 2014 (Figure 53). The prevalence rate<sup>32</sup> was calculated by dividing the total current number of patients registered in that year by the projected population, per 100,000 population. The prevalence rates have decreased from 115.4 per lakh (2011) to 95.7 per lakh (2014) (Figure 53). Both these rates follow a trend similar to that observed in the national estimates.

### Indicator: TB Mortality Rate<sup>33</sup>

Looking at the number of deaths due to TB, from state reports for five years, we see a decrease in the mortality rates from 8.3 per 100,000 in 2010 to 6.9 per 100,000 population in 2014 (Figure 54). The TB mortality rates were calculated by dividing the number of total reported deaths from TB by the projected population for that year per 100,000 population. It should be noted that the percentage of deaths due to TB are more in cases of relapse, treatment failures and defaulters as opposed to new sputum-positive, sputum-negative and extra-pulmonary patients. Annually 5–6% of new sputum-positive patients lose their lives to TB according to the Annual TB reports. This percentage is higher in cases of defaulters and failures (9–11%).

### Limitations in data

Being aware that the incidence, prevalence and mortality rates calculated are at best an

## Figure 54: **TB mortality rate in Karnataka** (2010–2014)



Source: Estimates calculated based on Revised National Tuberculosis Control Programme (RNTCP) – Annual reports and Karnataka state guarterly reports

<sup>&</sup>lt;sup>32</sup> Crude incidence and prevalence rates were calculated based on the formula obtained from the Centre for Disease Control (CDC) website, http://www.cdc.gov/ophss/csels/dsepd/ss1978/lesson3/ section2.html

<sup>&</sup>lt;sup>33</sup> TB mortality rate was calculated based on the formula for crude cause specific mortality rate provided by the Centre for Disease Control (CDC), http://www.cdc.gov/ophss/csels/dsepd/ss1978/ lesson3/section3.html

underestimate of the rates in the state, the incidence and prevalence rates were calculated from numbers obtained from the RNTCP annual reports. The rates were calculated under the assumption that exposure to risk is the same for the entire population in the state. The number of deaths due to TB was obtained from state quarterly reports from 2010 to 2014. Studies show that a large number of cases go unreported as they seek treatment from private providers. There is also an under-diagnosis of TB in absence or non-adherence to diagnostic

protocol as prescribed by the RNTCP. However, trends found in this report may be used to arrive at an understanding of the incident, prevalent status of the disease in the state.

The trends of TB incidence and prevalence in the state show a decrease in its incidence. Similarly, a decrease in mortality rates has been observed in the state over the past five years. These are crude estimates from the state-level data, which may be an underestimate; nevertheless they give the general direction of TB infection in the state.

## **MDG 7: Ensuring Environmental Sustainability**

The major chunk of resources in a developing country is generally devoted to eradicating poverty and hunger, improving health standards, providing universal education and increasing the material well-being of its citizens. In this context, as an emerging economy, it is important to understand the linkages and relationships between the conservation and use of environmental resources and the well-being of current and future generations. The seventh Millennium Development Goal promotes environmental sustainability by setting timebound and quantifiable targets for certain environmental indicators (Table 20). This chapter discusses the progress made by the Karnataka State Government towards each of the targets.

#### Table 20: Millennium Development Goal 7

Goal 7: Ensure Environmental Sustainability						
Target 9: Integrate the principle of sustainable development into country policies and programmes and reverse the loss of environmental resources.	<ul> <li>Indicators</li> <li>Proportion of land area covered by forest</li> <li>Ratio of area protected to maintain biological diversity to surface area</li> <li>Energy use per unit of GDP (rupee)</li> <li>Carbon dioxide emission per capita and consumption of Ozone-Depleting Chlorofluorocarbons (ODP tons)</li> <li>Proportion of households using solid fuels</li> </ul>					
Target 10: Halve, by 2015, the proportion of people without sustainable access to safe drinking water and basic sanitation	<ul><li>6. Proportion of population with sustainable access to an improved water source, urban and rural</li><li>7. Proportion of population without access to improved sanitation, urban and rural</li></ul>					
Target 11: To have achieved, by 2020, a significant improvement in the lives of at least 100 million slum dwellers	8. Slum population as percentage of urban population					

### Indicator: Proportion of Land Area Covered by Forest / Change in Forest Cover

The terms 'forest area' and 'forest cover' have different meanings. Forest area or recorded forest area refers to all geographic areas recorded as forest in government records. Forest cover refers to all lands more than one hectare in area, with a tree-canopy density of more than 10% (State of Forest Report, 2005). The term 'forest area' or 'recorded area' is more of a legal term based on ownership, whereas the term 'forest cover' refers to tree canopy and is based on GIS data. Therefore, forest cover, rather than forest area, is often the preferred indicator to measure increases in forest quality and extent.

According to the State of Forest Report, 2015, the percentage of area under forest cover in

Karnataka State is 18.99%. The area under forest cover has declined from 19.29% in 2001 (State of Forest Report, 2001). Figure 55 is a representation of percentage forest cover trends in Karnataka and the neighbouring states of Andhra Pradesh, Kerala, Maharashtra and Tamil Nadu. The forest cover in Andhra Pradesh has also declined. In Karnataka, the forest cover increased from 16.9% in 1993 to 19% in 2003, and then remained at around that figure. The percentage forest cover in the remaining states has increased. Among the neighbouring states, the one with the greatest percentage of forest cover to geographical area is Kerala and the state with the lowest percentage of forest cover to geographical area is Maharashtra.

In the state of Karnataka, the district with the greatest forest cover as a percentage of geographical area is Kodagu and the district with lowest forest cover as a percentage of geographical area is Vijayapura. These percentages are represented in Figure 56. Based on the 2005 and 2015 forest cover assessments, the districts that showed the greatest increase in percentage of forest cover are Tumakuru (59.19%) and the greatest percentage decrease is Bengaluru Urban (26.83%) (State of Forest Report, 2005 and 2015).<sup>34</sup>

#### **India Forest Cover**

The forest area in India has stabilised over the past twenty years, and India is said to be experiencing a forest transition, traversing from net deforestation to net afforestation (Mather, 2007). The percentage of forest cover has increased from 19.39% in 2001 to 21.34% of the total geographical area in 2015 (State of the Forest Report, 2001 and 2015). A study by Foster and Rosenzweig (2003) suggests that the main motivating factor for the forest transition has been the increase in demand for forest-based produce. Two afforestation programmes that have recognised this need are the Social Forestry and the Joint Forest Management programmes.

The states with the greatest and the least cover as a percentage of the total geographical area are Mizoram (88.93%) and Punjab (3.52%). Forest cover as a percentage of total area in Karnataka is 18.99%; this is lower than the national figure 21.23%. Karnataka ranks 22nd among the states and union territories of India (State of Forest Report, 2015).



#### Figure 55: Forest cover trends

Source: State of Forest Report (1995, 2005 and 2015)

<sup>&</sup>lt;sup>34</sup> The estimates on forest cover are based on GIS data. The technology

to measure forest area becomes more precise over time.





Source: State of Forest Report (2015)

Forest cover is categorised into very dense, moderately dense and open forest. As a percentage of total forest area, these figures are 4.89%, 55.09% and 40.02% respectively in Karnataka. The area under very dense forest has increased slightly, between the 2013 and 2015 assessments.

### Indicator: Ratio of Area Protected to Maintain Biological Diversity to Surface Area

The total geographic area extent protected in Karnataka is 8612.31 sq km. This is around 4.48% of the total geographic area of the state, and is home to 1,20,000 different species of plants and animals (Figure 57). There are five national parks, 25 wildlife sanctuaries, seven conservation reserves and two community reserves (Millennium Development Goals, India Country Report, 2015) (Table 21). The increase in protected areas over the years has been mainly due to the increase in community and conservation reserves. The forests of Karnataka support 25% of the elephant population and 10% of the tiger population of India (Biodiversity of Karnataka at a Glance, 2010). There has been an increase in the extent as well as the number of protected areas since 2011.





Source: Biodiversity at a Glance, 2010

<sup>35</sup> The names of the districts are based on the State of Forest Report (2015); where possible new names have been substituted. Gulbarga is used instead of Kalaburagi, since the area considered includes both Kalaburagi and Yadgir.

#### Table 21: Number of protected areas in Karnataka

	Numb	er	Area (sq km)		
	2011	2014	2011	2014	
National Parks	5	5	2742.18	2628.42	
Wildlife Sanctuaries	22	25	4003.43	5555.39	
Conservation Reserves	2	7	3.8	425.4	
Community Reserves	1	1	3.1	3.1	

Source: Millennium Development Goals, India Country Report (2015)

The percentage of dense forest has increased very slightly between the 2013 and 2015 assessments. However, Karnataka has not been able to increase forest extent. The initial increase in forest area, from 1995 to 2005, might be due to the increase in demand for forest produce. A study reports that the Indian government's response to the demand, with the Social Forestry programme and later on the Joint Forest Management approach, probably led to the increase in forest area (Mather, 2007). Though the schemes of Farm Forestry and Joint Planning Forest Management are very popular afforestation schemes by the forest department in Karnataka, population growth and increasing landlessness have led to an increase in forestland encroachment as well. This has contributed to the loss of forest area and corridors in many parts of the state (Annual Plan of Operation for Utilisation of State CAMPA Funds, 2010-11.)

The percentage of protected area has increased; however, it is still lower than the national average. In addition, 60% of the forest area is located in the Western Ghats, one of the biodiversity hotspots of the world. Increasing the protected area could potentially lead to the conservation of these corridors and biodiversity (Annual Plan of Operation for Utilisation of State CAMPA Funds, 2010–11).

In July 2012, UNESCO accepted the Indian proposal to include the Western Ghats in the UNESCO World Natural Heritage List. However, there is some controversy over how best to preserve this resource, taking into account the well-being of all stakeholders. Among the measures taken by the Government of India was the instituting in 2010 of the Western Ghats Ecology Expert Panel (WGEEP), to make recommendations on how to conserve the Western Ghats. The recommendations of the panel, headed by Madhav Gadgil, on biodiversity and environmental issues in the Western Ghats received resistance from stakeholders. Hence, another committee called the High-Level Working Committee (HLWC) headed by Kasturi Rangan was instituted to examine the Gadgil report and make recommendations. Both reports suggest restricting mining activities, banning hydroelectricity plants and the protection of certain areas and have received severe resistance (Raju & Raju, 2014). It has been difficult to find the balance between economic and social development and environmental sustainability.

Only around 4.83% of the geographical area of the total geographical area in India is protected. This percentage is slightly higher than the percentage for the state of Karnataka (4.48%). The states with the largest and lowest percentages of protected geographical areas are Sikkim (20.11%) and Punjab (0.68%) respectively. Amongst Karnataka's neighbouring states, Kerala has the highest percentage of protected geographical area (6.40%), while Maharashtra has the lowest (2.88%) (MDGs, India Country Report, 2015).

According to the Millennium Development Report, 2015, around 4.83% of the geographical area of the total geographical area in India is protected, which is higher than that for the state of Karnataka. The states with the largest and lowest percentages of protected geographical area are Sikkim (20.11%) and Punjab (0.68%). Among the neighbouring states, only Kerala has a greater percentage of geographical area under forest cover. Karnataka ranks twelfth in percentage of geographical area protected (Millennium Development Goals, India Country Report, 2015).

### Indicator: Carbon Dioxide Emission per Capita and Consumption of Ozone-Depleting Chlorofluorocarbons (ODP tons)

An estimate of Green House Gas (GHG) emissions expressed as carbon dioxide equivalent emissions generated by Karnataka is roughly around 80.2 million tons; this figure includes carbon dioxide emissions as well as other GHGs, namely methane and nitrous oxide emissions. The power sector contributes the largest share of GHG emissions, around 36%. Agricultural sector contributes about 20% while transportation and residential contribute 10% and 7% respectively. Other industries and waste account for the remaining 27% (Raghavan, Perumal & Bharadwaj, 2011). The method employed to arrive at this estimate is based on the top-down approach by the Intergovernmental Panel on Climate change (IPCC). This average is higher than the national per capita average. This estimate is based on available data; where state-specific estimates are not available, national level estimates are used to extrapolate. Among the GHGs, carbon dioxide emissions (58.82%) represent the largest share of the total GHG emissions. Figure 58 below represents the share of carbon dioxide emissions by the various sectors, estimated from data presented by Raghavan et al. Carbon dioxide emissions are highest in the power sector (49%) followed by industry (31%), transport (14%) and the residential sector (6%).

#### Figure 58: Estimation of carbon dioxide emissions, by sector, in Karnataka



Source: Estimated from Raghavan, Perumal & Bharadwaj (2011)

The Karnataka government has made significant strides towards increasing the share of electricity supply from renewable, not-polluting sources (Energy Statistics, 2012) such as wind power, water, etc. However, the power sector is the largest source of carbon dioxide emissions. Therefore, there need to be enhanced efforts to increase the share of renewable energy in order to bring down carbon dioxide emissions per capita. However, there are constraints to increasing the share of renewable resources; therefore, adoption of high-efficiency, low-emission coal technologies and demand-side mitigation is necessary (Raghavan et al., 2011)

## Indicator: Proportion of Households using Solid Fuels

There has been a shift in cooking fuel from solid fuels to LPG. This change was observed at the national level where there are significant shifts in the percentage of households who use solid fuels such as firewood towards to those using non-solid fuels such as LPG (Millennium Development Goals, India Country Report, 2015). According to the 2011 Census, LPG use has increased when compared to the 2001 Census in Karnataka as well. The percentage use of all other fuels has declined, except for the category 'any other fuel usage'. The percentage of the population using coal, lignite and charcoal has increased slightly; however, the percentage of the population using firewood has decreased. Firewood, crop residue, cow-dung cake, coal and lignite, charcoal and electricity are considered to be solid fuels (Millennium Development Goals, India Country Report, 2015). Therefore, based on Table 22, our estimates suggest that the share of solid fuels has decreased from 70.88% to 60.82%, and the share of LPG has increased from 18.32 to 32.49%. More recently, the National Family Health Survey 4 estimated that in Karnataka approximately 54.7% of the households use clean fuel for cooking (2015). This figure is up from 29.3% during the NFHS 3 surveys during 2005–06.

Year	Firewood	Crop residue	Cow- dung Cake	Coal, Lignite, Charcoal	Kerosene	LPG	Electricity	Biogas	Any other	No cooking
2001	64.89	5.29	0.24	0.03	9.17	18.32	0.43	1.22	0.08	0.32
2011	57.48	2.92	0.21	0.08	5.36	32.49	0.13	0.90	0.09	0.34

#### Table 22: Types of cooking fuel used (percentage) in Karnataka

Source: Census of India, 2001 and 2011 (from indiastat.com)

### Indicator: Proportion of Population with Sustainable Access to an Improved Water Source – Urban and Rural

According to the 1991 Census, only 71.7 % of the population had access to safe drinking water, defined as water from tap, hand-pump or tubewell (Kumar & Das, 2014). This percentage has increased to 87.6% in 2011 (Figure 59). According to the 2011 Census, more than 90% of the urban population and 83% of the rural population in Karnataka have sustainable access to improved water source. The recent NFHS 4 estimates of access to improved drinking water source<sup>36</sup> in Karnataka are 89.8 % (urban), 88.9% (rural) and 89.3% (total). The estimates from the NFHS-1 (1992) survey for access to drinking water from pump/pipe are 75.6%. The Millennium Goal for 2015 has been achieved. The proportion of the population without safe access to water has been halved from its 1990 level in the state.

According to the National Sample Survey Organisation (NSS) 69th Round, improved sources of drinking water include: 'bottled water', 'piped water into dwelling', 'piped water into yard/plot', 'public tap/standpipe', 'tubewell/borehole', 'protected spring', and 'rainwater collection' (Millennium Development Goals, India Country Report, 2015). Among neighbouring states, Karnataka (951 and 960 per 1000) has the maximum number of rural households per 1000 with access to improved source water. The national estimates are 885 and 953 per 1000 respectively. The states considered for comparison are Andhra Pradesh (919 and 975), Kerala (295 and 568), Maharashtra (855 and 987) and Tamil Nadu (940 and 950). The state with the lowest number of households with access to an improved source of water is Kerala. Among urban households, Maharashtra has the maximum number of households with access to an improved source of drinking water and Kerala the lowest (NSS 69th round).





Source: Census of India, 2001 and 2011 (Kumar and Das, 2014)

<sup>36</sup> Improved source of water: Piped water into dwelling/yard/plot, public tap/standpipe, tube well or borehole, protected dug well, protected spring, rainwater, community RO plant (NFHS-4) Sufficiency of water is also an important criterion to ensure sustainable access to water. In Karnataka, 750 and 795 urban households and rural households have sufficient water<sup>37</sup> per 1000 households; this is lower than the national figures of 858 and 896 households respectively. Tamil Nadu has the maximum number of households with sufficient access to water (932 and 925) and Karnataka the least number of households with sufficient access to sources of water among the neighbouring states. The most common source of drinking water in Karnataka is tap-water from treated source -41.22% (Census 2011) (Figure 60).

According to the District Level Household & Facilities Survey 4<sup>38</sup> factsheets the district with the greatest access to an improved source of water is Chamarajanagar (99.5%) and the district with the least access to an improved source of water is Udupi (57.6%). The Census also employs another measure of access to water, according to the Census of 2011, 44.5% of the households now have drinking water available within premises, compared to 31.7% of the population in 2001. Bengaluru Urban has the highest percentage of households with a water supply point within premises and Yadgir has the lowest percentage.

## Figure 60: Water supply sources in Karnataka by percentage



Source: Estimated from figures available at indiastat.com (Census of India, 2011)

<sup>37</sup> Sufficient water: Availability of water is defined as sufficient if the principal source from which water is taken is sufficient throughout the year (i.e., in each of the calendar months of the year, availability of drinking water is sufficient). If, during any month, the water availability is not sufficient for majority of the days of the month, availability is considered to be insufficient (NSS, 69th round).

<sup>38</sup> Improved source of drinking water: Includes piped water into dwelling, piped to yard/plot, public tap/standpipe/hand pump/ tube well/bore-well/ covered well /protected spring, tanker/truck, cart with small tank/drum, and packaged/bottled water (DLHS 4).

### Indicator: Proportion of Population without Access to Improved Sanitation: Urban and Rural

Around 55% of the households, according to the 2011 Census in Karnataka, have a latrine; an increase from 24.13% in 1991. The proportion of people without access to a toilet has not been halved, and therefore the goal is not achieved in the state. Among the neighbouring states, only Kerala has made adequate progress. Figure 61 below represents the percentage increase in households with a latrine from 2001 to 2011 in Karnataka. The National Family Health Survey  $4^{39}$  estimated the improved access to sanitation; the estimate for Karnataka is 57.8% (NFHS 4). The estimate of households with toilet facility, according to NFHS 1, was 31.2% - 68.8% had no sanitation facility.

Among the adjoining states, Kerala has the highest and Tamil Nadu the lowest percentage of households with a latrine among the neighbouring states. Figure 62 below shows the progress in the construction of toilets between 2001 and 2011, indicated by the drop in the number of homes without latrines, from 2001 to 2011.

## Figure 61: Percentage of households with a latrine in Karnataka



Source: Census of India 2001 and 2011 from Kumar and Das (2014)

<sup>&</sup>lt;sup>39</sup> Improved access to sanitation: Flush to piped sewer system, flush to septic tank, flush to pit latrine, ventilated improved pit (VIP)/ biogas latrine, pit latrine with slab, twin pit/composting toilet, which are not shared with any other household (NFHS 4).





Source: Census of India 2001 and 2011





Source: Census of India, 2011

In Karnataka, in 2011, per the Census, 48.8% of the population had no latrines (Figure 62). There were 71.6 % rural households without a latrine in Karnataka and 76.8% in Tamil Nadu; this was higher than the national figure of 69.3%. Both Karnataka's and Tamil Nadu's progress on increasing the number of rural toilets lagged far behind the national figures. Among Karnataka's neighbouring states, Kerala (18.7%) had made the most progress in increasing the number of toilets, followed by Maharashtra (62.0%) and Andhra Pradesh (67.8%); the figures for these two states were close to the national average (Census 2011). The figure for urban households without a latrine for Karnataka (15.1%) was lower than the national average of 18.6%. Among the neighbouring states, Kerala (2.6%) had the lowest percentage of urban households without access to a latrine, followed by Andhra Pradesh (13.9%) In Maharashtra (28.9%) and Tamil Nadu (24.9%), the percentage of urban households with access to a latrine was higher than the national percentage.

The National Sample Survey Organisation (NSS) 69th Round (2012) provides the figures for percentage of rural and urban households without access to a latrine facility. Karnataka was at 70.8% and 9.0% respectively, Tamil Nadu at 66.4% and 12.2% respectively, Maharashtra at 54.0% and 6.9% respectively and Andhra Pradesh was at 54.3% and 8.1% respectively. Both Karnataka and Tamil Nadu have greater numbers of households without access than compared to the national figures of 59.4% and 8.8%. Kerala has the least number of households without access to a toilet at 2.8% and 1.2% respectively.

The progress among the districts in Karnataka is extremely skewed. Bengaluru Urban district, with 94.85% of the households having access to a toilet, has made the most progress. The district with the lowest progress in increasing the number of toilets is Yadgir (11.24% of the households have access to a toilet) (*Human Development, Performance of Districts, Taluks and Urban Local Bodies in Karnataka, 2014* – *A Snapshot, 2014*). In this district, toilet construction has not been able to keep pace with population growth. The data on sanitation for each district is available in the appendix. More than 60% of Indian households (63.6%) did not have a latrine in 2001. However, this figure improved to 53.1% in 2011. The state with the largest percentage of households with a latrine is Kerala (95.2%). Both Jharkhand and Odisha have the highest number of households without a latrine (78.0%) (Census of India, 2011).

Though Karnataka has achieved the target by increasing the proportion of households with access to an improved safe source of water, there are still many households that do not have access to sufficient water. Karnataka is lagging behind in terms of providing sanitation and the distribution of sanitation facilities across districts. A more concentrated effort in the districts with poor availability of latrines will improve the performance of the indicator in an overall way.

### Indicator: Slum Population as Percentage of Urban Population

Slum population, as a percentage of urban population, has increased from 7.3% in 2001 (Sawhney, 2013) to 13.93% in 2011 (Census 2011).

According to the 2011 Census, the district in Karnataka with the highest slum population as a percentage of total population is Hassan and the district with the lowest slum population as a percentage of the total population is Dakshina Kannada (*Human Development, Performance of Districts, Taluks and Urban Local Bodies in Karnataka, 2014 – A Snapshot, 2014*).

Karnataka's share of slum population relative to the total slum population of India has increased slightly from 4.5% in 2001 to 5% in 2011. Among the neighbouring states, Maharashtra has the highest percentage of both slum population (number of inhabitants) and slum households (number of households), followed by Andhra Pradesh, Tamil Nadu, Karnataka and finally Kerala (Census 2011).

## MDG 8: Develop a Global Partnership for Development

Information and communication technologies (ICTs) have come a long way in helping people transform their livelihoods, by being able to help transmit knowledge to facilitate information-exchange cheaply and more easily. Globally, 2G cellular coverage has grown to almost 95% in 2015, cellular subscriptions have almost reached seven billion, growing almost tenfold since 2000, and internet access has touched almost 43% in 2015. Goal 8 and its indicators are given in Table 23.

#### Table 23: Millennium Development Goal 8

Goal 8: Develop a Global Par Development	tnership for
Target 12. In co-operation with the private sector, make available the benefits of new technologies, especially information and communication.	<ol> <li>Indicators</li> <li>Telephone lines and cellular subscribers per 100 population</li> <li>Internet subscribers per 100 population</li> </ol>

### Indicator: Telephone Lines and Cellular Subscribers per 100 Population

The Indian telecom sector has enjoyed an extraordinary growth recently. With approximately one billion telecom users in the country, India is second only to China, where roughly 1.3 billion people use telephones. Telephone subscribers from rural areas of India add up to roughly 420 million while urban telephone users are at about 580 million.

As per TRAI, a large number of telephone subscribers are affiliated with private companies, which are seen as one of the reasons India has



The Telecom Regulatory Authority of India (TRAI) reports that the total number of telecom subscribers in India crossed the one-billion mark in May, 2015.

India is second only to China in terms of telecom subscribers.

There is a steady increase in wireless subscribers while there is a steady decrease in wireline telecom users.

The highest number of telecom users come from Tamil Nadu, followed by Uttar Pradesh (E).

The highest numbers of internet users are from Maharashtra.

experienced this telecom boom. As of May 2015, 91.68% of the wireless telecommunication market share was held by private firms. Private firms held 25.46% of the wireline market share as well.

The number of telecom subscribers within the country, as well as in the state of Karnataka, continues to grow at a steady pace. Within the state, the number of subscribers grew from 35.51 million in 2009 to 59.45 million in December 2014. The number of wireless subscriptions (cellular subscriptions) has grown from 32.75 million in 2009 to 57.18 million in 2014. During the same period, the number of wireline subscriptions has fallen at a steady pace (Figure 64).



Figure 64: Telecom subscriptions in Karnataka

Source: Telecom Regulatory Authority of India - Performance Indices

Telephone density (or teledensity) is defined as the number of telephone subscriptions for every hundred individuals residing in a particular area. In May 2015, the number of telecom subscribers per 100 population in India and Karnataka stood at 79.67 and 96.64 subscriptions respectively. The highest amongst Karnataka's neighbouring states was Tamil Nadu, with a teledensity of 116.95. The highest in the nation was Delhi (236.09) and the lowest was Bihar (52.78).

#### Figure 65: No. of telephone subscriptions per 100 population in selected states



Source: Regulatory Authority of India - Performance Indices

## Figure 66: Teledensity – India vs. Karnataka (Dec. 2009–May 2015)



Source: Telecom Regulatory Authority of India – Performance Indices and Press Notes

Karnatakahas also seen an increase in teledensity (wireless and wireline) from 60.48 in December 2009 to 96.64 in May 2015. When looking at India as a whole, teledensity has increased from 47.88 to 79.67 during the same period (Figure 66). Rural teledensity in Karnataka has seen a rise from 21.14 per 100 in 2009 to 47.3 in 2014. Urban teledensity has increased from 128 in December 2009 to 174.86 in December 2014. Overall, teledensity has increased from 60.48 to 96.35 in the last six years.

Wireless teledensity (i.e., the number of cellular subscribers per 100 population) has increased overall for the state of Karnataka. In rural areas, teledensity has increased from 19.59 in 2009 to 46.55 by the end of 2014. Over the same time, urban teledensity has gone up from 117.92 to 166.49. Overall, Karnataka has seen an increase in teledensity from 55.78 to 92.67 (Figure 67).

Wireline connections have seen a gradual decrease. Overall, wireline teledensity has decreased from 4.69 to 3.67 over six years (2009–2014). Rural teledensity has dropped from 1.55 to 0.74 while urban levels have dropped from 10.09 to 8.36 (Figure 67).





Source: Telecom Regulatory Authority of India - Performance Indices

## Indicator: Internet Subscribers per 100 Population

Internet subscribers in the state of Karnataka have increased rapidly in the last two years. As per TRAI, the number of internet users within the state has gone up from approximately 11 lakh in 2009 to 171 lakh in 2014. Figure 68 below indicates the number of internet subscribers and not the number of internet users. The number of internet users could be higher, for one subscription may have multiple users. The number of internet subscribers within the state has gone up from 1.89 per 100 population in December 2009 to 27.89 per 100 by the end of December 2014 (Figure 69). This represents a tremendous increase over the last two years.

Comparing Karnataka with neighbouring states, Kerala had the most subscribers per 100 population with 34.71. Tamil Nadu was next at 31.36 and Maharashtra with 31.15. Andhra Pradesh was the lowest amongst the southern states, with 22.68. Bihar stood the lowest in India with 10.26 and Delhi the highest at 84.59. India's average was 21.37 (Figure 70).





Source: Telecom Regulatory Authority of India - Performance Indices



#### Figure 69: Internet subscribers per 100 population in Karnataka (2009-14)

Source: Telecom Regulatory Authority of India - Performance Indices





Source: Telecom Regulatory Authority of India

## Indicator: Personal Computers in Use per 100 Population

As per NSSO, urban populations had a higher number of personal computers or laptops in use than their rural counterparts. The number of computers in use had increased from 0.8 to 4.4 users per 100 population in the urban areas of the state (Table 24). In the rural areas, the number just increased from 0 to 0.1, i.e., one in a thousand persons had a computer.

## Table 24: Personal computers in use per 100population in Karnataka

Karnataka	Rural	Urban
NSSO 66th Round (2009–10)	0	0.8
NSSO 68th Round (2011-12)	0.1	4.4

With almost 60 million telecommunication subscribers, Karnataka has seen a huge rise in persons using communication technologies. The National Telecom Policy of 2012 aimed to make communication cheaper and more accessible and to improve effectiveness through public and private partnerships. Other initiatives, like the National Knowledge Network, provide a highspeed platform for knowledge-sharing institutions in the country. This would be particularly useful for scientists, researchers and students working to advance human development in the country. The Digital India Programme setup by the Government of India focuses on providing digital infrastructure as a core utility to every citizen, enhancing e-governance and digitally empowering all citizens.

In the state, rural teledensity stands at 47.3 while urban teledensity stands at almost 174. By narrowing this gap and increasing telecom and IT accessibility to the rural population, Karnataka would see better governance and faster communication (Millennium Development Goals, India Country Report, 2015).

### **Policy Responses and Challenges**

Karnataka has achieved its targets for poverty and education but lags behind in targets for gender empowerment, child and maternal mortality, environmental sustainability, and reversing its trend in combating infectious diseases like HIV/ AIDS and malaria. Achieving targets is only the first step on the road to human development; sustaining these goals with continued political will and commitment is a challenge faced by many development programmes. Karnataka has a number of policies and schemes whose successful implementation is important if the development goals are to be met and sustained in the years to come.

### **Policy Responses**

## Programmes Combating Poverty and Hunger in Karnataka

Mahatma Gandhi National Rural Employment Generation Act (MGNREGA): This scheme aims to ensure livelihood and food security by providing 100 days of unskilled work as guaranteed employment to every household in rural areas, as per demand, through creation of sustainable assets. Other objectives include strengthening the livelihood resource base of the poor, ensuring social inclusion and strengthening the Panchayati Raj Institutions. In Karnataka this programme is operational in 30 districts over 176 taluks and 288.61 lakh person days of employment have been generated in the state as of December 2014 (Economic Survey of Karnataka 2014–15, 2013).

Anna Bhagya Yojana: National Food Security Mission (NFSM) is an important initiative towards ensuring 'food security for all'. In Karnataka, the Anna Bhagya Yojana was officially launched on 16 July 2013. It is a modified form of the traditional Public Distribution System (PDS) in Karnataka. The programme covers a total of 87 lakh BPL card holders and 11.35 lakh Antodaya Anna Yojana<sup>40</sup> beneficiaries. A single person is eligible for 10 kg of rice, a two-person family will get 20 kg, a family with three or more members is eligible for 30 kg rice per month. The Revised Anna Bhagya Scheme was launched in May 2015, under which rice and wheat will be distributed for free to priority households (BPL and Antodaya families).

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Swarna Jayanti Shahari Rozgaar Yojana (SJSRY): This poverty alleviation programme aims to reduce urban poverty through setting up of self-employed ventures or provision of wage employment. Also, it focuses on providing gainful employment, skill training and financial backing, and developing community structures among those below the poverty line. In Karnataka, about ₹ 3.57 billion have been allocated under this scheme between 1997 and 2010–2011 and there are roughly 266,126 urban poor beneficiaries under the scheme (Sridhar, Reddy, & Srinath, 2011).

<sup>&</sup>lt;sup>40</sup> Antodaya Anna Yojana: Antodaya Anna Yojana (AYY) was launched by the Government of India on 26 December 2000. This scheme for the 'poorest of the poor' families provides them with 35 kilograms of rice and wheat at ₹ 3 per kg and ₹ 2 per kg respectively.

#### **Towards Universalisation of Education**

After implementing the District Primary Education Programme (DPEP) in selected districts, the state became part of the national programme for the universalisation of elementary education, namely the Sarva Shiksha Abhiyan (SSA). The Right to Education Act in 2009 made compulsory provisions regarding physical infrastructure, teacher-pupil ratio, and other features of learning conditions in schools. Karnataka, being one of the better-provided states, has been better able to comply with the RTE provisions.

The Mid-day Meal programme, another national scheme, provides hot cooked meals to children enrolled in Grades I to VIII. While the Government of India is the main funding partner for meals for children in elementary grades, the Government of Karnataka provides hot cooked meals to the children of Grades IX and X, using its own resources. Nearly 62.5 lakh children in 2012–13 got hot cooked meals every school-day in the state.<sup>41</sup>

Another significant state-run programme is Nali-Kali, which started in 1995 to revitalise primary schools through activity-based learning process and follows a ladder of learning. All state-run primary schools follow the approach from Grades I to III in Karnataka.

In secondary education Rashtriya Madhyamik Shiksha Abhiyan (RMSA) is the most important scheme, which is a partnership between the central and state governments. One major objective of RMSA in Karnataka is to ensure provision of a secondary school within a maximum distance of five kilometres of any habitation. As a result, the state hopes to reach the GER of 100% by the end of twelfth Five Year Plan in 2017.

#### Achieving Gender Empowerment

The Karnataka government aims to bring about empowerment of women through education and awareness, vocational training and skill education to create new job opportunities. The state has been implementing Mahila Samakhya, a women's empowerment programme based on making women's collectives around the issues of power, education and collective action in selected taluks.

The Stree Sakthi scheme was launched with the aim to strengthen the economic development of rural women, create Self-Help Groups (SHGs) based on thrift and credit principles, promote income-generating activities and facilitate access to other departmental schemes through convergence.

The New Swarnima programme was initiated to provide enhanced assistance to SHGs in the backward areas through the Backward Class and Minorities Development Corporation. Till now, the scheme has led to SHGs reaching 15–20 lakh women. The tangible impact of the scheme was that savings of about ₹ 72 crore are expected from the 15–20 lakh women belonging to the SHGs.

The Santhwana programme is a targeted programme for women victims of atrocities such as dowry, rape, domestic violence, etc., who have endured physical, mental and psychological trauma in addition to no/less social and financial capital. The scheme is implemented in 27 district and 23 taluk headquarters with about 51 Santhwanas functioning in the state. During 2007–08, the 51 Santhwana centres were provided a budget ₹ 130 lakh for their functioning.

Karnataka Mahila Abhivrudhi Yojane is an intersectoral scheme for women to promote gender equality and to integrate women in mainstream development. During 2006–07, 25 departments came together and identified 208 schemes designed to attain related programme objectives and in response the government provided ₹ 1057 crore (based on the one-third allocation of resources in each department towards women empowerment).

In addition, the Bhagyalakshmi Scheme was introduced in Karnataka in the year 2006 to

<sup>&</sup>lt;sup>40</sup> http://www.schooleducation.kar.nic.in/mms/mmspdfs/rep\_ childrencovered.pdf

address the skewed sex ratio of 946. The scheme aims to protect girls against female foeticide/ infanticide. Under the scheme the first two girl children of the family receive an LIC bond of ₹ 19,000 and 18,000 respectively. These bonds mature to about ₹ 1 lakh per girl when they turn 18 years of age. An amount of ₹ 200 crore has been released for distribution of bonds to 1,04,657 beneficiaries (Women and Child Department, Government of Karnataka).

## Improving the Health of Mothers and Children

**Integrated Child Development Scheme (ICDS):** The ICDS was initiated in Karnataka in October 1975 and since then, has expanded to all revenue taluks across the state. The scheme is targeted toward children aged 0–6 years as well as pregnant and lactating mothers. Largely delivered through approximately 63,000 Anganwadi Centres in the state, the scheme includes provision of supplementary nutrition to mothers, children and adolescent girls. Further, the scheme also has immunisation programmes, health checkups and medical referrals.

**The National Health Mission (NHM)** started in 2007 has given a big boost to child and maternal care across the country. Under its purview, the state has implemented various schemes to address the issues of neonatal and infant deaths, and nutrition:

**Integrated Management of Neonatal and Childhood Illnesses (IMNCI)** was established with the view to help parents of newborn children recognise early warning signs of a child's illness and increase awareness about breast-feeding.<sup>42</sup> A large part of the IMNCI includes training of community health workers, improving health systems and transmitting knowledge to parents. It has been implemented in 14 districts across Karnataka.

**Modified Nutritional Rehabilitation Centres** (**MNRCs**): While addressing the problem of malnourishment within the state, in 2012–13 Karnataka established 28 MNRCs and five NRCs (Nutritional Rehabilitation Centres) under the purview of the NRHM. The rehabilitation centres were built in order to reduce the cases of Severe Acute Malnourishment amongst children.<sup>43</sup> Further, high-focus districts in addressing malnourishment are Belagavi, Ballari, Chitradurga, Davanagere, Dharwad, Gadag, Kalaburagi, Haveri, Koppal, Raichur and Yadgir.

**Infant Death Audit:**<sup>44</sup> The Infant Death Audit, in collaboration with the UNICEF, since 2011–12, has been extended to all districts across the states. As per the initiative, community workers are given incentives for reporting deaths and the medical officer to conduct autopsies of all deaths. All deaths are audited by the district subcommittee. The scheme has seen some results, which include generation of trends in IMR, awareness of importance of infant death reporting and avoidance of erroneous reporting.

Janani Suraksha Yojana (JSY) was launched in 2005 with the goal of providing financial assistance to pregnant women during delivery. Under this scheme, SC, ST and BPL women get financial assistance of ₹ 500 if they deliver at home, ₹ 600 for an urban institutional delivery, ₹ 700 for a delivery in health centres in rural areas, and ₹ 1500 for a Caesarean delivery.

Karnataka introduced the Thayi Bhagya scheme to combat the shortage of specialist doctors in taluk and government offices. Under the scheme, all pregnant women from BPL families have access to free treatment at enlisted private hospitals. The scheme has been introduced in the six 'C' category districts of Kalaburagi, Bidar, Raichur, Koppal, Vijayapura and Bagalkot and the backward district Chamarajanagar.<sup>45</sup>

Under the Madilu scheme, all BPL women who deliver at government hospitals are eligible to obtain a kit which contains towels, soaps, mosquito nets, bed sheets, diapers, etc.

<sup>&</sup>lt;sup>42</sup> UNICEF India, http://unicef.in/Story/60/Integrated-Management-of-Neonatal-and-Childhood-Illnesses-(IMNCI)

<sup>&</sup>lt;sup>43</sup> GoK, Dept of Health & Family Welfare, http://karhfw.gov.in/PDF/ Guidelines12/modified%20NRC.pdf

<sup>&</sup>lt;sup>44</sup> GoK, Dept of Health & Family Welfare, http://karhfw.gov.in/nrhm/ PDF/Tenders/Infant%20Death%20Audit0001.pdf

 $<sup>^{\</sup>rm 45}$  GoK, Directorate of Health and Family Welfare, http://karhfw.gov.in/nrhm/PrTHAYIBHAGYAScheme.aspx

Prasooti Araike, started by the Government of Karnataka, is devised to ensure that all BPL women undergo prenatal checkups. A total of ₹ 2000 (₹ 1000 each after the second ANC and third ANC) is paid to expectant mothers under this scheme.

#### **Combating Infectious Diseases**

With the advent of antibiotics and improved healthcare, infectious diseases are no longer dreaded as they once were. However, a high burden of population still lacks access to adequate health, sanitation and education regarding communicable diseases, preventing the eradication of infectious diseases in the state. The disease control schemes include:

The **Malaria Control Programme** comes under the National Vector-Borne Disease Control Programme. The following are some of the measures it uses to control malaria. These include early detection and prompt treatment (EDPT) by collection of blood peripheral smears for diagnosis, and treatment of uncomplicated malaria by use of chloroquine. Apart from using insecticides, integrated vector-control measures have also been adopted in some areas of the state. This includes using larvivorous fish in perennial water bodies to control mosquito larvae. Biocides are also being used in some parts of the state.

**Urban Malaria Scheme (UMS)** is a complementary scheme to the NVBDCP in the rural areas. Eight towns are being covered under the UMS in Karnataka. These include Bengaluru, Belagavi, Ballari, Hosapete, Chikkamagaluru, Tumakuru, Mysuru and Hassan.

Mangaluru and Udupi are not part of this scheme as they fall under the Filaria Control Programme areas and are separately focused upon by the State Malaria Control Programme as they accounted for more than 58% of all malaria cases in 2013. Year-round efforts with addition of biolarvicides as ammunition against larvae are part of the ongoing efforts to tackle the disease here.

**Combating HIV/AIDS – National AIDS Control Programme (NACP):** The National AIDS Control Programme is in its fourth phase in India (2012– 2017). According to the Annual Action Plan of KSAPS, 2014-15, targeted interventions in the state currently cover around 85,355 Female Sex Workers (FSWs), 26,501 Men who have Sex with Men (MSMs) and 1200 Transgenders. There has been an increase in the number of Integrated Counselling and Testing Centres (ICTCs) for testing for HIV. These ICTCs function in government hospitals and selected private hospitals. A total of 2199 ICTC and F-ICTC centres were functioning in the state by the end of January 2015. Door-to-door campaigning was carried out in Vijayapura and Dharwad in order to focus on every household in high-prevalence districts. To increase awareness regarding HIV /AIDS among students, 1276 Red Ribbon Clubs have been established in degree colleges in Karnataka.46

**Combating TB – RNTCP in Karnataka:** According to the NRHM Karnataka PIP for 2013– 14,<sup>47</sup> the priority areas for the TB programme in Karnataka include:

- Increase the total TB case notification rate
- increase the success rate of the patients on treatment
- Scale up of DOTS Plus services in the state
- Strengthen the involvement of private health sector / NGOs
- Strengthen Advocacy, Communication and Social Mobilisation (ACSM) activities in the state
- Strengthen the involvement of medical colleges

The same PIP also shortlists Vijayapura, Yadgir, Belagavi, Kalaburagi, Bengaluru City and Raichur as priority districts for supervision and monitoring. The reasons for shortlisting include high HIV prevalence (Vijayapura, Belagavi), vacancies in District TB Officer positions (Yadgir, Belagavi), poor involvement of private sector (Bengaluru, Kalaburagi, Belagavi), etc. Since 2012, TB has become a notifiable disease, meaning every case diagnosed in the state at both private and public health facilities has to be notified in a prescribed format to

<sup>&</sup>lt;sup>46</sup> http://www.ksaps.gov.in/AAP\_14-15.html

<sup>&</sup>lt;sup>47</sup> http://nrhm.gov.in/nrhm-in-state/state-program-implementationplans-pips/karnataka.html

the government. Efforts are on to improve notification of TB within the state and to make the RNTCP data more dependable.

#### **Ensuring Environmental Sustainability**

Preserving our natural forest resources has not been a priority in India, a country still battling poverty and population explosion. However, in the interests of preserving our environment for future generations there is a need for urgent steps in this direction.

The schemes of Farm Forestry and Joint Planning Forest Management are afforestation schemes of the Karnataka Forest Department. However, increasing population and landlessness has increased encroachment and led to the loss of forest area and corridors (Annual Plan for the Utilisation of Forest Funds, 2010).

Belaku Yojana is a scheme that promotes the replacement of incandescent bulbs by compact fluorescent lamps (Energy Department, Government of Karnataka, 2015). In addition, the Government of Karnataka has announced Energy Efficiency the Karnataka and Conservation Policy 2014-2019, which promotes various energy conservation measures in the municipal, domestic, agricultural, commercial and industrial sectors

The Nirmal Bharat Abhiyan under the Swachh Bharat Mission is a campaign to eradicate openair defecation in rural India. Under this scheme, indoor household latrines will be provided to all below-poverty-line and select above-povertyline households within a Gram Panchayat.<sup>48</sup>

The Jawaharlal Nehru National Urban Renewal Mission (JNNURM) and the Rajiv Awas Yojana are two national schemes that provide better facilities for the urban poor. In this regard the National Urban Health Mission is another scheme that focuses on the health needs of the urban poor. Urban health and sanitation services are constantly under stress from an increasing population. Under such conditions it is important to improve existing services and look at use of innovative technologies and partnerships to cover this growing urban landscape.

# Challenges that Need Attention and Action

Although Karnataka has made notable progress in certain areas, there remain major challenges across sectors and areas. From the perspective of post-2015 sustainable development agenda, and the progress made so far on the MDG front, the following areas emerge as those that need attention and action:

- 1. More inclusive poverty alleviation: Although the state has achieved its overall poverty target, there exists a wide regional disparity in poverty across the districts with a higher concentration of poor in the northern districts and in areas close to the mines. Southern Karnataka is better off, with a few pockets of high poverty. Rural areas are poorer than urban areas. Focus should be on targeting the marginalised populations so that progress is more inclusive in the state.
- 2. Investment in improving the quality across all levels: The state needs to pay greater attention to the quality of learning in public schools by developing better understanding of the reasons for poor quality and responding to those through institutional and professional development measures.
- 3. Developing better system of private school monitoring: There is a high level of privatisation of education delivery at all levels in the state, and the Right to Education Act promotes the use of public money to promote the participation of children from poor and disadvantaged groups in private schools at elementary level. Therefore it is important that the state develops a better system of regulation and monitoring in a manner that promotes greater accountability among private schools and also prevents the rent-seeking behaviour of the state institutions at the same time.

<sup>48</sup> http://tsc.gov.in/TSC/NBA/AboutNBA.aspx

- 4. Development of a more comprehensive gender mainstreaming and women's empowerment: Though Karnataka has relatively better indicators of gender parity, gender equality is still a distant dream. A number of disparate schemes exist but there is need to develop a comprehensive framework and then assess all these schemes from the perspective of that framework. In absence of this clarity, a number of schemes at times work on cross-purposes; for instance, while Mahila Samakhya works with an objective of questioning power relations, a number of education and health schemes promote gender stereotyping.
- 5. Improving healthcare infrastructure: In India, there are approximately 0.7 physicians for every 1000 persons<sup>49</sup> against the stipulated guidelines by the WHO of one physician per 1000. Karnataka has done better with 1.39 doctors per 1000 population and 3.09 nurses (or midwives) per 1000 population (Hazarika, 2013). However, in terms of the number of beds, Karnataka lags behind with approximately one bed for every 1200 persons<sup>50</sup> against the WHO guidelines of 3.5 beds for every 1000 persons. More crucially, DLHS-4 data indicates that only 55.6% of Public Health Centres in the state operate on a 24 x 7 basis. Only 36.6% of the Community Health Centres have an obstetrician/ gynaecologist. These are the challenges to which the state needs to pay greater attention.
- 6. Inclusive health care: Adamson et al., 2012, found that women from general and other backward castes were more likely to go in for institutional deliveries as compared to mothers belonging to SC/ST groups. There is a need to develop better healthcare education and outreach, while designing culturally appropriate interventions for these women. Targeting the vulnerable or marginalised sections of society would go a long way in reducing maternal deaths within the state.

- Improvement in data collection and 7. notification of infectious diseases: There is a need to undertake more community-level surveys in order to improve the estimates in incidence and prevalence of diseases in the state. There are not enough studies that look at the prevalence of diseases like malaria, TB or HIV/AIDS and active reporting of the same. This is mainly due to a large number of people seeking treatment from private providers, which goes unreported. This is especially true for TB. Strengthening of the notification and information collection especially among private providers is not only an important step towards monitoring and evaluation of a programme, but provides us robust data for calculating state- and district-wise disease estimates for effective programme planning.
- 8. Multisectoral interventions to prevent maternal and child mortality: Demographic variables (education of the mother, maternal malnutrition, age of mother when a child is born, etc.), socio-economic factors (economic status, social group, etc.) and environmental factors (access to proper sanitation and drinking water) are important determinants of maternal and child mortality.<sup>51</sup> Therefore, it is important to realise that solutions to the issues are not within the health sector alone.
- **9.** Need for improvement in data collection, management and use: Unavailability of reliable data at district level is also an acute problem. There is a need to improve data collection at grassroots level in all sectors. Programme implementers at all levels need to be trained on the importance of accurate data collection and reporting. In a state that boasts a large IT sector, opportunities for easy access and storage of reliable data are endless. The state should move forward and

<sup>&</sup>lt;sup>49</sup> World Bank, 2012, http://data.worldbank.org/indicator/SH.MED. PHYS.ZS

<sup>&</sup>lt;sup>50</sup> National Health Profile, 2013, http://cbhidghs.nic.in/writereaddata/ mainlinkFile/Health%20Infrastructure-2013.pdf

<sup>&</sup>lt;sup>51</sup> UNICEF, http://unicef.in/CkEditor/ck\_Uploaded\_Images/img\_1364. pdf

use this resource and expand it to all sectors of the government. It is also important that data is managed well and used for the purposes of reflection, planning and monitoring.

**10. Focus on a comprehensive and integrated approach for sustainable human and environmental development:** Karnataka needs to develop a clear policy and roadmap for protecting the ecological balance of the Western Ghats, especially in view of the growing pressures from vested interests. There is also an urgent need for developing appropriate, future-oriented policies for controlling the growing air pollution, especially in cities and urban areas. Increase in non-plantation-based forest area and regulation of mining activities are also important. Sufficiency of water and access to safe water and sanitation are other issues that call for attention and action.

### **Technical Note**

All data used in this document comes from trusted secondary sources of information released as part of various government reports. Most indicators in this report have been calculated based on the methodology used by the Ministry of Statistics and Programme Implementation (MoSPI) in calculating estimates for the nationallevel Millennium Development Goal Report, 2015. Where this was not possible, mainly due to the paucity of data at the district level or due to difference in the sources of data available, efforts were made to derive estimates based on prescribed methods (described below).

For Goal 1, data on the Poverty Head Count Ratio for Karnataka has been obtained from Economic Survey of Karnataka, 2013–2014. The PHCR is available for rural and urban Karnataka for the years 1993–1994, 2004–2005, 2009–2010, and 2011–2012. We calculated the likely achievement of PHCR in 2015 using the per year growth rate formula. It is obtained for both rural and urban Karnataka. [NOTE: In our calculation, the current PHCR is for the year 2011–2012 and base PHCR is for the year 1993–1994.]

Likely Achievement PHCR in 2015 = Current Year PHCR + [{(Current year PHCR-Base Year PHCR/Base Year PHCR)\*100}/Number of years]

The various indicators for Goal 2 were calculated as below:

• The Net Enrolment Rate for Primary level is defined as the percentage of students

in regular school in the age-group of 6–11 years out of the total children in the same age group.

- Retention rate is calculated as enrolment in grade V in year 't+4'- repeaters grade V in year 't+4' as a percentage of enrolment in Grade 1 in year 't'.
- Transition rate is calculated as number of pupils admitted (new entrants) to the first grade of a higher level of education in a given year, expressed as a percentage of number of pupils in the final grade of the lower level of education (i.e., Grade V) in the previous year.
- Per Year Growth Rate of Enrolment = ((Enrolment @ (t-k) year)/(Number of years (t - (t-k)))
- Per year Change in NER = ((NER @ t year -NER @ (t-k) year)\*(100))/(NER @ (t-k) year)/ (Number of years (t - (t-k)))
- Ratio of Grade V to Grade 1 = (Total Enrolment in Grade V @ t year)/ (Total Enrolment in Grade 1 @ t year)
- Overall Change in Survival Rate = (Ratio of Grade V to Grade 1 @ t year) - (Ratio of Grade V to Grade I @ t-k year)
- Literacy Rate (above 7 years) = (Number of literate (above 7 years) population)\*(100)/ (Number of (above 7 years) population)
- Ratio of Rural-Urban literacy rate is calculated as rural literacy rate to urban literacy rate. The indicator measures the level of difference in literacy rate between rural and urban sector.

For Goal 3 the indicators were calculated as below:

- The Gender Parity Index (GPI) is the ratio of the number of female students enrolled at primary, secondary and tertiary levels of education to the corresponding number of male students in each level. The Gross Enrolment Ratio (GER) is the number of pupils enrolled in a given level of education, regardless of age, expressed as a percentage of the population in the theoretical age group for the same level of education. GPI of GER is the ratio of GER of the girls to that of boys in primary, secondary and tertiary education.
- Literacy Rate among the 15+ population is calculated from (1) Per 1000 distribution of persons of 15 years and above by general educational level for each state/UT (NSS Report No: 566: *Status of education and vocational training of India, NSS 68th Round, June 2012)* & (2) Per 1000 distribution of persons of age 15 years and above of different religious groups by levels of general education for each state/UT (*NSS Report No: 552 Employment and unemployment situation among major religious groups in India, NSS 66th Round Report, June 2010*)
- Ratio of literate women to men (15–24 years) is defined as literate women to literate men in the age group 15–24 years in a given year.
- Share of Women in Wage Employment in the Non-Agricultural Sector is defined as the share of female workers in the nonagricultural sector expressed as a percentage of total employment in the sector.
- Percentage of women political representatives is defined as the share of female political representatives expressed as a percentage of total political representatives in a given year.

For Goal 4, the data on child mortality rates was obtained from the National Family Health Surveys 1, 2, 3, 4; Sample Registration System (2009–2013); the India Country Report on Millennium Development Goals; and *Human Development, Performance of Districts, Taluks and Urban Local Bodies in Karnataka – A Snapshot* (2014), which compiled data from Health Management Information System and district offices, to obtain district-wise mortality rates for the year 2012.

For Goal 5, to obtain likely maternal mortality rates for the year 2015, data from the years 2006 to 2013 were extrapolated using a polynomial trendline of the form  $ax^2 + bx + c = y$  where 'a' tells us about the direction and steepness of the curve and 'b' gives us the rate of change when x is zero.

For Goal 6, due to the absence of state-level prevalence and mortality rates, incidence rates for TB were estimated based on data available from RNTCP annual reports and state-level quarterly reports. The formula for incidence rate, period prevalence and disease-specific mortality rates were obtained from the Centres for Disease Control, USA website. The following formulas were used in calculating the TB rates:

- Period Prevalence for TB = Total number of TB patients registered in 2014/ Projected population for Karnataka for 2014 per 100,000 population
- Incidence Rate for TB = All new cases of TB\* registered in 2014/ Projected population for Karnataka in 2014 per 100,000 population

\*Note: New cases of TB included the sum of new sputum-positive, new sputum-negative as well as new cases of extra-pulmonary TB registered.

• TB Mortality Rate = Number of cases of deaths due to TB in 2014/ Projected population for Karnataka in 2014 per 100,000 population

The Annual Parasite Index (API) for malaria was calculated as,

• API = Number of cases of malaria in a year/ the population in that year x 1000 For Goal 7, the types of calculations involved are percentage, summation and position calculations of states and districts. Percentage changes in forest cover between 2003 and 2013 have been calculated across all districts in Karnataka. Protected area and forest area as a percentage of total geographic area has also been calculated for all states, based on the data in the Millennium Development Goals Report for 2015. Similarly, the shares of both water, carbon dioxide emissions and cooking fuel by source have also been calculated, based on absolute numbers from the Census 2011, Raghavan et al. (2011).

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## Appendix

Incidence of poverty (Number of people below the poverty line) – Districts, Karnataka									
Districts	2004	-2005	2009	-2010	2011·	-2012			
	Rural	Urban	Rural	Urban	Rural	Urban			
Bagalkot	42.8	66	45.7	61.6	32.1	45			
Ballari	60.1	64.6	37	64.2	33.1	53			
Belagavi	36.3	38.1	49.7	45.9	27.5	32.3			
Bengaluru Urban	15.5	2.6	2.9	2.7	0	1.7			
Bengaluru Rural	34.7	22.9	6.7	32.9	19	0			
Bidar	54.7	29.8	60.1	28.7	32.5	45.9			
Chamarajanagar	22.2	37.1	12.7	3	1.3	4.1			
Chikkamagaluru	11.8	27.6	7.9	30.4	10.4	24.6			
Chitradurga	56.3	55.1	12	11.6	48.3	40.4			
Dakshina Kannada	15.3	8.9	2.5	13.2	1.5	1.9			
Davanagere	70.8	62.4	31.9	48.2	23	23.8			
Dharwad	13.7	32.1	32.7	34.1	57.3	15.5			
Gadag	49.4	47.4	47.3	61.1	25.6	15			
Hassan	20.2	37.5	12.6	23.3	11.3	13.9			
Haveri	72.5	75.3	16.8	37.5	31.3	52.2			
Kalaburagi	65.1	49.4	51.5	33.8	38.9	32			
Kodagu	11.5	5.6	0	13.5	1.2	2.8			
Kolar	30.8	20.1	6.5	7.1	9.8	11.2			
Koppal	26.2	56.6	34.4	84.3	42	34.6			
Mandya	29.6	50.5	12.3	29.4	18.9	4.1			
Mysuru	20.8	18.6	14.9	5.3	20.7	7			
Raichur	63.9	80.7	58.4	49.7	37.6	38.2			
Ramanagara					11.7	4.5			
Shivamogga	22.6	13.3	8	10.5	32.5	22.3			
Tumakuru	30.6	3.4	9.8	38.4	14.4	5.9			
Udupi	4.4	42.2	9.6	0.4	22.7	21.4			
Uttara Kannada	59.2	63.5	14.6	22	19.3	20.1			
Vijayapura	30.6	47.5	42.3	29.9	21.4	28.5			
Karnataka	37.5	25.9	26.1	19.5	24.5	15.3			

Source: Economic Survey of Karnataka (Notes: Estimates are based on MRP of distribution of monthly per capita consumption expenditure of the National Sample Survey

State	1992-1993	1998-1999	2005-2006
Andhra Pradesh	42.9	34.2	29.8
Arunachal Pradesh	32.1	21.9	29.7
Assam	44.1	35.3	35.8
Bihar		52.2	54.9
Chhattisgarh		53.2	47.8
Delhi	36.2	29.9	24.9
Goa	29.3	21.3	21.3
Gujarat	42.7	41.6	41.1
Haryana	31	29.9	38.2
Himachal Pradesh	38.4	36.5	31.1
Jammu & Kashmir		29.2	24
Jharkhand		51.5	54.6
Karnataka	46.4	38.6	33.3
Kerala	22.1	21.7	21.2
Madhya Pradesh		50.8	57.9
Maharashtra	47.3	44.8	32.7
Manipur	19.1	20.1	19.5
Meghalaya	36.9	28.6	42.9
Mizoram	17.2	19.8	14.2
Nagaland	18.7	18.8	23.7
Orissa	50	50.3	39.5
Punjab	39.9	24.7	23.6
Rajasthan	41.8	46.7	36.8
Sikkim		15.5	17.3
Tamil Nadu	40.7	31.5	25.9
Tripura	42.1	37.3	35.2
Uttar Pradesh		48.1	41.6
Uttarakhand		36.3	31.7
West Bengal	53.2	45.3	37.6
India	51.5	42.7	40.4

Source: National Family Health Survey, M/o Health and Family Welfare

#### Table III: Age-appropriate population for primary and upper primary levels in Karnataka (2001 and 2011)

Age Group	2001				Per Year Growth Rate (%)				
	Boys	Girls	Total	Boys	Girls	Total	Boys	Girls	Total
6 to 10 years	30,51,664	29,53,519	60,05,183	25,63,000	24,18,000	49,80,000	-1.60	-1.81	-1.71
11 to 13 years	18,04,149	17,29,301	35,33,450	16,09,000	15,52,000	31,62,000	-1.08	-1.03	-1.05
Total	48,55,813	46,82,820	95,38,633	41,72,000	39,70,000	81,42,000	-1.41	-1.52	-1.46

Source: Absolute population for 2001 and 2011 was sourced from Census and DISE respectively

State/UT	2008-09	2013-14
A & N Islands	NA	98.40
Andhra Pradesh	93.50	95.90
Arunachal Pradesh	97.80	98.00
Assam	93.20	93.10
Bihar	70.70	86.20
Chandigarh	NA	NA
Chhattisgarh	91.40	93.10
Dadra & Nagar Haveli	87.40	98.20
Daman & Diu	100.00	NA
Delhi	NA	NA
Goa	93.80	NA
Gujarat	91.60	97.80
Haryana	97.70	97.00
Himachal Pradesh	93.70	97.90
Jammu & Kashmir	97.10	93.20
Jharkhand	71.20	80.20
Karnataka	91.80	94.30
Kerala	98.00	NA
Lakshadweep	92.40	97.00
Madhya Pradesh	80.30	87.40
Maharashtra	95.40	99.00
Manipur	78.60	87.70
Meghalaya	85.10	NA
Mizoram	98.30	84.10
Nagaland		88.00
Orissa	93.80	88.80
Puducherry	NA	NA
Punjab	NA	97.60
Rajasthan	85.30	88.70
Sikkim	78.10	94.90
Tamil Nadu	98.60	95.40
Tripura	88.70	92.10
Uttar Pradesh	63.60	76.90
Uttarakhand	94.50	95.90
West Bengal	69.90	92.40
India	88.67	89.60

#### Table IV: Transition rate from primary to upper primary – States/UTs (2008–09 and 2013–14)

Source: DISE – State Report Card respective years

\*Note: The national average for 2008–09 was calculated by taking the average of the transition rate of State/UT for which the data was available.

#### Table V: State-wise enrolment in primary and upper primary (2008–09)

State/UT	2008-09											
		Boys			Girls		Total					
	Primary	Upper Primary	Total	Primary	Upper Primary	Total	Primary	Upper Primary	Total			
A&N Islands	17,440	11,818	29,258	16,738	10,670	27,408	34,178	22,488	56,666			
Andhra Pradesh	36,50,046	18,92,584	55,42,630	35,56,122	18,11,611	53,67,733	72,06,168	37,04,195	1,09,10,363			
Arunachal Pradesh	1,26,838	42,767	1,69,605	1,17,192	38,441	1,55,633	2,44,030	81,208	3,25,238			
Assam	21,07,737	8,40,403	29,48,140	20,54,264	8,63,614	29,17,878	41,62,001	17,04,017	58,66,018			
Bihar	80,04,950	19,05,155	99,10,105	72,28,343	15,70,841	87,99,184	1,52,33,293	34,75,996	1,87,09,289			
Chandigarh	49,315	28,406	77,721	40,414	23,067	63,481	89,729	51,473	1,41,202			
Chhattisgarh	16,29,142	6,75,875	23,05,017	15,57,431	6,30,727	21,88,158	31,86,573	13,06,602	44,93,175			
Dadra & Nagar Haveli	20,950	6,345	27,295	19,130	4,991	24,121	40,080	11,336	51,416			
Daman & Diu	8,732	4,450	13,182	7,598	4,380	11,978	16,330	8,830	25,160			
Delhi	8,94,151	5,20,288	14,14,439	7,86,109	4,46,531	12,32,640	16,80,260	9,66,819	26,47,079			
Goa	56,920	34,315	91,235	53,269	29,434	82,703	1,10,189	63,749	1,73,938			
Gujarat	30,92,570	10,32,972	41,25,542	27,16,171	8,70,564	35,86,735	58,08,741	19,03,536	77,12,277			
Haryana	11,51,084	5,52,299	17,03,383	10,30,677	5,08,369	15,39,046	21,81,761	10,60,668	32,42,429			
Himachal Pradesh	3,40,360	2,20,780	5,61,140	3,06,174	1,97,964	5,04,138	6,46,534	4,18,744	10,65,278			
Jammu and Kashmir	6,77,710	3,37,014	10,14,724	6,10,337	2,82,763	8,93,100	12,88,047	6,19,777	19,07,824			
Jharkhand	26,18,476	7,56,758	33,75,234	25,48,240	6,79,470	32,27,710	51,66,716	14,36,228	66,02,944			
Karnataka	28,56,389	11,76,874	40,33,263	26,79,645	10,95,392	37,75,037	55,36,034	22,72,266	78,08,300			
Kerala	10,18,928	6,98,268	17,17,196	10,00,483	6,66,918	16,67,401	20,19,411	13,65,186	33,84,597			
Lakshadweep	3,488	1,924	5,412	3,558	1,828	5,386	7,046	3,752	10,798			
Madhya Pradesh	57,25,630	22,60,850	79,86,480	55,63,216	20,20,997	75,84,213	1,12,88,846	42,81,847	1,55,70,693			
Maharashtra	55,02,569	29,23,779	84,26,348	48,99,038	25,92,818	74,91,856	1,04,01,607	55,16,597	1,59,18,204			
Manipur	1,65,846	60,359	2,26,205	1,65,363	59,989	2,25,352	3,31,209	1,20,348	4,51,557			
Meghalaya	2,28,238	58,935	2,87,173	2,31,476	67,465	2,98,941	4,59,714	1,26,400	5,86,114			
Mizoram	90,536	31,875	1,22,411	84,970	30,864	1,15,834	1,75,506	62,739	2,38,245			
Nagaland	1,45,894	63,115	2,09,009	1,40,341	60,141	2,00,482	2,86,235	1,23,256	4,09,491			
Odisha	22,84,017	10,80,475	33,64,492	21,83,373	10,00,620	31,83,993	44,67,390	20,81,095	65,48,485			
Puducherry	58,041	36,328	94,369	54,643	33,483	88,126	1,12,684	69,811	1,82,495			
Punjab	9,62,919	5,76,487	15,39,406	8,02,422	4,85,250	12,87,672	17,65,341	10,61,737	28,27,078			
Rajasthan	46,63,670	20,74,872	67,38,542	40,36,245	14,87,944	55,24,189	86,99,915	35,62,816	1,22,62,731			
Sikkim	44,332	15,945	60,277	43,285	18,578	61,863	87,617	34,523	1,22,140			
Tamil Nadu	31,65,310	19,38,532	51,03,842	29,83,101	17,91,678	47,74,779	61,48,411	37,30,210	98,78,621			
Tripura	2,37,837	1,12,135	3,49,972	2,25,684	1,07,711	3,33,395	4,63,521	2,19,846	6,83,367			
Uttar Pradesh	1,26,26,435	37,64,406	1,63,90,841	1,23,16,934	36,50,526	1,59,67,460	2,49,43,369	74,14,932	3,23,58,301			
Uttarakhand	5,56,725	2,68,459	8,25,184	5,19,100	2,54,188	7,73,288	10,75,825	5,22,647	15,98,472			
West Bengal	45,76,526	19,62,311	65,38,837	44,36,487	19,82,204	64,18,691	90,13,013	39,44,515	1,29,57,528			
India	6,93,59,751	2,79,68,158	9,73,27,909	6,50,17,573	2,53,82,031	9,03,99,604	13,43,77,324	5,33,50,189	18,77,27,513			

Source: DISE - State Report Card (2008-09)

### Table VI: Enrolment in primary and upper primary – States/UTs (2013–14)

State/UT	Boys			Girls		Total			
	Primary	Upper Primary	Total	Primary	Upper Primary	Total	Primary	Upper Primary	Total
A&N Islands	16,331	10,144	26,475	15,656	9,572	25,228	31,987	19,716	51,703
Andhra Pradesh	37,17,727	19,70,558	56,88,285	35,01,104	18,99,826	54,00,930	72,18,831	38,70,384	1,10,89,215
Arunachal Pradesh	1,14,863	49,948	1,64,811	1,10,189	50,047	1,60,236	2,25,052	99,995	3,25,047
Assam	20,20,590	8,67,085	28,87,675	19,93,116	9,25,393	29,18,509	40,13,706	17,92,478	58,06,184
Bihar	75,90,138	30,78,468	1,06,68,606	74,30,617	31,39,734	1,05,70,351	1,50,20,755	62,18,202	2,12,38,957
Chandigarh	51,874	35,521	87,395	45,650	28,140	73,790	97,524	63,661	1,61,185
Chhattisgarh	14,91,507	8,44,684	23,36,191	14,31,436	8,21,937	22,53,373	29,22,943	16,66,621	45,89,564
Dadra & Nagar Haveli	19,117	12,353	31,470	16,705	10,618	27,323	35,822	22,971	58,793
Daman & Diu	9,864	5,385	15,249	8,288	4,624	12,912	18,152	10,009	28,161
Delhi	9,79,283	5,99,429	15,78,712	8,49,458	5,16,021	13,65,479	18,28,741	11,15,450	29,44,191
Goa	63,891	39,731	1,03,622	58,929	35,533	94,462	1,22,820	75,264	1,98,084
Gujarat	31,67,088	18,11,825	49,78,913	27,69,479	14,81,079	42,50,558	59,36,567	32,92,904	92,29,471
Haryana	13,64,827	7,93,536	21,58,363	11,49,036	6,49,324	17,98,360	25,13,863	14,42,860	39,56,723
Himachal Pradesh	3,13,994	1,95,663	5,09,657	2,85,077	1,74,361	4,59,438	5,99,071	3,70,024	9,69,095
Jammu and Kashmir	6,40,395	3,24,808	9,65,203	5,83,067	2,92,908	8,75,975	12,23,462	6,17,716	18,41,178
Jharkhand	23,37,678	10,20,789	33,58,467	22,45,081	10,21,475	32,66,556	45,82,759	20,42,264	66,25,023
Karnataka	27,62,999	15,40,650	43,03,649	25,89,624	14,30,283	40,19,907	53,52,623	29,70,933	83,23,556
Kerala	12,71,666	8,31,976	21,03,642	12,10,731	7,87,573	19,98,304	24,82,397	16,19,549	41,01,946
Lakshadweep	2,425	1,720	4,145	2,266	1,878	4,144	4,691	3,598	8,289
Madhya Pradesh	50,01,066	25,39,549	75,40,615	45,67,940	24,85,534	70,53,474	95,69,006	50,25,083	1,45,94,089
Maharashtra	53,94,839	31,99,903	85,94,742	47,93,970	27,70,079	75,64,049	1,01,88,809	59,69,982	1,61,58,791
Manipur	1,98,087	78,206	2,76,293	1,97,032	76,572	2,73,604	3,95,119	1,54,778	5,49,897
Meghalaya	2,63,699	98,342	3,62,041	2,64,495	1,11,588	3,76,083	5,28,194	2,09,930	7,38,124
Mizoram	77,240	35,391	1,12,631	72,161	33,171	1,05,332	1,49,401	68,562	2,17,963
Nagaland	1,45,233	63,765	2,08,998	1,40,065	62,632	2,02,697	2,85,298	1,26,397	4,11,695
Odisha	22,11,900	10,81,140	32,93,040	20,65,810	10,29,207	30,95,017	42,77,710	21,10,347	63,88,057
Puducherry	54,737	34,716	89,453	51,960	32,709	84,669	1,06,697	67,425	1,74,122
Punjab	14,12,850	8,03,926	22,16,776	11,63,030	6,31,714	17,94,744	25,75,880	14,35,640	40,11,520
Rajasthan	44,83,620	21,56,611	66,40,231	39,10,467	17,39,554	56,50,021	83,94,087	38,96,165	1,22,90,252
Sikkim	38,581	22,621	61,202	35,251	23,648	58,899	73,832	46,269	1,20,101
Tamil Nadu	29,62,691	18,60,755	48,23,446	28,06,994	17,66,001	45,72,995	57,69,685	36,26,756	93,96,441
Tripura	1,97,048	1,03,893	3,00,941	1,89,482	99,807	2,89,289	3,86,530	2,03,700	5,90,230
Uttar Pradesh	1,33,36,608	53,82,427	1,87,19,035	1,26,04,978	54,02,487	1,80,07,465	2,59,41,586	1,07,84,914	3,67,26,500
Uttarakhand	5,88,740	3,05,356	8,94,096	5,28,383	2,82,411	8,10,794	11,17,123	5,87,767	17,04,890
West Bengal	42,88,381	23,26,352	66,14,733	41,49,336	25,16,553	66,65,889	84,37,717	48,42,905	1,32,80,622
India	6,85,91,577	3,41,27,226	10,27,18,803	6,38,36,863	3,23,43,993	9,61,80,856	13,24,28,440	6,64,71,219	19,88,99,659

Source: DISE - State Report Card (2013-14)

Districts in Karnataka	2008-2009	2013-2014	Per year change (%)
Bagalkot	86.2	95.6	1.8
Bengaluru Rural	98.9	94.2	-0.8
Bengaluru Urban North	NA	99.1	NA
Bengaluru Urban South	85.9	93.5	1.5
Belagavi	NA	97.2	NA
Belagavi Chikkodi	96.0	96.5	0.1
Ballari	89.4	88.4	-0.2
Bidar	98.3	92.6	-1.0
Chamarajanagar	98.1	94.1	-0.7
Chikkaballapura	98.2	95.2	-0.5
Chikkamagaluru	95.5	88.5	-1.2
Chitradurga	96.0	95.0	-0.2
Dakshina Kannada	NA	NA	NA
Davanagere	96.4	95.6	-0.1
Dharwad	97.8	93.6	-0.7
Gadag	97.3	91.7	-1.0
Hassan	95.7	97.3	0.3
Haveri	96.9	94.0	-0.5
Kalaburagi	NA	89.0	NA
Kodagu	NA	97.7	NA
Kolar	93.9	92.5	-0.2
Koppal	92.9	91.6	-0.2
Mandya	97.3	97.7	0.1
Mysuru	99.9	97.4	-0.4
Raichur	84.7	87.9	0.6
Ramanagara	NA	98.9	NA
Shivamogga	98.1	96.9	-0.2
Tumakuru	NA	NA	NA
Tumakuru Madhugiri	99.8	96.4	-0.6
Udupi	NA	NA	NA
Uttara Kannada	93.4	NA	NA
Uttara Kannada Sirsi	NA	98.9	NA
Vijayapura	92.4	87.7	-0.8
Yadgir	88.9	88.2	-0.1

#### Table VII: Transition rate from primary to upper primary (2008-09 and 2013-14): District, Karnataka

Source: District Report Cards (2008-2009 and 2013-2014), District Information System for Education (DISE)

Districts in Karnataka	2008-2009	2013-2014	Per year change (%)
Bagalkot	90.0	87.9	-0.4
Bengaluru Rural	51.0	91.1	13.1
Bengaluru Urban North	NA	99.1	NA
Bengaluru Urban South	63.1	93.5	8.0
Belagavi	69.9	94.9	6.0
Belagavi Chikkodi	NA	89.3	NA
Ballari	88.2	85.0	-0.6
Bidar	100.0	86.3	-2.3
Chamarajanagar	66.0	90.5	6.2
Chikkaballapura	NA	87.3	NA
Chikkamagaluru	100.0	87.5	-2.1
Chitradurga	96.7	90.6	-1.1
Dakshina Kannada	100.0	97.2	-0.5
Davanagere	99.4	93.1	-1.1
Dharwad	100.0	87.9	-2.0
Gadag	96.8	86.9	-1.7
Hassan	100.0	91.3	-1.5
Haveri	99.0	91.1	-1.3
Kalaburagi	65.1	88.2	5.9
Kodagu	100.0	92.6	-1.2
Kolar	61.9	91.4	7.9
Koppal	97.6	87.3	-1.8
Mandya	94.9	87.9	-1.2
Mysuru	100.0	96.5	-0.6
Raichur	97.4	88.3	-1.6
Ramanagara	NA	92.9	NA
Shivamogga	95.4	94.4	-0.2
Tumakuru	65.0	94.6	7.6
Tumakuru Madhugiri	NA	91.1	NA
Udupi	99.7	98.7	-0.2
Uttara Kannada	94.0	45.8	-8.5
Uttara Kannada Sirsi	NA	NA	NA
Vijayapura	100.0	86.6	-2.2
Yadgir	NA	80.7	NA

### Table VIII: Retention rate in Karantaka by district (2008-09 and 2013-14)

Source: District Report Cards (2008-2009 and 2013-2014), District Information System for Education (DISE)

Districts in Karnataka	Primary	Upper Primary
Bagalkot	-1.5	-8.8
Bengaluru Rural	-2.4	-19.8
Bengaluru Urban North	1.8	-6.9
Bengaluru Urban South	-2.4	-14.8
Belagavi	-1.4	-3.8
Belagavi Chikkodi	-1.2	-11.7
Ballari	-3.1	-9.4
Bidar	-0.8	-12.9
Chamarajanagar	-4.1	-20.2
Chikkaballapura	-5.2	-22.1
Chikkamagaluru	-3.1	-6.7
Chitradurga	-2.8	-16.9
Dakshina Kannada	-3.6	-18.9
Davanagere	-2.2	-18.8
Dharwad	-3.1	-8.9
Gadag	-3.0	-12.0
Hassan	-2.7	-30.2
Haveri	-2.8	-2.1
Kalaburagi	-3.3	-10.1
Kodagu	-6.7	-17.4
Kolar	-1.5	-24.5
Koppal	-1.2	-9.4
Mandya	-6.5	-29.4
Mysuru	-1.4	-20.3
Raichur	-3.7	-8.5
Ramanagara	-5.3	-21.1
Shivamogga	-4.1	-23.7
Tumakuru	-1.2	-23.4
Tumakuru Madhugiri	-2.6	-22.3
Udupi	-4.6	-34.4
Uttara Kannada	-0.5	-16.8
Uttara Kannada Sirsi	-2.5	-16.9
Vijayapura	-0.6	-8.0
Yadgir	1.5	-4.2

#### Table IX: Enrolment in Government schools (change from previous year - %) 2013-14

Source: District Report Card (2013-2014), District Information System for Education (DISE)
State/UT	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	2013-14
A&N Islands	1.04	1.08	1.07	1.07	1.02	1.06	1.00	1.00
Andhra Pradesh	0.90	0.84	0.83	0.83	0.85	0.86	0.86	0.92
Arunachal Pradesh	0.35	0.36	0.36	0.37	0.41	0.43	0.50	0.58
Assam	0.64	0.58	0.59	0.59	0.71	0.62	0.63	0.72
Bihar	0.46	0.54	0.40	0.49	0.58	0.69	0.86	0.92
Chandigarh	0.96	1.01	0.94	1.03	1.15	1.12	1.21	1.26
Chhattisgarh	0.59	0.62	0.67	0.72	0.81	0.86	0.91	1.06
Dadra & Nagar Haveli	0.55	0.72	0.77	0.81	0.97	0.95	0.98	0.98
Daman & Diu	0.91	0.96	0.97	0.87	0.88	0.93	0.90	1.01
Delhi	0.79	0.81	0.85	0.86	0.93	1.00	1.06	1.17
Goa	0.89	0.82	1.17	1.10	1.14	1.21	1.02	0.97
Gujarat	0.74	0.80	0.83	0.87	0.92	0.88	0.90	1.04
Haryana	0.88	0.85	0.84	0.82	0.86	0.95	0.97	1.03
Himachal Pradesh	1.01	1.07	1.06	1.02	1.01	1.00	1.03	1.11
Jammu & Kashmir	0.83	0.92	1.00	0.89	0.88	0.82	0.76	0.76
Jharkhand	0.39	0.38	0.52	0.58	0.62	0.74	0.77	0.84
Karnataka	0.99	0.96	0.95	0.93	0.98	0.97	0.97	0.90
Kerala	1.13	1.15	1.23	1.26	1.30	1.29	1.14	1.05
Lakshadweep	0.80	0.94	0.98	1.01	1.64	1.18	1.08	2.47
Madhya Pradesh	0.72	0.78	0.79	0.78	0.78	0.83	0.96	0.99
Maharashtra	0.87	0.85	0.87	0.88	0.91	0.97	1.00	1.02
Manipur	0.40	0.49	0.50	0.53	0.56	0.61	0.62	0.61
Meghalaya	0.38	0.43	0.46	0.49	0.55	0.53	0.46	0.54
Mizoram	0.71	0.64	0.72	0.72	0.76	0.63	0.65	0.63
Nagaland	0.56	0.64	0.66	0.70	0.70	0.70	0.74	0.86
Orissa	0.82	1.37	0.89	0.83	0.86	0.82	0.87	0.97
Puducherry	0.97	0.98	0.99	0.99	1.10	1.00	1.05	1.02
Punjab	0.94	0.96	0.99	0.93	0.92	0.80	0.88	1.00
Rajasthan	0.54	0.57	0.59	0.61	0.63	0.64	0.74	0.86
Sikkim	0.66	0.73	0.80	0.87	0.92	0.78	1.04	1.32
Tamil Nadu	0.97	1.01	1.01	1.01	1.06	1.05	1.05	1.00
Tripura	0.71	0.79	0.81	1.00	0.93	0.95	0.93	1.05
Uttar Pradesh	0.62	0.68	0.73	0.81	0.80	0.85	0.83	0.82
Uttarakhand	0.67	0.71	0.78	0.80	0.82	0.80	0.81	0.88
West Bengal	0.80	0.77	0.74	0.79	0.69	0.73	0.75	1.40
India	0.75	0.79	0.81	0.82	0.87	0.86	0.88	0.99

# Table X: Survival rate by state during 2005–2014

Source: Calculated using enrolment numbers provided by DISE - State Report Card (2008-2009 and 2013-2014)

Table XI	Overall	change in	survival	rate hy	districts in	Karnataka	during	2008-2013
Tuble Al.	over an	change in	341 41441	I acc by		Karnacaka	aaring	2000 2010

Districts	2002-03	2008-09	2013-14	Overall change
Bagalkot	1.05	0.8	0.85	0.05
Ballari	0.83	0.86	0.85	-0.02
Belagavi Chikkodi	NA	0.91	0.87	-0.05
Belagavi+	0.98	1.01	0.92	-0.09
Bengaluru Rural+	1.13	1.01	0.89	-0.13
Bengaluru Urban North	0.77	0.95	0.98	0.04
Bengaluru Urban South	NA	0.87	0.82	-0.05
Bidar	0.77	0.89	0.84	-0.06
Chamarajanagar+	1.06	1.01	0.95	-0.06
Chikkaballapura+	NA	1	0.93	-0.07
Chikkamagaluru+	1	1.09	0.98	-0.11
Chitradurga+	1.02	1.01	0.95	-0.06
Dakshina Kannada*	1.11	1.03	1.01	-0.02
Davanagere	0.98	0.95	0.95	0.01
Dharwad	1.07	0.97	0.9	-0.06
Gadag	1.08	0.93	0.89	-0.03
Hassan+	1.01	1.04	0.99	-0.05
Haveri	1.09	0.97	0.93	-0.05
Kalaburagi	0.69	0.82	0.82	0.00
Kodagu*	0.83	0.99	1.03	0.03
Kolar*	1.03	1.01	1.02	0.01
Koppal	1	0.84	0.85	0.01
Mandya	1.13	0.99	0.99	0.00
Mysuru+	1.01	1.05	0.98	-0.07
Raichur	0.76	0.75	0.85	0.1
Ramanagara+	NA	1	0.97	-0.03
Shivamogga*	0.97	1.03	1.01	-0.02
Tumakuru Madhugiri	NA	1.07	0.95	-0.12
Tumakuru*	1.09	1.08	1	-0.09
Udupi*	1.22	1.05	1.01	-0.03
Uttara Kannada Sirsi	NA	NA	1.03	
Uttara Kannada*	1.1	1.06	1.05	-0.01
Vijayapura	0.94	0.83	0.78	-0.05
Yadgir	NA	0.68	0.79	0.11
Karnataka	0.94	0.93	0.9	-0.03

Source: Calculated using enrolment numbers provided by DISE – District Report Card (2008–2009 and 2013–2014)

## Table XII: GPI of GER in primary – States

State/UT	2004-05	2005-06	2006-07	200708	2010-11	2011-12
A&N Islands	0.98	1	1.02	1.06	0.97	1
Andhra Pradesh	1.01	1.01	1	1	1	1.02
Arunachal Pradesh	0.89	0.9	0.9	0.92	0.96	0.96
Assam	0.99	1	1.02	1	1.03	1.04
Bihar	0.75	0.75	0.77	0.82	0.94	0.98
Chandigarh	0.9	0.87	0.89	0.87	0.99	1.04
Chhattisgarh	0.94	0.77	0.94	0.95	0.96	0.97
Dadra & Nagar Haveli	0.93	0.96	0.98	1.01	1.03	0.99
Daman and Diu	0.88	0.87	0.92	0.86	1.08	0.96
Delhi	1.11	1.04	1	1.02	1.03	1.03
Goa	0.98	0.96	0.97	0.98	0.95	0.97
Gujarat	0.87	0.87	0.87	0.88	1.02	1.01
Haryana	1.06	1.04	1.04	1.07	1.11	1.09
Himachal Pradesh	0.99	1.01	1	1	1	1.01
Jammu and Kashmir	0.98	0.95	0.95	0.95	1.03	1.04
Jharkhand	0.84	0.86	0.89	1	1.02	1.02
Karnataka	0.98	0.98	0.97	0.98	0.99	0.98
Kerala	1	1	1.01	1.01	1	1
Lakshadweep	0.89	0.93	1.02	0.94	0.99	0.96
Madhya Pradesh	0.95	0.96	0.96	0.99	1.06	1.04
Maharashtra	1	0.98	0.96	0.97	0.98	0.99
Manipur	0.96	0.96	0.96	0.97	0.96	1.04
Meghalaya	1.03	0.98	0.99	0.98	1.01	1.04
Mizoram	0.93	0.98	0.96	0.94	0.94	0.94
Nagaland	0.98	0.98	0.98	1	0.99	1
Odisha	0.97	0.97	0.96	1	1.01	0.98
Puducherry	0.87	0.88	0.87	0.87	0.98	0.98
Punjab	1.08	1.08	1.09	0.98	0.99	1
Rajasthan	0.93	0.95	0.95	0.95	0.99	0.99
Sikkim	0.99	0.97	1.01	0.98	0.97	1
Tamil Nadu	0.98	0.99	1	1	1.01	1.02
Tripura	0.96	0.95	0.96	0.98	0.99	1.01
Uttar Pradesh	0.94	0.93	0.93	1.05	1.05	1.03
Uttarakhand	1.01	1.03	1.05	1.09	1.02	1.02
West Bengal	0.99	0.96	1.01	0.99	1.03	1.03
India	0.95	0.94	0.94	0.98	1.01	1.01

Source: Millennium Development Goals, India Country Report 2015

Table XIII: GPI of GER in seconda	& higher s	secondary grad	es IX-XI
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State/UT	2004-05	2005-06	2006-07	2007-08	2010-11	2011-12
A&N Islands	1.05	0.99	1.05	1.04	1.01	0.99
Andhra Pradesh	0.82	0.85	0.87	0.9	0.96	1.01
Arunachal Pradesh	0.82	0.78	0.83	0.88	0.93	0.91
Assam	0.79	0.79	0.79	0.88	0.88	1.19
Bihar	0.48	0.54	0.58	0.62	0.78	0.93
Chandigarh	1.15	1.1	1.19	1.02	0.95	1.02
Chhattisgarh	0.68	0.71	0.75	0.75	0.89	0.93
Dadra & Nagar Haveli	0.73	0.79	0.67	0.63	0.93	0.9
Daman and Diu	1.03	0.88	0.98	1.45	1.18	1.37
Delhi	1.13	1.14	1.03	1.03	0.97	1.03
Goa	0.98	1	1	1	0.99	1
Gujarat	0.78	0.76	0.79	0.79	0.81	0.82
Haryana	0.88	0.91	0.97	0.95	1.09	1.06
Himachal Pradesh	0.93	0.94	0.91	0.94	0.98	1
Jammu and Kashmir	0.81	0.83	0.83	0.83	0.95	0.94
Jharkhand	0.67	0.67	0.71	0.75	0.91	0.98
Karnataka	0.94	0.95	0.94	0.97	1	1.05
Kerala	1.04	1.03	1.07	1.08	1.04	1.07
Lakshadweep	1.1	1.15	1.16	1.43	1.09	0.92
Madhya Pradesh	0.64	0.65	0.67	0.67	0.67	0.72
Maharashtra	0.91	0.92	0.92	0.91	0.89	0.95
Manipur	0.93	0.93	0.94	0.95	0.91	0.99
Meghalaya	1.04	1.04	1.02	1.1	1.08	1.21
Mizoram	1.02	1	1	1	1.01	1.04
Nagaland	0.98	1.03	1.03	1.03	1.01	1.02
Odisha	0.67	0.67	0.83	0.86	0.9	0.84
Puducherry	0.99	0.99	1	0.98	1.05	1.09
Punjab	1.02	1	0.94	1.04	1.01	1.03
Rajasthan	0.48	0.52	0.56	0.58	0.67	0.73
Sikkim	1.01	1.02	1.03	1.04	1.1	1.2
Tamil Nadu	0.98	1.02	1.05	1.06	1.1	1.13
Tripura	0.88	0.89	0.87	0.94	0.94	0.96
Uttar Pradesh	0.68	0.67	0.67	0.81	0.79	0.84
Uttarakhand	0.83	0.9	0.9	0.84	0.96	0.98
West Bengal	0.78	0.77	0.78	0.84	0.98	1.09
India	0.79	0.8	0.82	0.85	0.87	0.93

Source: MDG India Country Report 2015

## Table XIV: **GPI of GER in tertiary – States**

State/UT	2004-05	2005-06	2006-07	2007-08	2010-11	2012-13
A&N Islands	1.42	1.34	1.39	1.3	1.39	1.22
Andhra Pradesh	0.59	0.6	0.63	0.58	0.76	0.78
Arunachal Pradesh	0.63	0.67	0.69	0.75	0.58	0.9
Assam	0.7	0.51	0.49	0.51	1.01	0.99
Bihar	0.38	0.24	0.25	0.43	0.77	0.8
Chandigarh	1.49	1.38	1.53	1.08	0.96	1.14
Chhattisgarh	0.59	0.77	0.76	0.74	0.72	0.9
Dadra & Nagar Haveli	0.15	-	-	0	1.14	1.31
Daman and Diu	1.82	1.18	1.31	2.99	2.11	2.06
Delhi	1.3	1.14	1.05	1.21	0.85	1.03
Goa	1.37	1.32	1.36	1.19	1.16	1.2
Gujarat	0.78	0.88	0.81	0.75	0.8	0.79
Haryana	0.91	0.99	0.96	0.92	0.76	0.96
Himachal Pradesh	0.93	0.9	1.05	1.21	1	1.02
Jammu and Kashmir	0.93	0.83	0.9	0.92	0.98	1.03
Jharkhand	0.61	0.68	0.68	0.56	0.85	0.95
Karnataka	0.81	0.74	0.73	0.84	0.92	0.94
Kerala	1.22	1.12	1.14	1.1	1.34	1.42
Lakshadweep	-	-	0	0.54	2.8	-
Madhya Pradesh	0.52	0.55	0.49	0.79	0.79	0.65
Maharashtra	0.72	0.74	0.76	0.75	0.79	0.88
Manipur	0.79	0.76	0.86	0.59	0.86	0.99
Meghalaya	0.83	0.91	0.89	0.97	1.29	1.02
Mizoram	0.61	0.68	0.66	0.99	0.96	0.98
Nagaland	0.89	0.55	0.73	0.95	0.65	0.71
Odisha	0.26	0.23	0.25	0.31	0.78	0.85
Puducherry	0.96	0.83	0.79	0.93	0.92	0.86
Punjab	1.2	1.01	0.97	1.2	0.62	1.09
Rajasthan	0.57	0.56	0.59	0.73	0.72	0.8
Sikkim	0.75	0.82	0.84	0.79	0.85	1.21
Tamil Nadu	0.76	0.72	0.72	0.87	0.8	0.85
Tripura	0.72	0.73	0.73	0.8	0.69	0.71
Uttar Pradesh	0.74	0.74	0.69	0.63	1.14	1
Uttarakhand	0.96	0.95	0.95	0.9	1.13	1.05
West Bengal	0.61	0.58	0.65	0.62	0.79	0.78
India	0.71	0.69	0.69	0.7	0.86	0.89

Source: MDG India Report 2015

### Table XV: Women members in Rajya Sabha – States

State	Number of women members	Percentage of women members	Total number of seats
Andhra Pradesh	4	22.22	18
Arunachal Pradesh		0.00	1
Assam	1	14.29	7
Bihar	1	6.25	16
Chhattisgarh	1	20.00	5
Goa		0.00	1
Gujarat	1	9.09	11
Haryana	1	20.00	5
Himachal Pradesh	2	66.67	3
Jammu and Kashmir		0.00	4
Jharkhand		0.00	6
Karnataka	0	0.00	12
Kerala	1	11.11	9
Madhya Pradesh	2	18.18	11
Maharashtra	2	10.53	19
Manipur		0.00	1
Meghalaya	1	100.00	1
Mizoram		0.00	1
Nagaland		0.00	1
Delhi		0.00	3
Odisha	1	10.00	10
Puducherry		0.00	1
Punjab	1	14.29	7
Rajasthan		0.00	10
Sikkim		0.00	1
Tamil Nadu	3	16.67	18
Tripura	1	100.00	1
Uttarakhand		0.00	3
Uttar Pradesh	4	12.90	31
West Bengal	1	6.25	16
Total	28	12.02	233

Source: http://rajyasabha.nic.in/rsnew/publication\_electronic/rsstatis\_inf52-03.pdf

District	U5MR (2001)	U5MR (2011-12)	IMR (2011-12)	% of children (12–23 months) who received measles vaccine (2012–13)
Bagalkot	87	49	43	86
Ballari	109	63	55	90.1
Belagavi	71	42	37	88.3
Bengaluru Rural	67	31	27	95.5
Bengaluru Urban	47	17	15	96.2
Bidar	60	35	31	90.2
Chamarajanagar	79	39	34	92.9
Chikkaballapura	73	39	34	96.6
Chikkamagaluru	68	25	22	88.3
Chitradurga	91	53	42	83.8
Dakshina Kannada	49	22	19	93.5
Davanagere	81	44	38	88.5
Dharwad	70	40	35	89.6
Gadag	89	57	50	87.5
Hassan	59	23	19.5	96.7
Haveri	81	41	35	89.8
Kalaburagi	85	56	49	82.4
Kodagu	46	33	29	92.9
Kolar	73	39	34	92.9
Koppal	105	66	58	92
Mandya	73	30	26	87
Mysuru	74	44	39	93.4
Raichur	81	77	67	86.3
Ramanagara	67	31	27	89.7
Shivamogga	62	27	24	93.8
Tumakuru	83	39	34	95.1

Source: U5MR 2001 - U. Ram, P. Jha, F. Ram et al. (2013)

41

60

79

85

Udupi

Yadgir

Uttara Kannada

Vijayapura

U5MR (2011-12) & IMR (2011-12): Human Development, Performance of Districts, Taluks and Urban Local Bodies in Karnataka, 2014 - A Snapshot Percentage of Children receiving measles vaccination: District Level Household Survey-4, 2012-13

11

25

34

48

88.2

91.5

88.4

80.8

13

29

39

56

#### Table XVII: Maternal Mortality Indicators – Districts

Bagalkot 163 89.5	
Ballari 227 87.7	
Belagavi 155 93.8	
Bengaluru Rural 120 97.5	
Bengaluru Urban 73 96.7	
Bidar 134 93.8	
Chamarajanagar 142 97.4	
Chikkaballapura 137 93.2	
Chikkamagaluru 94 97.7	
Chitradurga 170 94.2	
Dakshina Kannada 89 99.2	
Davanagere 163 96.6	
Dharwad 157 94.8	
Gadag 215 89.7	
Hassan 98 99.3	
Haveri 163 91.6	
Kalaburagi 182 82.8	
Kodagu 101 96.6	
Kolar 140 94.7	
Koppal 236 83.1	
Mandya 111 97.3	
Mysuru 155 98.7	
Raichur 244 80.8	
Ramanagara 114 99.3	
Shivamogga 106 97.7	
Tumakuru 124 97	
Udupi 50 98.8	
Uttara Kannada 99 96.2	
Vijayapura 135 86.6	
Yadgir 186 83.6	

Source: MMR (2011-12) – Human Development, Performance of Districts, Taluks and Urban Local Bodies in Karnataka, 2014 – A Snapshot Percentage of deliveries attended by skilled personnel: District Level Household Survey-4, 2012–13

District	No. of pregnant women detected positive (15–49 years)	Pregnant women detected positive (15–24 years)	Condom prevalence rate (15-44 years) (2012-13)
Bagalkot	102	64	0.4
Bengaluru Rural	18	11	2.1
Bengaluru Urban	172	82	2.5
Belagavi	146	79	2.5
Ballari	61	37	0.5
Bidar	47	27	0.8
Chamarajanagar	15	13	1.5
Chikkaballapura	42	14	1.8
Chikkamagaluru	23	14	2.7
Chitradurga	24	12	0.9
Dakshina Kannada	19	3	4.8
Davanagere	41	24	1.2
Dharwad	55	26	0.9
Gadag	22	12	0.4
Hassan	19	12	4
Haveri	25	11	1.2
Kalaburagi	45	28	0.6
Kodagu	10	3	4.5
Kolar	37	25	1
Koppal	37	22	0.5
Mandya	25	14	1.6
Mysuru	56	35	1.9
Raichur	49	21	0.4
Ramanagara	19	11	1.8
Shivamogga	19	7	1.8
Tumakuru	51	32	1.6
Udupi	13	7	2.1
Uttara Kannada	21	9	2.3
Vijayapura	57	29	0.5
Yadgir	25	17	0.1
Karnataka	1295	701	

Table XVIII: District-wise HIV statistics on pregnant women and condom prevalence rate in married women in Karnataka

Source: Karnataka State AIDS Prevention Society for district-wise list of total pregnant women and those age 15–24 years detected positive; Condom prevalence rate from DLHS-4 District Fact Sheets (2012–13)

Year	Population	Positive cases of malaria	Plasmodium falciparum cases	Confirmed deaths	ΑΡΙ
2000	4,78,43,845	1,09,118	28,065	14	2.28
2001	5,02,34,000	1,97,625	48,008	21	3.93
2002	5,10,64,000	1,32,584	29,702	33	2.60
2003	5,17,00,651	1,00,220	23,560	22	1.94
2004	5,20,61,274	80,961	20,472	27	1.56
2005	5,20,56,530	83,181	21,984	26	1.60
2006	5,24,80,094	62,842	16,459	32	1.20
2007	5,28,05,190	49,355	11,295	18	0.93
2008	5,29,01,997	47,344	9,864	8	0.89
2009	5,41,67,427	36,859	5,723	0	0.68
2010	5,61,39,220	44,319	7,936	11	0.79
2011	5,70,49,376	24,237	2,648	0	0.42
2012	5,73,52,230	16,466	1,278	0	0.29
2013	5,40,72,064	13,302	967	0	0.25
2014	5,46,80,596	14,794	1,329	2	0.27

#### Table XIX: Epidemiological situation of Malaria in Karnataka from 2000 to 2014

Source: Karnataka State Malaria Control Programme

District	Population	Positive cases of malaria	Plasmodium falciparum cases	Confirmed deaths	API
Bagalkot	19,53,740	589	105	0	0.3
Ballari	24,54,451	182	2	0	0.1
Belagavi	48,89,307	71	6	0	0
Bengaluru (Rural)	10,49,839	7	1	0	0
Bengaluru (Urban)	30,68,444	14	1	0	0
Bidar	17,91,305	214	19	0	0.1
Chamarajanagar	10,54,738	50	11	0	0
Chikkaballapura	12,95,187	30	1	0	0
Chikkamagaluru	12,83,080	122	4	0	0.1
Chitradurga	17,40,323	75	6	0	0
Dakshina Kannada	21,94,220	5660	391	0	2.6
Davanagere	20,21,667	57	7	0	0
Dharwad	19,53,740	200	14	0	0.1
Gadag	11,13,280	664	10	0	0.6
Hassan	19,26,734	74	2	0	0
Haveri	16,18,743	287	30	0	0.2
Kalaburagi	27,08,402	435	21	0	0.2
Kodagu	6,18,074	32	2	0	0.1
Kolar	16,40,281	107	5	0	0.1
Koppal	15,01,918	599	50	0	0.4
Mandya	19,70,045	22	0	0	0
Mysuru	30,99,196	63	9	0	0
Raichur	20,18,773	230	31	0	0.1
Ramanagara	11,16,827	18	5	0	0
Shivamogga	18,90,415	117	9	0	0.1
Tumakuru	29,43,304	82	10	0	0
Udupi	12,51,831	2205	131	0	1.8
Uttara Kannada	15,87,146	253	49	0	0.2
Vijayapura	20,99,844	296	11	0	0.1
Yadgir	11,56,798	344	11	0	0.3
UKP N Pura	86,752	148	9	0	1.7
AMU Kembhavi	81,065	3	0	0	0.0
UKP Almatti	1,04,150	36	4	0	0.3
Bhimarayanagudi	68,611	16	0	0	0.2
Grand Total	57,352,230	13,302	967	0	0.2

## Table XX: District-wise epidemiological situation of Malaria in Karnataka in 2013

Source: Karnataka State Malaria Control Programme

District	Population	Positive cases of malaria	Plasmodium falciparum cases	Confirmed deaths	API
Bengaluru (Urban)	34,12,488	16	4	0	0.0
Bengaluru (Rural)	10,15,901	6	1	0	0.0
Ramanagara	11,46,177	26	10	0	0.0
Kolar	15,64,961	52	1	0	0.0
Chikkaballapura	12,77,664	9	0	0	0.0
Tumakuru	27,77,059	44	4	0	0.0
Chitradurga	15,68,479	39	4	0	0.0
Davanagere	21,87,783	93	17	0	0.0
Shivamogga	18,29,698	139	2	0	0.1
Belagavi	50,21,850	57	7	0	0.0
Vijayapura	15,73,056	183	5	0	0.1
Bagalkot	19,28,463	678	72	0	0.4
Dharwad	19,61,655	200	15	0	0.1
Gadag	11,04,582	544	22	0	0.5
Haveri	15,91,022	377	37	0	0.2
Uttara Kannada	15,73,791	187	10	0	0.1
Kalaburagi	27,09,467	298	40	0	0.1
Bidar	17,62,984	119	9	0	0.1
Ballari	24,30,230	148	13	0	0.1
Raichur	20,90,993	283	80	0	0.1
Yadgir	12,62,314	177	1	0	0.1
Koppal	1,46,3478	580	37	0	0.4
Mysuru	31,76,235	54	7	0	0.0
Chamarajanagar	10,34,738	68	20	0	0.1
Mandya	18,83,273	27	1	0	0.0
Hassan	17,81,040	68	11	0	0.0
Dakshina Kannada	2,20,636	8240	719	2	37.3
Udupi	1,24,8682	1639	123	0	1.3
Chikkamagaluru	1,166,696	169	13	0	0.1
Kodagu	5,54,762	32	1	0	0.1
UKP N Pura	90,577	145	28	0	1.6
AMU Kembhavi	83,738	4	0	0	0.0
UKP Almatti	1,07,287	69	15	0	0.6
Bhimarayanagudi	78,837	24	0	0	0.3
Grand Total	5,46,80,596	14,794	1329	2	0.3

## Table XXI: District-wise epidemiological situation of Malaria in Karnataka in 2014

Source: Karnataka State Malaria Control Programme

	Geographical Area (GA)	Very dense forest	Mod. Dense forest	Open forest	Total	Percent of GA	Change	Scrub
Bagalkot	6,575	0	11	189	200	3.04	0	280
Belagavi	13,415	17	756	319	1,092	8.14	-2	477
Ballari	8,450	0	109	676	785	9.29	12	240
Bengaluru Rural	5,815	7	122	690	819	14.08	7	255
Bengaluru Urban	2,190	0	26	94	120	5.48	-30	29
Bidar	5,448	0	18	36	54	0.99	0	12
Chamarajanagar	5,101	45	1,041	1,569	2,655	52.05	19	169
Chikkamagaluru	7,201	588	2,419	664	3,671	50.98	-10	18
Chitradurga	8,440	0	63	436	499	5.91	81	432
Dakshina Kannada	4,560	252	1,000	1,596	2,848	62.46	-12	3
Davanagere	5,924	4	340	459	803	13.56	61	260
Dharwad	4,260	0	233	154	387	9.08	2	4
Gadag	4,656	0	0	122	122	2.62	0	79
Hassan	6,814	67	743	553	1,363	20	33	90
Haveri	4,823	0	152	244	396	8.21	-3	50
Kalaburagi	16,224	0	86	209	295	1.82	-1	52
Kodagu	4,102	248	2,151	958	3,357	81.84	18	0
Kolar	8,223	1	54	423	478	5.81	-28	278
Koppal	7189	0	1	13	14	0.19	0	61
Mandya	4,961	1	92	226	319	6.43	11	134
Mysuru	6,854	4	648	392	1,044	15.23	-25	38
Raichur	6,827	0	1	22	23	0.34	-1	16
Shivamogga	8,477	205	2,742	1,197	4,144	48.89	-203	14
Tumakuru	10,597	0	64	845	909	8.58	357	198
Udupi	3,880	158	1,406	615	2,179	56.16	-11	0
Uttara Kannada	10,291	184	5,785	1,864	7,833	76.12	14	0
Vijayapura	10,494	0	0	12	12	0.11	0	2
Grand Total	1,91,791	1,781	20,063	14,577	36,421		289	3,191

#### Table XXII: Different types of forest cover – Districts

\*Source: State of Forest Report 2015

\* Change in forest area from 2013 to 2015

#### Table XXIII: Sanitation indicators – Districts

Name of District	Percentage of slum population	Percentage of households with access to improved source of drinking water (DLHS4)	Percentage of households with access to water (as per Census 2011 definition)	Percentage of households having access to a toilet
Bagalkot	3.06	98.5	70.73	18.8
Ballari	6.95	90.7	74.49	32.41
Belagavi	3	98.6	65.71	32.81
Bengaluru Rural	4.25	99.4	79.89	79.91
Bengaluru Urban	8.4	97.9	91.81	94.85
Bidar	5.7	95.7	58.47	23.2
Chamarajanagar	6.12	99.5	79.13	23.46
Chikkaballapura	5.78	98.9	73.86	36.47
Chikkamagaluru	3.5		76.85	61.49
Chitradurga	6.51	98.9	76.24	28.79
Dakshina Kannada	0.11	76.7	51.77	92.66
Davanagere	3.44	99	79.88	46.45
Dharwad	10.64	91.7	82.68	57.01
Gadag	2.09	91.6	69.67	21.18
Hassan	34.2	95.5	82.92	66.4
Haveri	17	95.4	77.78	37.31
Kalaburagi	12.75	86.3	63.91	25.43
Kodagu	1.84	88.8	59.98	81.43
Kolar	2.15	99	66.64	42.8
Koppal	5.74	98.9	69.54	18.48
Mandya	3.28	98.4	85.09	37.47
Mysuru	2.34	98.9	88.73	54.98
Raichur	6.33	89.3	58.67	20.68
Ramanagara	3.44	99	50.61	41.91
Shivamogga	9.08	81.8	65.59	71.15
Tumakuru	6.14	96.9	80.01	32.5
Udupi	1.14	57.6	86.24	87.21
Uttara Kannada	3.54	61.3	84.06	59.34
Vijayapura	2.86	96.5	67.15	18.10
Yadgir	5.4	97.5	51.83	11.24

Source: Col 1,3.4 Human Development, Performance of Districts, Taluks and Urban Local Bodies in Karnataka, 2014 – A Snapshot (2014) Col2- DLHS-4 district fact sheets Access to water defined as per Census 2011 definition