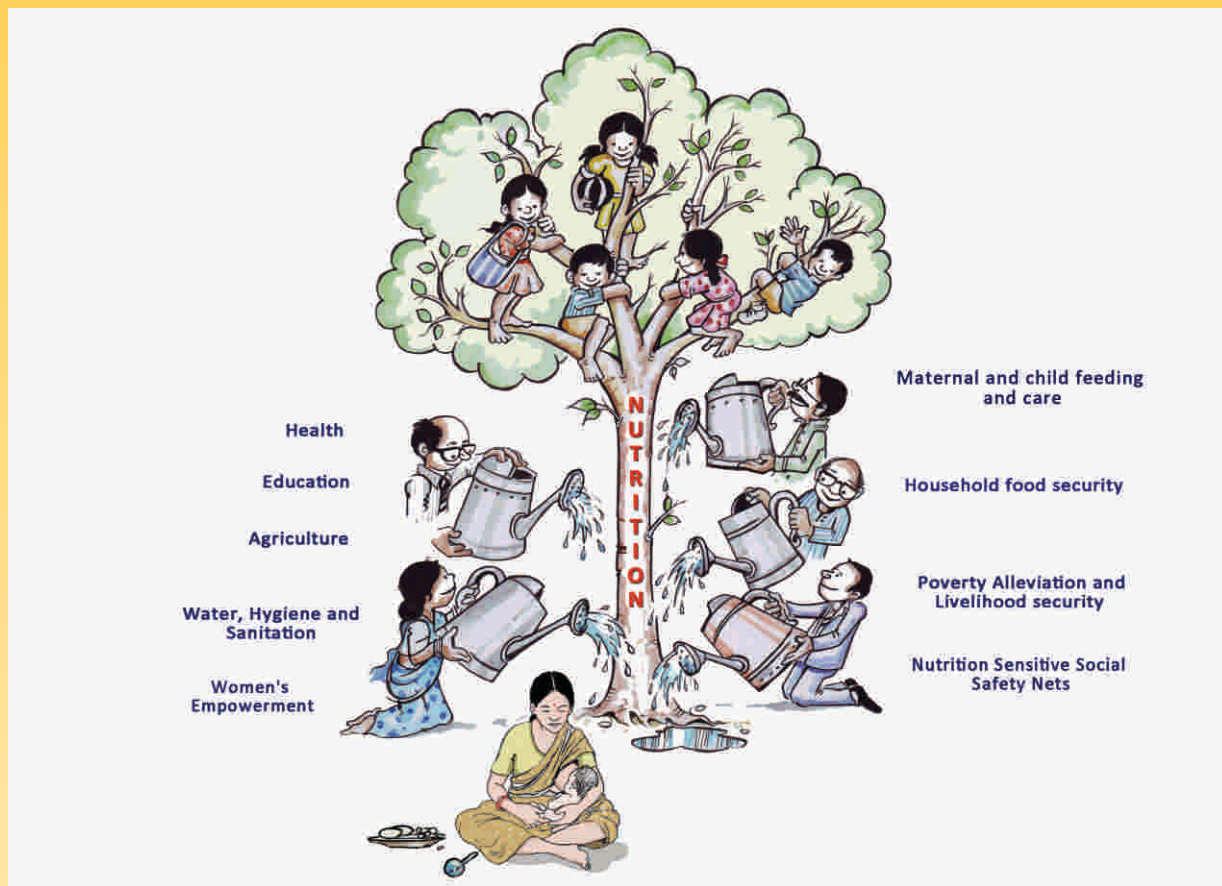


Budget TRACK

Volume 11, February 2016

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Governance Challenges in Addressing Undernutrition
A Multi-Pronged Approach to Nutrition
In-Conversation with Experts
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Factsheets



A Publication by Centre for Budget and Governance Accountability
In collaboration with Unicef India

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Views expressed in the articles are those of the authors and not necessarily the position of CBGA or Unicef India.

This issue of Budget Track is a special issue, focusing on Nutrition, being brought out in collaboration with Unicef India. It is a part of the efforts, being carried out jointly by CBGA and Unicef India, to deepen the policy discourse in India on nutrition specifically from the public investment perspective. The recent changes in the federal fiscal architecture and the policy landscape over the last year have a number of implications for financing for nutrition. Since addressing undernutrition requires a multi-sectoral approach, adequate public investment for nutrition across a range of sectors is crucial. Moreover, there has been a disconnect to some extent between the discourse on nutrition and that on budgets in the country; hence, this issue of Budget Track aims to bring together insights from both the domains in order to develop a holistic understanding of public investment for nutrition. To this end, this publication focuses on the key concerns, strategies, challenges and success stories in the domain of nutrition and public expenditure in the current context.

The issue begins with Saba Mebrahtu and Vani Sethi posing the problem of undernutrition in India, highlighting how the discourses on nutrition and budget have failed to influence one another. Following this, Arti Ahuja, and Reetika Khera & Jean Dreze, in their respective pieces, highlight the status of India's nutritional indicators vis-à-vis other countries, and the regional disparities between the states within India. The next set of articles by N. C. Saxena, V. Ramani and Vandana Krishna focus on some of the key governance challenges confronted in addressing undernutrition in India and how these can be overcome.

The articles following this highlight the need for adopting a range of interventions across nutrition-specific and nutrition-sensitive sectors

to address undernutrition holistically. While Dipa Sinha and Shikha Nehra discuss the role of National Food Security Act, Nikhil Dey and Inayat Sabhikhi focus on the linkages between livelihoods and nutritional security. In the next piece, Debjeet Sarangi, Bichitra Biswal and Pradeep Patra highlight the role of forest biodiversity in providing locally harvested safe food, which are also rich in micronutrients, for local communities. In the subsequent article, Pavitra Mohan and Divya Varma discuss the health and nutrition solutions in high migration areas of South Rajasthan, for the tribal communities.

This Budget Track also captures important insights from some key stakeholders in the In-Conversation series, where Aasha Kapur Mehta (academic), S. B. Agnihotri (former bureaucrat), Subodh Varma (senior journalist) and Vandana Prasad (social activist) share their views on the some of the key debates around nutrition.

The final set of articles focus on public investment for nutrition taking into account the perspectives highlighted in some of the earlier pieces in the publication. Suman Chakrabarti and Purnima Menon provide costing estimates for universalising nutrition-specific interventions in India. Subsequent articles by CBGA, discuss the recent changes in the fiscal architecture of the country and their implications for public investment for nutrition at the level of Union Government and at the subnational level.

We hope this issue of Budget Track would make an important contribution towards developing a holistic understanding of what contributes towards nutritional attainments, and the challenges and opportunities for enhancing public investment for nutrition in India.

- Editorial Team



Nutrition - Budget Disconnect

Saba Mebrahtu and Vani Sethi*

Stunting among children under five years of age – is a measure of chronic under-nutrition, in terms of height for age, and it means that a child is too short for his or her age. Stunting occurs early in life, starting from conception until two years of age. The two main direct causes include poor dietary intake and bouts of infection in the mother before and during pregnancy and in the child during early infancy and young childhood. The indirect causes involve multiple inter-related factors, such as household food insecurity and poverty, poor access to health, safe water and sanitation services, and caring practices – including non-handwashing with soap at critical times.

The consequences of stunting are serious, irreversible and life-long. The losses in physical growth and brain development associated with chronic under-nutrition during the first two years of life can never be regained. The 2013 Lancet nutrition series (Black, et al., 2013) estimated that stunting causes about one million child deaths annually world-wide, due to weakened immunity. Furthermore, the children who survive under-nutrition do not often meet their full human potential. Stunted children are more likely to have poor cognition and learning performance in childhood than their well-nourished counterparts. In adulthood, they face diminished productivity and increased risk of nutrition related chronic diseases, such as obesity, diabetes and hypertension. It ultimately robs the affected poor communities and countries of critical human capital development and undermines investments in health, education, and economic growth (Hoddinott et al. 2013).

In India, the prevalence of stunting in children less than five years of age is 39 percent according to

the latest 2013-14 national survey of the Ministry of Women and Child Development(2015).This represents a decline of 19.4 percent since the previous survey of 2005-06 NFHS-3. However, the annual rate of decline of 2.4 percent is not rapid enough to achieve the global target. With nearly 47 million children under-five years suffering from stunting in 2015, India is the epicentre of the global stunting crisis. According to the latest global estimates, India has higher proportion of stunted children than Africa (32 percent) and is three times more than that of Latin America and Caribbean (11.7 percent) (UNICEF/WHO/World Bank, September 2015).

Yet, evidence has shown that the solutions are well proven, feasible and highly cost-effective. Studies have shown that the economic returns to investing in improved nutrition remain high. In 40 low and middle income countries, the cost-benefit ratio of investing in nutrition interventions is estimated at 1:16, with a 10 percent compound rate of return (IFPRI 2014), while new studies in four low developing countries has estimated the compound rate of return at greater than 13 percent. These are all compelling reasons to focus efforts towards accelerated reduction of stunting in Indian Children.

The good news is that stopping stunting is possible for Indian children. The essential interventions that can end stunting when targeted during the first 1,000 days of life are well known and the platforms which can deliver these essential services are in place. The essential nutrition interventions which require to be delivered at scale, keeping quality and equity in mind, are grouped into two categories: nutrition specific-interventions and nutrition-sensitive interventions. Nutrition-

With nearly 47 million children under-five years suffering from stunting in 2015, India is the epicenter of the global stunting crisis. The cost-benefit ratio of investing in nutrition interventions is estimated at 1:16, with a 10 percent compound rate of return.

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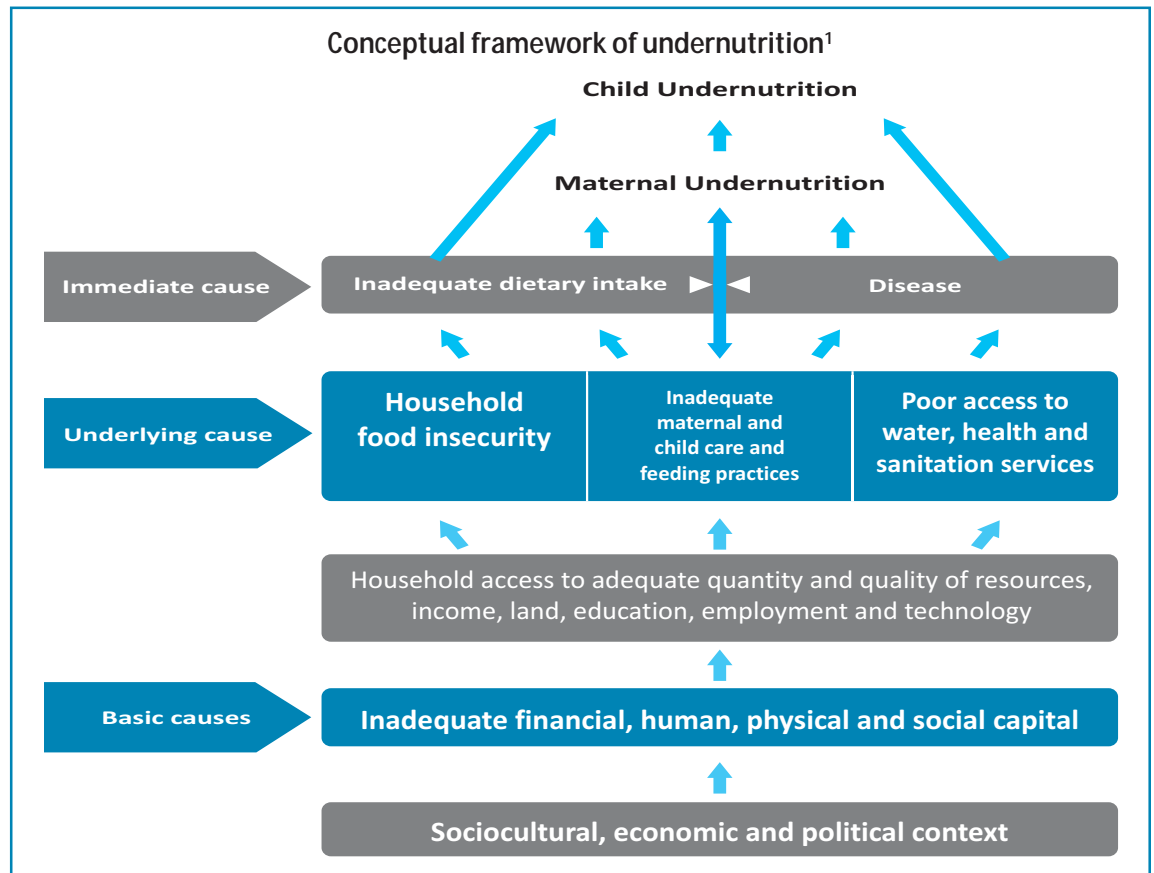
specific interventions focus directly on nutrient deficits, predominantly; micronutrient supplementation, protein and energy nutrient supplements, breastfeeding and complementary foods. These nutrition-specific interventions can be grouped in four Programme Focus Areas, namely: 1) Improving child feeding and care in the first two years of life; 2) Improving micronutrient nutrition in young children; 3) Improving early care for children with severe undernutrition; and 4) Improving nutrition and care for adolescent girls and women (Box 1). Lancet 2013 nutrition series (Bhutta et al., 2013) suggests that stunting can be reduced by 20 percent if these interventions are delivered at 90 percent coverage.

interventions address the indirect causes of undernutrition, such as, increasing access to family planning and maternal and child health care to increase birth spacing; to prevent and manage infections during pregnancy and early childhood; increasing adolescent girls access to education coupled with social and behavior change communication to reduce teen births; improving access to safe water and sanitation services coupled with behaviour and social change to improve hygiene practices; increased access to social protection and agriculture services to enhance household food security; and poverty alleviation (Box 1).

Lancet 2013 nutrition series suggests that stunting can be reduced by 20 percent if nutrition-specific interventions are delivered at 90 percent coverage. The remaining 80 percent reduction must be achieved through scaling-up the nutrition-sensitive interventions.

The remaining 80 percent reduction must be achieved through scaling-up the nutrition-sensitive interventions, which need to be delivered through non-health sectors. This calls for a multi-sectoral approach. Nutrition-sensitive

What this means is that achievement of significant reduction of stunting in a sustained manner cannot be the responsibility of only one Ministry or one department alone. It requires a collective effort involving multiple sectors. As such, in the case of India, the following key Ministries can play



¹Adapted from (Ruel, March 2008) and (UNICEF 2013)

an important role (i) Ministry of Rural Development; (ii) Ministry of Public Distribution and Civil Supplies; (iii) Ministry of Health and Family Welfare; (iv) Ministry of Women and Child Development; (v) Ministry of Drinking Water and Sanitation; and (vi) Ministry of Agriculture. With regard to reducing stunting with equity, it would be important to involve two other key sectors: (i) The Ministry of Tribal Affairs; and (ii) The Ministry

of Minority Affairs to ensure coordinated efforts so that essential nutrition-specific and nutrition-sensitive services reach the most deprived communities. Finally, the Ministry of Finance and Planning Departments can play an over-arching role to ensure programmes are supported with sufficient budgets, resources and a policy framework.

Ministry of Finance and Planning Departments can play an over-arching role to ensure programmes are supported with sufficient budgets, resources and a policy framework.

BOX 1: Nutrition-Specific and Nutrition-Sensitive Intervention

Nutrition-specific interventions	Ministry responsible
<ol style="list-style-type: none"> 1. Early initiation of breastfeeding within one hour of birth 2. Exclusive breastfeeding during the first six months 3. Timely introduction of complementary feeding after completion of six months 4. Age-appropriate complementary feeding, adequate in terms of quality, quantity and frequency for children in age group 6-24 months 5. Safe handling of complementary foods and hygienic complementary feeding practices 6. Preventive micronutrient supplementation and deworming (Vitamin A, Iron, Zinc and Iodine) 7. Frequent, appropriate and active feeding for children during and after illness 8. Timely and quality therapeutic feeding and care for all children with severe wasting 9. Improved food and nutrient intake for adolescent girls particularly to prevent anemia 10. Improved food and nutrient intake for women, including preconception, pregnancy and lactation – these include access to consumption of fortified foods, iodized salt, iron and folic acid supplements and supplementary foods (in food insecure settings) 	Health Health Women and Child Women and Child Women and Child Health Health Health Health/Women and Child Health/Women and Child
Nutrition-sensitive interventions <ol style="list-style-type: none"> 1. Health Sector <ul style="list-style-type: none"> ♦ Improving antenatal coverage and quality, particularly in first trimester. ♦ Strengthening immunization services ♦ Preventing and treating pneumonia, diarrhoea and malaria. ♦ Family planning to prevent pregnancies too early, too many and too soon 	Health
<ol style="list-style-type: none"> 2. Water, Hygiene and Sanitation sector: <ul style="list-style-type: none"> ♦ Maintenance of water supply – adequate quality and quantity ♦ Eliminating the practice of open defecation 	Drinking Water and Sanitation
<ol style="list-style-type: none"> 3. Education Sector <ul style="list-style-type: none"> ♦ Early stimulation and learning (ECCD) ♦ Schools as delivery platforms for nutrition interventions ♦ Promoting secondary education of girls 	Human Resource Development
<ol style="list-style-type: none"> 4. Agriculture Sector: <ul style="list-style-type: none"> ♦ Availability and access to diverse nutrient dense foods coming from production, value-chain interventions or markets 	Agriculture
<ol style="list-style-type: none"> 5. Poverty alleviation <ul style="list-style-type: none"> ♦ Reduce nutrition vulnerability and support nutrition-focus in livelihoods among the poor and socially-disadvantaged populations 	Rural Development/Labour
<ol style="list-style-type: none"> 6. Social safety nets <ul style="list-style-type: none"> ♦ Access to and use of food, entitlements and services including through conditional and unconditional cash/social transfers that provide or substitute for income 	Food and Civil Supplies Women and Child Development
Over-arching & Enabling environment to ensure budgets, targets, strategies	NITI Aayog



There is growing consensus that stunting in India - with its profound inequities - is both a marker and a maker of poor development, and that the budgets allocated to Nutrition must increase.

However, there are key prerequisites to success, which should involve adequately addressing some critical questions, such as the following:

- ◆ Do these Ministries/Departments understand the significance of nutrition to the achievement of their respective sector specific goals, and the role that they can play to improve nutritional outcomes in adolescents, women and children – i.e. during the first 1,000 days of life?
- ◆ Are budgets sufficient for scaling-up the nutrition-specific and nutrition-sensitive programmes?
- ◆ Is there adequate understanding on how each of the nutrition programmes are budgeted, how the funds are allocated and utilised as these programmes are dispersed across Ministries?
- ◆ Do nutrition experts understand budgeting process and do budget experts understand how they can influence nutrition outcomes?
- ◆ Do the Ministries have tools for tracking budgets for nutrition results; can these tools take into account efficiencies that can be achieved because of synergies of multiple sectors working in a coordinated and coherent manner? Is there an understanding that the additional costs of better coordination outweigh the benefits of synergistic and efficiencies involved?

There is growing consensus that stunting in India - with its profound inequities - is both a marker and a maker of poor development, and that the budgets allocated to Nutrition must increase. At the same time, it is evident that, with this increase, there is an urgent need to have a workforce with the necessary technical and managerial capacity to run large and effective nutrition programmes, through a multi-sector approach for maximum impact. For decades Nutrition was not a priority and, as a result there is a 'lost generation' of Nutrition expertise. These are questions that this

supplement attempts to address, with the hope to draw attention to the critical importance of improved technical capacity and understanding of the nutrition problem and possible solutions, especially related to the bridging of the Nutrition and Budget Divide in the country.

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Global Nutrition Report and Lessons for India

Arti Ahuja*

To a man with a hammer, everything looks like a nail. So might a nutrition champion appear to the uninitiated, viewing most activities from the nutrition lens. The fact remains however, that malnutrition, encompassing both under and over nutrition, is impacted by many factors- nutrition sensitive and specific. Thus, a host of inputs such as drinking water, immunisation, food diversity, open defecation, mother's age and education, apart from food intake and dietary diversity, impact the nutritional status. The Global Nutrition Report, the first of which was launched in 2014, and the second in 2015, put the issue of nutrition on the global centre-stage. The first Global Nutrition Report (GNR), released in 2014, ended with the almost poetic phrase- "In the 21st century the challenge of improving nutrition status resonates the world over. A failure to intensify action will cast a long shadow, bequeathing a painful legacy to the next generation... We can be successful only if we act strategically... and hold ourselves accountable". The second Global Nutrition Report, GNR 2015 launched recently, takes up from there, examining actions and accountability for nutrition.

The success of India in reduction of malnutrition finds honourable mention in GNR 2015. The recently released RSOC data of 2014, when compared with the last such nationwide survey, the NFHS-3 in 2006, shows a fall in stunting from 48 to 39 percent, a decline in wasting rates, and an increase in exclusive breast feeding rates. However, as is the case with almost all social indicators, there are regional disparities. The rate of decline varies among states and in some cases; there is reason to worry about the reversal of wasting rates.

However, when seen in the larger context, while the news from India is indeed heartening, it does not fare too well in global comparisons. A cursory glance at Table A1.1 in GNR 2015 has India alphabetically placed between Guyana, Haiti, and Honduras on one side and Indonesia, Iran and Iraq on the other, and faring worse in anaemia percentage (48% in 2011) compared to all these countries. For stunting and wasting also (NFHS 2006), it fares worse than these alphabetic neighbours. In comparison with the geographical neighbours, the situation is by and large the same. Thus, while the pace of reduction is indeed good news, it needs to be accelerated. The report demonstrates that there are clear pathways for reduction of malnutrition, and with clearly articulated will and the capacity to walk the talk, countries can, and indeed have conquered this bastion of inequality and inequity. Malnutrition reduction does have many drivers, and hence many points of intervention, but there do exist clearly defined, realisable solutions. The 12 interventions proven to prevent or treat undernutrition given in the Lancet series on maternal and child nutrition are a good starting point, and if we add interventions for adolescent girls, provide a comprehensive set of guidelines for focussed prioritisation.

However, actions need to be coupled with accountability for malnutrition reduction. The GNR provides some important pointers in this regard. In order to achieve an accelerated rate of reduction, as the first step, it is time to have a single window, focussed and multi-sectoral approach. It is necessary to have in place a central agency and a declaration of intent in the form of a clear policy/strategy that lays out the deliverables

It is necessary to have in place a central agency and a declaration of intent in the form of a clear policy/strategy that lays out the deliverables across ministries in a clear time frame, and then monitors their progress.

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With a clear policy and targets in mind, scaling-up of funding across all related sectors will be imperative if India is to achieve significant reduction in malnutrition.

across ministries in a clear time frame, and then monitor their progress. The Nutrition Council headed by the Prime Minister at the National level and by the Chief Ministers in many states, is a good starting point. A firm articulation through a national policy, with a clearly laid out strategy and SMART¹ objectives, along with a mechanism/structure such as a Nutrition Mission, but with teeth to review and monitor the performance of each department needs to be in place. In an administrative structure of closely guarded silos of operation in different ministries, accountability can be ensured only through such a mechanism. Example can be drawn from some best practices cited in the GNR 2015. Columbia, which was in 2010 the only country on target for meeting four World Health Assembly indicators on malnutrition, had a detailed set of interventions outlined in the national plan for food and nutrition security, which were inter-sectoral, had focus on well-being and emphasised prevention. Ethiopia brought out its National Nutrition Strategy in 2005 and the National Nutrition Programme in 2008, which was modified in 2013 to become the Multi-sectoral National Nutrition Programme. Later, inclusion of nutrition-sensitive elements was also made in their productive safety net programme (PSNP), which also introduced co-responsibilities across various sectors for nutrition. Similar policy frameworks with institutional mechanisms to ensure multi-sectoral interventions have been set up in many countries. The African Leaders Malaria Alliance (ALMA) used score cards to track progress in malaria reduction, and was successful in monitoring and tracking reductions. This can be used across departments in the Indian context. Similarly, lessons can be drawn from the HIV/AIDS programme that had the simple message of three ones - one national framework for action; one coordinating authority; and one agreed upon monitoring and evaluating framework.

Secondly, we need to invest more in nutrition-specific and nutrition-sensitive interventions. Both the GNR 2014 and 2015 emphasise that for low and middle income countries, the returns to scaling up nutrition interventions are high. The benefit cost ratio is 1:16, and the compound rate of return is 10 percent. The World Bank estimated in 2010 that it would cost an additional USD 10.3 billion of public investment to scale up proven under-nutrition specific interventions to 100 percent in the 36 countries, where most of world's undernourished children under-5 live. Available data suggests that currently only 20-30 percent is being mobilised. With a clear policy and targets in mind, scaling-up of funding across all related sectors will be imperative if India is to achieve significant reduction in malnutrition. African countries have set an example in this regard. The Abuja declaration in 2001 committed African Union member countries to allocate at least 15 percent of annual government expenditures to healthcare. In the Maputo declaration in 2003 and the recent Malabo declaration of 2014, the African countries committed to allocate at least 10 percent of national budgets on agriculture and rural development. These two targets have become benchmarks for monitoring by civil society groups and by the countries themselves. A similar benchmarking of public investments in the social sectors that impact nutrition, is needed for us.

Thirdly, the current measurement of malnutrition through ICDS has mostly focussed on underweight, i.e. weight for age, which no doubt is expedient at the village level. However, it keeps stunted and wasted children out of the MIS ambit. While wasting is still measured through mid-upper arm circumference (MUAC) in some states, stunting is only measured through periodic surveys. Quite distinct from this are two categories that are not part of any measurement and consequent action.

¹ SMART generally refers to specific, measurable, assignable, realistic and time-bound.

One is the children who are both wasted and stunted, who are neglected in the system response, and for whom special interventions will have to be designed. Second is the neglect of a measurement of obesity through the system. WHO data shows that obesity percentage for both males and females increased from 4 percent to 4.9 percent in the four years, from 2010 to 2014, and India is off-course in meeting the WHO obesity reduction targets. Appropriate policies can only be designed if proper and timely information and data are collected. Thus the indicators of malnutrition need to be re-looked not just to include different measures of underweight, but also overweight.

Lastly, a policy or strategy is only as good as the evidence it is based upon. The last NFHS of 2006 renders any comparisons in today's context infructuous, since the world and certainly India, has moved ahead. Besides, in the absence of regular and focussed outcome monitoring, there is a built-in disincentive to track the outcomes – it becomes convenient to monitor processes. NFHS or surveys of a similar kind will have to become a regular feature so that India's growth story can be tracked, accelerated, and disparities addressed. Together with a strong national mechanism, greater funding and a revised strategy, it will surely enforce action and accountability across board, and eventually hit the nail on the head.

NFHS or surveys of a similar kind will have to become a regular feature so that India's growth story can be tracked, accelerated, and disparities addressed.

Child Development Index: How have the Different States fared?¹

Reetika Khera and Jean Drèze*

Children have been out of focus in recent debates on public policy in India. Even when budget cuts threaten to undermine child nutrition programmes, the mainstream media barely takes notice. The recent release of summary findings of the Rapid Survey on Children 2013-14 (RSOC) is an opportunity to correct this bias and take a fresh look at the state of Indian children.

Helpfully, RSOC figures are comparable with similar data from the third National Family Health Survey (NFHS-3) for 2005-6. In earlier work published in *Economic and Political Weekly*, we used NFHS-3 data to construct a simple child development index analogous to the Human Development Index, but based on child-related indicators. This can be done again, with minor modifications, using NFHS-3 as well as RSOC data. This time, the four component indicators are: proportion of children fully immunised; female literacy in the age group of 10-14 years; proportion of births preceded by an ante-natal check-up; and proportion of children who are not underweight. In the absence of survey data on age-specific female literacy rates, we use the 2001 and 2011 censuses, respectively, for the literacy indicator. The indicators are normalised using the standard HDI method, and given equal weight (see Annexure)

The results are presented in Table 1. Note that the absolute value of the index is not strictly comparable across years - what can be compared is the ranking of states in 2005-6 and 2013-14. As it happens, the ranking is quite similar in both years and its basic features are familiar. At the top of the list come Kerala, Himachal Pradesh and Tamil Nadu - states that might be called

“supermodels”. Gujarat ranked 14th in the list of 20 major states in 2005-6, and slipped to 15th in 2013-14, with a child development index well below the all-India average.

Predictably enough, the other lagging states belong to the region formerly known by the unflattering acronym of BIMARU² undivided Bihar, Madhya Pradesh, Rajasthan and Uttar Pradesh. However, some important contrasts have emerged within this region. Chhattisgarh, for instance, has detached itself from the rest as far as child development is concerned. Indeed, the child development index for Chhattisgarh is above the all-India average. Uttarakhand is doing even better. Uttar Pradesh, on the other hand, has replaced Bihar at the rock bottom.

Bihar is still close to the bottom, but in absolute terms, it has progressed a great deal (from an abysmally low base) between 2005-06 and 2013-14. For instance, the proportion of births preceded by an ante-natal check-up in Bihar shot up from 34 percent in 2005-06 to 85 per cent in 2013-14, the largest improvement among all major states by a long margin. Similarly, the proportion of children fully immunised jumped from 33 percent to 60 percent. For a state that was thought incapable of running basic health services until very recently, this is a real breakthrough.

We explored variants of this index e.g. using stunting instead of low weight as the nutrition indicator, or looking at breastfeeding instead of ante-natal care. While some of these variants lead to a somewhat different ranking, the basic patterns are fairly robust: Kerala, Tamil Nadu and Himachal

The four component indicators are: proportion of children fully immunised; female literacy in the age group of 10-14 years; proportion of births preceded by an ante-natal check-up; and proportion of children who are not underweight.

¹This article was originally published on NDTV on November 18, 2015.

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Table 1: Child Development Index, 2005-06 and 2013-14*

2005-06		2013-14	
Kerala	0.955	Kerala	0.958
Tamil Nadu	0.921	Himachal Pradesh	0.866
Himachal Pradesh	0.810	Tamil Nadu	0.863
Punjab	0.800	Punjab	0.789
Maharashtra	0.749	Maharashtra	0.769
Haryana	0.706	Andhra Pradesh	0.762
Jammu and Kashmir	0.694	Karnataka	0.759
West Bengal	0.693	West Bengal	0.722
Karnataka	0.670	Uttarakhand	0.646
Andhra Pradesh	0.669	Haryana	0.627
Uttarakhand	0.635	Chhattisgarh	0.616
Odisha	0.577	Assam	0.553
Chhattisgarh	0.573	INDIA	0.530
Gujarat	0.561	Odisha	0.525
INDIA	0.502	Jammu and Kashmir	0.507
Assam	0.454	Gujarat	0.484
Rajasthan	0.424	Rajasthan	0.394
Madhya Pradesh	0.386	Jharkhand	0.354
Uttar Pradesh	0.333	Madhya Pradesh	0.333
Jharkhand	0.216	Bihar	0.296
Bihar	0.070	Uttar Pradesh	0.144

*In each year, states are ranked in decreasing order of Child Development Index

Pradesh are at the top, the former BIMARU states (minus Chhattisgarh and Uttarakhand) at the bottom, and Gujarat near the all-India average.

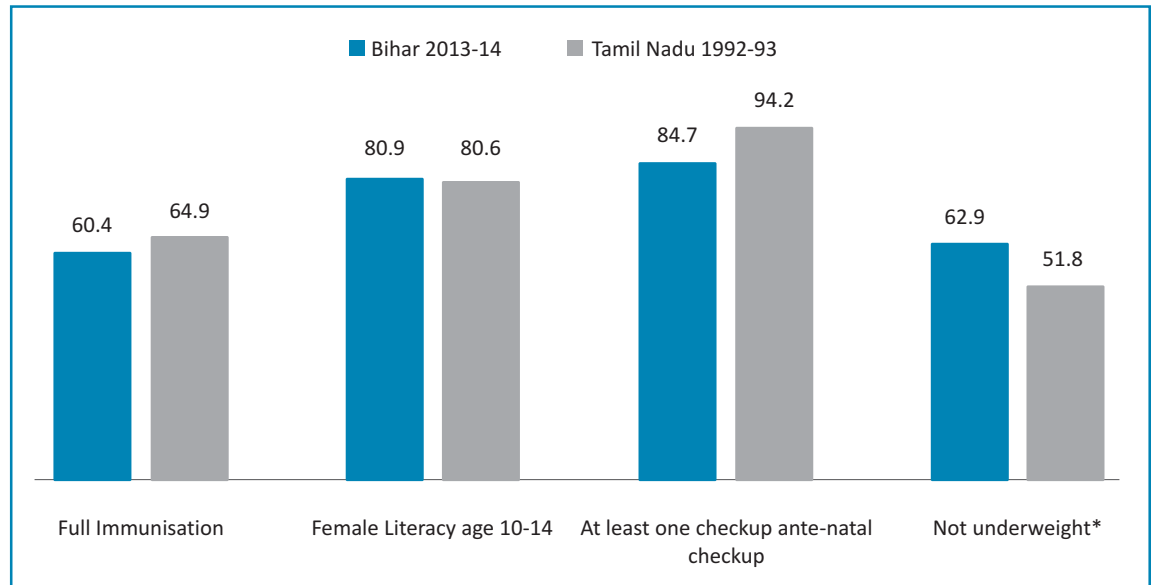
So what do Kerala, Tamil Nadu and Himachal Pradesh have in common? One part of the answer is that in each case, rapid progress followed a major expansion of elementary education. The timing differed, but mass schooling was the prime mover without exception. Second, the constructive role of the State also extended later on, to the provision of a wide range of essential services

and facilities, from healthcare and clean water to social security and basic infrastructure. Third, active social policies enabled disadvantaged groups to have a voice in the democratic process, and that, in turn, led to broad-based support for social development across political parties. Fourth, none of this prevented any of these states from doing well in terms of economic growth - on the contrary. Finally, despite regular warnings that this approach is not "sustainable", Kerala, Tamil Nadu and Himachal Pradesh keep expanding the reach and quality of public services. Tamil Nadu,

Active social policies enabled disadvantaged groups to have a voice in the democratic process, and that, in turn, led to broad-based support for social development across political parties.

for instance, has recently introduced pioneering schemes of maternity entitlements, community kitchens, and even nursing rooms at bus stands.

today is more or less on par with Tamil Nadu in the early 1990s (see the infographic below). This can be read to mean that Bihar is more than 20



* Not strictly comparable due to changes in standards and age groups

If the gap between Bihar and Tamil Nadu continues to narrow, as it did in the last 10 years, this also suggests that Bihar may take less than 20 years to look like Tamil Nadu today as far as child development is concerned.

Can other states take a leaf from these successful experiences? Kerala used to be thought of as some sort of anomaly among Indian states, but now Tamil Nadu and Himachal Pradesh are in the same league. And other states, including some that looked like basket cases not so long ago, are catching up too. Here is some food for thought: in terms of the four indicators considered here, Bihar

years behind Tamil Nadu in this field. But if the gap between Bihar and Tamil Nadu continues to narrow, as it did in the last 10 years, this also suggests that Bihar may take less than 20 years to look like Tamil Nadu today as far as child development is concerned. That is certainly a cheerful thought. And if Bihar can catch up, why not every state?

Annexure

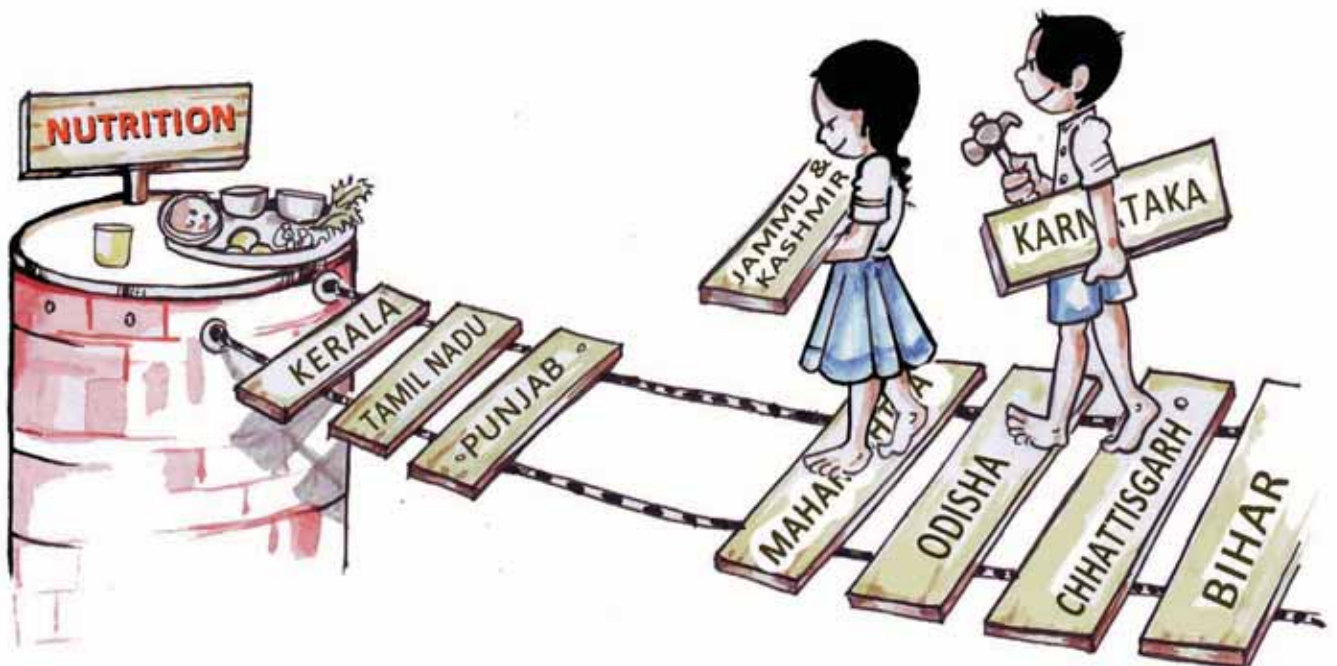
	2005-6 data from NFHS-3				2013-14 data from RSOC				Child development index	
	Proportion of children aged 12-23 months who are fully immunized (%)	Female literacy rate age 10-14 ^a (%)	Proportion of births preceded by health checkup (%)	Proportion of children below age 5 who are not under weight (%)	Proportion of children below age 12-23 months who are fully immunized (%)	Female literacy rate age 10-14 ^a (%)	Proportion of birth preceded by health checkup 9%	Proportion of children below age 5 who are not under weight (%)	2005-06	2013-14
Kerala	75	99	94	77	83	99	96	82	0.955	0.958
Himachal Pradesh	74	96	86	63	80	97	91	81	0.810	0.866
Tamil Nadu	81	93	99	70	76	98	98	77	0.921	0.863
Punjab	60	88	89	75	79	92	87	84	0.800	0.789
Maharashtra	59	93	91	63	77	95	92	75	0.749	0.769
Andhra Pradesh	46	81	94	67	74	93	94	78	0.669	0.762
Karnataka	55	84	89	62	79	95	94	71	0.670	0.759
WestBengal	64	80	92	61	75	93	98	70	0.693	0.722
Uttarakhand	60	88	69	62	69	94	79	79	0.635	0.646
Haryana	65	86	88	60	71	92	81	77	0.706	0.627
Chhattisgarh	49	82	89	53	67	93	96	66	0.573	0.616
Assam	31	73	71	64	55	88	93	78	0.454	0.553
INDIA	44	77	76	57	65	90	85	71	0.502	0.530
Odisha	52	74	87	59	62	91	92	66	0.577	0.525
Jammu&Kashmir	67	66	85	74	59	85	79	85	0.694	0.507
Gujarat	45	82	87	55	56	93	88	66	0.561	0.484
Rajasthan	27	70	79	60	61	85	82	69	0.424	0.394
Jharkhand	34	61	59	43	65	88	81	58	0.216	0.354
MadhyaPradesh	40	77	80	40	54	91	75	64	0.386	0.333
Bihar	33	51	34	44	60	81	85	63	0.070	0.296
UttarPradesh	23	68	66	58	47	86	62	66	0.333	0.144

^aCensus data for 2001 and 2011, respectively.

Sources: International Institute for Population Sciences (2007), *National Family Health Survey 2005-06 (NFHS-3): India* (Mumbai: IIPS); Rapid Survey On Children factsheets downloaded from the website of the Ministry of Women and Child Development; Census data, for literacy rates. States are ranked in decreasing order of the child development index in 2013-14 (last column). **Explanatory note:** The Child Development Index is an unweighted average of the normalised indicator values. For each indicator, the normalised value for a particular state is calculated as follows:

$$X_{ia} = (x_i - x_{\min}) / (x_{\max} - x_{\min})$$

where X_{ij} is the normalised indicator for state i , x_j is the corresponding pre-normalisation figure, and x_{\max} and x_{\min} are the maximum and minimum values of the same indicator across all states. The normalised indicator takes value 0 for the "bottom" state, 1 for the "top" state, and varies between 0 and 1 for other states. Essentially, it tells us where a particular state stands, between the "top" and "bottom" states (in terms of the concerned indicator), on a linear scale. For instance, a value of 0.5 means that the state is "halfway" between the top and bottom states.





Malnourished and Marginalised

N. C. Saxena*

Over 70 percent of *adivasis* reside in the central region of India, which though resource rich, is home to the poorest people who have not benefited from social and economic development to the same extent as people in other regions. In some cases they may have actually suffered due to the anti-tribal, market oriented forest policies (as they depleted the gatherable biomass), or resulted in displacement from their ancestral lands. The lack of accountability of government personnel in these remote and sometimes inaccessible regions has also resulted in poor delivery of all government programmes, contributing to the utter neglect of *adivasis*.

It is therefore not surprising that the proportion of *adivasis* – both adults and children – who suffer from malnutrition is far greater than the Indian average. Studies done by Subal Das, Kaushik Bose and Amaresh Dubey indicate that over half the *adivasi* adults have a BMI (Body Mass Index) below 18.5, which makes them chronically undernourished, as compared to 35 percent of all Indians (Das & Bose, 2012; Dubey, 2009). The figures are more dismal for women and children. For instance, 71 percent of tribal women in Jharkhand suffer from various degrees of malnutrition. They often face complications during pregnancy and are at risk of delivering low birth weight babies. Undernutrition of mothers is usually passed on to children. Some of the reasons for this undernutrition among tribal women are inadequate diet intake, ignorance, early marriage, poor access to health services and high morbidity due to unhygienic practices and surroundings.

A UNICEF (2014) report on nutrition and *adivasis*, points out that merely 2 percent *adivasi* children

between 6 to 11 months were fed complementary foods in the recommended quality and frequency. Of the 634 children surveyed in Akkalkuwa block of Nandurbar district (Shinde 2006), 378 were found to be malnourished and the number of girls among them was as high as 60 percent. In 2005, more than 98 children died in just three months and of these 71 children were found to be severely malnourished. The study also revealed that only 10 percent of malnourished children figure in government records. Under-reporting is facilitated by collusion between field staff and their supervisors, who are thus able to evade responsibility for improving nutritional outcomes.

There are cases to show that the tribes are denied their right to food. Children of the Birhor tribal community in Madhya Pradesh do not have access to the right to education and right to a mid-day meal at the school, as the teachers fear that the Birhor children will pollute the utensils (Asian Human Rights Commission 2009). The human rights groups working on the right to food report that tribal children cannot access facilities provided by the *anganwadi* centre (AWC) under the Integrated Child Development Services (ICDS), and the chances of survival of a tribal child are low, with 71.4 percent of tribal children being malnourished and 82.5 percent anaemic (Asian Legal Resource Centre).

More generally, the Supreme Court order issued in 2004 recommended that all new AWCs should be located in habitations with high Scheduled Caste and Scheduled Tribe populations. Yet, many villages in Khandwa district, where the *Korku* tribe live in large numbers, do not have AWCs in their areas. More than 60 percent tribal children in

Human Rights groups working on the right to food have reported some cases in which tribal children cannot access facilities provided by the *anganwadi* centre under ICDS, and the chances of survival of a tribal child are low, with many of the tribal children being malnourished and anaemic.

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Jabalpur district were underweight. Micronutrient deficiency disorders such as anaemia and vitamin-A deficiency were common among them. Unhygienic personal habits and adverse cultural practices relating to child rearing, breastfeeding and weaning were also prevalent among them (Rao et al., 2005).

The studies quoted above amply demonstrate that widespread poverty, illiteracy, absence of safe drinking water and sanitary conditions, poor maternal and child health services, and ineffective coverage of national health and nutritional programmes are major contributing factors for the dismal malnutrition indicators of tribal communities in Central India. They also suffer from many communicable, non-communicable and silent killer genetic diseases (Balgir n.d.). Their geographical isolation and remoteness further affects the developmental process as qualified health workers refuse to work in these areas.

From the policy viewpoint, it is important to understand that tribal communities are vulnerable not only because they are poor, without any assets and illiterate compared to the general population; often their distinct vulnerability arises from their inability to negotiate and cope with the consequences of their forced integration with the mainstream economy, society, cultural and political system, from which they were historically protected as a result of their relative isolation.

Post-independence, the requirements of planned development brought with them the spectre of dams, mines, industries and roads on tribal lands. With this came the concomitant processes of displacement, both literal and metaphorical – as tribal institutions and practices were forced into an uneasy existence with, or gave way to, market or formal state institutions (most significantly, in the legal sphere), tribal people found themselves at a profound disadvantage with respect to the influx of better equipped outsiders into their areas. The repercussions for the already fragile socio-economic livelihood base of the *adivasis* were devastating – ranging from loss of

livelihoods, land alienation on a vast scale, to hereditary bondage.

A recent UNICEF (2014) study confirmed that land alienation and displacement without adequate rehabilitation have been important causes for tribal impoverishment.

Many issues that need urgent attention are under the jurisdiction of Ministries of Environment and Forests, Rural Development, Panchayati Raj, and others, where they often do not get much attention. It is unfortunate that the Ministry of Tribal Affairs (MoTA) does not give sufficient attention to the important problems of the tribals on the plea that many of these subjects such as land alienation, displacement and PESA are outside their jurisdiction. Even so the ministry should play a more activist role in addressing these issues by pursuing adivasi concerns with the relevant ministries.

Apart from poor utilisation of funds, tribals have also suffered because of the poor quality of governance. Programme delivery has deteriorated everywhere in India, but more so in tribal areas, where government servants are reluctant to work, and are mostly absent from their official duties. Massive vacancies exist in tribal regions in the face of acute educated unemployment in the country. A UNICEF study on Jharkhand revealed that one of the main constraints faced by the National Rural Health Mission (NRHM) was a lack of skilled manpower. In the two districts visited, Sahibganj had less than 50 percent positions in place, while in East Singhbhum, with better infrastructure, it was around 54 percent. Other major reasons identified by this study for low utilisation appeared more due to a lack of systemic controls, such as a lack of monitoring, and a lack of understanding among the staff regarding the implementation of rules.

The law pertaining to involuntary displacement has been discussed since 1998, and although a new law has been enacted, it is yet to be implemented, though it is well established that tribals suffer most when new projects lead to involuntary displacement. MoTA should be

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empowered to pressure the states to change their laws in conformity with PESA and FRA. A white paper should be prepared by the ministry relating to governance in forest dependent villages, including huge vacancies and absenteeism of staff. The ministry must develop a meaningful partnership with advocacy organisations to produce credible reports in order to put pressure on other ministries that ignore tribal interests.

The outcome of policies and programmes pertaining to the issues which are critical for tribal livelihoods, are not frequently assessed by the concerned ministries. There is perhaps a need for capacity enhancement within MoTA, and its counterparts in the states, which should periodically evaluate the results of government interventions in tribal regions. Such reports should be used for advocacy with other ministries, who have been vested with the responsibility to ensure that basic justice and development reaches the adivasi. These studies should also assess whether basic services in education, health, or nutrition are reaching the tribal hamlets.

Therefore, a systemic change is needed in the way state tribal departments function; their approach must change from simply spending budgets through narrow departmental schemes to knowledge based advocacy with other concerned ministries/departments. MoTA should highlight the failure of governance that deprives the poor *adivasis* from accessing elementary services, and put pressure on the concerned ministries and state governments to ensure better policies and delivery.

In addition to spending financial budgets, departments should also be conscious of the impact that policies (or the lack of it) have on the marginalised peoples. Policies and budgetary provisions, despite the rhetoric, have not been integrated so far. Changes in policy or laws are not seen as an integral part of the development process because these have no direct financial implications. One lesser known reason for this isolation is that development and planning in India are associated with spending money. That

planning *means* expenditure, and this will lead to development is the mindset behind such beliefs. The Indian planner unfortunately has still to understand the difference between planning and budgeting. This is where a systemic change is needed in India. In addition to spending budgets, we need to give equal importance to non-monetary issues such as institutions, laws and policies.

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MoTA should highlight the failure of governance that deprives the poor *adivasis* from accessing elementary services, and put pressure on the concerned ministries and state governments to ensure better policies and delivery.

Reducing Child Malnutrition - Four D(o)s for governments

V. Ramani*

Child malnutrition constitutes one of India's biggest public health challenges. A look at international child nutrition rankings can be very sobering: India (with 44 percent of under-6 children underweight and 48 percent of under-6 children stunted) is in the same league as countries with far more pressing social, economic and political problems. The recently released Rapid Survey of Children (RSOC) carried out by the Ministry of Women and Child Development (MWCD), Government of India and UNICEF highlights the gap between better-performing and laggard states within India. The bulk of the poor performance on under-6 child nutrition (underweight and stunting) indicators is accounted for by just seven states: Bihar, Chhattisgarh, Gujarat, Jharkhand, Madhya Pradesh, Meghalaya and Uttar Pradesh. This is in spite of India having one of the oldest programmes (since 1975) – the Integrated Child Development Services (ICDS) – dedicated to improving maternal and child health and nutrition. The problem clearly does not lie in the intent; it lies in the inability of governments at the national and state levels to adopt a systems approach to tackling this issue.

This article argues that there are four must-dos for governments in India (all coincidentally starting with the letter D) which will hopefully contribute to significant reductions in child malnutrition. These are based on my personal experience with Maharashtra's Rajmata Jijau Mother-Child Health & Nutrition Mission ("the Maharashtra Mission") which I headed from 2005 to 2010 and from the heartening statistics which show that stunting and underweight in under-2 children in Maharashtra fell by 41

percent and 24 percent respectively between 2006 and 2012, attributable, at least in part, to a more focused approach of the Government of Maharashtra towards tackling child malnutrition.

Data and Disaggregation

Government systems are noticeably reluctant to use data, especially disaggregated data, to inform public policy direction and the ICDS is no exception. The MWCD receives monthly progress reports online from all state governments detailing *inter alia* the under-6 child underweight status (as per the WHO classification) on an ICDS project wise basis at the sub-district level. Unfortunately, this data often arrives after a considerable time-lag (when it does arrive at all) and there is no insistence on timely, accurate reporting. In any case, no use has been, or is, made of this rich source of data by the government to focus attention on specific geographical areas where the incidence of child malnutrition is severe. In all development indicators, some regions in the country will lag well behind others. In child nutrition outcome indicators too, it is observed that some regions in specific districts of the country, particularly those inhabited by tribal populations, minority communities and other socially disadvantaged groups show markedly poorer performance. There is also the issue of child coverage under the ICDS: despite the orders of the Supreme Court over ten years ago, a significant proportion of under-6 children and mothers still do not receive the full range of health and nutrition services. The decennial Census of India gives figures of children in the 0-6 age group right down to the village and urban habitation level. Using these figures as the denominator for action, as the Maharashtra

The problem clearly does not lie in the intent; it lies in the inability of governments at the national and state levels to adopt a systems approach to tackling this issue.

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Mission did from 2005 onwards, enables inclusive coverage of all 0-6 children. Ensuring that each and every one of these children are regularly weighed gives comprehensive monthly data on the nutrition status of children in each habitation and enables taking corrective nutrition and health measures in a timely manner. The availability of disaggregated data, including nutrition outcome indicators, draws the attention of policymakers to the worst affected areas and enables concentration of financial and human resources in those areas. More recently, Geographic Information System (GIS) tools like Jatak (see www.issnip.jatak.org) have been developed to track individual child nutrition status and take steps to improve the health and nutrition status of children. Using Interactive Voice Response Systems (IVRS), data on key child nutrition indicators are received from frontline nutrition workers as voice files and converted into data at a central facility. This data has a two-way flow: it goes down for initiation of timely action by field workers and also enables supervision of their activities by middle-level managers. Aggregated at sub-district and district levels, it also aids timely policy interventions.

Design and Delivery

As mentioned in the preceding section, the use of the latest census data on 0-6 child population allows firming up of the numbers of children to be covered by each anganwadi or a cluster of anganwadis in a revenue village or urban ward. The starting point has to be the provision of public health and nutrition services to the child, based on an assessment of her nutrition status. Growth monitoring is one area where significant systemic weaknesses can be seen in nearly all states. Maintaining monthly weight records of under-6 children and monitoring their growth progress enables the anganwadi worker to refer children at risk to medical facilities for early treatment of childhood illnesses or congenital diseases. The focus in the ICDS system thus far has been only on under-6 child underweight status. However, extensive research has shown that stunting

(height-related) and wasting (weight to height related) indicators are also crucial to the healthy development of the child. Till such time as government policy sanctions length/height measurement as an indicator, the appropriate strategy, as adopted by the Maharashtra Mission, would be to record the heights of all under-6 children listed as being severely (more than three standard deviations below normal) underweight and also of under-6 children, with faltering growth patterns and determine children, especially in the under-2 age category, requiring urgent health and nutrition interventions to check severe acute malnutrition (SAM), which significantly enhances infant and child mortality. This requires close coordination between the ICDS and health systems at village and health centre levels. The use of a system like Jatak would give an upto date list of severely underweight children. The anganwadi worker would provide this list to the nearest health worker/ medical facility to record the heights of these children and determine those children failing in the SAM category. Such children would be admitted to medical facilities, with continued post-treatment monitoring by field workers at home subsequently. Children in the moderate acute malnutrition category can be attended to at the anganwadis or at home by anganwadi workers.

The focus on reducing moderate and severe underweight and wasting rates in under-6 children requires revamping of delivery systems in the ICDS sector through building up motivation, skills and knowledge in anganwadi workers, supervisors and Child Development Project Officers. The negative mentality of blaming field workers for high rates of child malnutrition has to give way to an appreciation of the severe constraints they operate under, moving, as the Maharashtra Mission termed it, from “a fault-finding to a fact – finding approach”. Anganwadi workers are paid a pittance (often after a delay of many months) for the devoted services they render to the community and are handicapped by a severe shortage of infrastructure and equipment essential to the effective performance of their duties, as well as

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A large part of the Maharashtra Mission's efforts went into establishing an easy rapport with ICDS staff, encouraging innovative approaches at their level, appreciating their efforts and resolving their operational and organisational problems with higher levels in the ICDS Commissioner's office.

voluminous reporting requirements and absence of on-the-job training. The awareness that they are raising the next generation needs to be imprinted in the minds of all ICDS functionaries. It is not that monetary incentives alone motivate people: non-monetary recognition, through an appreciation of work by those higher in the hierarchy and giving publicity to achievers, can be a major inspiration to workers. At the same time, senior officer levels in the ICDS need to take on team leadership – they should be available 24*7 for solving implementation problems and making available resources to frontline workers to enable them to give their best. A large part of the Maharashtra Mission's efforts went into establishing an easy rapport with ICDS staff, encouraging innovative approaches at their level, appreciating their efforts and resolving their operational and organisational problems with higher levels in the ICDS Commissioner's office.

It's not rocket science!

The above approach, in my view, combines responsive governance with the intelligent use of

data in a systematic, disciplined manner, adopting a standard operating protocol, which can yield rich dividends where improving child nutrition outcomes are concerned. Of course, there are very relevant issues like the nutrition and health status of adolescent girls, effective antenatal care for expecting mothers, behavioural changes in communities and families on issues of health, nutrition, education, sanitation and gender equality, not to mention the all-important aspect of tackling poverty and low incomes. Trying to tackle all these issues is beyond the capacity of any one agency or department, let alone the government; governments, corporates, nonprofits and civil society have to come together to evolve solutions to these problems. These will take time; till then, our emphasis has to be on the child, as poignantly penned by the poet Gabriela Mistral:

"Many of the things we need can wait. The child cannot. Right now is the time his bones are being formed, his blood is being made and his senses are being developed. To him we cannot answer "Tomorrow", his name is today."



Governance Challenges in Reducing Malnutrition

Vandana Krishna*

Introduction

ICDS (Integrated Child Development Services) which runs the government anganwadis is the largest government programme to prevent child malnutrition. However, this reliance on ICDS is misplaced; it is only one of several critical interventions which are necessary to address this multi-dimensional problem. While the implementation of ICDS continues to suffer from a number of issues which merit urgent attention, the need for taking a more holistic, multi-pronged approach to tackling malnutrition also needs to be emphasised.

Inaccurate Reporting of Malnutrition by Departments

The true extent of malnutrition deaths or incidence of severe malnutrition has always been under-reported by the concerned departments in India. For example, many post-delivery infant deaths are reported as still-births so that they are not counted under IMR; many other deaths are not reported. Where the actual extent of under-weight among children could be 20 percent, ICDS figures might report only 10 percent under-weight. There is no easy solution to this problem; the malaise of under-reporting is too deep rooted.

The problem is that once the trend of under-reporting is established, it is practically impossible to suddenly start reporting higher figures without incriminating the earlier reports. The incentives to report correctly would have to be really strong for them to work. Monetary incentives would not be acceptable. Non-monetary rewards might work, such as recognition and felicitation, inter-state study tours, etc. Another solution would be to use IT to prepare a child-wise data base of monthly weight

gain which can be verified by anyone; that would eliminate the process of manual compilation of figures at each level: from anganwadi to block to project to district to state level. At each stage there is some under-reporting, which adds up to substantial cumulative under-reporting. Ideally, the government should totally eliminate manual compilation of monthly reports which is a big burden on ICDS workers.

To assess the true extent of malnutrition it would be best to carry out periodic third-party sample surveys, but surveys are expensive and time consuming. Either departments will have to make budget provisions for this, which is not done currently, or surveys would have to be funded (as they currently are) through non-government agencies. For example, recently an independent survey was commissioned by the Maharashtra Nutrition Mission in three tribal blocks in Palghar district. The data reveals a staggeringly high incidence of malnutrition howsoever one measures it: whether stunting (low height-for-age), wasting (low weight-for-height) or under-weight (low weight-for-age). The figures are far higher than the official figures reported by ICDS.

Huge Leakages of Funds

One of the biggest challenges under ICDS is huge leakages. Suppose the number of children registered in an anganwadi is 60, but on average only 20 or 30 children attend it daily. Food bills might be prepared and passed for 50 children, while the actual quantity of food supplied would be for only 20 children. The rest of the payment might be shared at all levels and pocketed. This becomes possible because the local mothers committee/ community/ *gram panchayat*/ ward/ municipal council do not know what bills are getting passed at the state or district level

At each stage there is some under reporting, which adds up to substantial cumulative under-reporting. Ideally, the government should totally eliminate manual compilation of monthly reports which is a big burden on ICDS workers

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office. There is complete lack of transparency in this regard. Accounting, budgeting, clearing bills, auditing – all these functions are centralised.

A solution would be to delegate powers to the *gram panchayats* or local bodies to clear all bills and to make payments to the food suppliers based on the observed daily attendance and food supplies. This would involve considerable decentralisation and democratisation of decision making. Budgets would have to be directly made available to *gram panchayats*. This is not a panacea: *gram panchayats* too are not free from corruption and local politics and there are issues related to their capacity, but these issues can be resolved over time with capacity building.

Coordination Between Departments

Since nutrition is a multi-sectoral issue, coordination between departments plays a key role in improving nutritional attainments. Till there is role clarity, the two main departments (Health and WCD) will keep on passing the buck. Maharashtra set up a Nutrition Mission to try to bring about greater coordination between departments but the results are mixed. For example, there are still no guidelines issued by either department on how to treat acute malnutrition in terms of nutrition and medical protocol. There is no unanimity as to who should be responsible for screening children for SAM (severe acute malnutrition) as this involves measuring MUAC (mid- upper arm circumference) and taking weight-to-height measurements. Which department should buy basic equipment such as stadiometers or infantometers to measure height accurately? Which department should make budget provisions for nutrient-rich food for treating SAM children?

There needs to be better coordination between Women and Child Development Department, Health Department, Agriculture Department, Tribal Department, Rural and Urban Development Departments, Food and Civil Supplies Department, and so on. All their policies need to be in consonance with each other. The difficulty

is that there is no over-arching body or department which has the power to coordinate their efforts and policies. Perhaps the NITI Aayog or PMO can play that role at the centre, while the CM's office or the Planning Department will have to play that role at the state level. If a Nutrition Mission is to play that role, it would have to be empowered to take decisions which might be contrary to an individual department's stand.

Multi-pronged Approach for Addressing Tribal Undernutrition

The causes of tribal malnutrition are multiple, complex and inter-generational: these include early and frequent pregnancies, low status of girls and unequal allocation of nutritional resources within the household, poor BMI and Hb of mothers starting from adolescence to motherhood, superstitions and myths about care during pregnancy, breast-feeding, food and child care practices. And of course there are factors related to the poor agro-economy: low agricultural and land productivity, a single crop in a year and subsequent migration which perpetuates malnutrition. There is no fast track solution but we should adopt a multi-pronged approach which covers community action, education and awareness, as well as improving agricultural practices. It is not an impossible task to reduce malnutrition in tribal areas but it requires strong political will and coordinated action across sectors.

Inadequate Resources and Limited Flexibility

There is a common perception among many planners that the government is already doing enough in terms of providing subsidised food-grains or free meals in *anganwadis* and schools. However, the ICDS budget is ineffective because it is thinly spread. Its focus is on quantity rather than quality. The norms are rigid and decided in a top-down approach. The very design of the scheme is such that the focus is on the wrong age group (3-6 years rather than on 0-3 years). No local

A solution would be to delegate powers to the *gram panchayats* or local bodies to clear all bills and to make payments to the food suppliers based on the observed daily attendance and food supplies. This would involve considerable decentralization and democratization of decision making.

innovations are allowed. No pooling of resources for prioritised target groups is allowed such as for severely wasted or stunted children, or children who show growth faltering or decline. The *gram panchayat* or community is not involved and does not take ownership of the scheme. If this scale of funds was available in a flexible and decentralised manner, how much more could be achieved by it!

There are other areas where budgets are meagre; e.g. for purchase or replacement of equipment such as weighing scales, stadiometers or infantometers (which measure height or length), for running crèches for under-3 children who do not attend *anganwadis*, for providing nutrient dense or therapeutic food (whether local or manufactured) to severely wasted or SAM children, for promoting kitchen gardens and vegetable cultivation. Training and IEC (information, education and communication) budgets have been slashed; whenever there are budget cuts these are the first to be affected.

Besides, there are critical gaps in government programming. For example there are no large scale programmes being implemented for prevention of early marriages and early pregnancies, or counselling of newly married couples to promote spacing.

How can malnutrition be reduced substantially unless there is a massive educational and awareness budget for the community and for mothers? Just like the '*Swatchh Bharat Abhiyan*', there should be a '*Kuposhan Mukti Abhiyan*'. There should be budgets for nutrition demonstrations, for mobile based applications to raise awareness, for tablets or projectors to show educational films. There should be a cadre of lactation and nutrition counsellors who teach young mothers the basics of proper breast-feeding and weaning practices. Mothers' clubs or mother support groups should be set up in all villages.

Conclusion

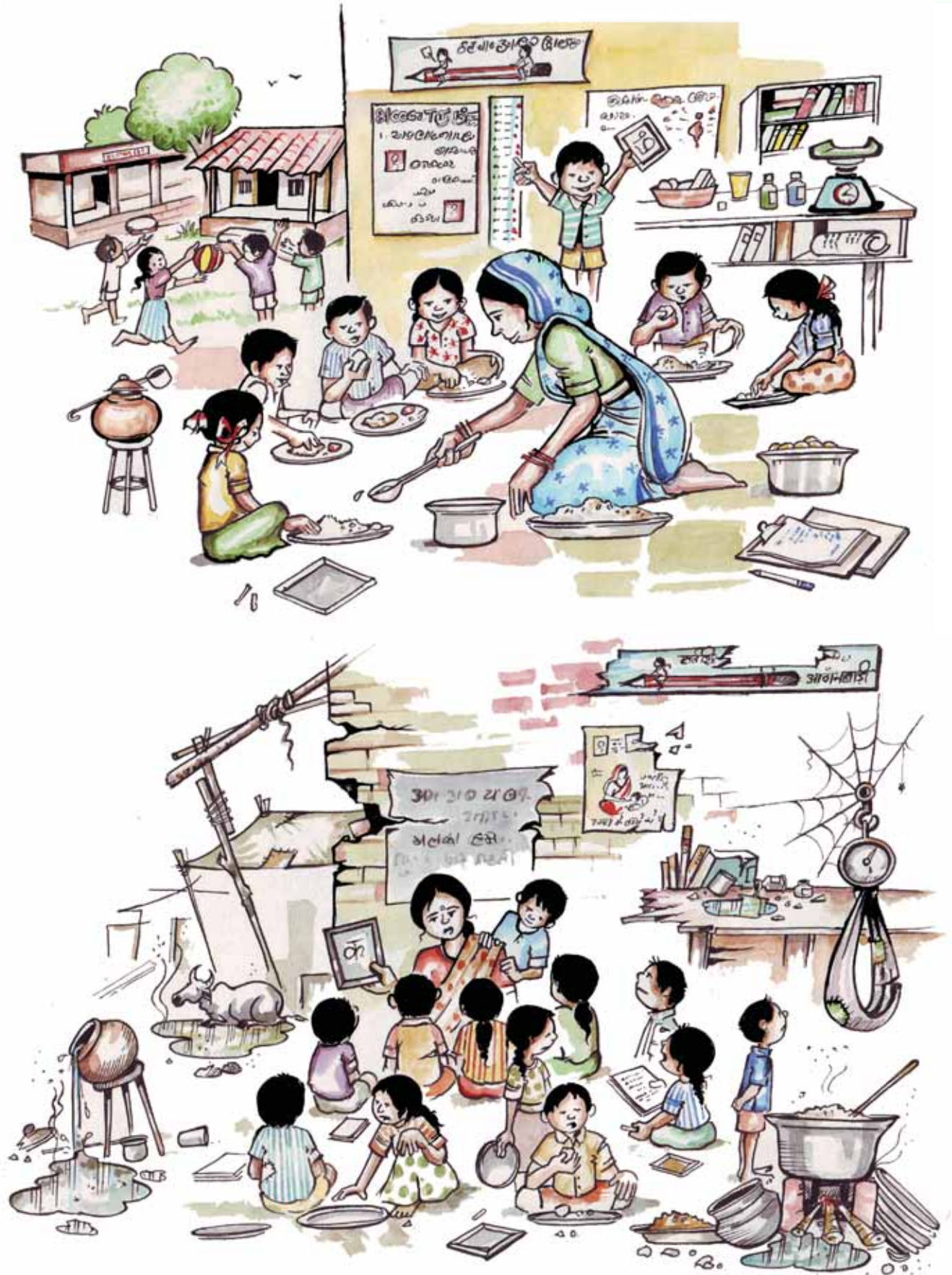
There is no single prescription to eliminate malnutrition; each of the measures listed

previously have an incremental impact. But if one had to choose one step, it would be raising community awareness about child caring and child feeding practices, to address myths, misconceptions and malpractices about feeding. To give just one simple example, elders often give the wrong advice of restricting diet and liquids during diarrheal episodes of children. As a result, children slip into more and more severe malnutrition with each diarrheal episode.

The government must have a two-pronged strategy to eliminate hunger and malnutrition: a long term strategy to reduce stunting which is caused due to chronic undernutrition, and a short term strategy to eliminate wasting or thinness. The long term strategy would include training the community in care during adolescence and pregnancy, proper breast-feeding, complementary feeding practices. We would also have to address food insecurity due to migration or poor cropping patterns. The short term strategy would include drives or campaigns for screening, identification and treatment of wasted children. For this to happen, clear guidelines must be issued by either the Health Ministry or the Women and Child Development Ministry on CMAM, i.e. community based management of acute malnutrition. These guidelines must cover basic issues such as how to screen children for SAM or MAM, what treatment and nutrition should they be given, and so on. The Health Ministry is responsible for at least issuing such medical guidelines, even if it does not accept the responsibility of budgeting for such treatment.

There has been considerable improvement in the awareness about nutrition issues over the last decade within government circles, though this awareness is still limited. We now know that malnutrition, particularly stunting, has impacted IQ, cognitive development and life-long productivity of half of Indians. But many policy makers still focus mostly on infrastructure as a measure of development. Planners must recognise that nation building and development is as much about human development as about infrastructure development.

No pooling of resources for prioritised target groups is allowed such as for severely wasted or stunted children, or children who show growth faltering or decline. The gram panchayat or community is not involved and does not take ownership of the scheme.





Addressing Malnutrition in India: National Food Security Act and Beyond

Dipa Sinha and Shikha Nehra*

The recently released data from the Rapid Survey on Children (RSOC), conducted in 2013, shows that in the last one decade there is an improvement in the situation of malnutrition in the country. The prevalence of stunting, an indicator of chronic undernutrition, among children under five years of age has come down from 48 percent to 38.7 percent at the all India level between the time span of National Family Health Survey (NFHS) 2005-06 and RSOC 2013, respectively (IIPS 2007; MoWCD 2015). While this is indeed progress, at an absolute level stunting in India continues to be very high and amongst the worst in the world.

Addressing this complex problem of undernutrition requires multidimensional efforts towards which National Food Security Act (NFSA) 2013 is one step in the right direction. The preamble of the Act aims to “provide for food and nutritional security in human life cycle approach” (Gol 2013). However, the provisions of subsidised foodgrains and meals laid down in the Act for households, pregnant and lactating women and children reflect a limited understanding of the complexity of malnutrition. While improving direct food consumption through the existing provisions is critical, prevention of infections by improving access to health care, clean drinking water and sanitation is equally important to ensure that children do not fall into the vicious cycle of malnutrition and illness. Disappointingly, the NFSA falls short of provisioning for the latter set of entitlements for children (Sinha, 2012).

Impact of Existing NFSA Entitlements on Nutrition

In its present form, the NFSA provides 5 kgs of highly subsidised foodgrains per month per person for 75 percent of the rural population and 50 percent

of the urban population through the Public Distribution System (PDS). This expanded coverage makes it possible to have a near-universal PDS (with only the rich excluded) in some of the poorest states where, under the Act, more than 80 percent of the population will be covered (e.g. Bihar, Jharkhand, Odisha). Initial studies from Bihar and Madhya Pradesh, where the Act has been rolled out, do indicate an improvement in PDS with a large number of households now being included (Drèze, Khera, and Pudusserly 2015).

Earlier studies have found that access to the PDS has an effect of improving not just calorie intake but also dietary diversity through its income effect (Himanshu and Sen 2013; Kaul 2014; Kishore and Chakrabarti 2015). Further, evidence shows that the PDS has been improving over the last few years with declining leakages and higher average consumption of foodgrains from the PDS (Drèze and Khera, 2015). While these improvements have mainly been seen in some states, with the NFSA expanding coverage and mandating reforms in the PDS across the country, it can be safely expected that by the time the next NSS survey takes place, there will be further increase in average consumption from the PDS and lower leakages. This could therefore have a positive impact on malnutrition levels as well.

However, the Act could have been even more effective had it made provisions for pulses and edible oils which are rich sources of protein and fat, especially because there is a decline in consumption of pulses between 1993-94 and 2011-12 as reported by National Sample Survey (NSSO 2014). The Act’s understanding of nutritional security remains limited to cereals, i.e. rice, wheat and millets. But in practice, even millets, are not being promoted through TPDS, although they have

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a high nutritive value. The availability of only rice and wheat at reduced prices has adversely affected the consumption pattern of coarse grains as their price is much higher than the subsidised prices of rice and wheat (Nagaraj et al. 2013). At the same time due to shortages in pulse and oil production in India, the prices of these commodities are highly volatile and have recently been seeing increasing inflation, making it more difficult for the poor to access. Hence, not only are the factors of availability and absorption not taken into account, access too, is defined narrowly in the NFSA.

Maternity Entitlements and Child Nutrition

In India, any understanding of nutrition also has to bear in mind that intra-household inequalities in food consumption, access to resources, decision making and care burdens have an underlying effect on the nutrition status of children, particularly girls and mothers. The NFSA includes some entitlements which are likely to have an even more direct impact on child and maternal malnutrition. The Act provides for one free meal for all pregnant/lactating women and children under six years of age through *anganwadis*, children in the age group of six to fourteen years through government schools. While these were already universal programmes mandated by the Supreme Court in the 'right to food' case, now that they are included in the legislation makes it even more binding on the states to ensure that they are delivered. There are of course a number of issues related to the quality of the meal and enhancing the nutritive content by including items such as eggs, fruits, milk, etc. which can go a long way in addressing malnutrition. These quality-related issues have not been addressed by the Act.

The NFSA provides for a universal cash maternity entitlement of Rs. 6,000 for all pregnant and lactating women along with breastfeeding counselling to promote exclusive breastfeeding up

to six months of age. Exclusive breastfeeding up to six months is one of the essential interventions for prevention of malnutrition. Improved nutrition and rest, during and after pregnancy, through maternity entitlements also contribute to pregnancy weight-gain (can reduce incidence of low birth weight) as well as create an enabling environment for women to stay away from work in order to be able to exclusively breastfeed. Despite these numerous benefits, the cash maternity benefit has not been implemented in the past two years. The Government of India has not even announced the scheme through which the cash benefit will be delivered. Meanwhile, the supplementary nutrition in the form of take-home rations provided through ICDS is also quite irregular. The RSoC 2013 reported that only 34.8 percent and 33.8 percent pregnant and lactating women, respectively, received supplementary nutrition in the past 21 days.

Adolescent Girls

One group which is important for nutrition interventions but has been left out of the NFSA is adolescent girls. The evidence presented in the Lancet series on Maternal and Child Health Nutrition 2013 highlights the importance of interventions at the preconception stage and targeted at adolescent girls to break the inter-generational cycle of malnutrition (Black et al. 2013). The situation of under-nutrition among adolescent girls in the country is abysmal and requires immediate attention. The RSoC 2013 found that in India more than 44 percent adolescent girls are underweight, i.e. have a body mass index of less than 18.5. Further, the Annual Health Survey's Clinical, Anthropometric and Biochemical (CAB) data 2013-14 for nine states reports high percentages of anaemia affected population among all age groups, including adolescents (10-17 years). The percentage of adolescent girls with anaemia in these states ranged between 76 and 92.9 percent (GoI 2014).¹

¹This range was arrived at by comparing the Annual Health Survey's Clinical, Anthropometric and Biochemical (CAB) 2013-14 reports for the states of Assam, Bihar, Chhattisgarh, Jharkhand, Madhya Pradesh, Odisha, Rajasthan, Uttar Pradesh and Uttarakhand.

In India, any understanding of nutrition also has to bear in mind that intra-household inequalities in food consumption, access to resources, decision making and care burdens have an underlying effect on the nutrition status of children, particularly girls and mothers.

Despite these worrisome figures the concerns of adolescent girls have escaped concrete policy attention. Even though Supreme Court orders² directed that all adolescent girls must be given supplementary nutrition, the *Kishori Shakti Yojana* of the Ministry of Women and Child Development remained limited to 2-3 adolescent girls per *Anganwadi*. In 2002-03, the National Programme for Adolescent Girls was launched in 51 districts, under which 6 kgs of free food grains per beneficiary per month was given to only underweight adolescent girls. In 2010, the central government launched the SABLA scheme, but this too is limited to 200 districts.

The nexus between gender discrimination and nutrition cannot be ignored. Malnourished girls become malnourished adolescents who marry early and have children during adolescence, who in turn become malnourished, and so the cycle continues (Sethuraman and Duvvury 2014). The lack of women's agency in making reproductive decisions and effect of early pregnancy on health and nutrition are all interconnected. The inadequate attention that is being paid to the nutrition requirements of adolescent girls is hampering the overall impact of the existing food provisions in addressing malnutrition. The NFSA has also ignored this group, and has shifted their entitlements to the Schedule III of the Act under those that are to be "progressively realised" (Gol 2013, p. 17).

Conclusion

Despite various interventions, India continues to have high malnutrition levels, emphasising the need for concerted efforts at various levels. The existing entitlements in the NFSA can contribute to a limited extent by increasing foodgrain consumption among the households. However, proper implementation of the maternal and child entitlements in the NFSA in an urgent manner is required to realise the Act's potential towards making a significant dent on malnutrition. At the

same time, there is a need to acknowledge the complex and multidimensional nature of malnutrition, and implement the other essential interventions that have not been included in the NFSA. It is hoped that the much anticipated National Nutrition Mission of the Government of India will take a more comprehensive view and fill these loopholes so that we see greater improvement in nutrition levels by the time we have the next round of data on this.

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'Kamao aur Khao'

Nikhil Dey and Inayat Sabhikhi*

Drought Relief to Employment Guarantee

In early 2000, in the midst of a severe drought in Rajasthan, the Akal Sangharsh Samiti and associated groups spent weeks on *dharna* demanding an Employment Guarantee Act in the State. Ashok Gehlot, the incumbent Chief Minister, scoffed at the unrealistic nature of the demand, stating that there was a limit to what the State could be asked to do in terms of providing work and employment for people. Four years later, the Chief Minister had changed his mind. He publicly said, that until there was an employment guarantee act, starvation deaths would continue. He asserted that no other programme or legislation could actually eliminate this terrible situation. He, in fact, supported the demand for such legislation, to enhance the capacity of the administration, and empower people in their struggle against hunger and starvation.

What brought about this change? In the interim four years, Ashok Gehlot had looked at the policy framework of Maharashtra's twenty five year old Employment Guarantee Act more carefully. He had been through several rounds of discussions to explore the possibility of such a legislation in Rajasthan. He understood that Maharashtra had made it possible to fund such a programme through dedicated taxes. He set up a committee to work on the issue, but given the state's precarious financial condition, he called upon the Central Government to pass an Employment Guarantee Act. He suggested that states could supplement the quantum of employment that the central law might guarantee.

Dramatic as the effect of the Mahatma Gandhi National Rural Employment Guarantee Act

(MGNREGA) has been in some areas, expectations have only been partially fulfilled. Even after ten years of having the MGNREGA, starvation and hunger related deaths still take place. While the incidence of starvation has decreased in areas where the MGNREGA is effectively accessed, the implementation of the Act has been far too patchy to have had a seminal effect across all vulnerable people of the country. It is also true that in all likelihood, in places where starvation occurs, the MGNREGA and other programmes like the Public Distribution System and Integrated Child Development Scheme will either be extremely poorly implemented, or not implemented at all.

Between Then and Now

Effective implementation clearly remains a big challenge for any programme designed to benefit the poor and marginalised. Nevertheless, implicit and explicit impacts have been well documented, where the MGNREGA has proved to be a lifeline for the vulnerable.

The MGNREGA does not turn abject poverty into affluence, but it has proved to be particularly useful in times of distress. It provides large numbers of people access to additional income, at a time when they are desperate to survive. People suffering in a drought or natural calamity for instance, need money for essentials like water, fodder, healthcare and food. There is evidence to show that democratic countries have managed to avoid famines in recent times. However, the debilitating impact of endemic poverty, drought, and deprivation in different parts of the country is also an emergency. To this extent, the MGNREGA provides some support to people. The money that people earn on public works is apportioned according to most vital needs—and food is certainly

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one of them. For the slightly better off who do turn up for work in times of drought, MGNREGA wages allows them to buy that little bit of *dal* or oil to supplement basic food grain they might have. The impact on nutrition is less obvious, because it is really only helping fight distress in direct ways. The indirect impact that might follow is less noticeable.

The availability of well managed and publicly available data related to the programme has enabled its vigorous analysis by academics. The Ministry of Rural Development in 2012 published an anthology of independent research by academics, scholars, public policy experts, activists and practitioners of 'MGNREGA Sameeksha' (Ministry of Rural Development, 2012). Earlier this year, the United Nations Development Programme published the second edition to the anthology 'MGNREGA Sameeksha II' (Ministry of Rural Development, 2015), collecting information from studies undertaken between 2012 and 2014. Reading these studies together about the evidence of employment guarantee on many aspects of peoples' lives underscores its importance as an integral part of the development framework of the country.

In this context, this article will mainly focus on three areas where changes witnessed on the ground have been supported by academic evidence; its relevance to marginalised communities, its impact on distress migration and the inclusion of women in the workforce. While understanding each of these, we also attempt to examine if something substantial can be said about the impact on food security and nutrition.

Who is MGNREGA for?

In the absence of a coherent social security umbrella (ideally consisting of a combination of government support mechanisms), employment guarantee acts as a de facto social security floor. By being self-selecting, persons most in need of work in rural areas seek work in the MGNREGA. They receive in turn wages for the days worked, ideally within fifteen days.¹ Close to 40 percent of the workers on the programme belong to either Scheduled Caste (SC) or Scheduled Tribe (ST).² Over the past four years, women have consistently constituted about half the MGNREGA workforce.

The employment guarantee has had some impact on mitigating acute destitution; the kind which makes people go hungry, resort to begging for food from neighbours, money from money lenders at viscosly high interest rates and even selling themselves to become bonded labourers. Recent evidence analysing household level consumption and expenditure supports this. The India Human Development Survey³ finds that dependence on money lenders decreased from 48 percent to 27 percent for households participating in MGNREGA and from 38 percent to 21 percent in non-participating households, thus indicating that not only has the dependence dropped more sharply in participating households, but that they were initially, more dependent on moneylenders. Klonner and Oldiges (2013) at the University of Heidelberg, combine data from National Sample Survey (NSS) on household consumption with information on the district-wise roll-out of the MGNREGA. They find that poverty reducing effects of the households belonging to SC and ST is

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¹At present, around 48 percent of wage payments under MGNREGA are made within fifteen days (as reported in MGNREGA website—At a Glance, percent wage payments made in time).

²21 percent of workers are SC and 16 percent are ST (as reported in MGNREGA website—At a Glance, percent workers SC & ST).

³As reported in (Sonalde, et al., 2015). The report is based on the India Human Development Survey which interviewed 42,000 households in two rounds, 2004-05 & 2011-12 and, is thus perfectly placed to capture the impact of the MGNREGA which was implemented in 2005-06.

significant, while this is not the case for all rural households. For this group, there was an increase in average consumption of about 15 percent and a decrease in various poverty measures between one fifth and a half, thus implying that the MGNREGA is impacting reduction in poverty and increasing consumption of the more marginalised rural households.

In Rajasthan, it is said that one drought can move a generation back into poverty. Staying true to its genesis from a drought relief programme, MGNREGA continues to play a vital role during drought. Even in 2015, the Central Government has extended the guarantee to 150 days in drought affected districts of Odisha, Maharashtra, Karnataka, Andhra Pradesh and Telangana. Some State Governments, like Chhattisgarh, have institutionalised this enhanced number of days with their own resources for all rural people at all times.

Some states have also extended the number of days to particularly vulnerable communities. The *Sahariyas*—a primitive tribal group—and some other extremely vulnerable communities in Rajasthan are guaranteed 200 days. The *Sahariyas* are infamous for the highest number of starvation deaths at the time of distress. These extra days, has not just helped them fight hunger; it has enabled many of them to free themselves from bondage. This is a powerful example of the political and economic impact of the MGNREGA on a vulnerable community and its fight against extreme deprivation and exploitation.

Staying Put

There are regular and distressing reports on the steady migration of people from regions with absolutely no opportunity, to irregular and humiliating conditions of work in urban areas (Rajshekhar, 2015). Imbert and Papp at the University of Oxford studied high out-migration

area at the border of Rajasthan, Gujarat and Madhya Pradesh. They calculate this cost of migration to be as high as 75 percent of daily earnings outside of the village. They find that workers engaged in short-term migration, report wanting more employment in the village, despite the fact that earnings outside of the village are nearly two times higher than the earnings in the village.

Even as men migrate out of the village for work, the existence of MGNREGA has enabled women and children to stay back. This has obvious direct positive impacts on the health and education of children, which has also been probed by academics. Dasgupta (2013), at the University of California, uses detailed administrative records of drought shock and phase-wise roll-out of MGNREGA with a household level panel data; the Young Lives survey, conducted over three waves (2002, 2007 and 2009-10) in Andhra Pradesh. She finds that while the employment guarantee does not help correct for long-term past health deficiencies it is useful in buffering nutritional shocks in early childhood, which varies by policy relevant sub-groups.

Thus, higher wages outside the village need not necessarily compensate for the other benefits of staying on in the village. The village home most often provides a better physical environment, and stability for nurturing the health and education of children of daily wage workers. Conversations at any MGNREGA work site will have people saying they would like to work more if they can.⁴ The 'human development framework', of a holistic life, is clearly not just driven by income.

Women in the Workforce

Three things are of note here: the participation of women in the programme, their financial inclusion and the impact on the agricultural wage rate. MGNREGA has a statutory provision of

While the employment guarantee does not help correct for long-term past health deficiencies it is useful in buffering nutritional shocks in early childhood, which varies by policy relevant sub-groups.

⁴ The national average days of employment per household has not crossed 50 over the past four years.

reserving 33 percent employment for women but the current national average of women working is about 58 percent⁵. In some states, this is even higher; 70 percent in Rajasthan, 91 percent in Kerala and 85 percent in Tamil Nadu. A corollary to their participation in the workforce is their financial inclusion.

Compared to 2004-05, 45 percent of the current women workers were either not working or they worked on a family farm. The MGNREGA has therefore provided many women their first opportunity to earn cash income. The percentage of participating women workers with bank accounts has risen more than five-fold from only 9 percent in 2004-05 to 49 percent in 2011-12 (Sonalde et al., 2015).

The opening of bank accounts in the name of women workers, and the transfer of wages to their accounts has had a direct bearing on expenditure on food, health and even education.

The opening of bank accounts in the name of women workers, and the transfer of wages to their accounts has had a direct bearing on expenditure on food, health and even education. Studies have shown that this is because women have been able to use the money for household essentials, and obviously, food tops the list.

MGNREGA wage rates have also had an impact on the growth of rural wages and agricultural wages. Dreze and Sen (2013) calculate the growth in women's wage rate in agriculture in 2005-06 to 2010-11 as 3.67 percent as opposed to a negative growth rate in the period before. Apart from the impact on the women's wage rate, the payment of a notified MGNREGA wage rate has had other multiplier effects, by increasing awareness levels, and their bargaining power in other works they do.

What about Food and Nutrition?

The picture that emerges for these aspects of the employment guarantee is one of tremendous implicit and explicit impact. This is despite the fact the programme is plagued by several

implementation and funding issues. It is managing to break patterns of unemployment and underemployment in lean agricultural seasons, it is bringing rural women into the workforce and financial networks, and it is serving as a social protection floor for the most destitute and vulnerable to destitution. In some cases it is stalling the debilitating effects of migration in distress.

The employment guarantee therefore has a natural link, with food and nutrition security. Recent studies estimate the direct contribution of the employment guarantee to nutritional outcomes. Liu and Deininger (2013) at International Food Policy Research Institute use a three-round 4,000-household panel from Andhra Pradesh together with administrative data to suggest that participants in the MGNREGA significantly increase consumption (protein and energy intake) in the short run.

Apart from attempts to estimate direct impacts, the MGNREGA has great potential for improving food security as a whole. In several meetings with workers across the country, people often repeat the phrase, "MGNREGA *key aaney sey khaaney ko milta hair*" (with the coming of MGNREGA, at least we get to eat now). While the employment programme may not be targeted to food, the wages received allow workers to spend the money on whatever the worker wishes to, the primacy of which is food for most vulnerable communities.

There is in fact, a potentially effective means of linking food with employment. The National Food for Work programme demonstrated how India's stockpile of food grain could be effectively used to fight hunger and starvation, as well as provide employment. Even after the employment guarantee act came into effect, some percentage of wages were paid in kind, and most workers (especially women) opted for and were happy with this arrangement as it amounted to direct supply of

⁵As reported in MGNREGA website—At a Glance, Women persondays for 2015-16.

food grains without the wait for notoriously delayed wages. Earlier version of the MGNREG Act itself has made provisions for allowing for part wages to be paid in kind. This could be retained as an option for workers. Apart of the wages could be paid in food grain, pulses, and cooking oil, as has been done for primitive tribal groups in the erstwhile Andhra Pradesh. This could pave the way for improving nutrition levels for the most needy in any part of the country.

The National Food Security Act (NFSA) which seeks universal access to food security through subsidised food grains via the Public Distribution System can build on the lessons learnt from MGNREGA. The most important lesson is the nature of the universalisation. MGNREGA has still somehow managed to remain truly universal and self-selecting. Those rural households with job cards willing to do manual work may participate. The NFSA has state-wise caps on the percentage of the population which may be included. State specific formulas could be explored on how to explicitly link MGNREGA workers and PDS beneficiaries. For example, all those working on MGNREGA may be mandatorily entitled to the PDS.

It is clear that the MGNREGA is operating as a de facto social security net for the most vulnerable communities at some of the most trying times. This is its core which needs to be protected and strengthened. Eventually, if the MGNREGA is better implemented, the well being of people will slowly and steadily improve.

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Forests: A Food Producing Habitat

Debjeet Sarangi, Bichitra Biswal and Pradeep Patra*

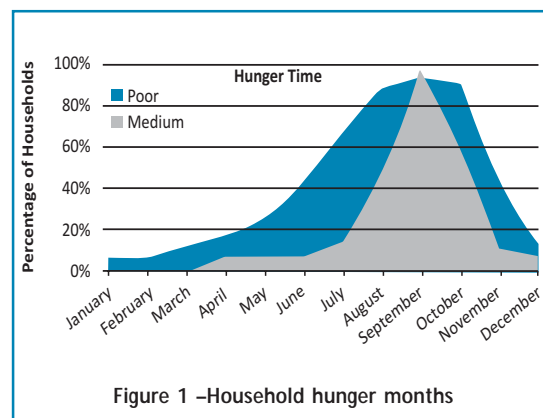
Background

The majority of the tribal population in India is found in the Central and North East Indian states. The eastern state of Odisha is home to 9.6 million tribals, constituting about 22 percent of the entire state's population. Malnutrition is prevalent on a large scale among these communities. Living Farms, has been working with 15,000 tribal and *Dalit* (Scheduled Caste) households in the two blocks of Bissamcuttack and Muniguda of Rayagada district, addressing their food and nutrition security concerns. The average agriculture land holding of these households is 1-2 hectares. The Household Economy Approach (HEA) survey shows a severe annual hunger period of five months (May-September) as illustrated in Figure 1 (Plän, 2011).

The months starting from April to September are difficult for villagers who have a very low household food security during this time. They neither get any full time employment nor are able to take up daily wage work owing to the extreme heat between mid-April to June. In addition, household food stocks also get exhausted as it is used for sowing. The subsidised rice from the public distribution system only meets the food needs of a family of five for about 5-6 days in a month.

This is why forest foods become critically important for these communities. According to accounts provided by the villagers, they had a tradition of collecting and cultivation to meet their food requirements. Traditionally, they have been growing more than 60 varieties of crops (millets, maize, sorghum, lentils, sesame, flaxseeds, spices and vegetables) through mixed-cropping practices

on 1-2 acres (2.5 acre = 1 hectare) of land and/or on hill slopes. They also cultivate a few local varieties of paddy and collect hundreds of uncultivated foods from the forests (edible flowers, fruits, tubers, leaves, stems, seeds, wild mushrooms, tamarind, bamboo shoots and edible insects, etc.).



The Shift from Hunting/Gathering to Agriculture and Resultant Dietary Changes

Odisha has a forest cover of 5,81,36,00 ha, which is 37.34 percent of the state's geographical area. By the end of December 2011, 384 proposals to divert an area of 39,720.186 ha of forestland to other purposes had been approved by the Ministry of Environment and Forest. During 2011-12, thirteen proposals have been approved for the diversion of 831.18 ha forest area (Government of Odisha February 2013). The current land use or forest policies and even food security programmes do not appreciate the traditional forest foods in the diet of tribal folk. Instead, the focus has been on using plantations as a revenue-generating measure at the expense of minor forest produce and un-marketed forest foods.

* The authors work with the Living Farms, Odisha. Living Farms is a non-governmental and non-sectarian organisation, established in 2006 with the mission to uphold food sovereignty. They work together with the landless, small and marginalised farmers in the dry and hilly region of Odisha.

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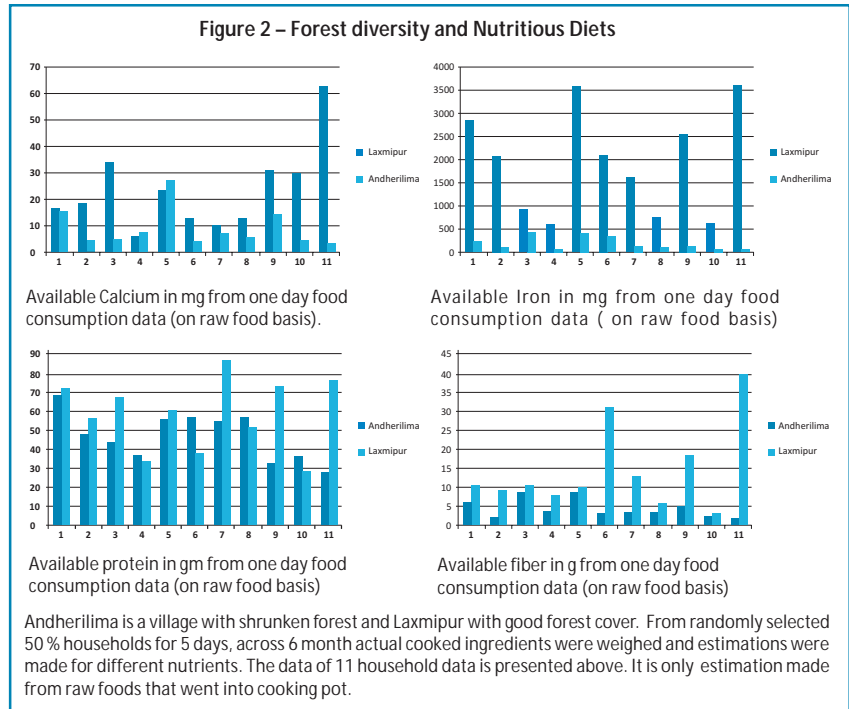
The women explain the way forest biodiversity helped them to survive drought years, the lean period when food stocks remained low and wage work was not available. Their connection to forest foods gave them a sense of independence, dignity and pride, and more importantly, protected them from falling into the clutches of moneylenders.

There are scientific evidences to show that diversity agriculture provides a natural insurance against major changes in the ecosystem, be it in the wild or in agriculture. It is also known that genetic diversity will be crucial in highly variable environments, especially in areas experiencing rapid human-induced climate change. The larger the number of species or varieties present in one field or in an ecosystem, the greater the probability that at least some of them will be able to cope with changing conditions (Cotter & Tirado 2008).

Unfortunately, the agricultural programmes initiated by the State in Rayagada district between the years of 1993-1995 have been promoting monoculture of paddy and sunflower with heavy use of chemical inputs and non-renewable seeds in the name of 'higher yields'. At the same time, there has been promotion of large-scale plantations of commercial species and horticulture in natural bio-diverse forests, leading to a diversion of forest land for such projects. These practices have led to a hugely reduced diversity of traditional food and degradation of forest and agro-biodiversity.

Initiatives to reclaim, regenerate the forest, promote forest food, and improve household dietary diversity

Living Farms conducted a study in the tribal districts of Rayagada and Sundargarh to understand the issues around collection and



consumption of forest foods and the extent of dependence of local communities on such food for their food and nutritional security.

The study (Deb et al. 2014) recorded 121 different kinds of forest foods being harvested between the last week of July 2013 and December 2013 by the sample households. On an average, 4.56 kg of such foods were harvested per household during each collection foray, which ranged from 21 to 69 different kinds of food. On an average, 0.725 kg of forest foods became part of the cooked food consumed per household per day. The highest diversity was in mushrooms while the largest quantities harvested were that of various tubers.

One of the primary reasons as to why forests are becoming sparse is that forests have rarely been viewed as food-producing habitats in India's policy discourse or in the implementation of any development efforts related to food security. Promotion of forest foods as nutrient rich and their consumption by children and women as part of their diets to improve food security has shown progress as illustrated in Table 1.

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Across six villages, forest foods accounted for 12 percent to as much as 24.4 percent of total cooked foods per day on average. The dependence of communities on forest foods ranged from 20 percent to 50 percent, depending on the characteristics of a village and the nature of its forests. This is both in terms of diversity and quantity. The study also shows that forest foods provide a critical supplement to the diets of these communities, ensuring diversity in the diets as shown in Figure 2 (Deb et al. 2014).

On average, they collect over 10 types of oil seeds, 25 varieties of roots and tubers, 35 kinds of fruits, mushrooms, fish and crab, 40 kinds of greens, and a similar number of birds, animals, edible insects and more throughout the year. However, the study found a decline in availability and consumption of forest foods in all the villages. Diversity is ebbing away and entire species have disappeared according to the villagers. Forests are becoming sparse and getting replaced by mono-plantations.

As a result, women have started resisting attempts to set up commercial plantations and

have instead been planting multipurpose trees as a part of the regeneration effort. More than 10,000 acres of forest has thus been protected and nurtured, leading to the revival of more than 275 varieties of wild foods rich in micronutrients. The importance of this in providing a more balanced diet cannot be overemphasised.

Challenging Dynamics of Forests, Food and Human Health

The mainstream model of food consumption and farming does not recognise the multiple values of (bio) diverse, traditionally consumed forest-based foods of tribal communities and other forest-dwellers (Vira et al. 2015). The legal right to food in India neither insists on locally produced food nor includes uncultivated foods from forests or other natural habitats (including the village commons).

Moreover, managing forests for food is not considered crucial in addressing food security, nutrition and well-being for its' vulnerable and dependent communities. The focus on sustainable livelihoods from forest produce takes

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Table 3: Nutrients in some of the uncultivated forest foods

Food Items	Protein (g)	Fat (g)	Fibre (g)	Energy (kcal)	Calcium (mg)	Iron (mg)	Carotene (Hg)	Vitamin C (mg)	Magnesium (mg)	Zinc (mg)
Wild yam	1.2	0.1	0.8	79	50	0.6	260	-	17	0.45
Wild mushroom	3.1	0.8	0.4	43	6	1.5	-	-	-	-
Amla	0.5	0.1	3.4	58	50	1.2	9	600	-	-
Fig	1.3	0.2	2.2	37	80	1.0	162	5	-	-
<i>Mahua</i> flower (<i>Bassia longifolia</i>)	1.4	0.3	0.9	111	45	0.2	307	40	-	-
Bamboo shoot	3.9	0.5	-	43	20	0.1	-	-	32	-
Red ant eggs	17.4	3.8	-	128	73	2.0	-	-	-	-
<i>Colocasia</i> leaves	3.9	1.5	2.9	56	227	10.0	10278	12	32	-
<i>Mushakani</i> leaves (<i>Coculus hirsutus</i>)	9.1	1.9	7.6	189	1152	10.7	4305	232	-	-
<i>Chakunda</i> leaves (<i>Cassia tora</i>)	6.8	0.7	2.7	87	869	9.7	10418	225	-	-

Source: *Nutritive value of Indian foods*, 2007, NIN Publication, www.mcgill.ca/cine, ASEAN Food composition table, 2000, 1st edition from Institute of Nutrition, Mahidul University, Thailand, in Food Regional Data base Centre and ASEAN Foods Coordinator.

away the attention from life-giving food and nutrition for local inhabitants from the forest.

The qualitative aspect of forests is often neglected with much attention given to its quantitative targets of food production, accessibility and availability. Nurturing forests is as much about ensuring food and nutritional security as about guaranteeing diversity. In policy circles, forest foods have not been identified as a focus area that would take into account the accessibility to and the maintenance of diversity in the commons.

The necessity of policy changes is a big challenge affecting the possible impacts. There is little or no valuation of forests as food sources when diverted for 'non-forest purposes'. Even the 'special provision to safeguard food security' applies only to 'irrigated multi-cropped land' as a source of food. The challenge of bringing the areas of uncultivated food that fall outside the notion of 'net area sown,' but are nevertheless vital in the local food chain, need to be accounted for as food areas.

Forests and Forest Eco-Systems— Our Way Ahead

A serious attempt to improve the national capacity to monitor and assess the contribution made by forests and trees to food security needs to be made. India's forest policies must be re-aligned with food security objectives. Forest clearance procedures for projects must also factor in loss to forest foods and governments must formulate rules to implement the Panchayats (Extension to Scheduled Areas) Act of 1996 in Schedule V areas.

Monitoring progress and impact is a critical aspect of national and regional food security strategies. A successful strategy to deal with the issue of malnutrition will need to go beyond the National

Food Security Act. National reporting frameworks that distinguish where and how food is obtained (produced, purchased or gathered from the wild) must include the contribution of forests and of trees on farms, both planted and wild. Recognition of the full contribution of the forest sector is fundamental for increased investment as a long-term adaptation strategy in the light of climate crisis. Forest agencies and national statistical bureaus such as the National Institute for Nutrition and The Food and Nutrition Board and its 43 Community Food & Nutrition Extension Units (CFNEUs) under 4 Regional offices in the country need to be more effective in recording and promoting the contribution of forests and trees at all levels of society.

Re-prioritising agricultural policies with State specific nutrition programmes (as opposed to being centrally designed) would help develop mechanisms for coordination across the ministries of women & child, health, agricultural, forestry, livestock, fisheries, energy, mining and other relevant sectors to ensure stronger coherence of food security and nutrition interventions.

In Odisha, at least, 32,711 villages are eligible for recognition of their Community Forest Rights (CFR)¹. These villages are concentrated in the tribal, upland districts of the state. The government needs to acknowledge this right and provide titles to the concerned villages (Rights and Resource Initiative et al. 2015).

More importantly, women play a critical role in gathering forest produce and in income generation opportunities. Recognising the intimate relationship between forests and women's empowerment must protect this aspect of gender equality. Improved tenure and access rights to forest resources, particularly for women, could

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¹ Community Forest Rights allows communities to protect and manage their customary forests. In combination with various community forests rights under the FRA, the CFR provision effectively democratizes forest governance in India, by providing sufficient legal powers to Gram Sabhas to govern and manage forests.

support more sustainable resource management for food security.

In conclusion, the alarming expansion of large-scale industrial production systems in tropical regions threatens the contribution of forests and tree-based agriculture systems to food security, diets and nutrition. Despite this, the role of forests in supporting human food security and nutrition remain largely under-researched. With food security and nutrition high on the agenda in many political and scientific spheres, it is crucial to understand the contribution of forests and trees to a food secure and nutrition-sensitive future.

Highlights

Forests need to be seen as nurturing both people and their culture. And one cannot highlight forests and forest foods, while keeping forest people whose food cultures are intrinsically linked to the forests out of the picture.

The National Forest Policy, 1988 acknowledges the symbiotic relationship between tribals and forests, its opportune for the Ministry of Tribal Affairs to re-look at expert committee reports and also move forward on the proposed National Tribal Policy. In addition, policy changes regarding revaluating food areas, revisiting nutritional security and recognising forest people are also important.

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Health and Nutrition Solutions for Tribal Communities in High Migration Areas: Lessons from Southern Rajasthan

Pavitra Mohan & Divya Varma*

Of Poverty, Deprivation and Ill Health

Large pockets of chronic poverty have been a persistent feature of Rajasthan's development trajectory over the past several decades. Despite relative progress made by the state in poverty reduction in recent decades (Institute of Development Studies, 2008), numerous, predominantly tribal pockets remain steeped in high levels of poverty and deprivation. Notable among these have been Udaipur, Dungarpur and Banswara districts of southern Rajasthan, a geographical cluster that has consistently lagged behind other parts of the state (the average HDI score of the region is 0.50, the lowest in Rajasthan). Sixty one percent of households in this region are tribal (mainly belonging to *Bheel* and *Meena* communities) and together they account for 53 percent of the tribal population of the state (Institute of Development Studies, 2008). Inhabiting a geography characterised by a semi-arid topography, high levels of water scarcity, vastly unproductive land tracts and a depressed economy, the tribal communities in the region have experienced a near complete loss of traditional forest dependent livelihoods in the recent decades, which has pushed them further into a state of deep impoverishment. This scenario has lent itself to the emergence of seasonal migration - into low-end, often exploitative jobs in urban labour markets – as a critical livelihood strategy for a vast majority of tribal households in this region.

The combination of being poor, tribal and migrant poses vast challenges to the health and well-being of this community, especially in south Rajasthan. So, while being tribal is an ethnic reality, being poor and a migrant is a reality imposed by the society and economy. We argue in this paper that health status of tribals is adversely affected not so much by their ethnic identity, but much more significantly by their social and economic identities (being poor and migrant, for example).¹

Being tribal, poor and migrant in south Rajasthan

While forests, which were a traditional source of food and nutrition for migrants have depleted, incomes from low end seasonal jobs that men folk engage in cities of Gujarat and Maharashtra, do not ensure adequate cash flow at the household level to provide for nutritious food on a regular basis, and for seeking healthcare. For instance, most families in the region cannot afford any source of animal protein (milk or egg) and can only afford small, inadequate amounts of oil. As a result, malnutrition and its adverse consequences are wide-spread.

As male members migrate to earn their livelihoods, the burden of running the household falls squarely on the women. Mothers, who are the primary caregivers are overburdened with work and exhausted from managing multiple demands on their time, which means that their

Health status of tribals is adversely affected not so much by their ethnic identity, but much more significantly by their social and economic identities (being poor and migrant, for example).

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¹ Human Development Report Rajasthan (2008).

² Most work on tribal health tends to focus on ethnic or biological identity of being a tribal, and tend to focus on certain conditions such as sickle cell anaemia that they are more prone to. We however believe that their social and economic identities affect their health status much more than their ethnic identities.

caregiving capacity is severely restricted. In a recent study conducted by Aajeevika Bureau on the nutritional status of children and their mothers, we found that 33 percent children are wasted with 9 percent being severely wasted. Not only were a large proportion of children malnourished, as many as 55 percent of their mothers were found to be undernourished too (Aajeevika Bureau, 2014).

The intergenerational effects of low nutrition among children need to be underscored here. Rampant low levels of child nutrition translate into poor nutrition as adults, reducing productivity and ability of the household to emerge out of poverty. Poor nutrition levels also make the body more susceptible to diseases, which, in turn, functions to further reduce nutrition levels. Some communicable diseases such as tuberculosis and diarrhoea are not only more rampant in such areas (in our field areas in south Rajasthan, which are almost entirely inhabited by tribal populations, we see a prevalence of tuberculosis that is almost double that of national average), but they also tend to be more severe, resulting more often in advanced disease and death.

Poor nutrition not only is causing a much higher risk of communicable diseases among tribals, but they also seem to be contributing to a much higher risk of non-communicable diseases such as diabetes and hypertension. Our experience of providing primary healthcare in remote tribal areas, as well as that of others working in similar areas in other states (Dr Abhay Bang, Gadchiroli, Maharashtra and Dr Raman Kataria, JSS, Bilaspur, personal communication) confirm a high prevalence of these diseases. We hypothesise that high incidence of non-communicable diseases in adulthood is related to low birth weights, which in turn is caused by poor nutrition of women (Barker's (1997) hypotheses).

In the absence of male members, the ability of the women to access health care is also constrained to a great extent. Women in these communities are often not empowered to go to the distant health facilities, and to negotiate the public systems alone, posing a significant barrier in seeking timely and adequate healthcare for their children and themselves. In tribal and migrant families, therefore, while women suffer from significant and prolonged morbidities (we see a very high occurrence of untreated reproductive tract infections, and hidden tuberculosis), sick children are often delayed in seeking care even when they are very sick (Aajeevika Bureau, 2014).

Low coverage of government healthcare services in these geographies exacerbates the crisis around health and nutrition. Not only are the Primary Health Centres (PHCs) far away (often 10-12 kms) from where people live, most PHCs are unmanned or understaffed—a third of the PHCs in the state of Rajasthan do not have even a single physician. Most such unmanned PHCs are located in predominantly tribal areas, inhabited largely by tribals. Incomplete, erratic and unresponsive services from the PHCs further discourage the families from seeking care. For example, a study in rural Rajasthan showed that only 1/7 PHC offered a treatment for reproductive tract infections, and only 3/8 conducted a blood glucose estimation (Concurrent Evaluation Survey, NRHM, Indian Institute of Population Studies, 2010).

Families therefore turn to private, informal providers, which are of poor quality and high cost but are available and responsive. These communities thus end up facing a sad paradox of healthcare emerging as one of the major causes of indebtedness, even as mortality levels remain very high. We run financial services in some of these remote tribal, high migration communities, offering small loans to impoverished families. In a large number of cases, the loans are directly or

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¹Understanding Hunger and Malnutrition among high migration communities. Aajeevika Bureau, 2014 (unpublished)

indirectly associated with a healthcare expenditure or loss of productivity due to a chronic illness or trauma. Anirudh Krishna and colleagues have reported healthcare expenditure as the single most important reason for families slipping into poverty in rural, tribal south Rajasthan (Krishna, 2004).

Being a Tribal Labour Migrant in a City

A vast majority of the migrants in the Southern Rajasthan-Gujarat migration corridor are tribal and constitute one of the most vulnerable groups among the general migrant population. They form a special segment among the poor in urban destinations (such as Ahmedabad and Surat), who at one end, are vulnerable to extreme health risks due to the excruciating living and working conditions in the city, and on the other, lose access to decent healthcare and welfare benefits as they move locations.

Work conditions in cities are harsh involving long hours of work, meagre earnings with little or no job security. Migrants are left to pick up the more physically strenuous and risky jobs in sectors vacated by local labour. For example, we are witnessing large numbers of people with chronic respiratory illnesses (including tuberculosis) among migrant tribals in Ahmedabad city, and in the villages in South Rajasthan, where they come from. Most of them are engaged in trades which put them at a very high risk of these illnesses: marble cutting, construction work, tile-fitting and tile cutting being some of them, where large numbers of young tribals come and work. Absence of nutritious food and overcrowded living conditions further predispose them to significant illnesses.

We are also finding that despite high quality healthcare available in cities, migrant tribals, when faced with a significant illness, often turn back to the pastures they know better: their own

villages; many a times delaying appropriate treatment.

It remains a moot point in these discussions that the modern day capitalist production systems create negative externalities in the form of environmental costs, body burdens and toxicities. In the absence of adequate protections at work, these costs are conveniently pushed down the bodies of the workers, who are not the least endowed in absorbing these shocks.

Elements of Effective services to Promote Health of Tribal, Migrant Communities:

We have been providing services and solutions to families dependent on labour and migration for their livelihoods in South Rajasthan. A large proportion of these families are tribal. For last three years, we have also started providing high quality, low cost primary healthcare services in these areas. We have also been running a large scale programme for early detection and treatment of tuberculosis among migrants in Ahmedabad city for last one and a half years. This experience, coupled with interactions and discussions with other organisations working in tribal areas, have helped us to sieve out some lessons on designing and implementing solutions for improving healthcare of tribal populations. Our key learning is that when designing responsive health services for the tribal populations, we do not have to take into account their ethnic identities, but also their social and economic realities (of being poor and often a migrant).

Here are some of the essential elements:

Addressing food availability and malnutrition:

As mentioned above, poor nutrition status at birth or in early years of life sets up a life of ill health, low learning levels and poor productivity.

Despite high quality healthcare available in cities, migrant tribals, when faced with a significant illness, often turn back to the pastures they know better: their own villages; many a times delaying appropriate treatment.

In remote tribal areas that face several resource constraints, primary healthcare services provide a foundation that provides context specific and sustained response to the needs of the communities. In practice, it translates in community-based services that offer the preventive, promotive and curative services, and collaborates with other services such as financial, skill building and livelihood services.

Any intervention on improving the status of health in tribal populations, who face a chronic shortage of nutritious foods, and chronic malnutrition, needs to squarely address this issue.

Capacity to address communicable and non-communicable diseases:

Traditionally, health programmes of the tribals tend to focus on some communicable diseases such as tuberculosis and malaria. While these conditions do impose a significant burden, many are increasingly suffering from non-communicable illnesses. The health services need to be equipped to manage these conditions at the primary health care level.

Adhering to principles of primary healthcare:

Primary healthcare is rooted in the community, is accessible and affordable, and addresses critical social determinants of health. In remote tribal areas that face several resource constraints, primary healthcare services provide a foundation that provides context specific and sustained response to the needs of the communities.

In practice, it translates in community-based services that offer the preventive, promotive and curative services, and collaborates with other services such as financial, skill building and livelihood services.

Judicious optimisation of a mix of human resources:

Human resources for health are in short supply. The more remote and rural an area is (where most tribal families live), more difficult is it to ensure availability of skilled human resources, especially physicians.

An optimal mix of human resources helps in ensuring that scarce human resources are put to optimal use, while maintaining continuity and quality of services. For instance, the *Amrit* clinics run by Aajeevika Bureau are managed by three

primary care nurses and two health workers each, who are in turn supported by a physician who visits once a week and is on-call for 24 hours of the day. They are ably aided by senior health workers, community volunteers (called *Swasthya Kirans*) and women's groups (called *Ujala Samoohs*) who undertake health education and awareness building regarding the services of the clinic.

Engaging Tribal Providers:

In our experience, recruitment and training of women from the tribal community itself helps reduce attrition of staff to a great extent. However, dedicated investments need to be made to ensure proper living arrangements for them, and in skilling them to provide high quality services.

Establishing good transport-referral systems:

Most tribal populations live in scattered areas, many of the poorest live in areas not connected by metalled roads. Having an emergency transport that is reliable and has vehicles that can negotiate difficult terrain is life-saving in many instances, especially for obstetric emergencies.

Using appropriate technology:

Our experience also builds the case for the appropriate use of low-cost technology to enable consultation, rapid diagnostics and continuity of care. Though technology can never replace human intervention in such scenarios, it can play a very useful complementary role in the delivery of high quality healthcare.

Budgeting for healthcare of tribal communities:

Low density of population and long distances involved translate into high costs for last-mile delivery of services and logistics management for medicines and supplies, and often turn out to be



much more expensive than delivering healthcare in urban areas. Often, however, the planners budget less for such areas, thinking that poor areas require lesser money. Any budgeting exercise for healthcare of tribal communities living in remote areas should take this fact into account, and provide for adequate resources.

Providing services for tribal migrants in cities:

Such programmes need to address the reality that a large number of youth move to cities, where they live and work in extremely hazardous circumstances. A large number of tribal youth migrate to cities where they need to have migrant friendly health and nutrition services, to minimise the impact of labour migration on bodies of this highly productive but also highly vulnerable population.

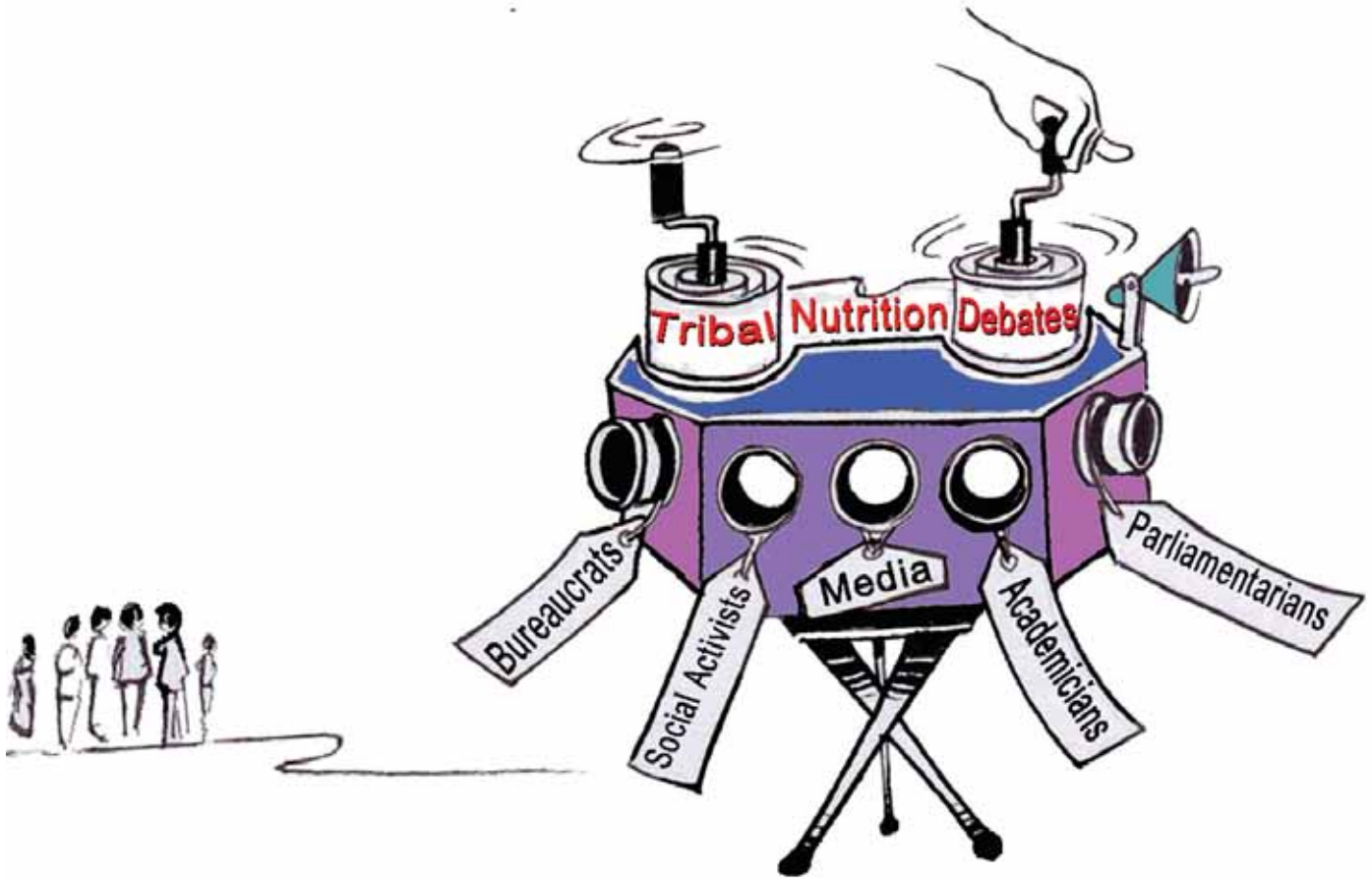
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In-Conversation with Prof. Aasha Kapur Mehta*

Question: Are the WHO growth standards questionable since India's position seems to be worse than sub-Saharan Africa for nutritional indicators, whereas in other indicators of health India's performance has been much better (as has been argued by Arvind Panagariya)?

Answer: There are three parts to this question— (a) are the WHO growth standards questionable? (b) does application of the changed WHO growth standards lead to inaccurate estimates of India's performance on malnutrition? (c) are the estimates for malnutrition inaccurate since India's performance on health indicators is much better?

What are the WHO growth standards? These are basically achievable goal posts that tell us how far we are from the optimal so that we take the actions required to get there. The optimal standards are based on a longitudinal study of 8,440 children from six countries, i.e., Brazil, Ghana, India, Norway, Oman, and the United States. The children are specifically chosen from environments in each country that enable healthy growth of the child. The purpose of the study is to describe "how all children **should grow** when their needs are met' and to "reiterate the fact that child populations grow similarly across the world's major regions **when their needs for health and care are met.**" The children chosen for the study are selected such that "constraints to growth such as poor diets and infection" are minimised and also that their mothers followed health practices such as breastfeeding their children and not smoking during and after pregnancy.

Arvind Panagariya argues that malnutrition is a multidimensional phenomenon that can broadly be divided into protein energy malnutrition and micronutrient deficiency and that "the former

manifests itself most prominently in poor gains in height, weight, and circumferences of head and mid-upper arm" in addition to other physical symptoms while "micronutrient deficiency results from inadequate levels of iron, folate, iodine, and various vitamins...and these deficiencies lead to anaemia, goitre, bone deformities, and night blindness." Hence, he disputes the singular focus on low height and weight and argues that "only a thorough medical check-up can properly determine whether a child is malnourished or not." He also argues that there is an anomaly between "the higher measured levels of child malnutrition in India than in virtually all countries in sub-Saharan Africa that are poorer than it" and our superior performance on life expectancy at birth, infant and under five mortality compared to them.

Arvind Panagariya rightly argues that genetics affect height etc., and that protein energy malnutrition and micronutrient deficiencies have serious health consequences and need to be measured. However, there are a range of factors that lead to malnutrition. These include lack of adequate purchasing power for access to a balanced diet, low dietary intakes, poor breast and complementary feeding practices, poor absorption due to infectious diseases and lack of access to "safe" drinking water and sanitation. We state that we provide "safe" drinking water to almost all households based on the premise that the water is from an improved source. No tests are conducted to see if the water is truly "safe" either at the point of origin or at the source from which households collect it. We also state that our performance on Life Expectancy at Birth is better than many countries even though data on Life Expectancy is available for less than half the total States/ UTs. Similarly, official data pertaining to morbidity are a fraction of estimates provided by micro-studies based on medical check-ups.



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It is also true that what and how you measure determines performance. For instance, our estimates of population in poverty rose dramatically in 2004-05 from 27.5 percent to 37.2 percent when the Tendulkar Committee raised the poverty line by just Rs 40 for urban and Rs 90 for rural areas. Similarly, if you change the standards for measuring malnutrition, the extent of malnourishment will change. WHO growth standards use the growth trajectory of children, who are nurtured in optimal growth environments. Hence the percentage of malnourished is higher since the standard is more stringent.

The fact is that malnutrition is a serious problem in India and the effort should be to see what needs to be done to achieve improvements in it.

Question: Why is the research on undernutrition among tribals, especially national level studies, so limited even though they are amongst the most deprived? What should be the focus in addressing undernutrition among tribal people and children?

Answer: Tribals and especially primitive tribal groups live in remote areas and inaccessible areas. As is well known, they are among the most deprived in the country. Das & Bose (2015) summarise the nutritional status and socio-demographic profile of the tribes of India based on 76 studies covering the years from 2005 to 2014. They draw attention to the “paucity of data and information on more than approximately 600 tribes regarding their bio-social profile” as well as the severe to critical situation of undernutrition in tribal populations. This is corroborated by data from NFHS 3 which found that malnourishment levels were highest among tribal children for height-for-age, weight-for-age and height-for-weight indicators. “Children from scheduled tribes have the poorest nutritional status on almost every measure, and the high prevalence of wasting in this group (28 percent) is of particular concern” (NFHS 3 p. 272). The fact that 76.8 percent of children in the age group 6-59

months suffered from anaemia is a cause that requires action on priority.

Malnutrition, mortality and morbidity are a function of a large number of variables that include access to balanced food and nutrition, absorption, access to preventive, promotive and curative health care, nutrition counselling, safe water and sanitation, age of marriage, spacing of children, etc. Hence the focus should be on reaching out to the communities through providing counselling and services at the door step of all tribal families to address the above, as in the case of the mitanin model. Additionally, the focus should be on providing access to potable water “free from contamination, from chemical and bacteriological impurities, from iron, sulphur, magnesium etc. beyond the desired level as also free from excess fluoride content”; access to homestead land, agricultural land, employment opportunities, food security and sanitation (Mishra 2013)¹.

Convergence is needed within and across programmes and schemes implemented by Ministries and Departments such as Ministry of Panchayati Raj, Health, Education, Women and Child Development and Water and Sanitation in order to track progress and jointly plan and monitor key results and indicators. Spatial mapping of facilities is very useful for determining where AWCs, Sub-Centres, PHCs and health facilities are located, whether they are available where the need is greatest and what gaps need to be bridged.

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In-Conversation with Dr. S. B. Agnihotri*

Question: It is sometimes alleged that the true extent of malnutrition deaths or presence of severe malnutrition is under-reported in India. What can be done to encourage accurate reporting by departments?

Answer: Under-reporting of child deaths, inadequacies of Civil Registration System, and our dependence on SRS estimates for IMRs is well known. So have been the uncorrected deficiencies of the ICDS reporting system. To quote what a District Magistrate told Mr. N C Saxena, as mentioned in his article in the special issue of 'Seminar'¹ on tribal children, correct reporting of nutritional status is a high risk low reward exercise!

Be that as it may, we first need to set up a robust system of cause of death analysis through the ANM and the ICDS Supervisor and give them contingency funds of, say, Rs 500 for this. This will improve the infant mortality reporting significantly.

On child malnutrition, we need to get a regular third party cross checking system on the ICDS data. Besides this, every two years, we need to do an NFHS type survey pertaining only to nutritional status of children in the 0-36 month age group. We also need to communicate a message that correct reporting is not high risk low reward – but inaccurate reporting is.

Question: Since nutrition is a multi-sectoral issue, the coordination between departments could play a key role in improving nutritional attainments; how do you think we can bring about better coordination between departments? What are the key challenges in this process?

Answer: We are like Rajput warriors—individually brave, sincere and courageous, but have taken a vow NOT to fight together. So we have open defecation free Panchayat in isolation, 100 percent immunisation in some other PHC, deworming in a third ICDS block and SNP in a fourth block. If only we converge these four, moderate and severe malnutrition will have no business to exist.

We should also proactively create malnutrition free conclaves—green 'liberation zones' liberated from malnutrition as an answer to the naxal red 'liberated zones'! We should first clinch moderate and severe wasting, followed by moderate and severe underweight and then stunting. These three are respectively like T-20, one dayer and test match. The strategies have to differ.

So converge and prioritise—is the name of the strategy and challenge at the same time.

Question: Malnutrition among the tribal communities, especially in the remote blocks, is acute as well as chronic; why has the government not been able to address the situation effectively? What is the general perception among the senior policymakers about the problem of tribal malnutrition?

Answer: We have treated this with benign neglect. We must adopt the above strategy in tribal areas in association with tribal welfare department much more seriously. We must strive to get the nutritional profile of the tribal child to become equal to if not better than those of the non-tribal children. The green zones must be established and secured here first.



We have open defecation free Panchayat in isolation, 100 percent immunisation in some other PHC, deworming in a third ICDS block and SNP in a fourth block. If only we converge these four, moderate and severe malnutrition will have no business to exist.

* Dr. S. B. Agnihotri is Professor at Centre for Technology Alternatives for Rural Areas, IIT Bombay; and Former Secretary, to Government of India. This is a short interview conducted with him for Budget Track.

¹ 'The malnourished tribal' *Seminar*, vol. 661, September 2014

Question: Do you think that sufficient budgetary resources are being allocated to address malnutrition? If not, are budgetary constraints hampering our commitment towards eradication of malnutrition? Or, is there an issue of prioritisation which needs to be addressed?

Answer: The ICDS budget had faced a visible reduction last year, though eventually better sense prevailed. You may keep criticizing leakages and corruption in ICDS. But the answer is to plug this leakage and corruption – not denying children their due by cutting the budget.

In-Conversation with Dr. Vandana Prasad*

Question: What, according to you, are the causes for persistent undernutrition in the country? Do you perceive the problem of tribal undernutrition to be arising out of special reasons or is it a mere subset of the reasons which characterise undernutrition in general?

Answer: The problem of hunger and malnutrition can be linked to certain immediate and fundamental underlying causes. Poverty and gender remain critical fundamental causes, and other causes can be located within these. Factors like quality of food, water and sanitation, diarrhoea, infections, habitat; nearly everything correlates with poverty and gender. In addition, there are some middle level determinants like women's literacy, which also have a significant bearing on nutritional status. There are more proximal determinants such as elements of care in the context of child care, child hunger, and malnutrition, which too, are related to gender – women's capacity, women's time, women's energy, and women's power to take decisions. Thus, element of care for children and within that, the facilities available in terms of nutrition and health, play a key role.

In the context of these deep inter-sectoral interlinkages, malnutrition has to be understood as a complex issue, where specific vulnerabilities add up exponentially. Different kinds of vulnerabilities compound the problem. For tribal communities specifically, geographical remoteness, illiteracy, environmental factors, food insecurity, livelihood insecurity, lack of land holdings, lack of access to forest produce, environmental factors, inadequate access to basic services etc. play out in compounding the problem.

Question: Do you think that the government recognises undernutrition as a multi-sectoral

problem, with a range of interventions being implemented in a coordinated manner, or is the approach more fragmented towards addressing this issue?

Answer: The definition of malnutrition, recognising it as a multi-sectoral issue, has evolved only recently and has been used as a big paradox. At one level, it is used to explain paralysis, to explain lack of impact, stating that it is a complex problem which is difficult to address. On the other hand, the same multi-sectorality is denied, when it comes to taking action of a specific kind. The solutions, however, are straight forward and it is lack of political will that seems to be a deterrent in taking action. To bring about a change on ground, there needs to be specificity within comprehensiveness.

There has to be a minimum package to change the situation—behavioural change, nutrition counselling, investment in food security, some direct supplementation of good quality food, direct health services—many supply side issues and behavioural change issues—which need to be looked at together. A lot of time has been wasted in advocating just one or the other of the approaches. This, coupled with the fact that there is no national policy or law on nutrition, adds to the problem. While the National Food Security Act does address this issue to some extent, but conversely, it also creates the complication of 'medicalising' the whole business by setting unnecessary standards, which leads to politics of standards and brings in contractors, profit making agencies, and conflict of interest. Thus there is an entire gamut of complications in nutrition, which people have easily used as an excuse to not take action. Despite recognition of these issues, government has failed to take action and invest in it.



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Analysis of budgets reveals that the central government's investments have gone down; fiscal devolution is more of a myth. At the same time there is also a positive secular trend which needs to be recognised. Recent data shows that the country is doing relatively well but the pace could have been enhanced; while there is stagnation in many indicators, there are also improvements in some. This is happening mostly despite public policy and government action, and not as a result of these. However, there were phases of investment in programmes like Mid-Day Meals, ICDS, PDS which are bearing fruits and resulting in the current improvements. If we go down the road that is being followed currently, it would not be surprising to see a decline in these parameters.

The Centre has been saying that for advancement some States would suffer and some would gain. But there needs to be a balance of protection and control; balance between centralised control with decentralisation.

Question: Do you think putting a greater onus on the states, with restricted devolution of resources to them, would lead to regional imbalances with some states performing better on this front, given the greater autonomy in deciding their priorities?

Answer: This would happen regardless of the central assistance. For example, UP has been a poor State, regardless of the assistance by the Centre. This struggle has to happen for things to become better and it is not a bad thing that the struggle is shifting from the Centre to States. It is more challenging, but what is worrisome is collateral damage. The Centre has been saying that for advancement some States would suffer and some would gain. But there needs to be a balance of protection and control; balance between centralised control with decentralisation. That balance needs to be in terms of investing in building capacities at the State level and lower down. But that kind of planning is not happening and it is only devolution of responsibilities, than actual devolution in favour of poor people.

The paradox is that it is not that the control has been relinquished. It is not a true decentralisation in any sense, it is merely a shedding of responsibilities. What needs to be figured out is which States have more money and can act as

champions or leaders for the others. I would wish to see a defined plan for investing in sensitisation and capacity building where central investment should go. The Centre should enable States to make more money, as bankrupt State governments would not be able to make any social sector expenditure. What is needed is an evaluation of the available basket of funds at the states' level, have a sense of which State has how much money and then see how allocations are being done, so that a more defined advocacy can be done. And the Centre needs to champion rather than relinquish. The more you decentralise, the more you need to monitor and that is what one has not seen; neither are we seeing that kind of championship nor are we seeing any capacity building. We should be advocating for that.

If systems are designed to fail, they will fail and private sector will enter. The current design seems to be not to invest in social sectors, allowing more room for private sector involvement. While entry of private sector was restricted earlier owing to limited cash availability, this too is being changed with cash transfers – government will ensure that there is a cash flow as long as this flow is towards the private sector. The problems of this design are that though there may be short-term gains for some people, inequities will rise and long-term regulatory issues will arise. The collateral damage would have to be paid by the most vulnerable. If we allow the money to drive things then the people with least access to money, even if there is cash flow downwards, would suffer. In three-four States, cash transfers have been rejected by communities in favour of PDS. People are recognising that even poorly functioning public system still gives them some advantage.

Question: In terms of assessing government's response towards addressing issue of undernutrition, what is the biggest problem—policy design, investment that has gone in to realising these designs, or implementation on the ground, or are they all equally problematic?

Answer: These are highly inter-connected and difficult to separate. There is poor political will in the area of nutrition and that is holding back all these issues. Lack of political will leads to both lack of governance as well as implementational will, because the message that goes down is that these are not priority areas; the priority areas are banking, infrastructure, roads, etc. This is a peculiar case of transition where it is difficult to

make a comment as we are going to be riding on the gains made in the last five years or so for the next two-three years. So, there is a phase lag. The current policy and budget environment is going to show its effect after three-four years. So it is difficult to have hard evidence to say anything just now because we did have a period of relative gains, though never adequate. In that sense the last year has been retrogressive on all these fronts.

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In-Conversation with Mr. Subodh Varma*



Question: What would be in your understanding some of the most important reasons for the persistence of high levels of undernutrition in India?

Answer: Pervasive poverty and under-employment are the basic causes for persistent undernutrition in India. If incomes are low, families are unable to buy proper food. As the recent SECC data shows, in nearly 92 percent of the country's households, the income of the main bread-winner was less than Rs. 10,000 in 2011. NSSO surveys show that average monthly per capita expenditure was just Rs. 1287 in rural areas and Rs. 2477 in urban areas in 2011-12. Since 2004-05, the increase was just 3 percent per year. These figures show the abysmal economic status of the common Indian family. Naturally, buying nutritious food is impossible in such dire conditions. Certain more vulnerable sections of society like women, *dalits*, *adivasis*, face an even bigger disadvantage – both social and economic – leading to higher nutrition deficits.

Question: Do you think this issue has received adequate attention in the country's policy framework?

Answer: Certainly not. Tackling malnutrition is treated like any other bureaucratic chore. You pronounce ill-conceived schemes, under-capitalise them, don't address innate social obstacles and constantly run them to the ground trying to save money. Then there is corruption, mismanagement and hijacking by entrenched interests. There are no worthwhile reviews and no people's control. Even the benchmark minimum calorific intake has been watered down and calculated for sedentary life. Who leads a sedentary life in India? It is only because of sustained advocacy by people's groups and movements that some rectification took place and the repeated intervention of the apex court forced governments to bolster policies like the mid-day meal scheme or the ICDS.

Question: Would you assess the focus of mainstream media on hunger and malnutrition to be sufficient in response to the extent of the problem?

Answer: Mainstream media's attention is episodic and shallow, by and large. A chilling incident of starvation death or suicide would bring a brief burst of attention and much hand-wringing. But that's about it. The fact that millions in this country – at last estimate, a staggering 250 million – face creeping death or life long disability due to malnutrition is something that does not make for a good sensational story. Also, there is inability or wilful neglect of digging deep to find the roots of malnutrition and dissect them thoroughly. Corruption is often pointed out as the villain whereas the reasons are far bigger and deeper. The commitment of a large section of the mainstream media to neoliberal dogmas, like cutting down on public expenditure, blinds them to obvious causes of hunger and deprivation. Similarly, caste and gender biases prevent them from seeing the disadvantaged treatment meted out to, say, *dalits* or girls, in terms of nutritional intake.

Question: How do you see the role of media and public discourse in eliciting an appropriate response from the government to the problem of malnutrition?

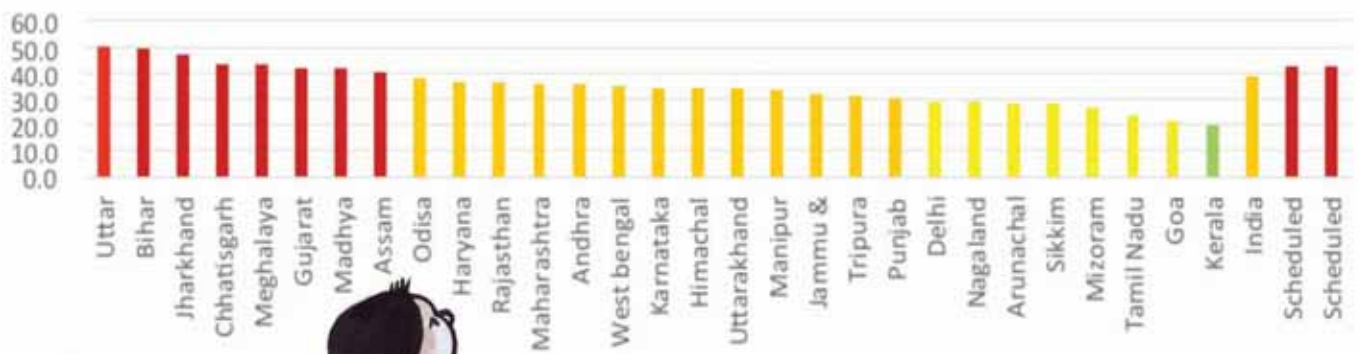
Answer: The role of media, especially Indian language media, is important not only in directly influencing political and bureaucratic policymakers but also in creating public opinion which plays a much bigger role in forcing governments to act. But to do this, the media has to be relentless and thorough. It also needs to be committed to the people of the country and not to certain elite sections alone.

Mainstream media's attention is episodic and shallow, by and large. A chilling incident of starvation death or suicide would bring a brief burst of attention and much hand-wringing. But that's about it.

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Stunting Prevalence by State and ST/SC, RSOC 2013-2014



Budgeting to Deliver for Nutrition: Reflections from a Costing Study on Nutrition Specific Interventions in India

Suman Chakrabarti and Purnima Menon*

For India, in monetary terms, investing in provision of essential nutritional interventions, translates to a return on investment of INR 38.6 for every rupee invested on nutrition

Despite having the third highest national income in 2014¹, India bears the largest national burden of child undernutrition in the world. Over 40 million of Indian children under five years suffered from some form of undernutrition in 2014. This high burden of undernutrition imposes a staggering cost in terms of lives lost, forgone productivity, increased healthcare spending, and reduced lifetime earnings; and therefore is of long term consequence for India's development goals (Raykar et al., 2015). Globally, undernutrition has proved to be a multifaceted challenge which requires simultaneous improvements in access to various health and nutrition related services and actions, along with improvement in supporting factors such as education, sanitation, safe drinking water, food security and poverty, among others. However, research also suggests that providing a set of essential nutritional interventions (ENIs) such as nutritional counselling, food and micronutrient supplementation and health services, at the appropriate time and scale (near universal coverage), can reduce the prevalence of stunting (a form of chronic undernutrition) by 20 percent (Bhutta et al. 2013). For India, in monetary terms, this translates to a return on investment of INR 38.6 for every rupee invested on nutrition

(Hoddinott et al. 2013); a substantial return. Global cost estimates for scaling up ENIS are available (Horton et al. 2010) but they do not fully capture India's national priorities, policy guidelines, delivery platforms or local unit costs. Having cost estimates that are tailored for India's unique challenges and diversity, will not only support effective planning for scale up but also assist in engaging policy makers that are continuously faced with difficult budgetary decisions and multiple fiscal trade-offs. In addition, sub-nationally tailored cost estimates can help identify states where additional resources may be required to effectively expand coverage to reach the target population.

Outside the nutrition research and policy community, there is limited understanding of the pertinent issues surrounding undernutrition in India. In the post liberalisation era, improvement in India's nutritional indicators appears modest at best, relative to what one might expect in the light of India's high rates of economic growth. We observed the movement in young child nutrition indicators for three years 1999 (NFHS-2), 2006 (NFHS-3) and 2014 (RSOC)² and found three emerging trends. First, undernutrition among under-five children is still extremely high,

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Disclaimer: The authors alone are responsible for the views expressed in this publication and they do not necessarily represent the decisions, policy or views of IFPRI. Any errors are our own

¹[http://data.worldbank.org/indicator/](http://data.worldbank.org/indicator/NY.GNP.MKTP.PP.CD?order=wbapi_data_value_2014+wbapi_data_value+wbapi_data_value-last&sort=desc)

[NY.GNP.MKTP.PP.CD?order=wbapi_data_value_2014+wbapi_data_value+wbapi_data_value-last&sort=desc](http://data.worldbank.org/indicator/NY.GNP.MKTP.PP.CD?order=wbapi_data_value_2014+wbapi_data_value+wbapi_data_value-last&sort=desc)

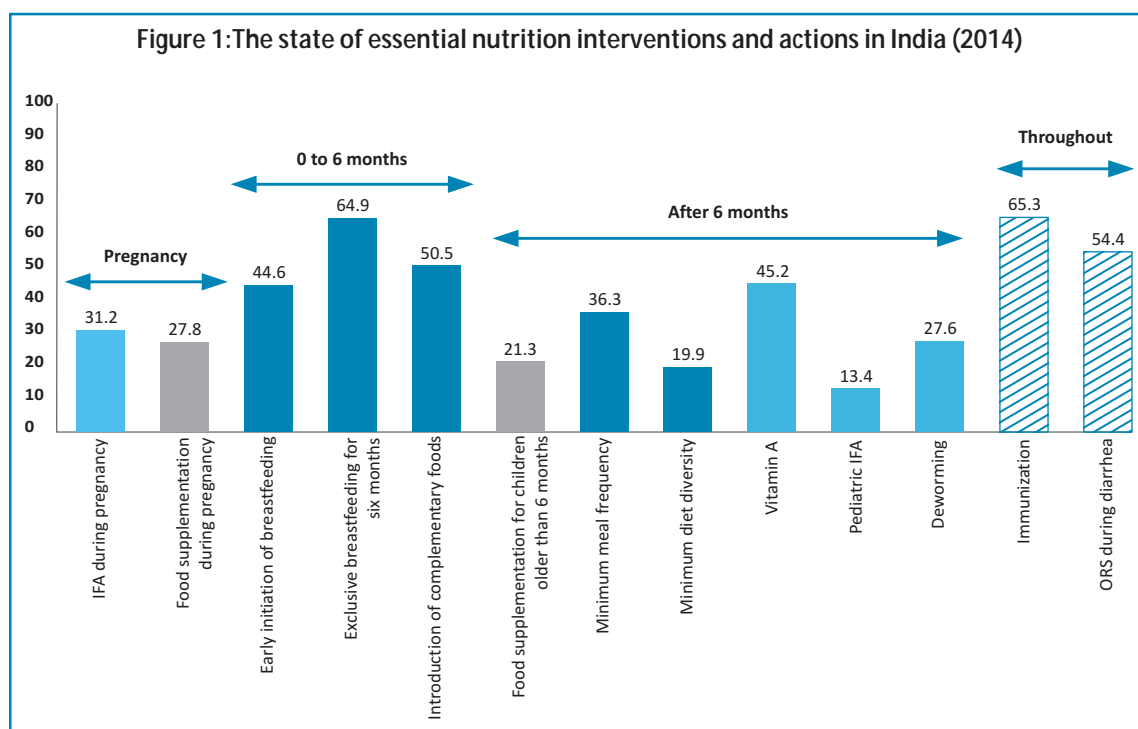
² NFHS: National Family Health Survey; RSOC: Rapid Survey of Children

regardless of the reference population or time period. Second, height-based indicators of chronic undernutrition continue to improve, but only gradually. The proportion of children that were stunted fell only modestly over the seven year period between 1999 and 2006. This decline accelerated somewhat in the second period and as a result the proportion of children stunted has fallen to 38 percent in 2014. The prevalence rates of wasting and underweight were stagnant between 1999 and 2006. Recent data from the RSOC are more reassuring – indicators of acute undernutrition have shown some improvement in the eight years since the last round of available data. The proportion of wasted children was five percentage points lower in 2014 than it was in 2006. Despite this encouraging downward trend,

the burden of undernutrition in India is still considerably high, and this has repercussions for India's future economic growth and development.

The period of improvements in nutrition between 2006 and 2014, coincided with an increase in the coverage of the two national programmes—Integrated Child Development Services (ICDS) and National Rural Health Mission (NRHM)—that collectively deliver *nutrition-specific interventions* (Black et al. 2008³; Avula et al. 2013). The current state of coverage of some of these interventions is provided in Figure 1. As is evident from the figure, India is still far behind the policy goal of universalisation, with large gaps in the delivery of all the interventions throughout the continuum of care, which starts at pregnancy and continues

India is still far behind the policy goal of universalisation.



Source: Rapid Survey of Children, Ministry of Women and Child Development, Government of India, 2014
 Notes: IFA=Iron-folic acid; ORS=Oral Rehydration Salts

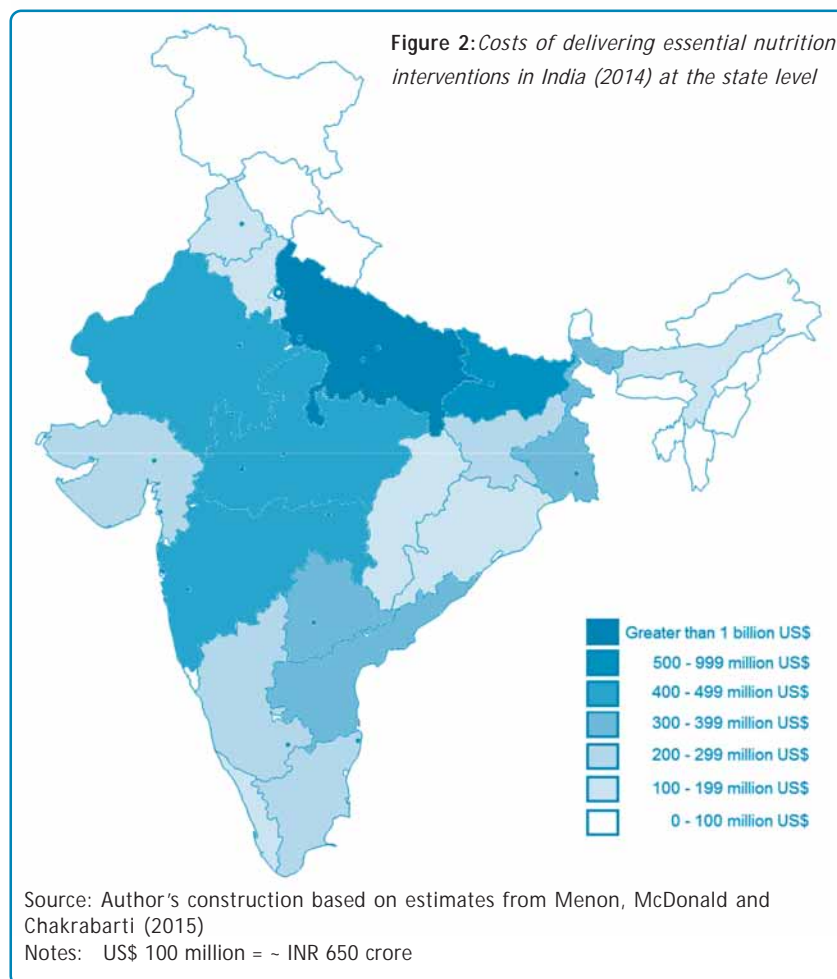
¹ The available programmatic tool kit for addressing undernutrition includes two sets of interventions. First, nutrition specific interventions that address the immediate determinants of foetal and child nutrition and development—adequate food and nutrient intake, feeding, caregiving and parenting practices, and low burden of infectious diseases. These interventions include adolescent, preconception, and maternal health and nutrition; maternal dietary or micronutrient supplementation; promotion of optimum breastfeeding, among others. Second, nutrition sensitive interventions that address the underlying determinants—food security; adequate caregiving resources at the maternal, household and community levels; and access to health services and a safe and hygienic environment. These interventions include agriculture and food security; social safety nets, among others.

up to the early years of a child's life. One of the primary reasons for such limited coverage is insufficient funding, along with other known challenges about implementation capacity, overburdened and undertrained health workers, limited awareness of available nutrition services and more (Avula et al. 2013; Kosec et al. 2015). Investments to scale up these actions are an essential component of a larger strategy to tackle undernutrition in India. However, the financial commitment required to deliver these nutrition-specific interventions at scale in India is not well understood and therefore has potentially not been adequate. There are virtually no studies in India thus far that can inform researchers and policy makers about the financial requirements and,

therefore, the potential funding gaps for these nutrition specific programs have not been assessed.

Within this context of costing and cost-effectiveness in the area of nutrition, we conducted a study to calculate and compare the cost of delivering a set of *nutrition specific interventions* at scale that are supported by recommendations from a large network of stakeholders in India (Menon, McDonald & Chakrabarti, 2015). The costing exercise reveals that the total annual cost of implementing the complete set of core interventions at full coverage throughout India is US\$ 5.93 billion (approximately INR 35,550 crore) shown in Table 1. The largest proportion of this

There are virtually no studies in India thus far that can inform researchers and policy makers about the financial requirements and, therefore, the potential funding gaps for these nutrition specific programs have not been assessed.



⁴Currently averaging INR 33 per day for six months

cost is for the cash transfers to women to support breastfeeding promised under the National Food Security Act (2013) and supplementary food rations delivered by the Ministry of Women and Child Development, respectively. These two interventions together cover over 85 percent of the total cost estimates, followed by health interventions (including in-patient treatment of severe acute malnutrition), counselling actions, and micronutrient supplements and deworming, which account for remaining share of the total cost.

Furthermore, there is considerable variability in the costs for delivering the interventions at scale in the different states across India (Figure 2), with variability in cost estimates primarily driven by differences in target populations. The cost of implementing all interventions in Uttar Pradesh amounts to just under US\$ 1.2 billion (~ INR 7,700 crore) which is one fifth of the total cost estimate. Costs for Uttar Pradesh are high primarily due the

large base population, and high fertility rates, which lead to a large annual birth cohort of above 5 million newborns a year, as well as by the state's poor performance on nutrition, which amplifies the costs for treatment of severe acute malnutrition. Similarly, in other states such as Bihar, Madhya Pradesh, Rajasthan and Maharashtra where wasting rates and population sizes are high, delivering interventions at scale will cost in excess of US\$ 400 million (INR 2,600 crore) per year. On average, the estimates approximate to a per child (0-24 months) cost of \$140 (INR 9,100) per year.

These estimates are not without limitations because they are highly sensitive to target populations and unit costs. For example, our estimates suggest that, at \$2.9 billion (~INR 19,000 crore) per year, the universally targeted maternity cash benefits to support breastfeeding are the highest cost intervention to deliver at scale. Therefore, even a small increase in per day

There is considerable variability in the costs for delivering a set of nutrition-specific interventions at scale, in the different states across India.

Table 1: Total costs of delivering nutrition specific actions at scale across India

Action	Cost (INR crore) per year 1 INR=65 US\$	Cost (US\$ million) per year	Share in cost (%)
Counseling			
Counseling during pregnancy	322.47	49.61	0.84
Counseling for breastfeeding	116.16	17.87	0.30
Counseling for complementary feeding and hand-washing	1,427.14	219.56	3.70
Supplementation			
Complementary food supplements for children 6-36 months of age	9,919.07	1,526.01	25.73
Supplementary food rations for pregnant and lactating women	4,279.28	658.35	11.10
Additional food rations for severely malnourished children	721.76	111.04	1.87
Micronutrient and deworming			
Iron-folic acid supplements for pregnant and breastfeeding women	128.90	19.83	0.33
IFA supplements and deworming for adolescents	261.24	40.19	0.68
Iron supplements for children 6-36 months of age	260.13	40.02	0.67
Vitamin A supplementation	49.21	7.57	0.13
ORS and therapeutic zinc supplements for treatment of diarrhea	461.44	70.99	1.20
Deworming	145.67	22.41	0.38
Health			
Treatment of severe acute malnutrition	1,449.37	222.98	3.76
Insecticide treated nets for pregnant women in malaria-endemic areas	160.94	24.76	0.42
Miscellaneous			
Cash transfers to women in the first 6 months after delivery	18,848.25	2,899.73	48.89
TOTAL	38,550.92	5,930.91	100.00

Source: Menon, McDonald and Chakrabarti (2015)

The discussion needs to shift from the Center to the states; high burden states now have the onus of allocating adequate resources for nutrition and health.

transfers⁴ at universal coverage or higher, or a more targeted transfer amount can both have significant implications for total financial outlays. Secondly, our estimates for food supplementation are based on cost norms for the ICDS supplementary nutrition program, provided by the Government of India. However, the low unit costs of the ICDS may be unlikely to deliver a high quality supplementary food that also meets quality norms for food supplements to support optimal complementary feeding. Further research on the true unit costs of provision of a palatable, safe, high quality food supplement in India is, therefore, strongly merited. Thirdly, recent government estimates of wasting (RSOC 2014) are below those used for our cost projections, and these lower wasting rates may lead to lower financial implications for the costing of treatment of severe acute malnutrition, one of the more expensive interventions. Fourthly, as with other studies, our estimates reaffirm that unit costs for micronutrients and deworming are lowest among the spectrum of interventions, and, therefore, yield the lowest total intervention costs. However, costs of delivery of such interventions will vary even within different states. Further research is essential to re-estimate some of these costs based on updated unit costs and target populations, preferably at the state or district level, for supplementary feeding, micronutrients and severe acute malnutrition. Fifthly, although fortification is presently not a government-funded intervention in India, it has been recommended for scale-up in the global literature (Horton et al. 2010). It would be prudent to estimate the cost of fortifying rice and wheat provided through India's Targeted Public Distribution System and Mid-Day Meal Scheme, as it could prove to be a cost effective strategy.

To put cost estimates in perspective viz. India's budget, we assessed ICDS coverage and expenditures against our estimates and two

important findings emerged (Menon, McDonald & Chakrabarti, 2015). First, even for reported number of beneficiaries of the ICDS in 2014, the corresponding expenditures – which were the highest ever for the ICDS–fell short by more than half a billion US dollars (~ INR 3,250 crore) because of lower reported spends. Second, 2014 coverage levels of target beneficiaries were far below those that would be needed if the program were to adhere to full universalisation. Trends in programme expenditure show that fiscal outlays for ICDS and NRHM have been increasing (at least up until 2014) due to an increasing financial commitment from the centre. In 2015 however, new fiscal devolution efforts have led to reduced financial commitments from the centre⁵ and the implications of the fiscal devolution on programme financing and coverage are currently unknown. Therefore, the discussion needs to shift from the centre to the states; high burden states identified in our study – Uttar Pradesh, Bihar, Madhya Pradesh, Rajasthan, Maharashtra and West Bengal – now have the onus of allocating adequate resources for nutrition and health. Adequate planning and fund allocation will require a routinised estimation of district-by-district target population needs and gaps, so that individual states can allocate funds further down to districts in a more optimal manner. The financial requirements for delivering nutrition interventions vary within India, and prioritisation of financing for nutrition across India will need to consider the gaps between projected costs for each state (or even district), current expenditures and the availability of national, state and district-level finances to deliver fully for nutrition in order to adapt to the new fiscal environment and cope with challenges.

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⁴ Currently averaging INR 33 per day for six months

⁵ The 2015 ICDS budget was INR 15,500 crore (including the additional release), which is still approximately INR 3,000 crore less than it was in 2014 (Menon, McDonald and Chakrabarti, 2015).



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Recommendations of the Fourteenth Finance Commission

The Finance Commission (FC) is a Constitutional body, constituted every five years, to facilitate intergovernmental transfer of resources at the sub-national level of the government. It plays an important role in determining the fiscal architecture of the country. The Fourteenth Finance Commission (14th FC), whose recommendations would be applicable from 2015-16 to 2019-20, was appointed by the President in January 2013 and submitted its report in December 2014.

The mandate of the 14th FC included making recommendations on the following:

- ◆ Distribution of net proceeds of central taxes between the Union Government and the states (vertical devolution), and the allocation between the states of their respective shares of such proceeds (horizontal devolution).
- ◆ Principles which should govern, and the sums to be paid, as grants-in-aid of the revenues of the states out of the Consolidated Fund of India
- ◆ The measures needed to augment the Consolidated Fund of a state to supplement the resources of the panchayat and municipalities in the state on the basis of the recommendations made by the respective FCs of the states.

The 14th FC's Terms of Reference (TOR) also stated that the Commission shall regard certain criteria such as, resources of the Central Government for the next five years, taxation efforts and potential for additional resource mobilization, need for insulating the pricing of public utility services, etc., while making its recommendations. The TOR of the 14th FC has two singular features:

(a) In the TOR of the 14th FC there was no specific mention of treatment of Gross Budgetary Support (GBS) to Plan as a committed liability of the Union Government; it also did not bind the Commission to look only at the Non-Plan revenue expenditure of the states. Hence, the 14th FC was able to take a more comprehensive view of the revenues and expenditures of the Union Government and states; and not restrict itself to just Non Plan expenditure.

(b) Also, the TOR indicated that the 14th FC could take into account the demographic changes that have taken place since 1971; as opposed to earlier Commissions which had to take population figures of 1971 as the base.

The recommendations of the 14th FC have seen a major departure from the previous Finance Commissions. One of the major recommendations of the 14th FC was to increase, substantially, the quantum of untied resources being devolved to the states. This provided greater autonomy to the states in setting their spending priorities.

Some of the major recommendations of the 14th FC are:

- ◆ Increasing the share of states in the divisible pool of central taxes from 32 percent (as per the 13th FC) to 42 percent.
- ◆ No specific purpose grants have been made by the 14th FC.
- ◆ The formula for the horizontal distribution of resources has been revised. It is now based on: (i) Population of 1971 [17.5 % weight] (ii) Population in 2011 [10 % weight] (iii) Area under forest cover [7.5 % weight] (iv) Income Distance [50% weight] and (v) Area [15 % weight]
- ◆ Grants to local bodies (both rural and urban with different criteria, amounting to Rs. 2,87,436 crore for the period 2015-20.

Report of the Sub-Group of Chief Ministers on Rationalisation of Centrally Sponsored Schemes

Formation of the Sub-group and its Members

The Sub-Group of Chief Ministers on the rationalisation of Centrally Sponsored Schemes (CSS) was constituted on March 9, 2015 by the Prime Minister under the chairmanship of the Chief Minister of Madhya Pradesh. Chief Ministers of Arunachal Pradesh, Jammu & Kashmir, Jharkhand, Kerala, Manipur, Nagaland, Rajasthan, Telangana, Uttar Pradesh, and Lt. Governor of Andaman & Nicobar Islands were Members of the Sub-Group. The group submitted its report in October 2015 and most of its recommendations were accepted thereafter.

Some of the important recommendations of the Sub-Group are as follows:

1. It identified priority sectors which form the National Development Agenda (NDA) for realising VISION 2022. These include, among others, poverty elimination (through promotion of livelihood opportunities, and skill development), drinking water and Swachh Bharat Mission, rural connectivity (including electricity, access roads and communication), agriculture, education (including Mid-Day Meal), health, nutrition, women and children, etc.
2. Existing CSS should be restructured and their number be reduced to a maximum of 30 Schemes. All these schemes would be 'Umbrella Schemes', with every scheme having a large number of components with a uniform funding pattern.
3. Schemes in the NDA should be classified as 'Core' and 'Optional.' Core schemes would require compulsory participation of the states, whereas, from the Optional group, states could choose to implement some or all the schemes.
4. Among the Core Schemes, there would be 'the Core of the Core' schemes which would include MGNREGA and schemes for social inclusion. These would be the first charge on funds available for the NDA.
5. Funds available for CSS should be divided by the Ministry of Finance into two broad categories: Funds for Core schemes and Funds for Optional schemes. Funds for Core schemes may be allocated amongst the schemes in the Demand for Grants of Central Line Ministries by the Ministry of Finance.

6. Suggested funding pattern:

Division of Existing CSSs and their Fund Sharing Pattern			
Scheme Type		Funding	Centre: State share
Core	Core of the Core Schemes	No change in fund sharing pattern	
	Other Core Schemes	8 North-east States and 3 Himalayan States	90:10
		Other States	60:40
Optional	All non-core schemes	8 North-east States and 3 Himalayan States	80:20 (Schemes having Centre's share below 80 would remain as such)
		Other States	50:50
		Uts	100% Centre

7. A debatable aspect with respect to the recommendations is regarding the salary/ honoraria component under CSS (such as those for ASHA, anganwadi workers and helpers, contract teachers under SSA, etc.). The group recommended that the funding pattern for salary/remuneration should not be modified. Nevertheless it restricted the Centre's allocation at the current level, implying that any upward revision in the remuneration or additional hiring is to be incurred from the state's own resources. The Union Ministry of Finance has still not expressed its opinion on this recommendation but this may adversely impact the services provided through the existing interventions and restrict further expansion of these services in hitherto uncovered areas.

Tracking Budgetary Outlays of the States for the Fiscal Year 2015-16: A Note on the Methodology Followed

Following the recommendations of the Fourteenth Finance Commission, the Union Budget 2015-16 witnessed significant changes in the sharing of resources between the Centre and states, across a number of schemes. Owing to higher devolution of untied resources to the states – from 32 percent of divisible pool of central resources earlier, to 42 percent now – the Union Government reduced its own Plan expenditure substantially in the Budget Estimates for 2015-16. While Plan grants like the Normal Central Assistance, Special Central Assistance, Additional Central Assistance, etc. were discontinued, a number of schemes were also de-linked from the Union Budget. Around 31 schemes were to be fully supported by the Union Government, and fund sharing arrangements was revised for 24 schemes,

The reductions in the Plan expenditure in 2015-16 (BE), was also reflected in reduced budgetary outlays of many states, especially the ones which presented their budgets after the presentation of the Union Budget. This had given rise to a lot of concern as to whether the states would be able to make up for the budgetary cuts by the Union Government, especially for the social sector schemes. Preliminary analysis of the states' budgets reveals a mixed picture.

However, amid the concerns of a fall in funding for critical social sectors, the Union Government presented the first batch of Supplementary Budget in July 2015 authorising additional budgetary outlays of around Rs. 40, 800 crore, of which, Net Cash Outgo was around Rs. 25,500 crore. This was followed by a second batch of Supplementary Grants in December 2015. This sought to authorise gross additional expenditure of Rs. 56,250 crore, of which Net Cash Outgo was Rs. 18,195 crore. Box 1 below gives details regarding the different kinds of supplementary grants.

Several states also presented their Supplementary Demand for Grants and in some cases made substantial changes in fund allocations for schemes, following their initial Budget Estimates. For example, Bihar presented its first supplementary grant of Rs. 16,745 crore in August 2015, followed by a second supplementary grant of Rs. 6,700 crore in December 2015. Thus, in order to assess the

Box : 1

The types of supplementary grants and their inclusion in our budget analysis of schemes is discussed below:

1. **Cash Supplementary:** It involves net cash out-go and is over and above the original budget provisions. Since cash supplementary results in enhancement of the overall allocation for the demand/grant, it is always considered in assessing the department/sectoral/scheme allocations. The cash supplementary is added to the original grant of the year to arrive at the total grants for a particular scheme in the given year.
2. **Technical Supplementary:** It is basically re-location of funds within the demand. When there is a saving in one of the sections and the same is proposed to be utilised for another scheme under a different section. There may be an addition or deduction of grants from the department/scheme budget depending on whether the resources were added to or were taken away from a section of the scheme.
3. **Token Supplementary:** By its nature it is very small and may or may not be considered for analysis depending on the information provided in the supplementary demand for grants.

true extent of allocations for different schemes for the year 2015-16 it is necessary that the provisions made for the scheme in the supplementary budgets of the Union Government and the State Governments are taken into account. Additional allocations/ withdrawal of funds for a particular scheme have been considered, wherever applicable, from the supplementary grants presented by the Union Government and the states.

The detailed Methodology for tracking budgets for nutrition specific and nutrition sensitive schemes is discussed in the respective articles¹ in the same issue of Budget Track.

¹ These articles are (a) "Public Spending on Nutrition in the New Fiscal Architecture in India" – Saumya Shrivastava (b) "Using TSP Budget for Addressing Undernutrition Among Tribals" – Chandrika Singh and Vani Sethi.



Impact of the 14th Finance Commission Related Changes on the Spending Capacity of States

Manjur Ali*

The focus of this piece is to find out the net-devolution of funds from the Union Government to the states and what has been its impact on the total size of the States' budget. Net-devolution is defined as the sum total of "State share in Central taxes" and "Grants-in-Aid from the Centre". This piece looks at the 'Net Devolution' of funds from the Union Government for twenty five states, to understand post-devolution fiscal situation in States.

The ToR of the 14th Finance Commission (FFC) required it to look into the issue of distribution of net proceeds of taxes between the Union Government and the States; to suggest the principles that should govern the grants-in-aid and the measures to augment the Consolidated Fund of a State. The Commission found that the pre-dominant feature of State finances in the period from 2004-05 to 2014-15, is that there has been an overall improvement in fiscal indicators of the States. This has happened mainly due to an increase in the aggregate revenue receipts, accompanied by compression of revenue expenditures of the States.¹ Majority of the states had, in their memorandum, demanded that at least 50 percent of the net tax revenue of the Union Government should be devolved to the States. Looking at the arguments by the Union Government and the States, the Commission recommended increasing the share of tax devolution from the divisible pool to 42 percent.

Union Government accepted this recommendation. However, the total quantum of Gross Central Taxes to GDP ratio is not expected

to increase substantially in the coming years. In such a situation, while the Union Government increased the devolution to States through a higher share in divisible pool of Central taxes, it also reduced the Central Assistance for State Plan and its outlays for many Central schemes. This was done with the expectation that States would provide additional funds for the plan schemes from the higher quantum of untied funds given to them. Thus, while the State will get more resources through the untied channel, they will get lesser resources through the tied channel.

States which have gained from devolution based on FFC can be categorized as substantial gainers and marginal gainers. The States which have gained in terms of absolute figures are Assam, Goa, Gujarat, Himachal Pradesh, Chhattisgarh, Kerala, Madhya Pradesh, Tamil Nadu, West Bengal and Uttar Pradesh. States which have marginally gained are Haryana, Jharkhand, Odisha and Tripura. Those who have lost some resources when seen in terms of absolute amount are Maharashtra, Delhi, Bihar, Rajasthan, Andhra Pradesh, Telangana, Karnataka, Uttarakhand, and Punjab. Now, the important question that can be asked is whether the increase or decrease in absolute amount of net devolution has affected the total expenditure of the states, in comparison to the size of their economies (as percentage of GSDP).

Table 2 shows that 14 States' total expenditure as percent of their GSDP has decreased in 2015-16 (BE) as compared to the previous year. The States, which witnessed a decline in the net

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¹ Report of the Fourteenth Finance Commission, Government of India

Table 1: Total Expenditure of States and Net Devolution from the Union Government (in Rs. crore)

States	2014-15 (BE)				2014-15 (RE)				2015-16 (BE)			
	TBE	State's Share in Central Taxes	GIA from Centre	Net Devolved Fund	TBE	State's Share in Central Taxes	GIA from Centre	Net Devolved Fund	TBE	State's Share in Central Taxes	GIA from Centre	Net Devolved Fund
Andhra Pradesh	111824	16839	28831	45670	112068	16839	19831	36670	113049	22638	17722	40360
Assam	58105	14105	22948	37053	-	-	-		66142	16667	23179	39846
Bihar	116886	41775	31420	73195	132187	38082	28903	66985	144145	50748	18171	68918
Chhattisgarh	54710	9881	14662	24543	55034	9467	15129	24596	68627	16213	12994	29208
Delhi	36766	325	2845	3170	34790	NA	NA		41129	325	1195	1520
Goa	10527	1017	617	1634	-	-	-		13331	1981	739	2721
Gujarat	119527	11637	13522	25158	-	11000	16404	27404	137667	13000	16841	29841
Haryana	59451	4010	7439	11449	-	-	-		69140	5680	6497	12177
Himachal Pradesh	26345	3364	6431	9795	29689	3364	8445	11809	29539	3844	11843	15687
J&K	43543	5191	22973	28164	43091	4477	20472	24949	46473	8088	18211	26299
Jharkhand	50388	10879	15786	26664	50840	9885	15012	24897	55493	12000	15022	27022
Karnataka	130771	16560	20135	36695	127628	15410	20478	35888	136013	24790	9919	34709
Kerala	79414	9365	6672	16037	79780	7926	9494	17420	95325	13122	9946	23068
Madhya Pradesh	117041	27681	30063	57744	118518	27289	28545	55834	131199	30450	30401	60851
Maharashtra	212321	20213	27958	48171	219075	17607	30659	48266	259648	29062	17869	46931
Odisha	80140	18290	20971	39260	77557	17480	19291	36771	84488	19580	21067	40647
Puducherry	6100	-	1857	1857	5940	-	1577	1577	6450	-	1800	1800
Punjab	73593	5400	8230	13631	74931	5400	5808	11209	79314	7998	5076	13074
Rajasthan	131427	22756	27776	50531	126112	19817	23596	43413	140922	28925	19845	48770
Tamil Nadu	153104	19014	8456	27470	160534	16824	21724	38548	175523	21150	16377	37527
Telangana	100638	9749	21721	31470	100638	9749	21721	31470	115689	12823	12400	25224
Tripura	12405	1835	7391	9226	12400	1800	7400	9200	14949	1890	9005	10895
Uttarakhand	30354	4134	10510	14643	32406	-	12366	12366	37482	5526	8720	14246
Uttar Pradesh	274705	76502	48685	125187	263303	75417	49639	125055	322511	86729	49600	136329
West Bengal	130014	27797	30777	58574	129648	28242	25961	54202	138374	31966	32257	64224

Source: Budget at a Glance, Budget Summary, Annual Financial Statements of Various States. 2015-16 figures include supplementary budgets as well.

Note: TBE: Total Budget Expenditure; GIA: Grants-in-Aid

devolution of resources in the changed fiscal scenario, are also the States which have witnessed a fall in the Total Budget Expenditure this year. However, Bihar, Maharashtra and Uttarakhand are

exceptions to the pack. In their supplementary budgets, they have increased their total expenditure. Bihar, with two supplementary budgets, added Rs. 23,459 crore to the original

budget. Maharashtra has added Rs. 29,586 crore through two supplementary budgets. On the other hand, states that gained from devolution have not been necessarily reciprocated in a positive manner. Odisha, Assam, Gujarat,

Himachal Pradesh, Tamil Nadu and West Bengal have marginally lowered their total budgetary allocation (Table 2). This could be because of their efforts to reduce the deficits in their budgets further, instead of increasing overall expenditure.

Table 2: Post-Devolution Total State Expenditure as percentage of GSDP (in percent)

Sr. No.	States (States which Lost out)	Total State Expenditure as % of GSDP in 2014-15 (BE)	Total State Expenditure as % of GSDP in 2015-16 (BE)
1	Andhra Pradesh	21.5	19.1
2	Bihar	29.1	29.9
3	Delhi	8.1	7.9
4	J&K	49.5	46.8
5	Karnataka	18.6	18.04
6	Maharashtra	12.6	13.4
7	Puducherry	23.6	21.5
8	Punjab	21.03	20.2
9	Rajasthan	22.9	21.0
10	Telangana	23.4	23.1
11	Uttarakhand	21.9	23.6
	States which Gained Marginally		
12	Haryana	13.7	13.9
13	Jharkhand	25.5	26.9
14	Odisha	25.8	24.7
15	Tripura	40.3	42.2
	States which Gained Substantially		
16	Assam	31.6	31.6
17	Chhattisgarh	26.0	28.09
18	Goa	18.8	20.7
19	Gujarat	13.5	13.5
20	Himachal Pradesh	27.9	27.3
21	Kerala	17.5	18.6
22	Madhya Pradesh	23.0	25.8
23	Tamil Nadu	15.7	15.6
24	Uttar Pradesh	28.1	29.2
25	West Bengal	16.2	15.0

Source: Budget at a Glance, Budget Summary, Annual Financial Statements of various states.

Public Spending for Nutrition in the New Fiscal Architecture in India

Saumya Shrivastava*

The Context

A comparison of the RSOC (2013) with the NFHS-3 (2005-06) indicates marked improvement in nutritional indicators of children under-5 years of age. However, there remain huge differences across states, a fact that is also clear from the recently released NFHS-4 data (for 13 states and 2 UTs). The findings of NFHS-4 reveal that though India, as a whole, has made advances in improving its nutritional outcomes, not all states have been able to achieve similar levels of attainments. According to NFHS-4, while in 9 states / UTs, less than a third of children are stunted, states of Madhya Pradesh, Bihar and Meghalaya recorded a high proportion of more than 40% of children being too short for their age. Of the 15 states / UTs for which the findings are available, more than 50% of women and children were found to be anaemic in 10 states. Thus, despite improvements, India continues to grapple with high levels of under-nutrition. Government interventions are thus crucial to improve access to clean drinking water and sanitation facilities, provide health-care services, ensure food and livelihood security, and undertake feeding programmes for women and children.

However, in the backdrop of recent changes in the fiscal architecture in India, following the recommendations of the 14th Finance Commission, and most recently, the report of the sub-group of Chief Ministers on Centrally Sponsored Schemes (CSS), it is pertinent to analyse the impact of the these changes on public investment for nutrition. The Union Government reduced its Plan expenditure in the Union Budget 2015-16

substantially, with the qualifier that this gap would be made up by the states out of their enhanced resources. However, how far the states make up for the resource gap depends on whether there has been a net increase in their spending capacities as well as on their respective social sector priorities.

In this backdrop, this article analyses public investment for nutrition by the Union Government and four state governments – Madhya Pradesh, Maharashtra, Odisha and Andhra Pradesh – in the changed fiscal scenario. Adopting a multi-sectoral approach for addressing under-nutrition, the article analyses the budgets for 9 schemes and programmes – Integrated Child Development Services (ICDS) (for children below 6-years), Rajiv Gandhi Scheme for Empowerment of Adolescent Girls (SABLA), Indira Gandhi Matritva Sahyog Yojana (IGMSY) (for pregnant women and lactating mothers) and Mid-Day Meal (MDM) (for school going children), Reproductive and Child Health (a component of National Health Mission (NHM)), National Rural Drinking Water Programme (NRDWP), Swachh Bharat Abhiyaan (SBA), Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA), and spending on food security, as a part of Public Distribution System (PDS). We may note here that schemes selected for the analysis are not exhaustive; although they cover broad areas of interventions, a range of other measures such as education and agriculture that help in creating an enabling environment for the well-being of individuals have not been included in the analysis. Also, the state budget analysis includes, in addition to the Centrally Sponsored Schemes (CSS), the State Plan Schemes

How far the states make up for the reduced resources by the Union Government, depends on whether there has been a net increase in their spending capacities as well as on their respective sectoral priorities.

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in respective sectors. For example, along with NRDWP, the author has looked at drinking water supply as a sector and analysed budgets for the same.

Public Investment for Nutrition by the Union Government: What has Changed?

The Union Budget 2015-16 initiated significant changes in the fund-sharing pattern of many CSS. Later in the year, the subgroup of Chief Ministers on restructuring the CSS submitted its report which re-classified the CSS as 'Core of the Core', 'Core' and 'Optional' schemes.¹ The sub group also recommended clubbing the schemes as umbrella programmes for implementation. From the table

given below it may be seen that except for MGNREGA all schemes are to be implemented with a changed sharing pattern, although they remain 'core' schemes of the Government of India. The Union Government had accepted most of the recommendations of the sub-group.

The Union Government allocations for nutrition-specific schemes, ICDS and SABLA in 2015-16, were very low initially compared to 2014-15 BE (see figure 1); ICDS suffered a budget cut of around Rs. 10,000 crore. It was only in the first and the second supplementary budgets presented thereafter that these schemes received additional allocations, making budgetary outlays for ICDS comparable to 2014-15 BE. For SABLA, however, despite the addition of Rs. 400 crore in the supplementary

For some schemes, there were reduced outlays in Budget Estimates of 2015-16. However, these were restored to certain extent through the first and second supplementary grants presented by the Union Government thereafter.

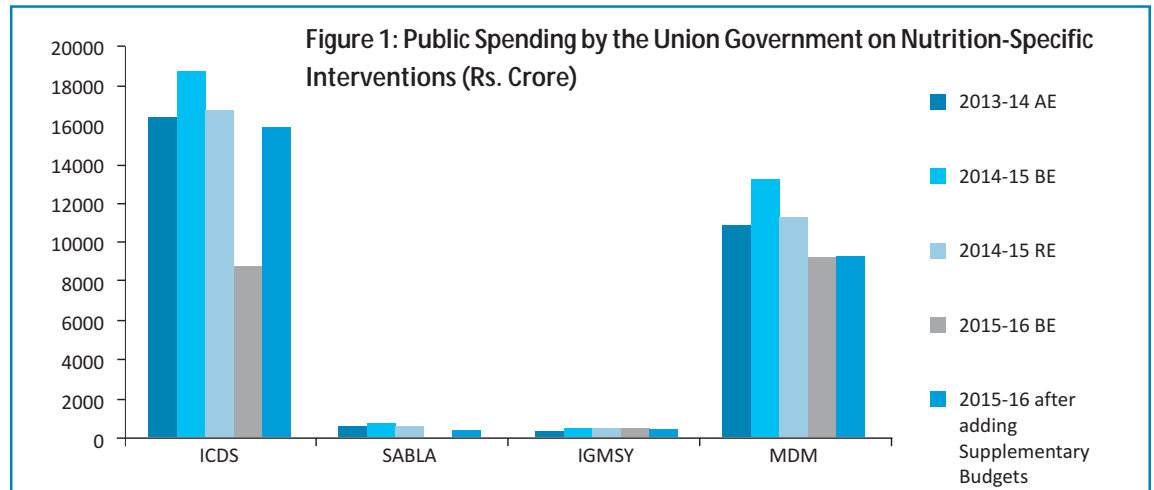
Table 1: Changes in the Fund Sharing Pattern of Nutrition- Specific and Nutrition-Sensitive Schemes / Programmes

Scheme	Changes in the Union Budget 2015-16	Changes suggested in the Report of the Sub Group of Chief Ministers on Restructuring of CSS	Suggested Umbrella Programmes by the Sub Group
Integrated Child Development Services (ICDS)	Changed Pattern	Core	ICDS Platform
Indira Gandhi Matritva Sahyog Yojana (IGMSY)	Changed Pattern	Core	
SABLA	Changed Pattern	Core	
Mid-Day Meal	Changed Pattern	Core	Mid-day Meal programme
Swachh Bharat Abhiyaan	Changed Pattern	Core	Swachh Bharat Abhiyaan
NRDWP	Changed Pattern	Core	National Drinking Water Mission
National Health Mission	Changed Pattern	Core	National Health Mission
MGNREGA	Fully supported by Centre	Core of the Core	Mahatma Gandhi National Rural Employment Guarantee Scheme

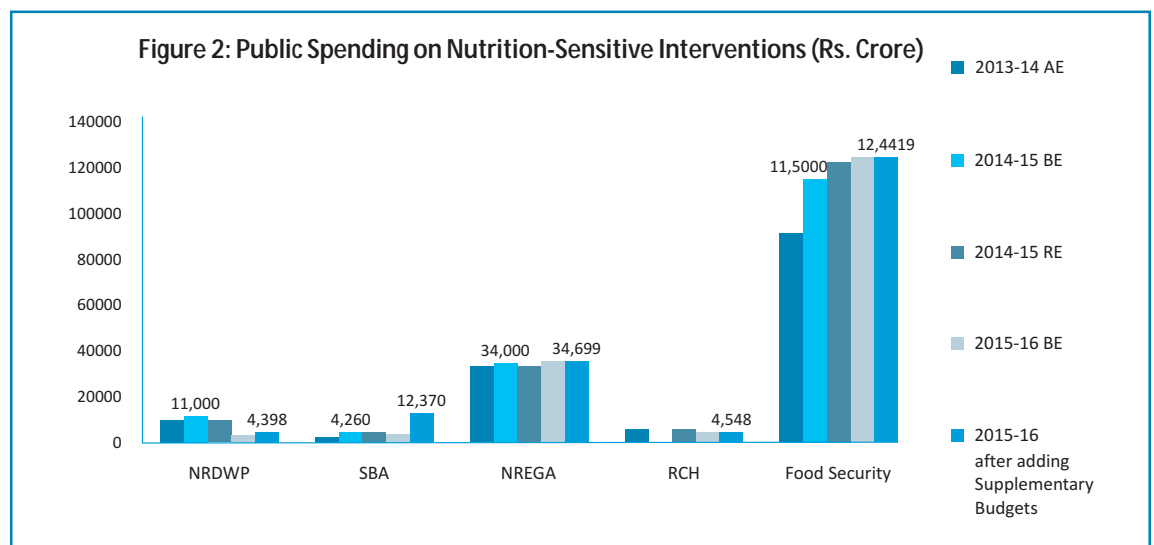
¹ The details of this are discussed in the "Note on the Report of the Sub-Group of Chief Ministers on Rationalisation of Centrally Sponsored Schemes" in the same issue of Budget Track.

grant, allocations for 2015-16 remained less than the allocation of Rs 700 crore in 2014-15 BE. Similarly, the Mid-Day Meal scheme has seen substantial budget cuts of around Rs. 4,000 crore in 2015-16 BE, and additional funds were not provided in the supplementary budgets. All these schemes are direct feeding programmes initiated to address the problem of malnutrition among its set of beneficiaries. Given the life cycle approach to nutrition and high prevalence of under-nourishment among adolescent girls this may prove to be inimical for nutritional well-being of the future generation.

Among the nutrition-sensitive interventions, schemes for drinking water (NRDWP) and health (RCH) witnessed a decline in the budgetary outlays in 2015-16 (even after adding supplementary grants). RCH was effective in providing mother and child health care services such as ante-natal care, post-natal care, immunisation facilities, etc. in rural areas. Even though India is a high growth economy, only 65% of children between 12-23 months are fully immunised and more than one-fifth cases of diarrhoea among children remain untreated. Among all the schemes considered for analysis, NRDWP was visibly hit by spending cuts of the Union Government, whereas for Swachh



Source: Compiled by author from Union Budget, Gol, various years



Source: Compiled by author from Union Budget, Gol, various years; figures for RCH have been taken from the MIS of the NHM, MoHFW, Gol
 Note: Data figures are given for 2014-15 BE and 2015-16 (BE+SB)

Bharat Abhiyaan (both rural and urban) budgetary outlays increased significantly—by almost three times as compared to 2014-15 BE. Most of the additional allocation for this scheme in the supplementary grants has come from the Swachh Bharat Kosh. Given the urgent need to address the problem of open defecation in the country the increased priority for sanitation is welcome.

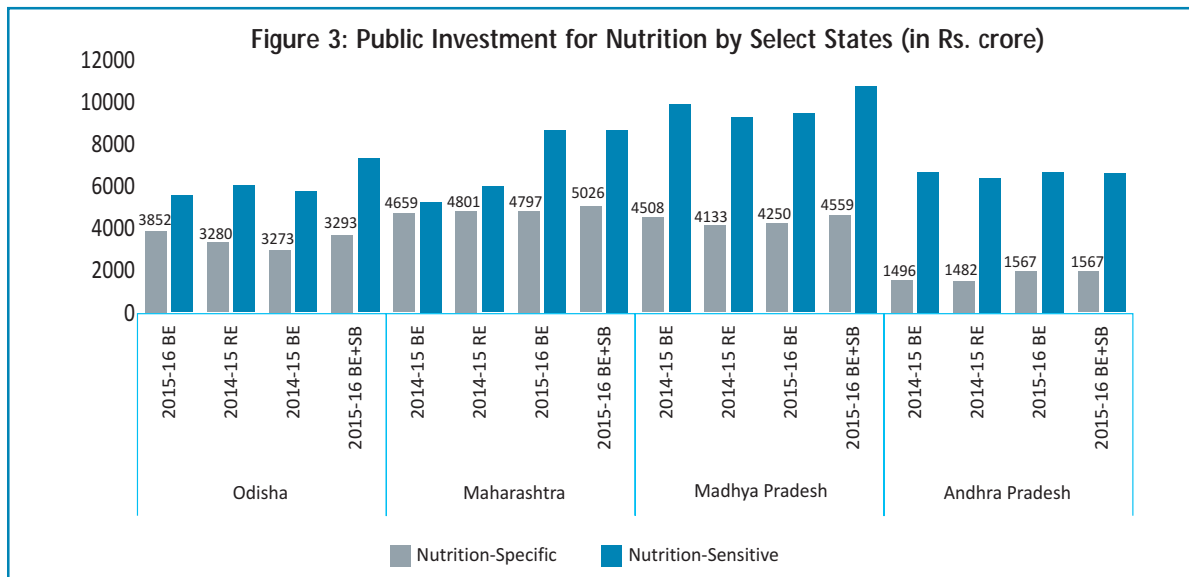
Public Investment for Nutrition by the State Governments: What has Changed?

It was mentioned earlier that now a larger responsibility is on the states for investing on nutrition. In this context we analyse the budgets of four states to assess their spending priorities towards nutrition.

Although the total outlays for nutrition-specific schemes increased in 2015-16 (BE + Supplementary

Budget) from 2014-15 BE in Maharashtra, Andhra Pradesh and Madhya Pradesh, the increase is not uniform across schemes. For instance, in Madhya Pradesh while the total outlay for ICDS in 2015-16 declined to Rs 2,767 crore (even after adding the supplementary budgets) from Rs 2,851 crore in 2014-15 BE, there was a marginal increase in allocations for SABLA, IGMSY and MDM. According to RSOC data, the proportion of stunted and wasted children in Madhya Pradesh is above the national average, implying that there is in fact a need for greater fund allocation for ICDS rather than a cut back. In the case of Maharashtra, we find that whereas the allocations for ICDS and MDM have increased, outlays for SABLA and IGMSY were cut down. In this context, it may be noticed that Maharashtra has a high percentage of adolescent girls who are underweight (54.2% in total) and a large percentage of babies are born underweight (20.6% in total). It is important to note that SABLA is the only scheme for nourishment of adolescent

A larger responsibility for investing on nutrition, now falls on states



Source: State Budget documents of Odisha, Madhya Pradesh, Maharashtra, and Andhra Pradesh.

Notes: 1. Odisha ICDS budget includes Emergency Feeding Programme; IGMSY includes MAMATA

2. AP ICDS budget includes AAH-One full meal scheme.

3. Food security budget includes all the expenses incurred under the major heads 2408, 3451, 3475, 4408 and 3475. The expenses are obtained after deducting recoveries. It includes all expenditure incurred on procurement, food subsidy, transportation, storage and warehousing.

4. Food security budget: Maharashtra-includes all the expenses incurred under the 2408, 3451, 3475, 4408 and 3475. The expenses are obtained after deducting recoveries. Thus, it includes all expenditure incurred on procurement, food subsidy, transportation, storage, warehousing, weights and measurements. But does not include expenses incurred by state agencies for subsidy through FCI.

5. Drinking water and sanitation includes allocations for both urban and rural areas.

6. MP-drinking water sanitation includes allocations from the following departments: UDD, RDD / Panchayati Raj, PHE, and School Education department.

7. Andhra Pradesh's budgetary outlays do not include supplementary grants.

Increased autonomy to the states in setting their budgetary priorities did not translate into greater prioritisation for nutrition in three out of four states, for which budgets were analysed

girls and is still in pilot mode. Among these four states Odisha is the only state where there has been a decline in absolute terms in allocations for nutrition-specific schemes primarily due to substantial cut backs in allocations for ICDS and SABLA.

In contrast to nutrition-specific schemes where we observed some redistribution of funds between schemes, there was an increase in allocations for almost all nutrition-sensitive schemes in Odisha, Madhya Pradesh and Maharashtra, except for food security in Madhya Pradesh. However, the budgetary outlays for nutrition-sensitive schemes in Andhra Pradesh have decreased, owing to a decline in the budget for drinking water, which can be traced to the cuts in the Union Budget outlays for NRDWP.

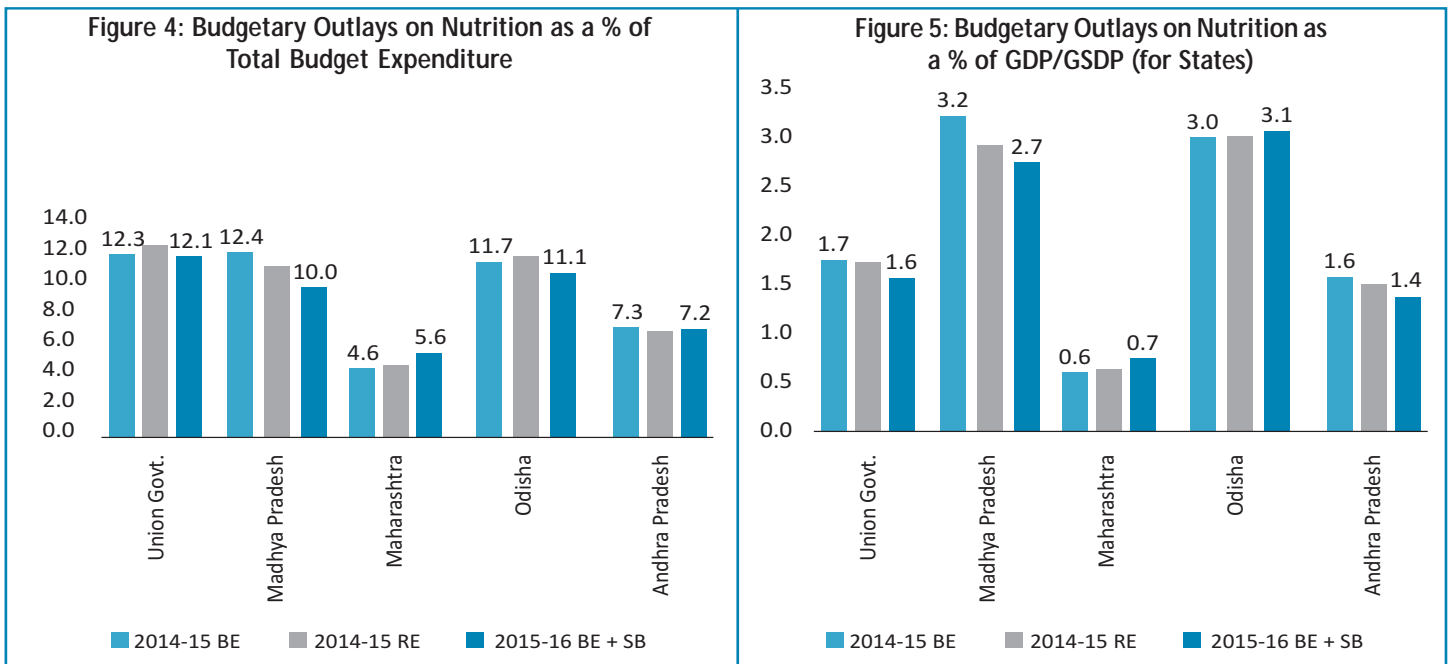
Till now we have only discussed the changes in absolute allocations for nutrition related schemes, following changes in fiscal architecture in the year 2015-16. However, when we see total allocations for these schemes as a proportion of the Total Budget Expenditure (TBE), we find that except for

Maharashtra, there has been a decline in expenditure on nutrition by the other three states and also by the Union Government from 2014-15 BE to 2015-16 (BE+ Supplementary Budget) (see Figure 4). MP recorded maximum decline in expenditure on nutrition from 12.4 percent of TBE in 2014-15 BE to only 10 percent of TBE in 2015-16. This indicates that the increased autonomy to the states in setting their budgetary priorities did not translate into greater prioritisation for nutrition for the other three states.

Even when viewed as a proportion of the total size of the economy in respective states, Madhya Pradesh and Odisha as well as the Union government witnessed a decline in the budgets for nutrition (Figure 5). Although Maharashtra increased the investment in nutrition in 2015-16 (BE+SB), it has one of the lowest figures as less than 1 percent of GSDP is spent on nutrition.

Summing Up

The year 2015-16 brought in a number of changes in the fiscal architecture of India, and the states are still coming to terms with these changes. The



Source for Figures 4 & 5: State Budget documents for the selected states.
Note: Data for Andhra Pradesh budget does not include any supplementary grants.

sudden shift in the funding responsibilities towards states (the greater autonomy in deciding the sectoral priorities in respective state budgets, as well as in the CSS, the approach towards consolidating a number of schemes under an umbrella programme, etc.) require a degree of preparedness on part of the states. While one year might have been too short a period to adequately prepare for these changes and factor them in the respective state budgets, it is expected that the budgets in the next fiscal (i.e. 2016-17) would be a better reflection of the response to these changes.

Although the nutritional indicators in India have improved as per the RSOC report, the extent of malnutrition remains quite high. More than 45 million children under-5 are stunted in India and almost 45 percent adolescent girls in the 15-18 age-group are underweight (BMI<18.5).

Moreover, there are huge variations across states in the prevalence of malnutrition. The budget cuts for nutrition related schemes witnessed in the 2015-16 BE of the Union budget, though reversed to some extent through some additions in supplementary grants, seem to have impacted the investment in nutrition adversely in some states. A comparison of the budgets for nutrition in 2014-15 BE and 2015-16 (BE+SB) reveals while Maharashtra has been able to prioritise its state budget in favour of nutrition, the other three states reflect a mixed picture. There has been a redistribution of funds between schemes which has resulted in increase in expenditure in some schemes at the cost of others. Hence, it is crucial that higher fiscal autonomy to states translates into greater priority towards improving the nutritional outcomes.

One year might have been too short a period to adequately prepare for the fiscal changes and factor them in the respective state budgets, it is expected that the budgets in the next fiscal (i.e. 2016-17) would be a better reflection of the response to these changes.

Using TSP Budget for Addressing Undernutrition Among Tribals

Chandrika Singh and Vani Sethi*

Tribal people have been among the most malnourished groups in the country. Almost 42% tribal children under age-5 years are stunted, compared to 34% for other categories.

Tribal people have been among the most malnourished groups in the country and the results of Rapid Survey of Children (RSOC) report were no different from the previous reports in terms of the caste divide of the undernourished. RSOC estimates that almost 42 percent children under age-5 years belonging to Scheduled Tribes (STs) are stunted as compared to nearly 34 percent children belonging to 'other' category. Although in comparison to NFHS-3 the extent of stunting among ST children below 5 years of age has come down, but in comparison to other groups they are more than 10 years behind when seen in terms of anthropometric indicators. However, the true extent of malnutrition among certain tribes is not evident from these averages. Anthropological studies reveal high (20-39 percent of population: serious) to very high (greater than or equal to 40 percent of population: critical) prevalence of Chronic Energy Deficiency (CED) among tribal population (following the WHO classification of the public health problem of low Body Mass Index (1995))(Das & Bose 2015).

The common explanation tendered for high incidence of malnutrition among STs is that they are physically isolated and confined to forest and hilly areas, which makes it difficult to reach them. However nutrition is a complex phenomenon. It is influenced by not only immediate causes such as adequate nutrient intake and feeding habits, but also by economic, social and political factors which determine resource availability and distribution. In the case of *Adivasis* it has been found that 'discrimination' in access to education, healthcare services, food security schemes and

livelihood opportunities strongly influence their nutritional attainments (Roy et al. 2004; Sabharwal 2011). A related observation was made by NNMB Tribal Report 2007-08. The report pointed out that the marginal improvement in nutritional status of STs between the period 1998-99 and 2007-08, which was accompanied by a decline in food and nutrient intake, could be due to non-nutritional factors such as improvement in access to safe drinking water, better outreach of healthcare services, and improved socio-economic conditions.

While the social sector spending of the Central government improved in the first decade of the twenty-first century, the changes introduced in the Budget 2015-16 have significantly altered the prevailing system of fund allocation for various schemes and purposes, resulting in reduced social sector spending of the Union Government. Tribal Sub-Plan (TSP) outlay of Union Government too came down as a consequence of the fiscal changes initiated last year.

There is, thus, at one end extreme form of deprivation which includes hunger and starvation and at the other, decline in central government funds for the social sectors, as we observe in the next few paragraphs. The changes introduced in the budget 2015-16 do not generate confidence that the issues of deprivation among tribal people will be taken on a priority basis. Also, due to a reduction in the funds made available for nutrition schemes there is a fear that whatever gains made in the past are going to be reversed unless the state governments step up their efforts for

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nutritional spending. In this context, this article highlights two pertinent issues: TSP strategy in the new fiscal scenario and the government policy or the lack of it for tribal nutrition.

TSP in the Changed Fiscal Architecture

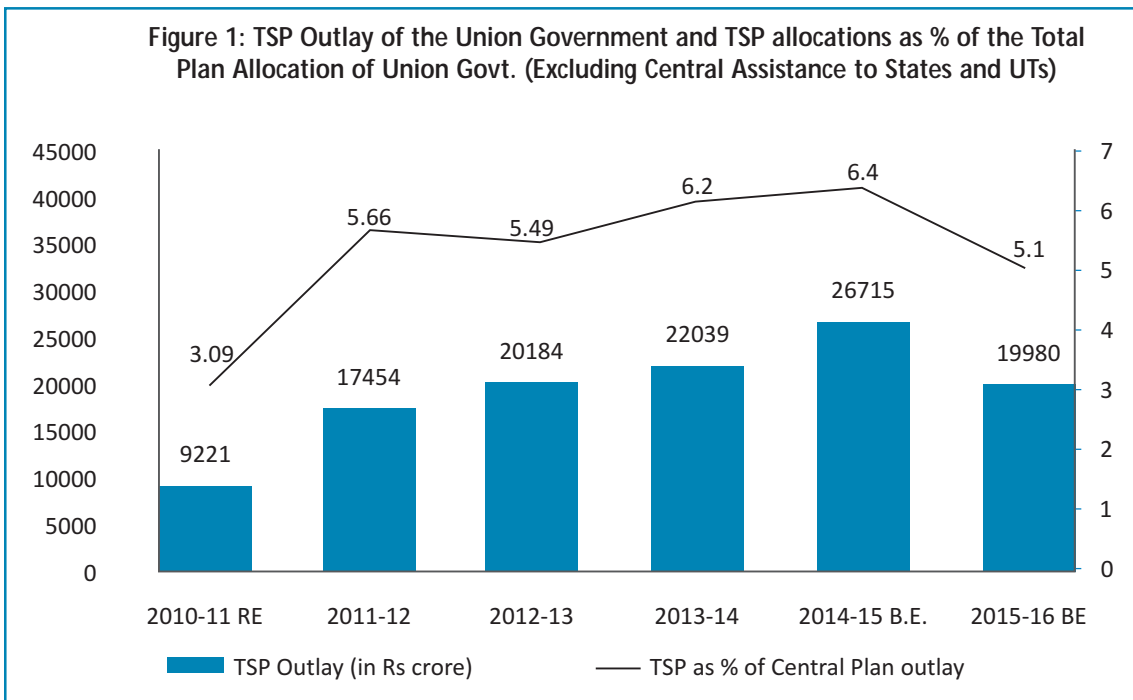
In the year 2015-16, as a consequence of the Fourteenth Finance Commission (FFC) recommendation to devolve greater funds from the central pool of taxes to states, Central Ministries reduced their TSP outlays with the expectation that states would make up for this through higher outlays from State Budgets. TSP allocations of the Union government came down from Rs. 24,598 crore in 2013-14 to Rs 19,979 crore in 2015-16 BE. It may be seen from Figure 1 that even in the past allocations for TSP were below the recommended levels. Thus, funds in proportion to the ST population in the country, i.e. 8.2 percent of the central plan outlay, were not being earmarked for TSP. The Central government has argued that the fall in outlay is due to greater devolution of resources to states

and the fund loss shall be compensated for by states. As is known there is an overlap between tribal concentration areas and backward areas and that there is "high degree of polarisation" in developed districts, with tribal areas lagging far behind other areas (Bakshi et al. 2015). TSP was meant to bridge this gap between tribal concentrated and non-tribal areas by infusing greater resources in tribal areas. These funds were supposed to supplement resources mobilised through other sources such as state plan and central ministries.

Tribal Nutrition Policy and Spending on Tribal Nutrition in the FY 2015-16

Tribal people have always been among the most undernourished group in the country and yet there is no independent nutrition policy especially designed for tribal people. Due to absence of a policy framework for addressing malnutrition among tribal people, the financing for tribal nutrition is limited to existing schemes of the government which may not have a defined tribal

Due to absence of a policy framework for addressing malnutrition among tribals, the financing for tribal nutrition is limited to existing schemes of the government which may not have a defined tribal component.



Source: Compiled by CBGA from Union Budget documents, various years.

Note: Allocations for TSP in 2014-15 BE exclude allocations for MGNREGA.

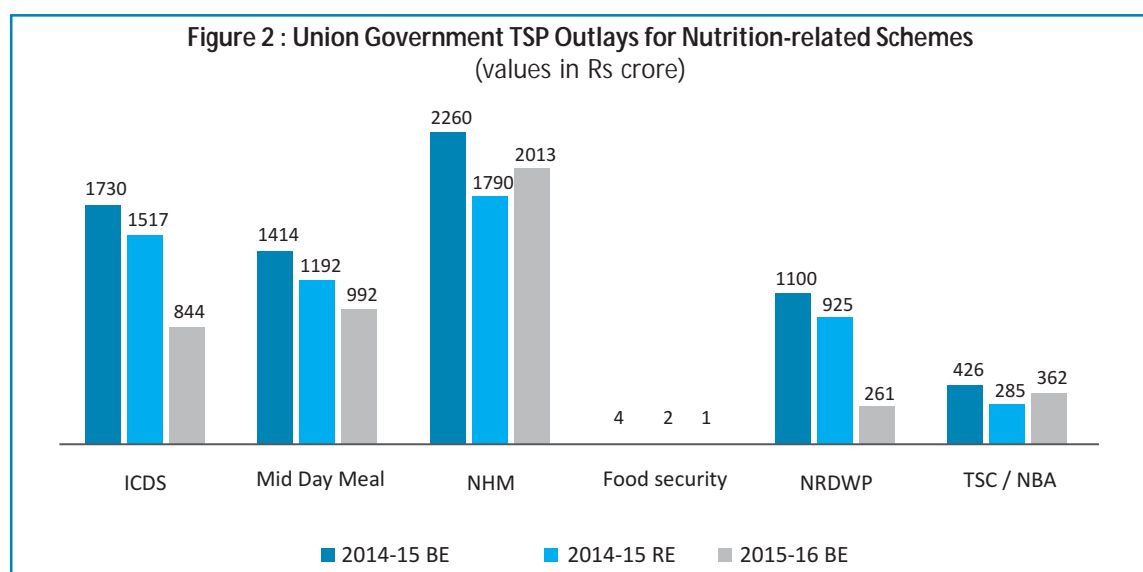
component. This in turn leads to inadequate resources for addressing a problem which requires simultaneous interventions at multiple levels.

Using the multi-sectoral approach to nutrition, we analysed budget outlays of 9 schemes/sectors of the Government of India. They are as follows: ICDS (for children below 6-years), SABLA (also known as Rajiv Gandhi Scheme for Empowerment of Adolescent Girls), Indira Gandhi Matritva Sahayog Yojana (IGMSY, for pregnant women and lactating mothers) and Mid - Day Meal scheme (MDM, for school going children), Reproductive and Child Health (RCH, a component of National Health Mission (NHM)), National Rural Drinking Water Programme (NRDWP), Swachh Bharat Abhiyaan (SBA), Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA), and spending on food security. Budgets of 4 state governments with a large percentage of tribal population (Maharashtra, Andhra Pradesh (AP), Madhya Pradesh (MP), and Odisha) have been analysed in the context of increase in untied transfers to states and cut-backs on CSSs by Union Government. For state budgets, state schemes for the sectors were also considered for the analysis.

Total expenditure through TSP, on nutrition related schemes in 2015-16 BE, was only about Rs 4,472 crore, which constitutes around 0.3% of the total Union Government expenditure

Union Government's TSP Outlay for Nutrition

The Union Government's outlay on nutrition covers major schemes of the government across sectors like food, drinking water, health, sanitation, and poverty reduction. The total allocations for the selected schemes/sector, which include ICDS, IGMSY, SABLA, MDM, SBA, NRDWP, MGNREGA, RCH, and for food security, in 2015-16 BE do not seem substantial compared to the need.¹ Since the TSP allocations are made from the plan outlays of these schemes, TSP outlays are even lower. The combined expenditure through TSP on these schemes in 2015-16 BE was only about Rs 4,472 crore, which constitutes around 0.3% of the total Union Government expenditure. This is lower than the amount spent in 2014-15 (RE) which was about Rs 5,712 crore (Fig. 2). In the current situation, which is marked by agricultural distress due to monsoon failure and rising food prices, (especially that of pulses), it was expected that the Centre would step up efforts to ensure food availability particularly among the most marginalised.



Source: Compiled by the authors from Union Budget documents.

¹ Please refer to article *Public Spending on Nutrition in the New Fiscal Architecture in India* in this series for further details on Union Government's spending on nutrition.

It was earlier stated that due to greater devolution of resources to states, the responsibility for funding for socio-economic development has enhanced for states. We therefore look at state budgets to understand how far they have compensated for the loss of funds in these schemes.

State Governments' TSP Outlay for Nutrition

Following the changes in the fund transfer from the Union Government and the substantial reduction in Central Plan resources, with limited increase in resources states had a formidable task of compensating for the resource gap in schemes. The state's response varied depending on their ability to mobilise greater resources and on their social sector priorities. In our analysis of state budgets it was noted that in the changed scenario the states often redistributed funds between nutrition schemes, resulting in decline in allocations for some schemes.

Odisha is a state with a large percentage of tribal people. The TSP outlay for nutrition-specific schemes of Odisha government came down from Rs. 924 crore in 2014-15 BE to Rs. 805 crore in the 2015-16, following a decline in the total outlays for ICDS and SABLA. Moreover, in the supplementary budget there was a further withdrawal of TSP resources (about Rs 15 crore) from the Emergency Feeding Programme (EFP), which was a food-based intervention in 8 selected districts of the state. It has been argued that the introduction of National Food Security Act and its exclusionary criteria for monthly PDS grain allocation are responsible for the reduction in outlay for the EFP programme (Damodaran 2015).

Though the allocation for both ICDS and MDM in general has improved in the current year in Andhra Pradesh, there was a slight decrease in TSP allocation of MDM. However, overall there was a small increase in total TSP outlay for nutrition-specific schemes (Fig. 3).

Madhya Pradesh is another state where there has been a decline in TSP allocations for nutrition-specific schemes, from Rs. 964 crore to Rs. 891 crore, primarily owing to decline in ICDS allocations. The TSP funds for ICDS came down from Rs. 624.6 crore in 2014-15 BE to Rs. 548.7 crore in the FY 2015-16 (after including supplementary allocations). The TSP funds for MDM too recorded a decline, although allocations for SABLA improved. Here it may be recalled that Madhya Pradesh (where almost 60% children under-5 years of age are malnourished) is amongst the bottom three states along with Bihar and Jharkhand in terms of the percentage of children who are underweight.

With respect to Maharashtra we may note that the TSP budget was not affected by changes in scheme-specific allocations as a different system for TSP allocation is adopted by Maharashtra which will be discussed later in this section.

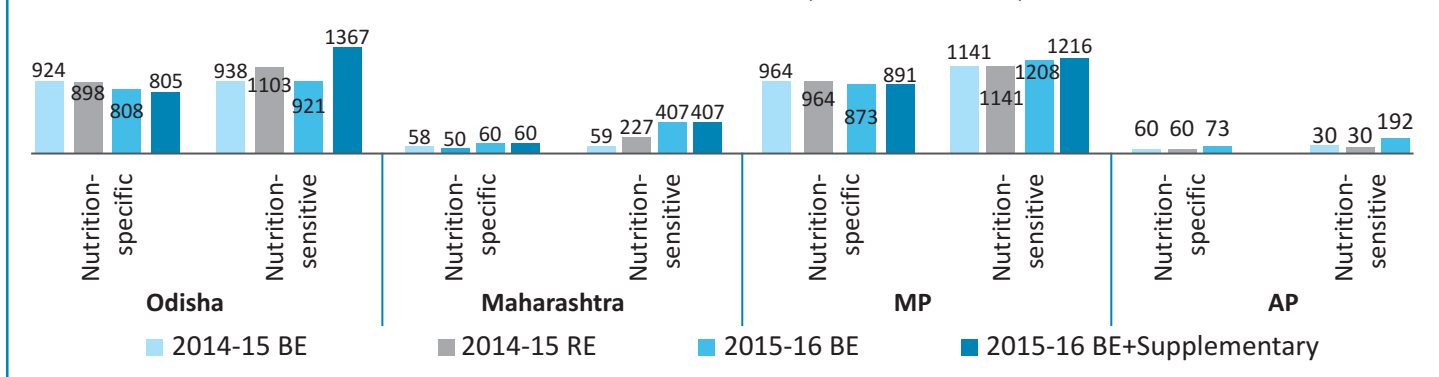
Nutrition-sensitive schemes which have an indirect impact on nutrition and are critical for creating an environment for body to absorb nutrients, too were affected by changes in the fiscal scenario. However, TSP outlays for nutrition-sensitive schemes witnessed the usual trend of slightly increased allocations. The extraordinary increase in the outlay for nutrition-sensitive schemes in Andhra Pradesh is attributable to a rise in allocations for MGNREGA.

With respect to TSP allocations for MGNREGA, it may be recalled that the National Commission for STs had recommended that the wage component of the scheme should not be included in TSP expenditure and only the assets created through MGNREGA funds should be part of TSP. However, a detailed study needs to be undertaken to know the nature of TSP expenses incurred for the scheme by the states.

Overall, we observe that there has been a decline in TSP outlays for nutrition-related schemes as a percentage of the total budget expenditure of the state, except in Andhra Pradesh where

Scenario with respect to TSP outlays for nutrition, across states, presents a mixed picture.

Figure 3: State TSP Outlay for Nutrition-Specific and Nutrition-Sensitive schemes in 2014-15 and 2015-16 (values in Rs. Crore)



Notes:

1. Nutrition-specific schemes considered for the analysis are ICDS, SABLA, IGMSY, and MDM, nutrition-sensitive schemes includes MGNREGA, and expenditure on food security, drinking water, and sanitation. For Odisha, EFP and MAMTA are also included in the nutrition outlays.
2. TSP component of the RCH budget could not be found, hence it is not included in state budget analysis.
3. Maharashtra follows a different method of fund allocation, hence it may not reflect actual spending on these schemes in Scheduled Areas, but the allocations indicate the outlays for these sub-sectors from Total TSP budget of the state.
4. Supplementary budgets included are as follows: MP-3 supplementary budgets, Centre- 1st supplementary budget, Odisha- 1st supplementary budget.

Source: Compiled by the authors from state budget documents.

expenditure on nutrition improved only slightly from a low base. Among the three states (Odisha, MP and AP) and Union Government, Odisha is one of the better performing states and spends around 2.3% of its total expenditure on tribal nutrition. On the other hand, Andhra Pradesh is the worst performer. However, it is disappointing to note that the Union Government allocations have not only come down in the current year, it is also one of the lowest in the country. Analysis of state budget for tribal nutrition shows that there

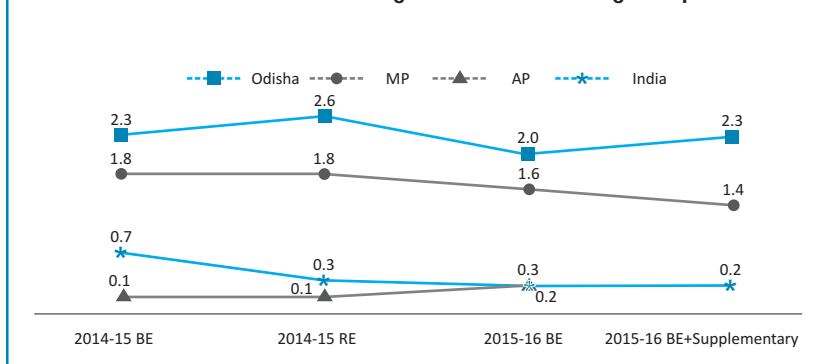
is a large variation in per capita expenditure by states and the Union Government is one of the worst performers.

Maharashtra budget earmarks TSP from the state Annual Plan in proportion to ST population at the beginning of the planning exercise and transfers the TSP funds to Tribal Development Department (a portion of which the department transfers for district TSP). However, funds from the general sector also flow to TSP areas in the usual manner. As Fig. 5 shows TSP outlays for health and nutrition from the total TSP budget have remained below the average recommended values for district and state TSP. Moreover, expenditure on nutrition mainly consists of funding for 'construction of Anganwadi Centres'. Among the three budget heads rural water supply is the only head where allocations have been greater than the percentage recommended.

Conclusion

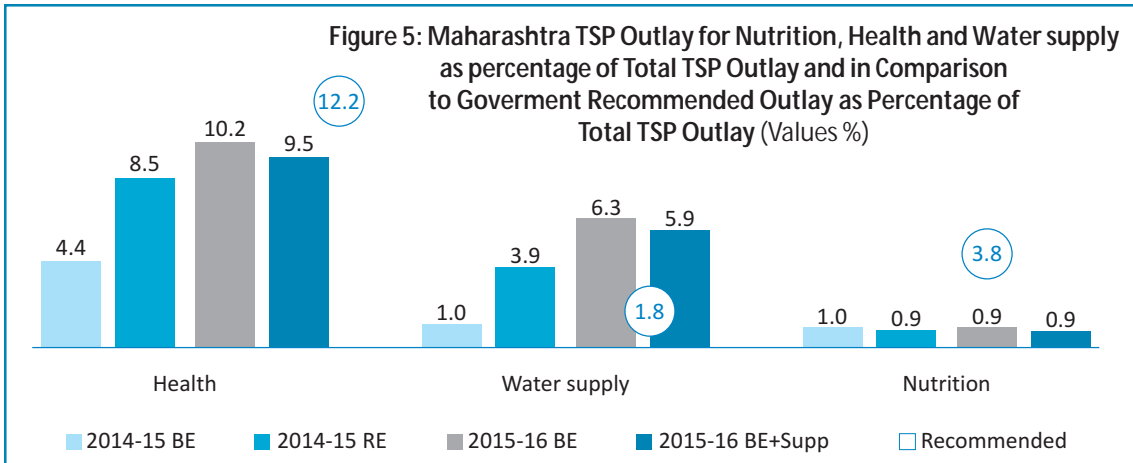
Even though tribal people have been among the most undernourished groups in the country, there is no independent tribal nutrition policy. The

Figure 4: Union and State Governments TSP Expenditure on Nutrition Related Schemes as Percentage of the Total Budget Expenditure



Note: Same as Fig. 3.

Source: Compiled by the authors from state and Union budget documents.



Note: The values for recommended figures have been calculated on the following basis: As per the Tribal department recommendation, the following percentage from the district and state TSP outlay should be earmarked for health, rural water supply, and nutrition: From State TSP budget–8% for health and 5% for nutrition; From district TSP Budgets–15% for health, 3% for rural water supply and 3% for nutrition. State and district share in Total TSP Outlay are 40 and 60 percent respectively. Since the budget document provides data for the combined expenditure incurred by the state and district TSPs, we have computed the average of the recommended values for district and state TSP to arrive at average values seen as blue circle in the figure.

funding for nutritional needs of tribal people is thus restricted to allocations from general sector schemes, which rarely have a defined tribal component. Moreover, the TSP funds are linked to Plan outlays of the government which not only impinges on the policy space of TSP but also restricts spending to a portion of the scheme outlay, with limited scope for additional allocations for areas and groups that require additional funds.

Fiscal squeeze by the Centre in the year 2015-16 and limited fiscal flexibility of the states either due to budgetary constraints or expenditure priorities of a state, adversely affected nutrition spending last year, resulting in decline in TSP spending on nutrition. However, considering the nutritional lag among the STs and fiscal changes adversely impacting nutrition spending, the time may be opportune to press for an independent tribal nutrition policy which is not affected by scheme-specific outlays of Departments and Ministries.

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Considering the nutritional lag among the STs, the time may be opportune to press for an independent tribal nutrition policy which is not affected by scheme-specific outlays of Departments and Ministries.

Outlays for Schemes Related to Nutrition in Union Budget 2016-17 (Rs. Crore)

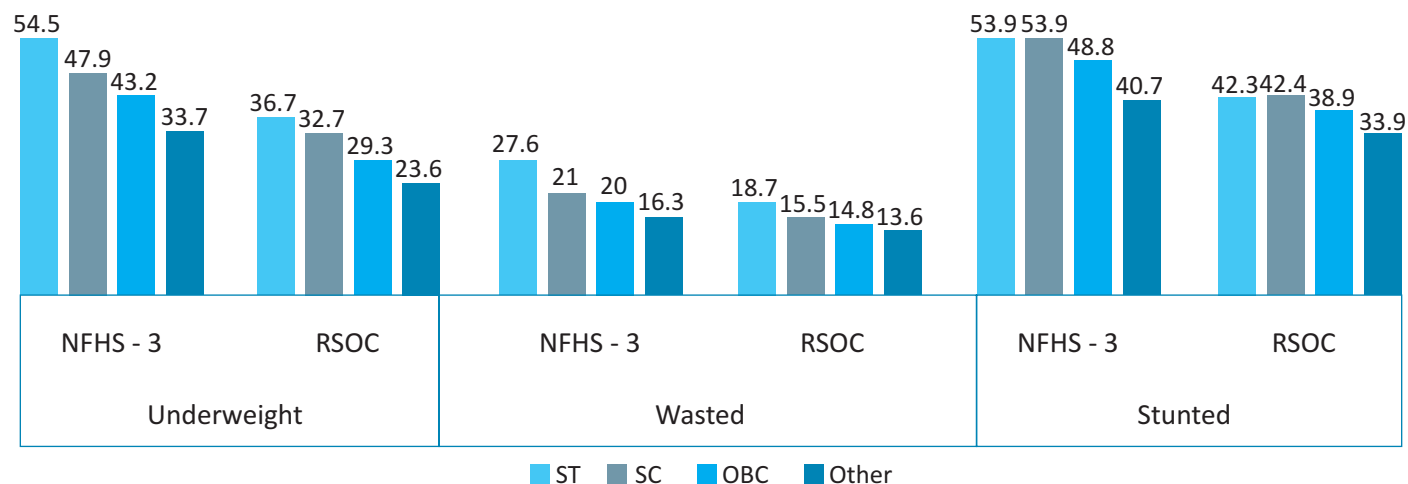
Schemes	2012-13 (Actuals)	2013-14 (Actuals)	2014-15 (Actuals)	2015-16 RE	2016-17 BE	% change between 2016-17 BE and 2015-16 RE
Nutrition-specific schemes						
Integrated Child Development Services Scheme (ICDS)	15,767	16,401	16,684	15,584	14,863	-5
Mid-day Meal (MDM)	10,761	10,918	10,523	9,236	9,700	5
Scheme for Empowerment of Adolescent Girls (SABLA)	504	603	622	476	460	-3
Indira Gandhi Matritva Sahayog Yojana (IGMSY)	82	232	343	234	400	71
National Creche Scheme for Children of Working Mothers (RGNCSWWM)	106	100	98	132	150	14
Total nutrition-specific schemes	27,220	28,253	28,270	25,662	25,573	0
Nutrition-sensitive schemes						
National Health Mission (NHM)	18047	18634	19751	19122	19037	0
National Rural Drinking Water Programme (NRDWP)	10490	9691	9243	4373	5000	14
Swachh Bharat Mission (SBM) (Rural + Urban)	2474	2244	3700	7525	11300	50
Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA)	30,273	32,994	32,977	36,967	38,500	4
National Rural Livelihood Mission (NRLM)	2,195	2,022	1,413	2,672	3,000	12
Food Subsidy	85,000	92,000	1,17,671	1,39,419	1,34,835	-3
National Food Security Mission (NFSM)	1,723	2,027	1,873	1,137	1,706	50
National Mission for Sustainable Agriculture (NMSA)	0	0	1,268	203	1,101	442
National Mission for Oilseeds and Oilpalm (NMOOP)	398	0	316	269	503	87
Total nutrition-sensitive schemes	1,50,600	1,59,612	1,88,213	2,11,687	2,14,981	2
Total Nutrition	1,77,820	1,87,865	2,16,484	2,37,348	2,40,554	1.4
Total Budget Expenditure (TBE)	14,10,367	15,59,447	16,63,673	17,85,391	19,78,060	10.8
GDP at Current Market Prices 2011-12 series	99,51,344	1,12,72,764	1,24,88,205	1,35,67,192	1,50,65,010	11.0
Nutrition Expenditure as percentage of TBE	12.6	12.0	13.0	13.3	12.2	
Nutrition Expenditure as percentage of GDP	1.8	1.7	1.7	1.7	1.6	

Source: Union Budget Documents, various years.

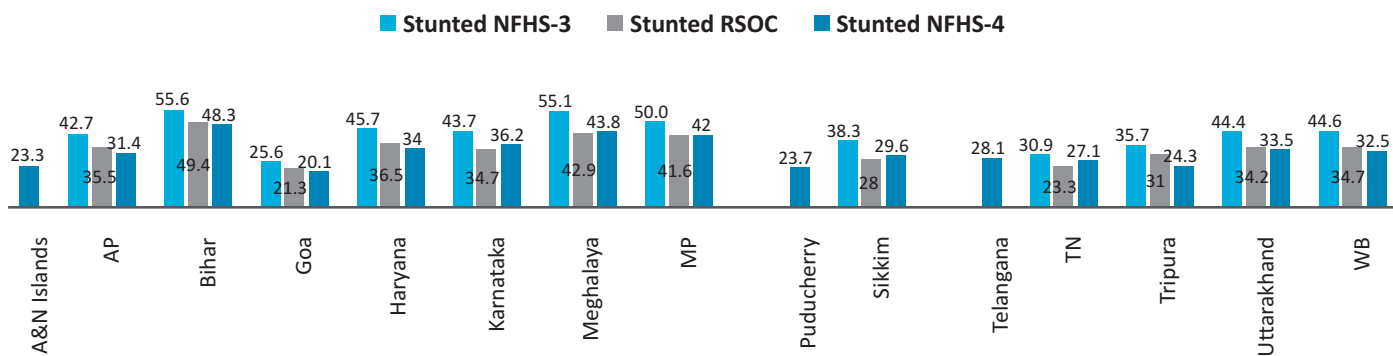
Note: From 2016-17 core ICDS, National Nutrition Mission (NNM), IGMSY, SABLA and RGNCSWWM have been clubbed together as 'Umbrella ICDS.' The allocations for NNM are included in ICDS budget.

Factsheet

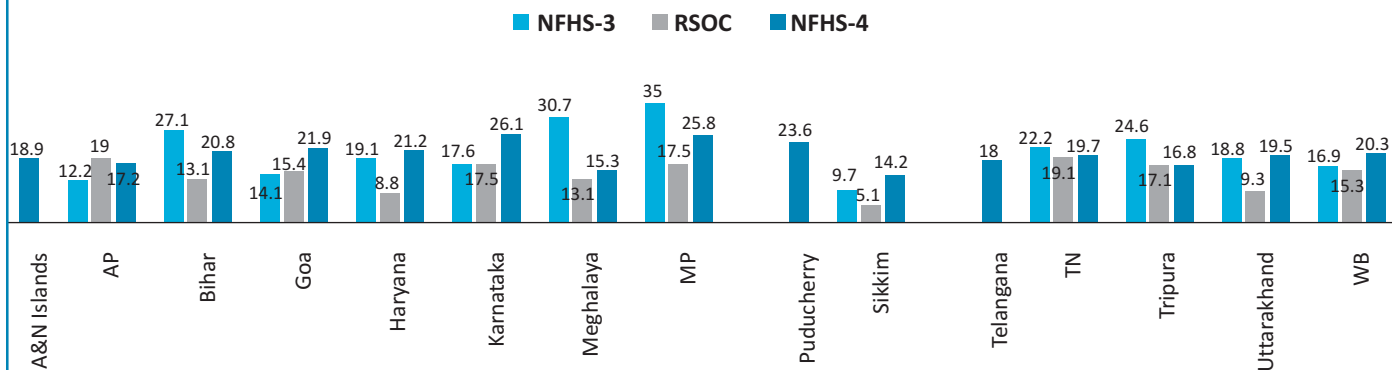
Percentage of Children Under 5-years of Age Classified as Underweight, Wasted and Stunted as per NFHS and RSOC by Social Groups



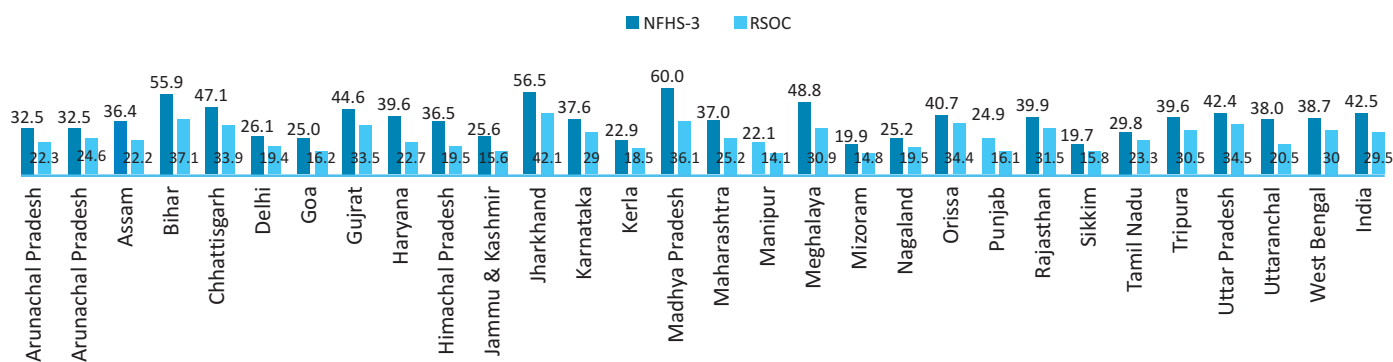
Stunting Prevalence by State as per NFHS-3, RSOC and NFHS-4



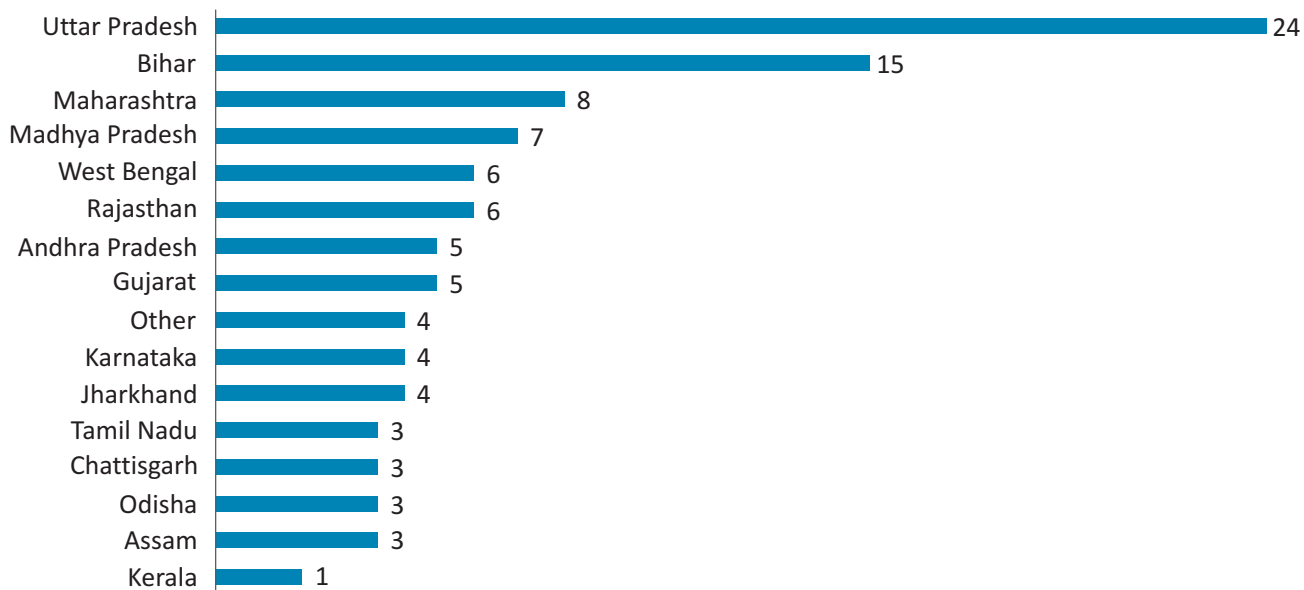
Wasting prevalence by state as per NFHS-3, RSOC and NFHS-4



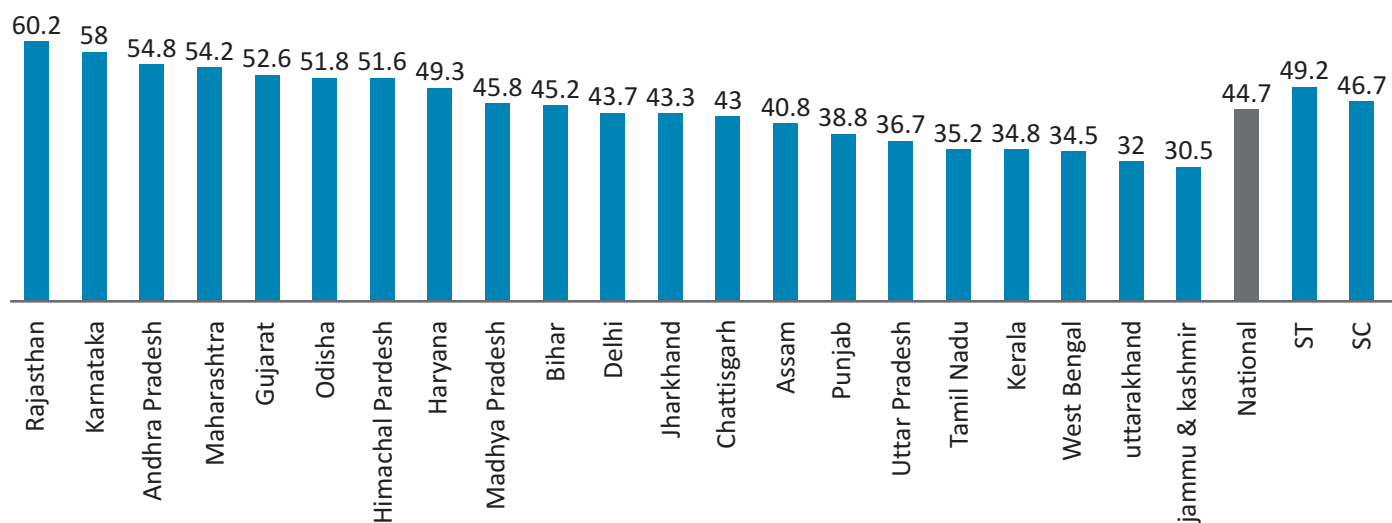
Percentage of Children Under 5-years of Age Underweight, by NFHS-3 and RSOC



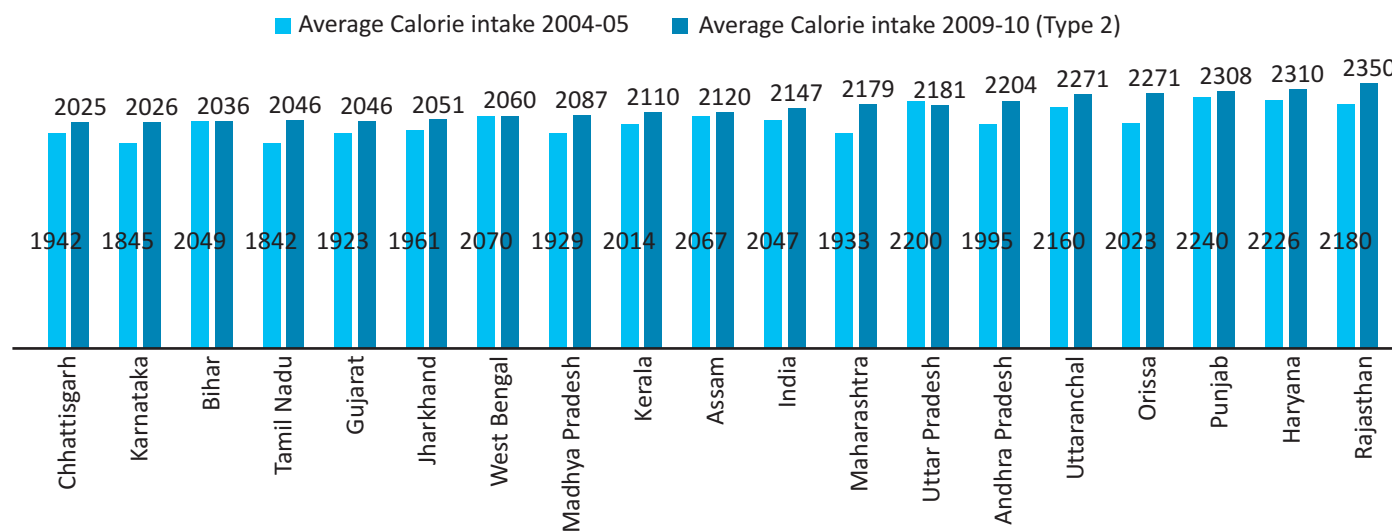
Percentage Distribution of Stunted Children by State, RSOC 2013-14



Percentage of Adolescent Girls with BMI<18.5 by state, Sc and ST, RSOC 2013-14

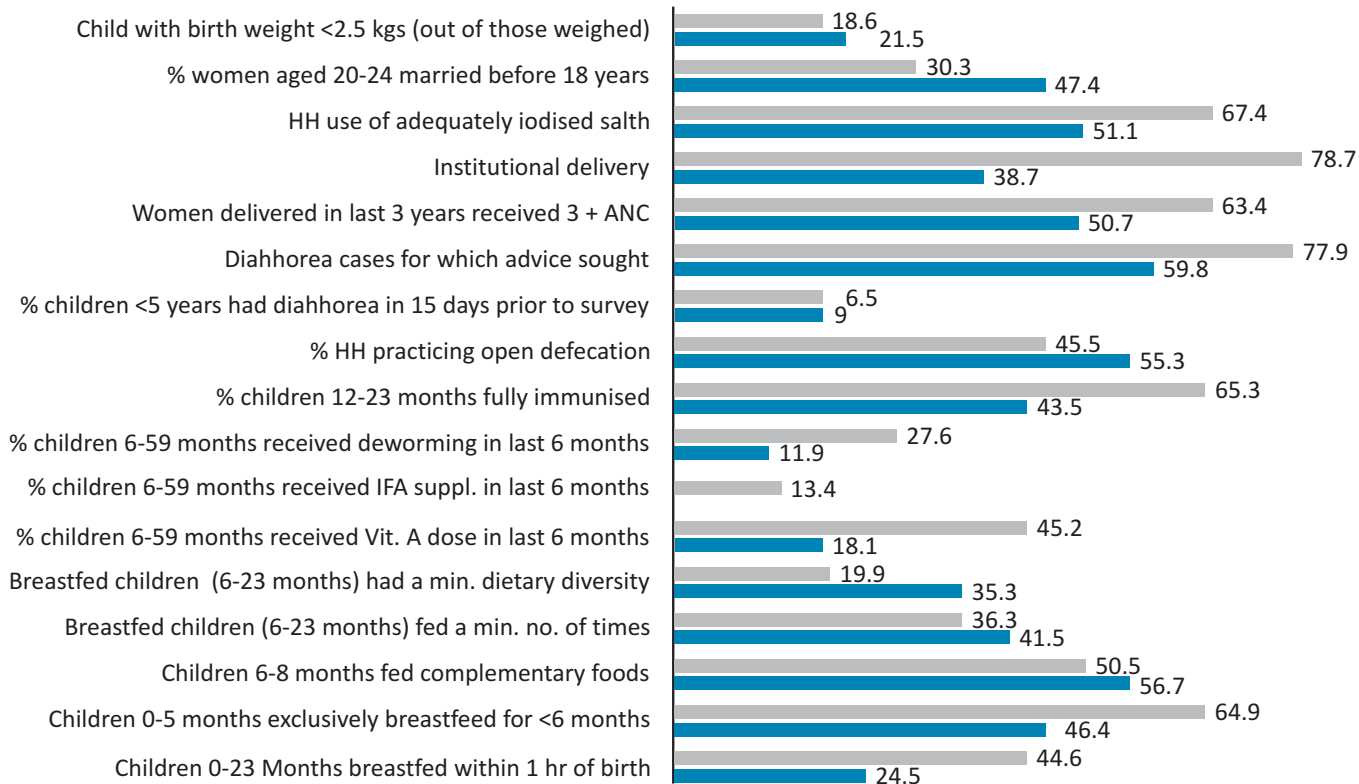


State-wise Average calorie Intake (Values in Kcal)



National Trend in Coverage of essential Nutrition Interventions between NFHS-3 and RSOC

■ RSOC ■ NFHS-3





Understanding Nutrition Basics¹

Types of Child Undernutrition

Stunting or chronic undernutrition is restriction of growth in height and is indicated by a low height-for-age. Stunting starts in the foetal stage and accumulates through the first two years of life; after which point it becomes irreversible. Stunting is a biological adaptation to inadequate maternal nutrition, and then inadequate food, frequent episodes of disease or both – during infancy and early childhood.

Wasting is acute weight loss indicated by low weight-for-height, together with bilateral oedema. Wasting in its severe form is called severe acute malnutrition (SAM). SAM can be easily defined by mid upper arm circumference (MUAC) <11.5 cms and/or presence of bilateral pitting oedema. The risk of death in a SAM child is nine times greater than their well-nourished peers.

Underweight is a composite indicator which measures both – wasting and stunting.

Another form of undernutrition is micronutrient deficiencies (iron deficiency anaemia, vitamin A deficiency and iodine deficiency) often called hidden hunger.

Types of Maternal Undernutrition

Maternal stunting or chronic undernutrition in women is indicated by height less than 145 cms.

Maternal wasting is acute weight loss indicated by maternal MUAC <23 cms, wherein more severe cases will have MUAC less than 21 cms.

Maternal thinness is indicated by body mass index less than 18.5 kg/m². Maternal thinness is however not a good indicator of nutrition status in pregnancy.

Women also suffer from **micronutrient deficiencies** (iron deficiency anaemia, vitamin A deficiency and iodine deficiency) often called hidden hunger.

Nutrition-Specific and Nutrition-Sensitive Interventions

There are two broad categories of nutrition interventions – nutrition specific interventions and nutrition sensitive interventions. Nutrition specific interventions focus directly on nutrient deficits, predominantly: micronutrient supplementation, protein and energy sufficiency, and lipid-based nutrient supplements, breastfeeding and complementary foods. Lancet 2013 suggests that the current total of deaths in children, younger than five years, can be reduced by 15% and stunting by 20% if these interventions are provided at 90% coverage.

¹Helen Young and Susanne Jaspars (November 2006). *The meaning and measurement of acute malnutrition in emergencies: A primer for decision-makers*. London: Humanitarian Practice Network at Overseas Development Institute; Unicef. *Nutrition Basics: Impact of Emergencies on nutrition* <http://www.unicef.org/nutrition/training/2.2/2.html>; Unicef (2013). *Improving Child Nutrition: The Achievable Imperative for Global Progress*. New York: Unicef; FAO FAQs, retrieved from <http://www.fao.org/food/nutrition-sensitive-agriculture-and-food-based-approaches/faq/en/>; and Bradley "Woody" Woodruff, O. Bornemisza, F. Checchi and E. Sondorp. (2009). *The use of epidemiological tools in conflict-affected populations: open-access educational resources for policy-makers*. London: LSHTM, retrieved from http://conflict.lshtm.ac.uk/page_115.htm#Malnutrition_Types; WHO Child Growth Standards – Background 4, retrieved from http://www.who.int/nutrition/media_page/backgrounders_4_en.pdf

Nutrition sensitive interventions emphasize factors which indirectly influence nutritional status, such as: family planning to increase birth spacing and antenatal care, education and social change to impact efforts to reduce teen births, hygiene and sanitation, food security, social protection agriculture, education, and poverty alleviation.

The ten essential nutrition-specific and sensitive interventions for reducing mortality and stunting in children are:

1. Early initiation of breastfeeding (within one hour) – reduces neonatal mortality, improves immunity and prevents infections.
2. Exclusive breastfeeding (for six months) – increases immunity and prevents onset of early infections, thus improves child survival and development.
3. Timely introduction of complementary feeding (after six months) – contributes to growth and development, reduces stunting.
4. Age-appropriate complementary feeding, adequate in terms of quality, quantity and frequency for children in age group 6-24 months – contributes to growth and development, reduces stunting.
5. Safe handling of complementary foods and hygienic complementary feeding practices – reduces infections and stunting.
6. Adequate feeding during and after illness – prevents wasting.
7. Immunization and micronutrient supplementation (Vitamin A, Iron and Zinc) – improves immunity, better survival.
8. Adequate feeding for severely undernourished – addresses wasting and reduces mortality.
9. Adequate nutrition for adolescent girls and women of reproductive age – reduces stunting by improving maternal nutrition.
10. Adequate nutrition for pregnant and lactating women – reduces stunting by improving maternal nutrition.

Essential interventions for adolescent girls and women –preconception, pregnant and lactating

1. Food Consumed is Adequate in Quantity and Nutrient Quality

- ◆ Improve household access to generalised ration (through public distribution system)
- ◆ Improve access/use of micro-nutrient fortified supplementary food (to bridge calorie, protein, micronutrient gap)
- ◆ Devise community-based food security systems (as coping mechanisms)
- ◆ Access to knowledge to improve local diet, production and HH behaviour

2. Prevent Micronutrient Deficiencies and Anaemia

- ◆ Iron and Folic acid (IFA) supplementation
- ◆ Use of iodised salt
- ◆ Maternal calcium and maternal deworming
- ◆ Awareness to prevent tobacco and alcohol use
- ◆ Malaria prevention and treatment, in malaria endemic zones
- ◆ Pre- and peri conceptual folic acid
- ◆ Maternal vitamin A supplement within 8 weeks after delivery

3. Access to Basic Health Services and Special Care for At-Nutritional' Risk

- ◆ Early registration and quality outreach services
- ◆ Monitoring of pre-pregnancy weight and monthly weight gain during pregnancy
- ◆ Expand antenatal/health checkups to include screening and care for at-nutritional risk women (MUAC <23 cm), anaemia, night blindness and malaria in endemic areas
- ◆ Universalise skilled facility-based delivery

4. Improving Hygiene and Access to Water and Sanitation Services

- ◆ Sanitation and hygiene education
- ◆ Access to safe drinking water and improved sanitation facilities

Food Security

Food security is a situation that exists when all people, at all times, have physical, social and economic access to food of sufficient quantity and quality in terms of variety, diversity, nutrient content and safety to meet their dietary needs and food preferences for an active and healthy life.

Low Birth Weight (LBW) Babies

LBW is defined as a birth weight of less than 2,500 grams. This indicator is widely used because it reflects not only the status (and likely nutritional health risks) of the newborn, but also the nutritional well-being of the mother.

Malnutrition

Malnutrition refers to deficiencies, excesses or imbalances in intake of energy, protein and/or other nutrients. It refers more broadly to both undernutrition (problems of deficiencies) and overnutrition (problems of unbalanced diets, such as consumption of too many calories in relation to requirements with or without low intake of micronutrient-rich foods).

Macronutrient Deficiencies

Deficiency of carbohydrates, protein and fat occur when the body adapts to a reduction in macronutrient intake by a corresponding decrease in activity and an increased use of reserves of energy (muscle and fat), or decreased growth.

Micronutrient Malnutrition or 'Hidden Hunger'

It occurs when essential vitamins and/or minerals are not present in adequate amounts in the diet. It can also occur during acute or prolonged emergencies when populations are dependent on a limited, unvaried food source. Vitamin and mineral deficiencies, especially for iron, iodine, zinc and vitamin A, can lead to poor physical growth and development, lowered mental capacity, reduced productivity, impaired immune function, blindness and death. The effects of micronutrient deficiencies are all preventable.

MUAC

Mid-upper arm circumference (MUAC) measures the muscle mass of the upper arm. A flexible measuring tape is wrapped around the mid-upper arm (between the shoulder and elbow) to measure its circumference. MUAC is a rapid and effective predictor of risk of death in children aged 6 to 59 months and is increasingly being used to assess adult nutritional status.

Oedema

Oedema is the excessive accumulation of fluid in body tissues which results from severe nutritional deficiencies. It is an essential indicator for determining the presence of severe acute malnutrition or kwashiorkor. It presents first in feet, then in ankles and lower limbs.

Overnutrition

It refers to a chronic condition where intake of food is in excess of dietary energy requirements, resulting in overweight and/or obesity.

Recommended Dietary Intake (RDI)

The average daily dietary intake level that is sufficient to meet the nutrient requirements of nearly all (97–98 percent) healthy individuals in a particular life stage and gender group. In India, it is the Indian Council of Medical Research (ICMR) that sets up Nutrition Advisory Committees or Expert Groups that recommend the "Dietary Allowances" in respect of energy (Calories), proteins, fats, minerals, iron, vitamins, etc. for various age groups within the population including special groups like infants, pregnant/nursing mothers, children, etc. and at the same time recommend dietary allowance by activity groupings also.

Severe Acute Malnutrition (SAM)

It is defined as the percentage of children aged 6 to 59 months whose weight-for-height is below minus three standard deviations from the median of the WHO Child Growth Standards, or by a mid-upper-arm circumference less than 11.5 cms and/or presence of bilateral pitting oedema. The risk of death in a SAM child is nine times greater than their well-nourished peers.

Undernutrition

Undernutrition is the result of food intake that is continuously insufficient to meet dietary energy requirements, poor absorption and/or poor biological use of nutrients consumed. This usually results in loss of body weight. It includes being underweight for one's age, too short for one's age (stunted), dangerously thin for one's height (wasted) and deficient in vitamins and minerals (micronutrient malnutrition). It may be caused by household food insecurity, inadequate maternal health or child care practices, or inadequate access to health services, safe water, and sanitation.



Understanding Budget Basics

What is a Budget?

A government budget is a legal document that is passed by the legislature and approved by the President of India. It is an annual financial statement of estimated **receipts and expenditures** of the government for the fiscal year concerned.

Classification of Government Receipts

Receipts Budget can be divided into two distinct categories viz. Revenue Receipts and Capital Receipts.

♦ **Capital Receipts:** Capital Receipts lead to a reduction in the assets or an increase in the liabilities of the government. Capital Receipts need not come up periodically in every Budget.

Some examples of Capital Receipts: Capital Receipts that lead to a reduction in assets are Recoveries of Loans given by the government in the past, and Earnings from Disinvestment in government owned enterprises. Capital receipts through Debt lead to an increase in government's liabilities.

♦ **Revenue Receipts:** With this kind of receipts, there is no change in the asset-liability position of the government, i.e. a Revenue receipt neither reduces the assets of the government nor increases its liabilities. Revenue Receipts consist of proceeds of total Tax and Non-Tax Revenues of the government.

Some examples of Revenue Receipts: Receipts from Fees/ User Charges imposed by government; Dividend & Profits from government-owned enterprises (no effect on the size of the original asset of government); Revenue earned from the various types of Taxes.

Classification of Government Expenditure

A. Plan and Non-Plan Expenditure

Plan Expenditure is meant for financing the development schemes formulated under the given Five Year Plan or the unfinished tasks of the previous Plans. Once a programme or scheme pursued under a specific Plan completes its duration, the maintenance cost and future running expenditures on the assets created or staff recruited are not regarded as Plan Expenditure.

Any expenditure of the government that does not fall under the category of Plan Expenditure is referred to as **Non-Plan Expenditure**. Sectors like Defence, Interest Payments, Pensions, Subsidies, Police, Audits, etc. are only Non-Plan Expenditure since these services are completely outside the purview of the Planning Commission; while sectors like Agriculture, Education, Health, Water and Sanitation, etc., have both Plan and Non-Plan Expenditure.

B. Revenue and Capital Expenditure:

The entire Expenditure Budget can be divided into two distinct categories called: Revenue Expenditure and Capital Expenditure.

Capital Expenditure is usually meant for increasing the government's assets or reducing its liabilities. It is, however, not necessary that the assets created should be productive or they should even be revenue generating. Once the government decides to spend for the creation of an asset, Capital Expenditure bears all charges for the first construction of the asset, while Revenue Expenditure bears all subsequent charges for its maintenance and all working expenses. Capital Expenditure of any type is usually not incurred regularly from every Budget. Hence, most kinds of Capital Expenditure are seen as non-recurring expenditure.

Some examples of Capital Expenditure:

- ◆ Government spends for building a new factory (increase in assets)
- ◆ Government gives a Loan to someone (increase in assets)
- ◆ Government repays the Principal amount of a debt it had taken from someone (reduction of a liability)

Revenue Expenditure generally does not have anything to do with creation of assets or reduction of liabilities of the government. Most kinds of Revenue Expenditure are seen as recurring expenditure, since the government incurs those expenditure periodically from every Budget.

Some examples of Revenue Expenditure:

- ◆ Government pays the Interest charges due on a loan from International Monetary Fund (no effect on the size of the original liability of Government)
- ◆ Government expenditure on Food Subsidy (no effect on assets/ liabilities)
- ◆ Government spending on salary of its employees
- ◆ Government spending on procurement of medicines for its hospitals

Different Categories of Plan Schemes

There are three different kinds of Plan Schemes, which are implemented in any State, viz. State Plan Schemes, Central Sector Schemes and Centrally Sponsored Schemes.

State Plan Schemes – The funds for State Plan Schemes are provided only by the State Government, with no ‘direct contribution’ from the Centre. However, the Centre may provide some assistance to the State Government for its State Plan schemes, which is known as ‘Central Assistance for State & UT Plans’. Unlike Centre’s grants to a State under central schemes, the ‘Central Assistance for State & UT Plans’ cannot be tied to any conditionalities of the central government ministries.

Central Sector Schemes (also known as Central Plan Schemes) – The entire amount of funds for a Central Sector Scheme/ Central Plan Scheme is provided by the Central Government from the Union Budget. The State Government implements the scheme, but it does not provide any funds for such a scheme from its State Budget.

Centrally Sponsored Schemes – In case of a Centrally Sponsored Scheme, the Central Government provides a part of the funds and the State Government provides a matching grant. Conventionally, the CSS were meant to be introduced in those sectors that fall in the Union List and occasionally in the Concurrent List of the Constitution. However, some sectors (such as health) despite being in the State List were not accorded adequate priority in terms of public provisioning. Hence CSS were introduced in such sectors as well.

Deficit and Debt

The excess of government’s expenditure over its income is known as ‘Deficit’. Thus, deficit refers to a gap, and the Government takes Debt to cover that gap. Until the late 1990s, Govt. of India could ask RBI to print money to cover a part of this Fiscal Deficit (called Monetisation of Fiscal Deficit). But that practice has been discontinued.

Fiscal Deficit: Fiscal Deficit is the gap between the government's total expenditure (including loans net of repayments) and its sum total of non-debt receipts. Thus, fiscal deficit indicates the total borrowing to be made by the government in a particular year.

Revenue Deficit: The gap between Revenue Expenditure of the Govt. and its Revenue Receipts is called the Revenue Deficit.

Budget Estimates (BE) and Revised Estimates (RE)

Let's consider the new Budget being presented in Parliament on 29th February, 2016. The estimates presented in this Budget for the approaching fiscal year, i.e. 1st April 2016 to 31st March 2017, would be called Budget Estimates (BE). These are the initial receipts and expenditure, which get further revised in Revised Estimates.

The estimates presented in this Budget for the fiscal year 2015-16, based on the disbursements in the first two to three quarters of that fiscal year would be called as Revised Estimates (RE). Revised Estimates are not voted by the Parliament, and hence by itself do not provide any authority for expenditure. Any additional projections made in the Revised Estimates need to be authorised for expenditure through the Parliament's approval (in case of New Service/New Instrument of Service, etc.) or by Re-appropriation order.

Actuals or Accounts are amounts of receipts and expenditures that finally get recorded in the Accounting authorities' books, reflecting the "Actual" receipts and expenditures for financial year, say, beginning on 1st April, 2014 and ending on 31st March 2015.

So, this Union Budget 2016-17, would present the information for the following: 2014-15 (Actuals), 2015-16 (BE), 2015-16 (RE) and 2016-17 (BE).



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ABOUT BUDGET TRACK

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