

This fact sheet presents preliminary findings from the fourth round of the Young Lives survey of children in Andhra Pradesh<sup>1</sup> in 2013. It reports on some of the changes that have taken place in key nutrition indicators for our sample children over the eleven years since the first round of data collection in 2002. We see how children's growth trajectories develop over time: almost a third of the sample children continue to show signs of stunting (chronic malnutrition), especially among the poorest and most marginalised children and in rural areas. Almost a third of the Young Lives sample children are also experiencing thinness – another indicator of (shorter-term) under-nutrition. And we see that the food diversity of poor children is changing: children are eating fewer pulses, legumes and nuts, and poorer quality cereals. Finally, we report that while almost all Young Lives children now have access to clean water, only half of the sample had access to sanitation, with extremely low coverage in rural areas and for the poorest households.

## Policy context

Under-nutrition is the single biggest cause of under-5 mortality, underlying nearly half of all child deaths globally. India is one among many countries where child malnutrition is severe and predominantly concentrated among the poorest and most socially disadvantaged families. This matters because under-nutrition can undermine children's physical and mental health setting them on a lifelong trajectory of low education levels and reduced productivity, with consequences for the labour force in a rapidly growing economy. While economic growth has been rapid in recent years, India's malnutrition rates have not seen a commensurate decline. The Supreme Court of India has passed various judgements that have paved the way for the National Food Security Act (2013). Recent initiatives include the restructuring of the Integrated Child Development Scheme (ICDS) to focus on under-3s, maternal care and early childhood care and education (ECCE), and new provision of supplementary food to pregnant and lactating women under the National Maternity Benefit Scheme and the Janani Suraksha Yojana, as well as strengthening of the national Midday Meal Scheme in schools.

Acknowledging that tackling malnutrition will require strengthening inter-sectoral convergence and coherence in planning, as well as nutrition-specific interventions, the Ministry of Women and Child Development has launched a multi-sectoral nutrition programme (MSNP) in 200 high-burden districts of India, to ensure nutrition-sensitive programming is included across a wide range of sectors, including health, agriculture, water and sanitation, social protection, education, and women's empowerment (MWCD, 2014)

While there is global evidence to show that the sensitive period for intervention to prevent or counter malnutrition is during the first 1,000 days of life (from conception to a child's second birthday), there is emerging evidence to show the possibility that children may recover from malnutrition if proper care is taken even after two years of age (Radhakrishna and Ravi 2004; Lundeen et al. 2013). Studies including the three National Family Health Surveys (NFHS) and data from Young Lives reveal that malnutrition is multifaceted, and interacts with other complex factors like poverty and access to resources, food security, care and feeding practice and disease (UNICEF 2013).

Young Lives has been collecting anthropometric measures from the two cohorts of children since 2002 and is in a strong position to assess their height and weight and to link this data with socio-economic, community and other household factors. The availability of data for the same children over time allows us to see which groups of children are likely to be persistently stunted, which may recover in their growth trajectories, or which children may falter in their growth.

## Key findings

- Almost a third of all Young Lives children continue to show signs of malnutrition at age 12, with high rates for economically and socially marginalised children and those in rural areas.
- However, inter-cohort analysis, which allows us to see changes in children's environment over time, reveals a decline of 6 percentage points in stunting among 12-year-olds in 2013 compared to 2006.
- Young Lives data confirm other findings that the food intake of poor children is changing. Children are eating fewer pulses, legumes and nuts. Less than 20% of the Young Lives children were regularly eating meat, fish and eggs.
- Good sanitation is crucial for children's healthy development and to reduce the burden of disease and malnutrition. Children from urban areas, better-off families and more socially advantaged groups continue to have better access to clean water and sanitation than children in rural areas and marginalised groups.
- Socially marginalised groups and the poorest households need to be targeted in efforts to reduce malnutrition.

<sup>1</sup> The state as it existed since 1956 before its bifurcation into two new states of Andhra Pradesh and Telangana on 2 June 2014.

## Stunting among Young Lives children

Stunting (low height-for-age, measured against World Health Organization reference standards) is a consequence of and taken as a proxy for malnutrition. Data from the Young Lives survey in 2013 (Round 4) indicates that overall there is little decline in stunting among the Younger Cohort children. Irrespective of gender, around 30% of the children were stunted from age 1 up to age 12 and we see only a very slight reduction in the prevalence of stunting among boys, which hovers at around 30%, while in case of girls, it improved slightly.

As we found during our Round 3 survey in 2009, children living in rural areas continue to experience a higher prevalence of stunting, and 'Other Caste' children fare much better than other groups. While urban-rural differences continue to persist, we observe a higher percentage of urban children stunted in 2013 than in 2009. Better-educated mothers (who are also usually better-off) are less likely to have stunted children. Stunting is more prevalent among Scheduled Tribe children, as well as in the poorest households, in rural areas, or where a child's mother has received little formal education (Figure 1).

If we compare the Older Cohort in 2006 with the Younger Cohort in 2013, when they were both age 12, we see reduction of stunting by 6 percentage points. By and large, this trend is true across all categories of households.

### Thinness

Thinness is another indicator of (shorter-term) under-nutrition (caused by food quantity, food quality or poor health). The number of Young Lives children experiencing this form of malnutrition increased from 28% at age 8 (in 2009) to 33% at age 12 (in 2013). The trends in thinness observed among socio-economic groups and between urban and rural children are similar to those for stunting, with more than a third of SC, ST and BC children being thin, compared to a quarter of

Other Caste children. If we compare the two cohorts at age 12, we find less thinness among 12-year-old boys in 2013 (38%) compared to boys in 2006 (44%). However, there is an increase in thinness among 12-year-old girls from 23% in 2006 to 28% in 2013. There is also a considerable gap in thinness between children from better-off households (26%) and the poorest households (37%).

### Food diversity and nutrition

There is a direct link between nutrition and food diversity. Malnutrition, with its two constituents of macronutrient (protein-energy malnutrition) and micronutrient deficiencies (also known as hidden hunger), continues to be a major health burden in India. Nationally, food price increases have affected food consumption trends. For example, the poorest households have changed the type of cereals consumed due to the availability of wheat and rice through Public Distribution System (PDS) rather than coarse cereals such as bajra, ragi, maize and jowar, which are rich in micronutrients and minerals (Ramachandran 2007).

Food diversity, measured by the number of food groups consumed, indicates that on average, both cohorts ate 4 out of 7 food groups. However, the main food groups they have access to have changed over time: both cohorts are eating less pulses, legumes and nuts, and less milk and dairy products. We also find that less than a quarter of children regularly were eating meat, fish, eggs and pulses. The question arises whether these changes in food diversity have any bearing for policy? We see differences in the food intake of stunted and non-stunted children and of thin and not-thin children, with better-nourished (non-stunted) children having more access to meat and fish, milk and milk products, as well as vitamin A and iron-rich foods. By and large, this was also true for thin and not-thin children.

Figure 1. Prevalence of stunting among children at age 1, 5, 8 and 12 years

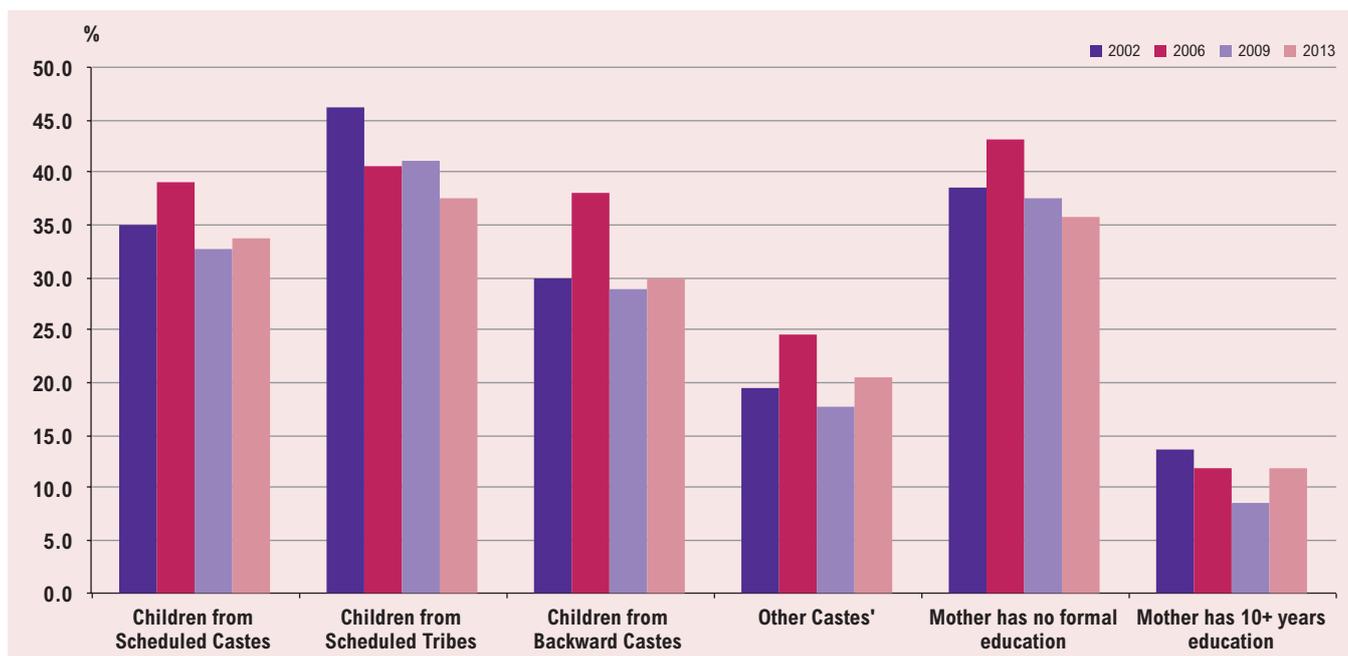
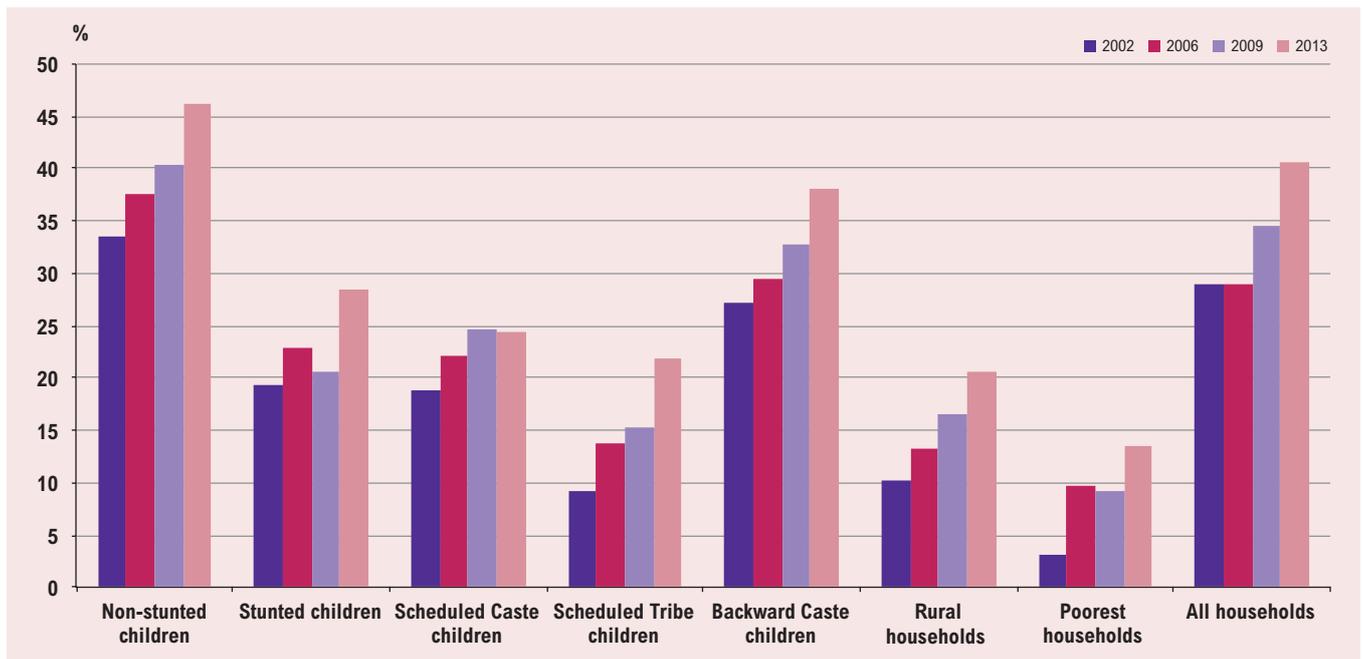


Figure 2. Access to Sanitation among Younger Cohort children 2002-2013



### Access to water and sanitation

Access to basic services such as clean water and sanitation has important implications for children’s health and nutrition, and access to both has increased for both cohorts. Access to clean water has increased from 84% in 2002 to almost 99% of all Young Lives children in 2013, and sanitation coverage has increased from 30% in 2002 to 46% in 2013.

However, there is still a significant gap in access to sanitation between social groups: less than a quarter of SC and ST children and a little over a third of BC children had access to sanitation in 2013, compared with 75% of Other Caste children. The poorest households have poorest access (just 13%). Although urban households continue to have good access to sanitation, there has only been a marginal improvement in rural areas (from 17% in 2009 to 21% in 2013 among the Younger Cohort families), and less than one in four ST households have access to sanitation (Figure 2). These are also the groups who have the highest level of under-nutrition, including stunting.

### Conclusion

There has been comparatively little improvement in the nutritional status of children in terms of stunting and thinness in Andhra Pradesh between 2006 and 2013. Around a third of the children continue to suffer from malnutrition and the disparities among socio-economic groups persist with little improvement. Children from Scheduled Tribes, the poorest households, rural areas, and children whose mother had little or no education are the worst affected. There is therefore a need for a targeted approaches to tackle malnutrition, particularly as there is evidence that every dollar invested in preventing malnutrition returns 30 dollars in higher life-time productivity (UN 2013: 7). While the Government of India has demonstrated its commitment to tackling malnutrition, implementation of the National Food Security Act, 2013 needs to be measured with indicators and targets that ensure action and accountability toward access to adequate nutritious quality food as well as commitment to improving access to clean water and sanitation for all children.

1 Food groups: Items were classified into 7 groups: 1. Grains, roots and tubers; 2. Fruits and vegetables; 3. Meat, poultry, fish and seafood; 4. Eggs; 5. Pulses, legumes and nuts; 6. Milk and milk products; 7. Foods cooked in oil or fat.

**Table 1. Nutritional status of 12-year-old children in united Andhra Pradesh**

	Stunting (%)		Thinness (%)		Number of food groups eaten in last 24 hrs		G5: Pulses, legumes, nuts (%)		G6: Milk and milk products (%)		G3: Meat, poultry, fish, seafood and organ meats (%)		Access to sanitation (%)	
	2006	2013	2006	2013	2006	2013	2006	2013	2006	2013	2006	2013	2006	2013
<b>Gender</b>														
Male	32.4	29.8	43.8	38.1	4.3	4.2	41.9	24.1	67.0	72.1	16.4	16.5	33.1	42.1
Female	36.3	29.8	23.3	27.7	4.3	4.4	42.1	23.5	63.3	75.2	10.8	16.1	34.9	39.2
<b>Child's ethnic group or caste</b>														
Scheduled Castes	35.5	33.7	30.5	32.3	4.2	4.1	44.6	16.2	53.4	65.2	10.4	15.7	17.2	24.4
Scheduled Tribes	38.1	37.6	28.6	34.4	4.1	4.3	40.6	26.2	53.8	64.3	16.0	16.6	22.6	21.9
Backward Classes	36.8	29.8	36.8	36.9	4.2	4.3	37.4	27.3	66.1	76.3	14.9	14.4	32.6	38.2
Other Castes	26.0	20.6	31.5	24.7	4.6	4.4	50.3	21.0	80.3	81.3	12.3	21.3	60.1	75.0
<b>Maternal education level</b>														
No education	39.5	35.7	35.1	38.0	4.1	4.2	39.0	24.9	55.5	66.1	11.8	13.7	20.1	20.8
Up to 5 years	34.9	28.4	37.8	35.4	4.5	4.4	50.0	23.0	77.0	81.1	13.8	20.1	33.3	36.7
6 to 10 years	22.4	23.1	28.0	25.9	4.6	4.4	43.8	21.2	82.7	79.1	16.7	18.0	69.3	71.5
More than 10 years	5.0	11.9	15.0	16.1	4.6	4.5	42.5	28.0	77.5	91.5	25.0	21.2	92.5	95.8
<b>Household wealth level (Young Lives wealth index)</b>														
Bottom tercile	40.3	39.8	37.8	37.4	4.0	4.3	35.2	25.0	48.7	66.9	12.6	15.1	7.8	13.4
Middle tercile	36.2	29.3	33.0	36.6	4.3	4.2	45.8	23.9	63.8	71.9	9.6	14.0	17.4	28.4
Top tercile	26.5	20.3	29.4	25.8	4.6	4.4	44.9	22.4	82.6	81.9	18.4	20.2	77.0	81.2
<b>Place of residence</b>														
Urban	25.7	20.4	24.8	22.1	4.6	4.4	43.5	22.8	87.0	82.5	23.0	21.3	92.2	93.2
Rural	37.1	33.4	36.1	37.5	4.2	4.3	41.5	24.2	58.1	70.1	10.5	14.4	15.5	20.5
<b>Stunted children</b>														
Not stunted	–	–	–	–	4.3	4.3	43.6	23.5	65.9	75.7	14.3	17.4	36.8	46.1
Stunted	–	–	–	–	4.2	4.2	39.2	24.5	64.0	68.3	12.5	13.9	28.7	28.4
<b>Thin children</b>														
Not thin	–	–	–	–	4.3	4.3	42.8	24.7	64.4	74.0	13.7	16.6	36.9	45.5
Thin	–	–	–	–	4.3	4.3	40.8	22.0	66.9	72.5	13.7	15.8	28.3	31.3
<b>Average of all children</b>	<b>34.4</b>	<b>29.8</b>	<b>33.4</b>	<b>33.2</b>	<b>4.3</b>	<b>4.3</b>	<b>42.0</b>	<b>23.8</b>	<b>65.1</b>	<b>73.5</b>	<b>13.5</b>	<b>16.3</b>	<b>34.0</b>	<b>40.7</b>
<b>Sample size</b>	<b>943</b>	<b>1,905</b>	<b>943</b>	<b>1,905</b>	<b>938</b>	<b>1,910</b>	<b>938</b>	<b>1,910</b>	<b>938</b>	<b>1,910</b>	<b>938</b>	<b>1,910</b>	<b>952</b>	<b>1,915</b>

Note: Data from the Older Cohort children aged 12 in 2006 (Round 2) and the Younger Cohort children aged 12 in 2013 (Round 4).

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