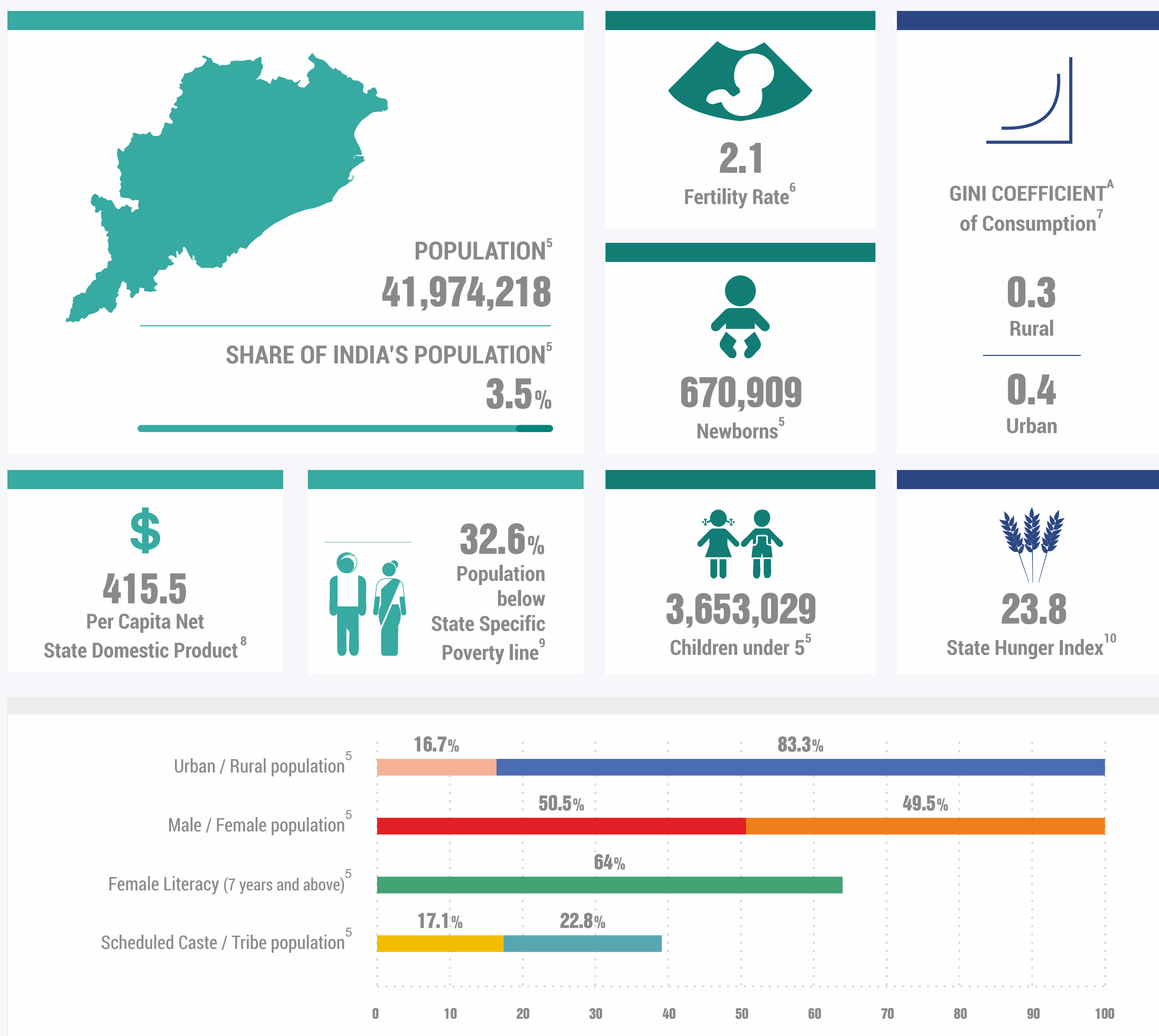
I. CONTEXT

A. DEMOGRAPHIC CONTEXT

This section highlights the demographic composition of the state in terms of male-female, rural-urban, and SC-ST ratios, literacy and fertility rates. In addition, it also includes the size of the population of newborns and children less than five years of age (as of the Census of India, 2011) to illustrate the size of the target population for nutrition-related interventions that need to reach this vulnerable population.



A : Gini coefficient is a measure of inequality of distribution. A Gini coefficient of 0 represents perfect equality, while a value of 100 implies perfect inequality. (See Appendix A for more information)

[5] *Source : Primary Census Abstract, Census, 2011*

[6] *Source : SRS, 2013*

[7] *Source : Planning Commission Estimates: NSSO 66th round-Employment and Unemployment Survey, 2009-10*

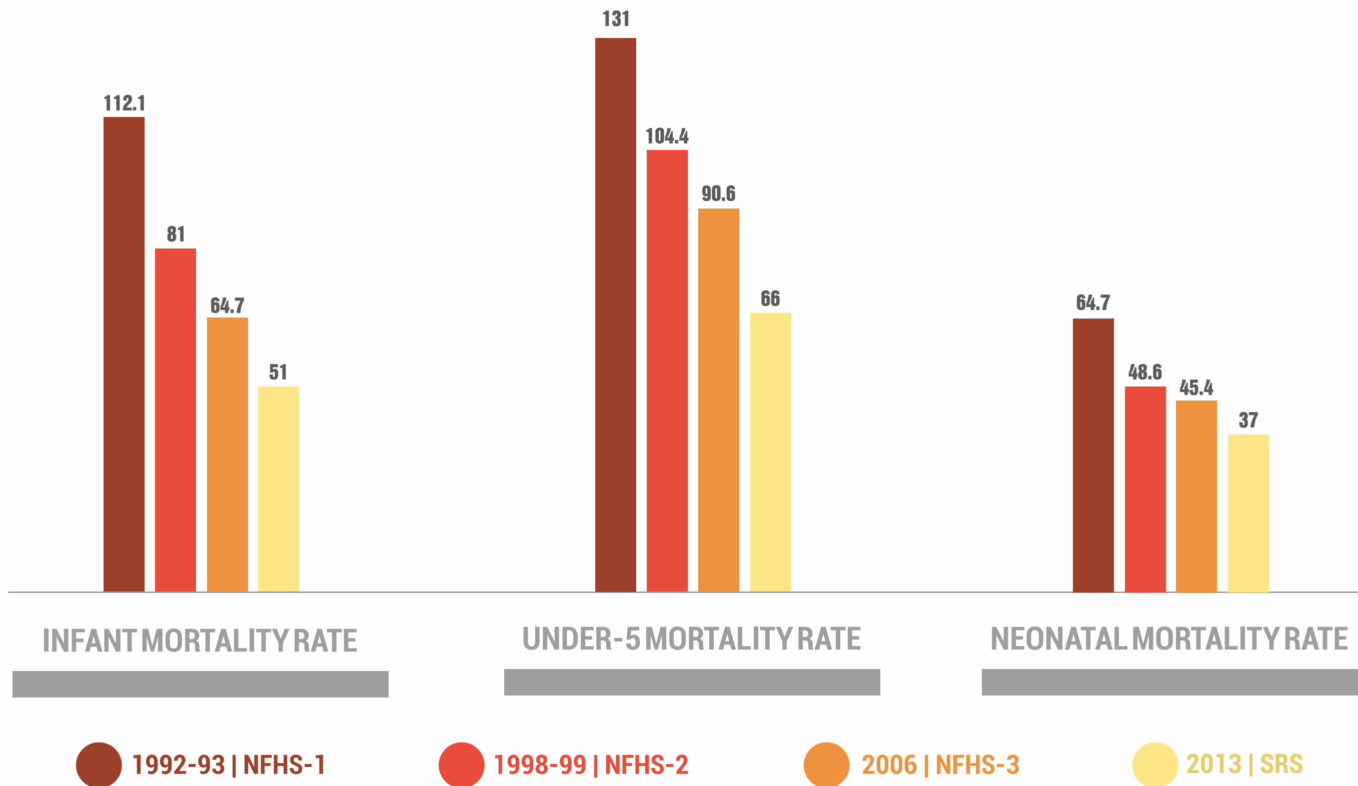
[8] *Source : Press Releases and Statements, Ministry of Statistics and Programme Implementation, 2013-14 : http://mospi.nic.in/Mospi_New/site/inner.aspx?status=3&menu_id=82*

[9] *Source : Press Note on Poverty Estimates, 2011-12, Planning Commission, Government of India, 2011-12 : http://planningcommission.nic.in/news/pre_pov2307.pdf*

[10] *Source : IFPRI, India State Hunger Index, 2009*

B. CHILD MORTALITY PER THOUSAND LIVE BIRTHS

This section illustrates trends in mortality in neonates, infants and children under 5 years, since 1992. The purpose of this is to highlight the success achieved by individual states in averting deaths of children since the economic growth of the 1990s.



II. NUTRITIONAL STATUS AMONG CHILDREN

This section presents data on nutrition outcome indicators (stunting, wasting, and underweight) and anemia prevalence. Anthropometric measures for children under 5 (stunting, wasting, and underweight) are presented over time periods, by age groups and by background characteristics. This data aims to convey the prevalence and severity of undernutrition in the state.

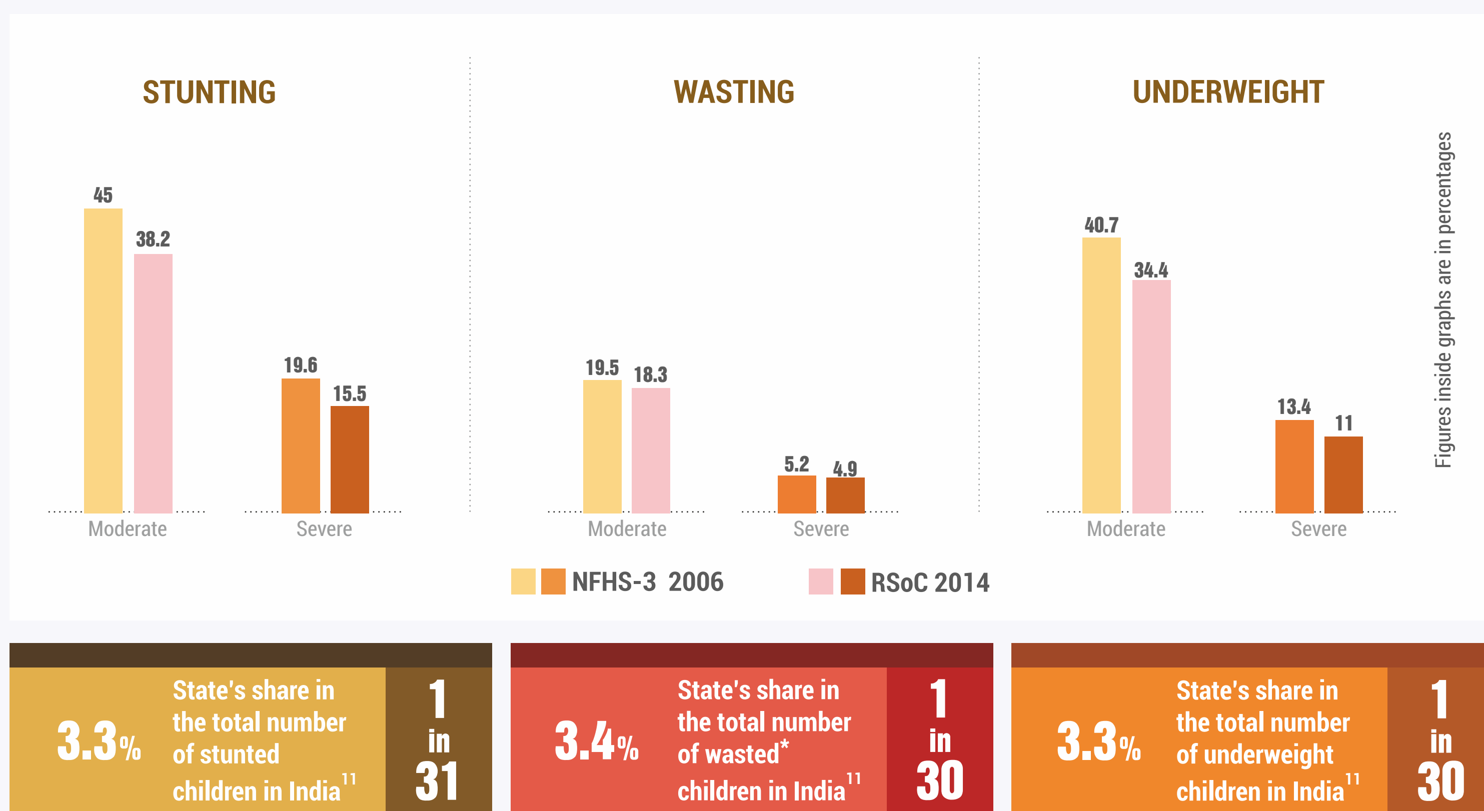
A. CHILD UNDERNUTRITION, BY TIME PERIOD

ANTHROPOMETRIC MEASURES

Stunting is inadequate height for age, which is indicative of chronic or cumulative nutritional deprivation in early childhood. A stunted child's height-for-age is below -2 standard deviations from the median height-for-age (termed HAZ) of the WHO Child Growth Standards, while a severely stunted child is below -3 standard deviations.

Wasting is inadequate weight for height, which points to acute or short-term undernutrition. A wasted child's weight-for-height (WHZ) is below -2 standard deviations from the WHO Child Growth Standards; a severely wasted child is below -3 standard deviations. (Another way to determine severe wasting or severe acute malnutrition is through a measurement of a child's mid-upper arm circumference (MUAC).

Underweight is inadequate weight for age, a composite indicator that encompasses stunting and wasting. An underweight child's weight-for-age (WAZ) is below -2 standard deviations from the WHO Child Growth Standards; again, a severely underweight child is below -3 standard deviations.

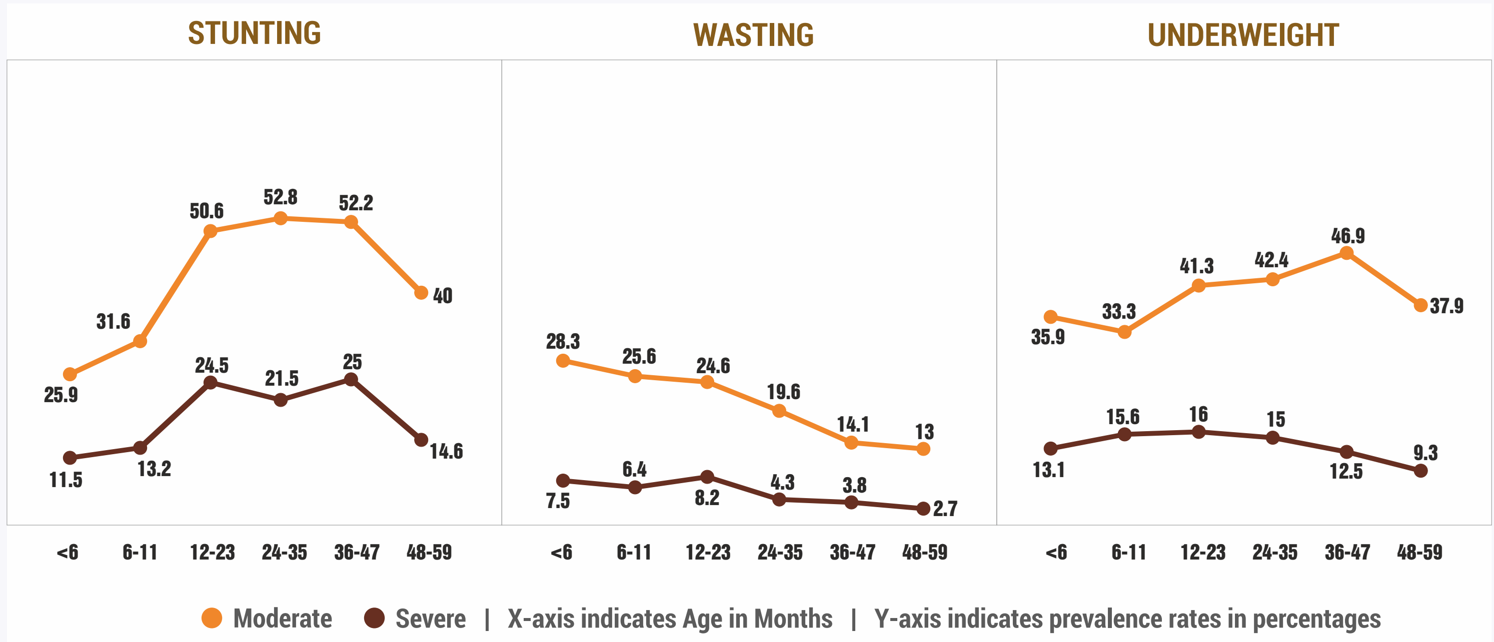


*Wasting is subject to seasonal variations either in food supply or disease prevalence and hence may not be comparable across groups of children measured at different times of the year within a survey round as well as between different survey rounds.

[11] Source : NFHS-3, 2006

B. CHILD UNDERNUTRITION, BY AGE GROUPS[12]

Percentage of moderate (below -2 SD from the WHO growth standards) and severe (below -3 SD) stunting, wasting and underweight are available for 6 age groups among children under 5.



C. PREVALENCE OF CHILD UNDERNUTRITION, BY BACKGROUND CHARACTERISTICS

In this section, child undernutrition outcomes are presented, along with key socioeconomic drivers that are known to be associated with child nutrition, such as caste, residence, mother's health and education, and household income.

MOTHERS' EDUCATION[12] | WEALTH INDEX[12] | MOTHERS' BMI[12]

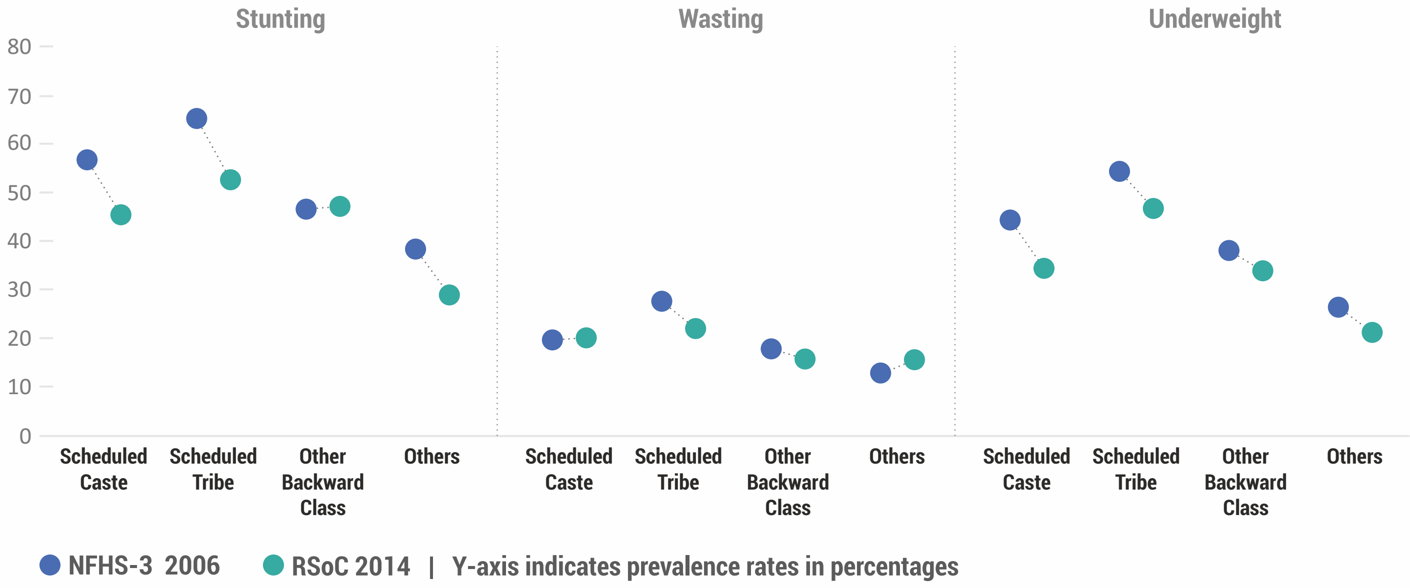
70 60 50 40 30 20 10 0

No education | < 5 years complete | 5-9 years complete | 10 or more years complete | Lowest | Second | Middle | Fourth | Highest | Underweight (BMI below18.5) | Normal (BMI18.5-24.9) | Overweight (BMI more than 25.0)

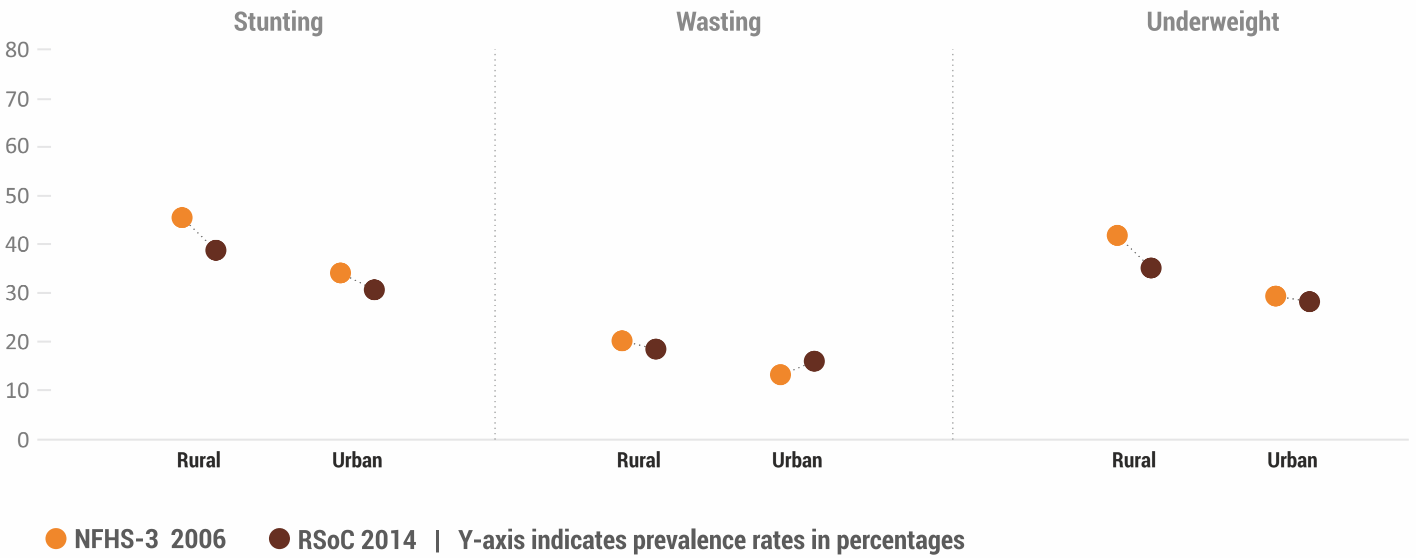
Stunting | Wasting | Underweight | Y-axis indicates prevalence rates in percentages

[12] *Source : NFHS-3, 2006*

CASTE

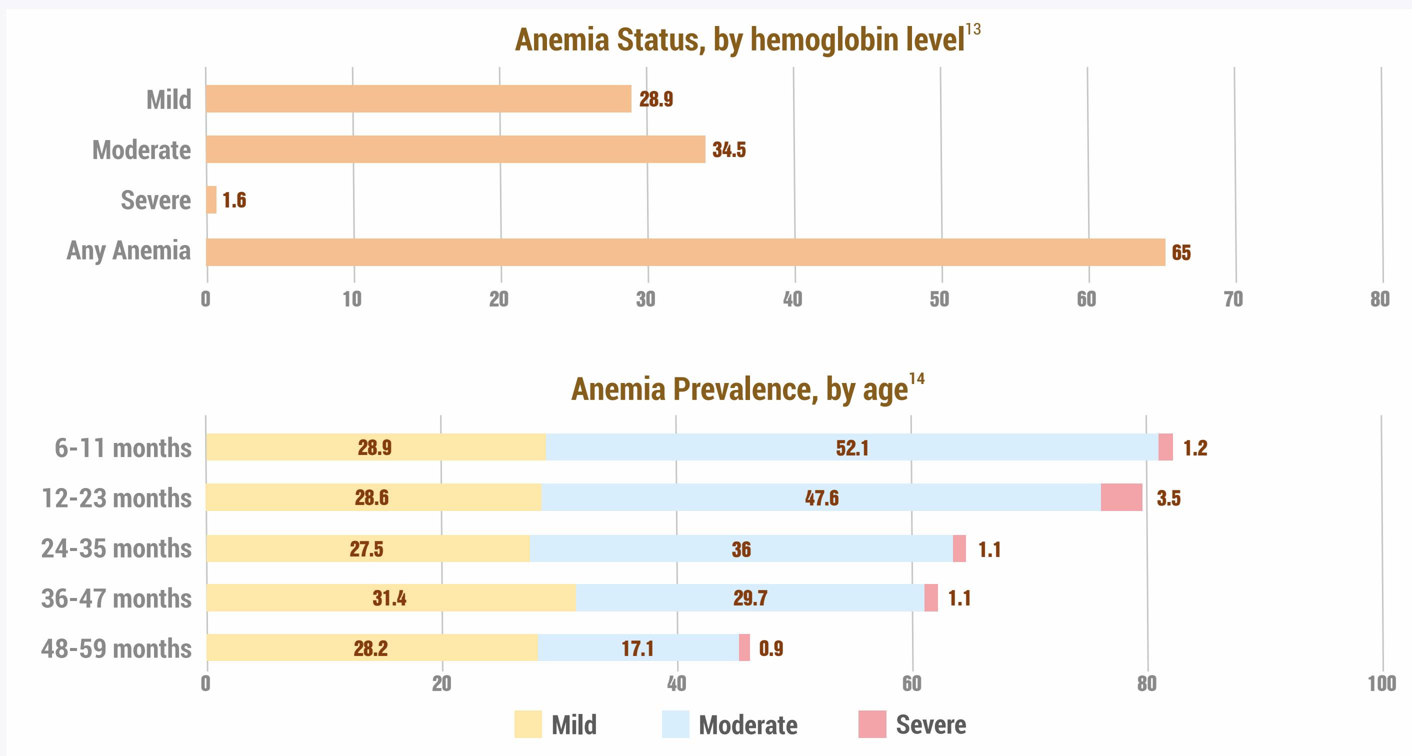


RESIDENCE



D. ANEMIA PREVALENCE

Anemia can impair physical and cognitive development among children and create long term impacts on productivity and wellbeing. This section features data on anemia prevalence by severity and age groups for children under 5.

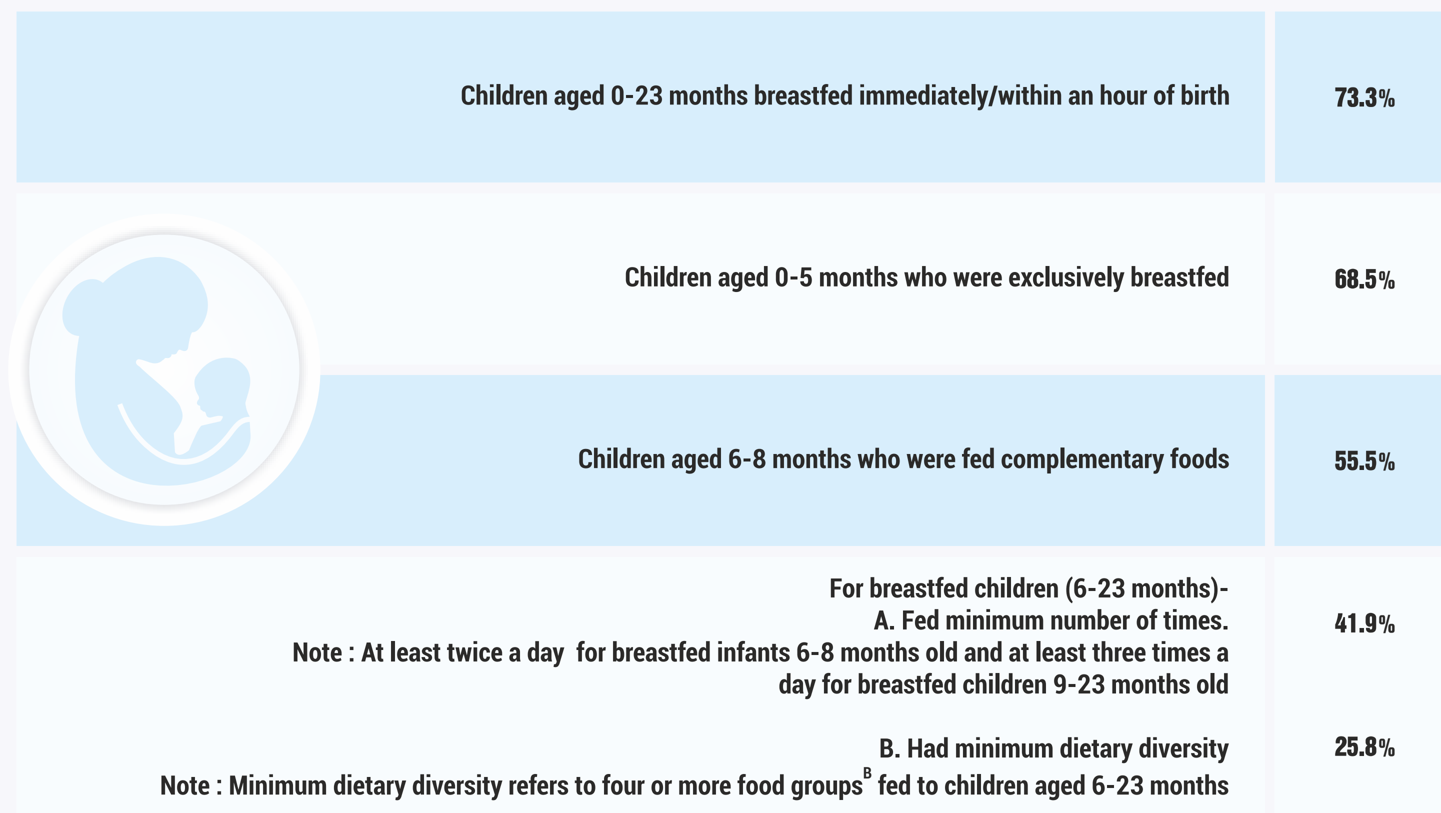


[13] *Source : NFHS-3, 2006*

III. IMMEDIATE DETERMINANTS

A. INFANT AND YOUNG CHILD FEEDING (IYCF) PRACTICES[15]

This section presents indicators for assessing IYCF practices as recommended by the WHO and revised in 2008. Following optimal IYCF practices during the first 1,000 days is crucial for early child survival and growth as well as long-term health and wellbeing.



Indicator	Value
Children aged 0-23 months breastfed immediately/within an hour of birth	73.3%
Children aged 0-5 months who were exclusively breastfed	68.5%
Children aged 6-8 months who were fed complementary foods	55.5%
For breastfed children (6-23 months)- A. Fed minimum number of times. Note : At least twice a day for breastfed infants 6-8 months old and at least three times a day for breastfed children 9-23 months old	41.9%
B. Had minimum dietary diversity Note : Minimum dietary diversity refers to four or more food groups[B] fed to children aged 6-23 months	25.8%

B. CHILD HEALTH[15]

Prevalence of childhood illnesses (in children aged 0-59 months)	
Had diarrhea in 15 days prior to survey	9.2%
Had fever in 15 days prior to survey	13.7%
Had symptoms of Acute Respiratory Infection (ARI) in 15 days prior to survey	9%

[B] The 7 food groups include the following: i. grains, roots and tubers ii. legumes and nuts iii. dairy products (milk, yoghurt, cheese) iv. Flesh foods (meat, fish, poultry, and liver/organ meats) v. eggs vi. Vitamin-A rich fruits and vegetables vii. other fruits and vegetables.

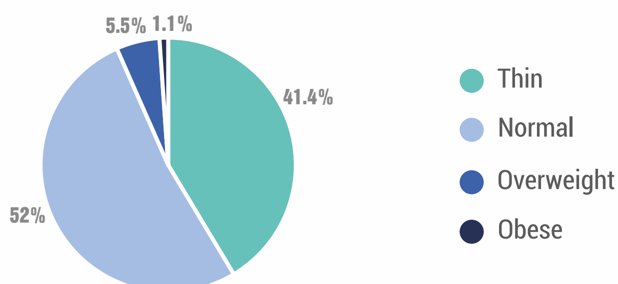
[15] Source : RSoC, 2014

C. NUTRITIONAL STATUS OF WOMEN AND ADOLESCENT GIRLS

Maternal health and nutrition, as well as adolescent nutrition, have important consequences for intergenerational transmission of undernutrition. Data on Body Mass Index (BMI), anemia prevalence and heightamong women of reproductive age are presented in this section, as are data on adolescent BMI and anemia.

C.1. WOMEN 15-49 YEARS OLD[16]

BMI[C] levels of women aged 15-49 years



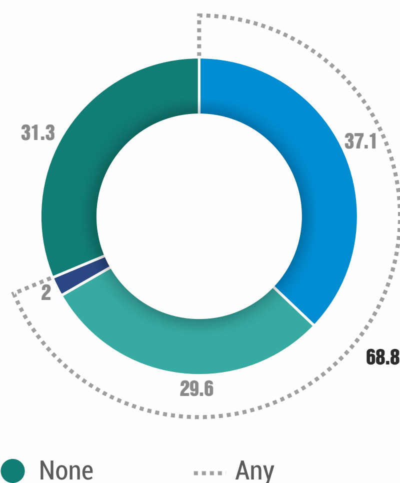
[C]Body Mass Index (BMI) is defined as the weight in kilograms by the square of the height in metres (kg/m2). It is a simple index of weight-for-height which is commonly used to classify underweight, overweight and obesity in adults. Range: BMI<18.5=total thin, BMI 18.5-24.9=normal, BMI 25.0-29.9=Overweight, BMI>30.0=Obese [per WHO Standards]

61.2%
Women aged 15-49 years are anemic

1.5%
Women aged 15-49 years are severely anemic

C.2. PREGNANT WOMEN[16]

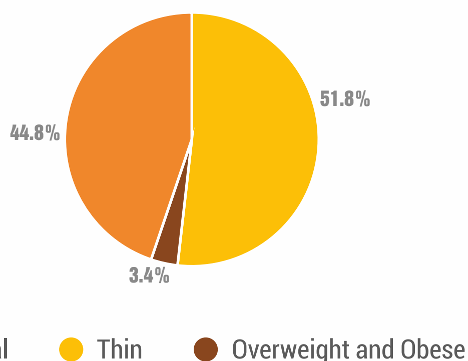
Anemia prevalence in pregnant women aged 15-49 years



Mild Moderate Severe None Any

C.3. ADOLESCENT GIRLS

BMI levels of adolescent girls aged 15-18 years[17]



Normal Thin Overweight and Obese

61.4%
Adolescent girls aged 15-19 years are anemic[16]

1.7%
Adolescent girls aged 15-19 years are severely anemic[16]

[16] Source : NFHS-3, 2006
[17] Source : RSoC, 2014

IV. UNDERLYING DETERMINANTS

A. SOCIAL STATUS OF WOMEN

Women's status is recognized to contribute in significant ways to improving nutrition. This section presents indicators that are representative of women's social status, including measures of education, age at marriage and first birth, employment, decision making and domestic violence. It also includes the Gender Empowerment Measure that captures gender inequality along three dimensions: political participation and decision-making power, economic participation and decision-making power, and power over economic resources.

Currently married women who have 10 or more years of schooling[18] **13%**

33.3% Women aged 20-24 years who were married before the age of 18[19]

20.9 Average age at marriage[19]

Gender Empowerment Measure[D,20] **0.4**

0.5 National Average[20]

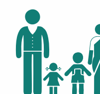
Female workforce participation rate[22] **27.2%**

Currently married women who make decisions about[23]:

38.1% Own healthcare

6.7% Major household purchase

24.3% Purchases for daily household needs



5% Visits to her family/friends/ relatives

41.2% Women who have experienced any form of physical/ sexual/emotional violence[23]

62.2% Ever married women who justify hitting/ wife-beating (for either of the reasons mentioned)[23]

[D] *The Gender Empowerment Measure is a weighted average index based on indicators that are classified into three dimensions: a. political participation and decision-making power b. economic participation and decision-making power and c. power over economic resources. The index ranges from a minimum of 0 to a maximum of 1, with a higher score indicating greater empowerment of women. (More information available at http://wcd.nic.in/publication/GDIGEReport/Part3.pdf.)*

[18] *Source : DLHS-3, 2007-08*
[19] *Source : RSoC, 2014*
[20] *Source : MoWCD, 2006*
[22] *Source : Women and Men in India, 16th Issue MoSPI, 2014*
[23] *Source : NFHS-3, 2006*

B. WATER AND SANITATION

Poor hygiene and sanitation, by directly increasing exposure and susceptibility to infections, are associated with undernutrition among children. This section covers key indicators on access to safe drinking water and availability of sanitation facilities at the state level. It also includes the expenditure on toilet construction under the Total Sanitation Campaign.

87.1%

Households with access to improved sources of drinking water[E, 24]

17%

Households using improved sanitation facility[F, 24]

77.7%

Households practicing open defecation[24]

46.9 M

Expenditure on toilets under Total Sanitation Campaign (TSC)[G, 25]

1,050 M

National Average[25]

C. AGRICULTURE AND FOOD SECURITY

Agriculture productivity and food security can affect household access to foods necessary for a healthy diet. Thus, this section presents indicators related to agricultural growth and food consumption patterns in the state, indicating the level of food security in the state relative to the national situation.

3%

Growth rate of agriculture from 2007-2012[26]

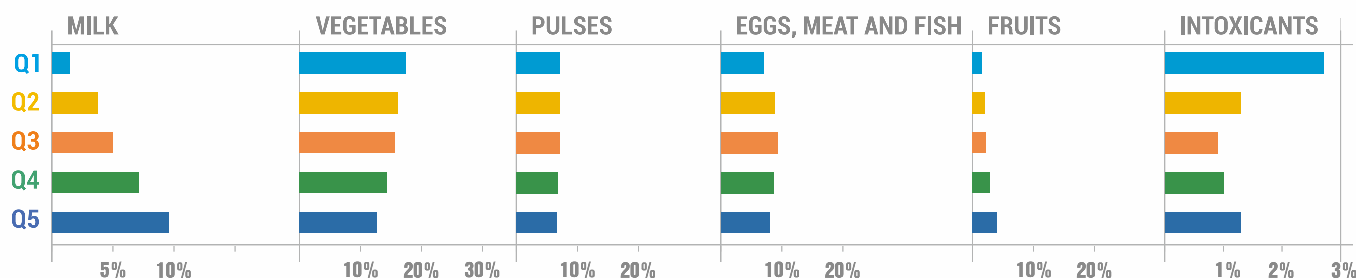
2.5%

Share in India's total foodgrain production[27]

Mean Calorie intake per person per day (in Kcal)[28]

	RURAL		URBAN	
	ODISHA	INDIA AVG	ODISHA	INDIA AVG
Kcal	2215	2233	2191	2206

Expenditure on food items by income quintiles[28]



[E]Improved sanitation means households using improved toilets that include: flush toilet, piped sewer system, septic tank, flush/pour flush to pit latrine, ventilated improved pit latrine, pit latrine with slab, composting toilet, special case (as per Joint Monitoring Programme definition: http://www.wssinfo.org/definitions-methods/watsan-categories/); excludes those households who are using improved toilets but sharing toilet facilities with other households.

[F]Besides toilet construction subsidies, this expenditure also includes funding other activities such as solid and liquid waste management, IEC activities for sustainable demand generation for sanitation facilities, assistance to production centers of sanitary materials and rural sanitary marts, provision of construction of community sanitary complexes, provision of sanitation facilities in govt. schools and Anganwadis in govt. buildings etc.

[24] Source : RSoC, 2014
[25] Source : Indiastat, Rajya Sabha Unstarred Question No. 2950, dated on 30.08.2011, 2011-12
[26] Source : Indiastat, complied by datanet from Rajyasabha & Loksabha unstarred questions no. 3039, 4535. 2007-12
[27] Source : Indiastat, Ministry of Agriculture, Government of India 2011-2012
[28] Source : NSSO, 68th round-Nutritional Intake in India, 2011-12

V. STATUS OF NUTRITION-RELEVANT INTERVENTIONS

A. NUTRITION-SPECIFIC INTERVENTIONS

The financial resources allocated to, and spent on direct nutrition-specific interventions can determine the scale, coverage and quality of interventions to reach vulnerable target populations. These services, in India, are delivered both by the Integrated Child Development Scheme (ICDS) and the National Health Mission (NHM). This section includes data on the coverage of interventions delivered by these two key centrally-sponsored schemes that directly impact maternal and child nutrition and health. We also include here information on the human resources and service availability of these schemes and expenditures.

A.1. COVERAGE OF ICDS AND NHM:

The Integrated Child Development Services (ICDS) aims to improve the nutrition and health status of children under-six through a package of services (supplementary nutrition, immunization, health check-up, referral services, etc.) delivered through frontline workers at the Anganwadi Centres (AWCs). This section provides information on expenditure on ICDS and coverage of its supplementary nutrition programme (SNP). This section also covers critical services provided by the health system, including provision of care for pregnant women and child immunization. Immunization plays a crucial role in complementing actions to improve nutrition. The link between undernutrition and infectious diseases is cyclical, poor nutrition increases vulnerability to infections, which in turn worsen nutrition status. Data on immunization among children are presented by residence. Here, full immunization refers to children covered with BCG, measles and 3 doses each of DPT and polio.

Beneficiaries who availed supplementary food under ICDS[29]	
Children 6-35 months	89.2%
Children 36-71 months	67.3%
Pregnant women	60.6%
Lactating mothers	76.5%

Beneficiaries who received supplementary food for at least 21 days in the month prior to the survey	
Children aged 6-35 months	0%
Children aged 36-71 months	35.6%
Pregnant women	24.8%
Lactating women	0%

[29] *Source : RSoC, 2014*

SERVICES PROVIDED TO WOMEN WHO HAD A LIVE BIRTH IN LAST 35 MONTHS[30]

75.3%

Received 3 or more antenatal checkups prior to delivery

95.8%

Received 2 or more TT injections prior to delivery

28.9%

Consumed 100 or more IFA tablets/syrup during pregnancy

81.3%

Had Institutional delivery

83.7%

Women who had live birth in 35 months where delivery was assisted by skilled health provider[30]

62.1% Rural | 61.6% Urban

Children aged 12-23 months who are fully immunised[30]

8%

Children aged 12-23 months who have not received any immunisation[30]

WOMEN GIVEN ADVICE ON[31]:

48.5% Breastfeeding

45.2% Nutrition

48.2% Institutional delivery

A.2. PERSONNEL CAPACITY OF ICDS AND NRHM:

This section features data on availability of healthcare personnel and services available to women of reproductive age (antenatal care, tetanus toxoid coverage, iron-folic acid supplementation coverage, institutional delivery and counseling). Household and individual access to health services can directly impact children's nutrition and welfare during the crucial first 1,000 days of life.

Availability of Anganwadi Centres and Workers (AWCs and AWWs)[H, 30]	Value
Pending or vacant Anganwadi workers to sanctioned number of workers[30a]	9.1%
AWWs living in the AWC village/ward	84.9%
AWWs having 10 or more years of schooling	74.9%
Median age of AWWs	35 years
AWCs serving to population more than the stipulated norm	31%

Growth Monitoring[30]	Value
AWCs having functional baby weighing scale	89.4%
AWCs having functional adult weighing scale	36%
Available WHO growth chart at AWCs	97.3%

[H] *Number of AWCs surveyed for Odisha as per RSoC 2014 is 200.*

[30] *Source : RSoC, 2014*
[30a] *Source : MoWCD, 2012*
[31] *Source : DLHS-4, 2012-13*

Training and Comprehensive Knowledge[32]	Value
AWWs having correct knowledge of intake of food by pregnant women	97.3%
AWWs having correct knowledge of normal birth weight of children	93%
AWWs having correct knowledge of initiation of breastfeeding within one hour	96.7%
AWWs having correct knowledge of exclusive breastfeeding for the first six months	75.7%
AWWs having correct knowledge of appropriate age of child for complementary feeding	55.6%

Health Service Delivery Personnel	Value
ASHAs selected[33]	99.6%
Current density of ASHA as per Census 2011 rural population[33]	1 per 805 persons
Pending or vacant ANM positions sub centres & PHCs[34]	0.3%

A.3. EXPENDITURE ON SCHEMES DELIVERING NUTRITION-SPECIFIC INTERVENTIONS

Expenditure on Schemes (in million dollars)	In million USD	National Average
ICDS (ICDS general + SNP + training) (women and children)[35]	111	75
NRHM expenditure (Central Government)[36]	86.2	68.8
NRHM expenditure (State Government)[36]	29.2	9.3

B. NUTRITION-SENSITIVE INTERVENTIONS

This section includes information on expenditure and coverage of key centrally-sponsored schemes that indirectly impact maternal and child nutrition. These are: the Mid Day Meal Scheme (MDMS), Public Distribution System (PDS), and Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA).

B.1. COVERAGE OF SCHEMES DELIVERING NUTRITION-SENSITIVE INTERVENTIONS

Coverage of Schemes	Value
MDMS (base: eligible children*)[37]	56.1%
PDS (base: rural and urban households reporting consumption)[38]	59.1%
MGNREGA (base: rural persons 18 years and above registered in MGNREG job card and demanded work during last 365 days)[39]	70%

*All children studying in primary & upper primary classes in schools supported under Sarva Shiksha Abhiyan and NCLP (National Child Labour Project) run by Ministry of Labour.

B.2. EXPENDITURE ON SCHEMES DELIVERING NUTRITION-SENSITIVE INTERVENTIONS:

Expenditure on Schemes (in million dollars)	In million USD	National Average
MDMS[40]	83	47
PDS[41]	862.7	475.3
MGNREGA[42]	196	214

[32] Source : RSoC, 2014
[33] Source : NRHM, 2013
[34] Source : MoHFW, 2013
[35] Source : Lok Sabha Unstarred Question # 846 dated 27.02.2015, 2012-13
[36] Source : Lok Sabha Annexured Unstarred Question # 409 dated 6.12.2013, 2012-13
[37] Source : Part (c) of Lok Sabha Starred Question # 216 dated 05.02.2014 http://164.100.47.132/Annexture_New/lsq15/15/as216.htm 2011-12
[38] Source : Report No. 558, NSSO 68th round-Employment and Unemployment Situation in India, 2011-12
[39] Source : Report No. 554, NSSO 68th round-Employment and Unemployment Situation in India, 2011-12
[40] Source : Part (c) of Lok Sabha Starred Question # 216 dated 05.02.2014, 2012-13
[41] Source : Food Corporation of India 2013, 2012-13
[42] Source : Lok Sabha Annexured Unstarred Question # 3835 dated 19.03.2015, 2012-13