



Public Investment on Food and Nutrition for Socially Excluded and Marginalised Groups and Directions for Public Policy and Public Finance

FLAIR Policy Paper 5

March 2015

CONTENT	Page No.
I. Context	2
II. Financing Food and Nutrition Programmes in India	5
III. Priority Attention to Socially Disadvantaged Groups – SCs and STs	6
III.1 Share of SCP and TSP in total Nutrition Budgets	7
III.2 Share of SCP and TSP in important Nutrition Programmes/schemes	8
III.3 Utilization of Nutrition provisions under SCP and TSP	10
IV. Gap between Fund Requirement and Actual Allocations	11
V. Other Nutrition Programmes under National Health Mission and State Specific Schemes on Nutrition	12
V.1 Share of other Nutrition Programmes in the Food and Nutrition Schemes budgets	14
V.2 Under-utilization under Nutrition programmes in National Health Mission	16
VI. Areas needing priority in Public Policy for Nutrition – The CMAM Approach	17
VII. Public Finance - Need for Further Study on Costing of Supplementary Food and Operational Protocols	22
Annexure 1	23

I. Context

India continues to have the dubious distinction of being a leading country on many malnutrition and mortality indicators. Malnutrition dimensions have now reached a situation of alarm with more than 50 per cent of the population suffering from some form of malnutrition or micronutrient deficiency, resulting in suboptimal cognitive and physical development, low productivity and high health care costs. The country ranks among the top 6 nations in the world having malnourished children and tops the list of countries with yearly incidence of deaths of children below 5 years. In the year 2012 there were 14 lakh under-five deaths in India¹.

Malnutrition, severely acute or otherwise, is estimated to be a contributing factor in over 50 per cent of child deaths. The prevalence of severely acute malnutrition (weight for height < -3 z-scores of the median NCHS/WHO reference) is estimated to be 4 per cent in India (as per NFHS 3, 2005-06) translating to approximately 60 lakhs severely acute malnourished children at one time in India as per census 2011. The prevalence of acute malnutrition (weight for height < -2 z-scores of the median NCHS/WHO reference) is 20 per cent in India (as per NFHS 3) translating to approximately 3 crores acutely malnourished children at one time in India as per census 2011.

Malnutrition amongst children is a factor of household level food and nutrition insecurity, lack of health care and extremely poor conditions of public health including water, sanitation and hygiene. Lack of basic sanitation in India, especially in high-density areas is one of the key reasons for severe child malnutrition burden among indigent poor and backward groups. Research suggests that an unhygienic environment combined with high population density creates a perfect storm for diseases to thrive, and malnutrition to flourish in India. Residents of nearly 59.4 per cent of the country's rural homes defecate in the open.² The absence of sanitation exposes children to infectious diseases such as typhoid and diarrhoea, which rob

¹Levels and trends in Child Mortality, Report 2013, by UNICEF

² 69th round NSSO survey report on drinking water, sanitation, hygiene and housing condition in India

them of their ability to absorb nutrients. States like Kerala, Manipur, Mizoram and Sikkim, where 80% or more of the rural population have access to toilets, have the lowest levels of child malnutrition in India. Conversely, within India amongst the different states, Madhya Pradesh, Bihar and Jharkhand top the list with as high as 85 percent home in Bihar, 86.9 percent in Madhya Pradesh and 77 percent of homes in Jharkhand having no toilet facilities³ where child malnutrition rates are also the highest. States of Bihar, Jharkhand, and MP are among the worst performing states in terms of improvement on malnutrition indicators as seen in Table 1.

Table 1: Malnourished Children (under 3 years of age) in Bihar, Jharkhand, MP and All India

	Malnourished children under 3 years of age below -3 SD according to “Height-for-Age index”(Stunting)		Malnourished children under 3 years of age below -3 SD according to “Weight-for-Height index” (Wasting)		Malnourished children under 3 years of age below -3 SD according to “Weight-for-Age index” (Underweight)	
	%age	Number	%age	Number	%age	Number
India	27.6	245.91 lakh	6.6	58.80 lakh	18.5	164.83 lakh
Bihar	29.1	29.05 lakh	8.3	8.29 lakh	24.1	24.06 lakh
Jharkhand	26.8	10.74 lakh	11.8	3.40 lakh	26.1	7.51 lakh
MP	26.3	15.60 lakh	12.6	7.47 lakh	27.3	16.19 lakh

Social inequalities are found in every aspect of socio-economic well-being such as education, health and income. Among the different social groups the scheduled population (both SC & ST) are mainly found to be vulnerable to the effect of child-undernourishment when compared to child under nutrition among higher caste population. The following table states the anthropometric data of India across social groups.⁴

³ <https://sanitationupdates.wordpress.com/2012/03/16/india-census-more-people-have-a-mobile-phone-than-a-household-toilet/>

⁴ Calculated from the NFHS-3 dataset

Table 2: Malnutrition in different Social Groups

Social Groups	Stunting		Underweight		Wasting	
	<i>Below-2 SD</i>	<i>Below-3 SD</i>	<i>Below-2 SD</i>	<i>Below-3 SD</i>	<i>Below-2 SD</i>	<i>Below-3 SD</i>
SC	53.9	27.6	48.0	18.5	21.2	6.6
ST	53.9	29.1	55.0	24.9	27.6	9.3
OBC	48.8	24.5	43.2	15.7	20	6.6
Others	40.7	17.8	33.7	11.1	16.3	5.2

Higher incidences of child under nutrition, Low Birth Weight children and Anaemic children among SCs and STs are direct fallout of prevailing multidimensional inequities across the different social groups in India. Mother's poor nutritional and educational status, higher birth order, poor wealth index, poor vaccination rates, being the determining factors for child undernutrition are quite higher among the SCs & STs.

Table 3: Contributing Socio-Economic factor for high incidence of Under Nutrition among Disadvantaged Social Groups⁵

	SC	ST	OBC	Others
Percentage of LBW children	23.7	22.3	21.3	20.7
Children moderately Anaemic	43.7	47.2	40.5	34.8
<u>Mother's Nutritional Status</u>				
i) Thin	43.6	46.3	38.2	33.8
ii) Normal	52.1	52.2	55.1	54.8
iii) Obese	4.4	1.5	6.6	11.5
<u>Birth Order</u>				
i) 3 to 4	32.6	34.9	32.7	27.2
ii) 5 or above	22.4	26.3	20.1	14.3

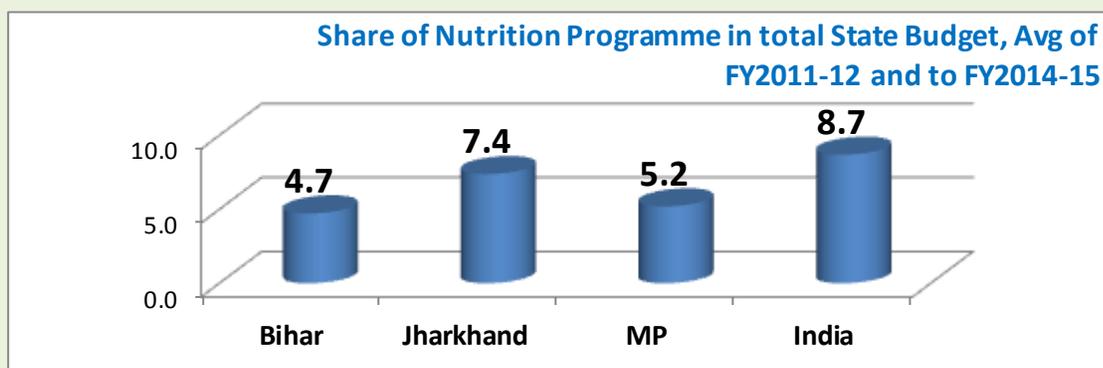
⁵ NFHS-3 dataset

Children Vaccinated (< 2 years)	29.8	23.5	30.0	40.9
Mothers with no Education	58.5	69.1	53.1	32.7
Wealth Index – poor	59.1	77.2	46.9	29.0

II. Financing Food and Nutrition Programmes in India

When the situation is so grim it is important that the problem of malnutrition receives necessary and adequate attention of the public policy and public finance. We have analysed the budget outlays and expenditure patterns for the Food and Nutrition schemes of the Government of Union of India and the three the States with worst indicators of Child Malnutrition across all the social groups in the Country viz., Bihar, Jharkhand and Madhya Pradesh. Understanding that the burden of child malnutrition is higher among the Scheduled Castes and Scheduled Tribes we have done a disaggregated analysis of allocation and expenditure for the SCs and STs. We have analysed the trends and patterns of Government’s financial commitments to address malnutrition among children belonging to SCs and STs from the earmarked budget heads of Special Component Plans (SCPs) for the Scheduled Castes and Tribal Sub Plan (TSP) for Scheduled Tribes. We have taken the schemes of – (i) ICDS, (ii) MDM, (iii) SABALA, and (iv) Food and Civil Supplies Schemes including Food Subsidies.

Figure 1: Share of Allocations on Food and Nutrition Schemes in Total Budget



There has been in general an increase in allocation in Food and Nutrition programmes between FY 2011-12 and FY 2014-15. But the shares of nutrition schemes in total Union and respective State Budgets have been highly inadequate considering the grim status of malnutrition. Over the years allocations in Jharkhand shows a decreasing trend.

- India: The share increased from 8.21 per cent to 9.60 per cent : Average stands at 8.7 per cent
- Bihar: The share increased from 4.37 per cent to 5.09 per cent : Average stands at 4.7 per cent
- Jharkhand: The share decrease from 8.17 per cent to 6.00 per cent: Average stands at 7.4 per cent
- MP: The share increased from 4.14 per cent to 5.07 per cent: Average stands at 5.2 per cent.

III. Priority Attention to Socially Disadvantaged Groups – SCs and STs

Acute malnutrition in children is a big public health problem. It is the underlying cause for deaths from communicable diseases like diarrhea and pneumonia. The burden is higher on the children belonging to socially disadvantaged groups and thus there is a provision for earmarking allocations in the Government Budgets for these groups.

Special Component Plan (SCP) and Tribal Sub Plan (TSP) were introduced in India to channel funds for SCs and STs in proportion to their share in the total population. But the share of plan allocations under SCP and TSP heads in total plan allocations in Union Budget (excluding Central Assistance for State and UTs) are still far below than the stipulated norm of 17 percent and 9 percent respectively.⁶

⁶ as per census 2011, share of SCs and STs in total population calculated as 17 percent and 9 percent respectively

- Share of allocation under SCP in total plan allocation in Union Budget stands at 10.4 percent in FY 2014-15.
- Share of allocation under TSP in total plan allocation in Union Budget stands at 6.7 percent in FY 2014-15.

On an average between FY 2011-12 and FY 2014-15, 17 per cent of total provision made under SCP head was for Food and Nutrition Programmes/interventions and 13.3 per cent of total Provision made under TSP head was for Nutrition Programmes/interventions.

III.1 Share of SCP and TSP in total Nutrition Budgets

Union Government has not been fulfilling SCP and TSP guidelines of earmarking Plan allocations for SCP and TSP in proportion to their population. Between FY 2011-12 and FY 2014-15, the share of provisions under **SCP** in total Nutrition budget stands at

- 16.58 per cent in Bihar
- 11.03 per cent in Jharkhand
- 12.78 per cent in MP

On an average, between FY2011-12 and FY2014-15, the share of provisions under **TSP** in total Nutrition budget stands at,

- 0.97 per cent in Bihar
- 46.86 per cent in Jharkhand
- 16.78 per cent in MP

Jharkhand shows higher share because of higher allocations under food and civil supplies schemes from the TSP allocations. Bihar has miniscule allocation from TSP as the State has almost no tribal population.

III.2 Share of SCP and TSP in important Nutrition Programmes/schemes

Integrated Child Development Scheme

SCP and TSP heads at the State level finds very less allocation under ICDS when compared to that in Union level. On an average between FY2011-12 and FY2014-15, share of SCP in total ICDS budget stands at -

- 23.2 per cent in India
- 7.9 per cent in Bihar
- 5.1 per cent in Jharkhand
- 11.4 per cent in MP

Share of TSP in total ICDS budget on an average between FY 2011-12 and FY 2014-15 stand at -

- 10.2 per cent in India
- 1 per cent in Bihar
- 28.4 per cent in Jharkhand and
- 16 per cent in MP

Bihar has miniscule allocation from TSP as the State has almost no tribal population.

Nutrition Meal Programme in Schools

On an average between FY 2011-12 and FY 2014-15, share of SCP in total budget for Nutrition Meal Programme in Schools (MDM) stands at –

- 20.1 per cent in India
- 24.7 per cent in Bihar
- 16.3 per cent in Jharkhand and
- 23 per cent in MP

Share of TSP in total Nutrition Meal Programme in Schools (MDM) budget, on an average between FY 2011-12 and FY 2014-15 stand at –

- 10.8 per cent in India
- 2.4 per cent in Bihar
- 46 per cent in Jharkhand and
- 30 per cent in MP

Bihar has miniscule allocation from TSP in Nutrition Meal Programme in Schools because the State has almost no tribal population.

Rajiv Gandhi Scheme for Empowerment of Adolescent Girls (SABLA)

On an average between FY2011-12 and FY2014-15, share of SCP in total budget for SABLA stands at –

- 20.6 percent in India
- 6.6 percent in Bihar
- 8 per cent in Jharkhand and
- 3.8 per cent in MP

Provision for TSP for SABLA is not mentioned at Union level. On an average between FY 2011-12 and FY 2014-15, share of TSP in total budget for SABLA stands at –

- 15 percent in Bihar
- 44 percent in Jharkhand and
- 5.3 percent in MP

III.3 Utilization of Nutrition provisions under SCP and TSP

Table 4: Percentage under-utilisation for Nutrition programme, Average of FY 2011-12 to FY 2012-13

	General	SCP	TSP
India	+0.8	5.9	8.6
Bihar	28.0	25.7	20.3
Jharkhand	24.6	24.9	20.5
MP	5.1	24.9	25.8

In the individual nutrition scheme, major portions of provisions made under SCP and TSP heads have been unutilized in last year for which expenditure figures are available (FY2012-13).

Under utilisation in FY2012-13, under the SCP head is as follows:

- **All India:** 10.2 per cent of MDM provisions, 19 per cent of provision for SABLA and 8 per cent of provision for Food civil supplies scheme have been unspent.
- **Bihar:** 5 per cent of ICDS budget, 38 per cent of MDM provisions, 54 per cent of provision for SABLA and 3 per cent of provision for Food civil supplies scheme have been unspent.
- **Jharkhand:** 17 per cent of ICDS budget, 16 per cent of MDM provisions, 88 per cent of provision for SABLA and 20 per cent of provision for Food civil supplies scheme have been unspent.
- **MP:** 33 per cent of ICDS budget, 49 per cent of MDM provisions, 8 per cent of provision for SABLA and 81 per cent of provision for Food civil supplies scheme have been unspent.

Under utilisation in FY 2012-13, under the TSP head is as follows:

- **All India:** 14 per cent of ICDS budget and 9 per cent of MDM budget in India have been unspent.
- **Bihar:** 41 percent of provisions for MDM have been unspent.
- **Jharkhand:** 18 per cent of ICDS budget, 35 per cent of MDM provisions, 5 per cent of provisions for SABLA and 17 per cent of provisions for Food civil supplies scheme have been unspent.
- **MP:** 47 per cent of ICDS budget, 51 per cent of MDM provisions, and 16 per cent of provisions for Food civil supplies scheme kept unspent.

This pattern of underutilization of allocations from SCP and TSP budget heads shows that provisions are not reaching the needy and are a big contributing factor in their poor status on malnutrition.

IV. Gap between Fund Requirement and Actual Allocations

The gap between financial requirement based on the government's own component wise unit cost calculation and actual provisions made under schemes like MDM, ICDS shows bad planning by the government.

Nutrition Meal Programme in Schools (MDM): The figures in this section are computed based on the record of physical status on different components viz. current physical coverages of children, CCH, amount of foodgrains(rice and wheat) allocated in primary and upper primary schools in different states. These units of the components are then multiplied the associated cost (such as, cost of foodgrains for wheat and rice, cooking cost for children approved by PAB, transportation cost per MT food grain and honorarium for CCH) mentioned in government's own financial estimates to get required fund for each component. Summation of all such components in primary and upper primary levels shows the actual requirement of fund under MDM that is taken to compare with actual allocations

under MDM to calculate the gap in resource allocation in each state. Gap between fund requirement and actual allocation for MDM scheme in the FY 2014-15, stands at –

- Rs. 2966.56 crore in India
- Rs. 120.11 crore in Bihar
- Rs. 316.93 crore in Jharkhand
- Rs. 178.36 crore in MP

Supplementary Nutrition Programme under ICDS: The gap analysis in terms of resources for SNP-ICDS has been done based on the official record, as claimed by the Government, as on March' 2014, on number of beneficiaries (children under 6, malnourished children, P&L mothers) in Union of India and states of Bihar, Jharkhand and MP. These figures are then multiplied with the associated per unit cost estimated in government's own financial memorandum (that is, the revised norm of 2012 on per beneficiary per day and number of days to be covered for each category of beneficiary). Gap between fund requirement and actual allocation for SNP under ICDS in the FY 2014-15, stands at –

- Rs. 6627.53 crore in India
- Rs. 1719.18 crore in Bihar
- Rs. 281.23 crore in Jharkhand
- Rs. 953.42 crore in MP

V. Other Nutrition Programmes under National Health Mission and State Specific Schemes on Nutrition

Other nutrition specific programmes/interventions mainly include programmes under the National Health Mission (NHM) at Union Level and state specific interventions under NRHM + RMNCH plus flexi-pool of state project implementation plans (PIPs) having direct/indirect benefit to mitigate malnutrition among children, adolescents and P&L women in states like

Bihar, Jharkhand and MP. In India, interventions under NHM that largely address nutrition status of children, adolescents and women include the following (including the flexible pool to the states, UTs and NE areas)

- National Iodine Deficiency Disorders Control Programme
- Reproductive and Child Health Project
- Routine Immunization
- NRHM - RCH Flexible Pool
- Mission Flexible Pool of State Project Implementation Plans (PIPs)
- RCH Flexible Pool of State Project Implementation Plans (PIPs)
- NHM for North Eastern Areas and Sikkim

Nutrition and Health programme under NRHM + RMNCH plus flexi-pool that are found common in these states include -

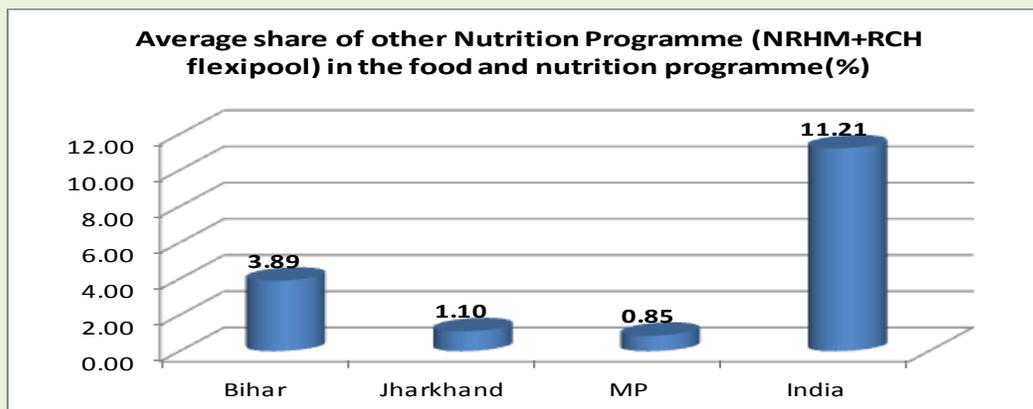
- 1 National Iron Plus Initiative- including Dissemination, trainings, meetings etc; Distribution of IFA syrups to children under 5 years and tablets among children of 5-10 years; IFA tablets/Sucrose among pregnant and lactating women
- 2 Weekly Iron and Folic Acid Supplementation Programme (WIFS)
- 3 Infant and Young Child Feeding/IYCF
- 4 Management of diarrhoea & ARI & micronutrient malnutrition
- 5 Vitamin A solution for Addressing Micronutrient Malnutrition to improve the survival of child and reduction in U5MR*
- 6 Care of Sick Children and Severe Malnutrition (e.g. NRCs, CDNCs etc.)
- 7 Micronutrient Supplementation Programme (cost of activities except cost of procurement of supplements)
- 8 National iodine deficiency disorder control programme

Programmes like de-worming, Incentive for referral of SAM cases to NRC and follow up of discharge SAM children from NRCs/Community day care for SAM management are operational in Bihar and MP respectively though the allocations are not uniform in all the years.

V.1 Share of other Nutrition Programmes in the Food and Nutrition Schemes budgets

Estimates and expenditure details for other Nutrition Programmes are computed from the expenditure budget, Volume II under the Department of Health and Family Welfare (demand no: 47) in Union level and state level PIP documents of Bihar, Jharkhand and Madhya Pradesh in the official website of NRHM, Gol.

Figure 2: Average percentage share of other nutrition programmes in Food and Nutrition Programmes (2011-12 to 2014-15)



The share of other nutrition programmes in total budget for Food and Nutrition in India and states, on an average between 2011-12 and 2014-15 stands at –

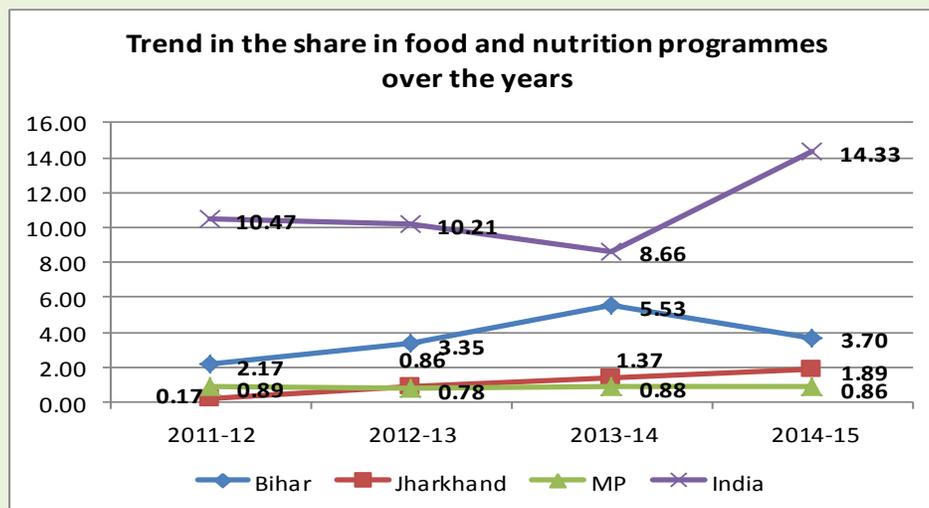
- 11.21 per cent in India,
- 3.89 per cent in Bihar,
- 1.10 per cent in Jharkhand, and
- 0.85 per cent in Madhya Pradesh

Table 5: Allocations for Nutrition Interventions under NRHM (2011-12 to 2014-15)

(NRHM and RCH flexi-pool)				
Rs. In lakh				
	2011-12	2012-13	2013-14	2014-15
India	1132921.00	1270406.00	1137583.65	2469088.00
Bihar	6196.94	11106.22	26536.58	22022.33
Jharkhand	441.48	2681.86	3705.38	5718.05
MP	2988.70	3726.80	4693.40	5101.90

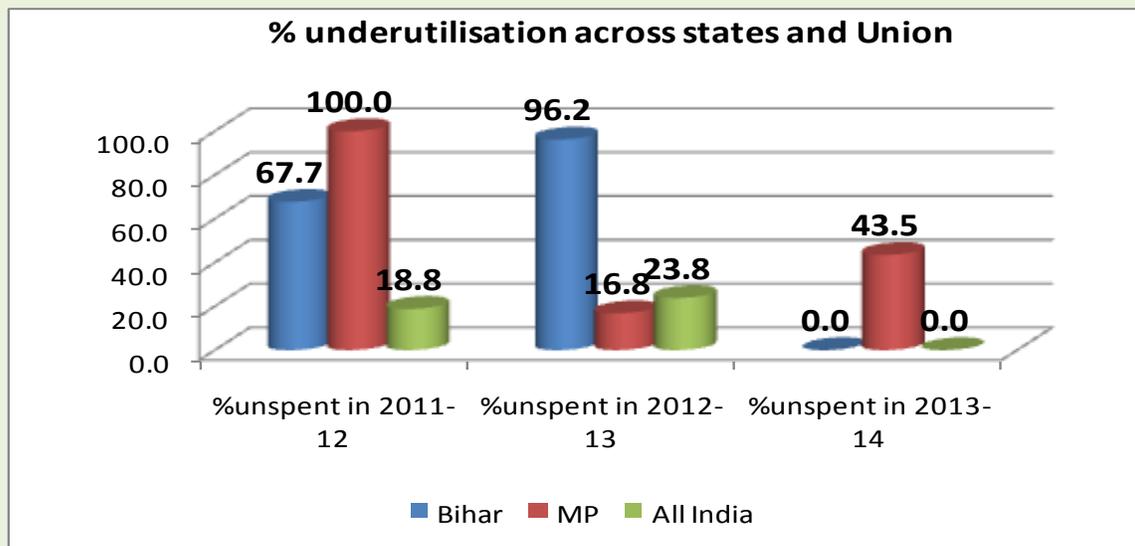
- Allocation for nutrition interventions under NRHM and RCH flexi-pool in last four years has increased substantially in the Union Budget and the Budget of the States.
- However, their share in total Food and Nutrition programmes has been quite erratic.

Figure 3: Trend in the percentage share of nutrition programmes under NHM and RCH flexi-pool in overall Food and Nutrition Programmes



V.2 Under-utilization under Nutrition programmes in National Health Mission

Figure 4: Trend in percentage under utilization of allocated fund for NRHM interventions



Expenditure data for most of nutrition interventions mentioned under NRHM and RCH budget documents are either or missing or documented as 'Zero' in states. Looking at the provision and expenditure data for important nutrition interventions, one can notice under utilization of available resources. In Jharkhand, expenditure figures are not reported in any year.

- **India:** “National Iodine Deficiency Disorders Control Programme” and “Reproductive and Child Health Project” shows under spending by 76 per cent and 69 per cent respectively.
- **Bihar:** 78.1 per cent and 49 per cent of allocated funds for ‘Care of Sick Children and Severe Malnutrition’, ‘Management of diarrhoea & ARI & Micronutrient Malnutrition’ was unspent in 2012-13.
- **Madhya Pradesh:** Programmes like “National Iodine Deficiency Disorders Control Programme”, “IYCF” and “Micronutrient Supplementation Programme” shows under spending by 33 per cent, 27 per cent and 73 per cent respectively.

Thus we see that the crucial public finance meant for preventing and treating acute and severely acute malnutrition that are part of the National Health Mission interventions are very inadequately financed and more so the allocations remain unspent.

VI. Areas needing priority in Public Policy for Nutrition – The CMAM Approach

The children need energy, protein and micro nutrients in recommended amounts and through a recommended feeding and caring protocol to come out of malnutrition. Micronutrient deficiency is a serious contributor to childhood morbidity and mortality. Children can receive micronutrients from food, food fortification, and direct supplementation. The good news is that the BJP manifesto said that "extreme poverty and malnutrition will be treated as a national priority and will be addressed on mission mode". India introduced a number of schemes to improve nutrition needs of children and pregnant mothers from time to time under different Ministries. The present interventions do not address structural and systemic causes of India's malnutrition; they are inadequate with poor coverage, and riddled with gaps. Existing prevention programmes are imperfect, in India showing very slow improvement in reducing prevalence of moderate plus severe malnutrition (as underweight) from 47% in 1998-99 NFHS 2 to only 46% in 2005-06 NFHS 3. Wasting increased from 6.7 per cent to 7.9 per cent between NFHS 2 and NFHS 3.

However, many children still go on to become severely acute malnourished, even when prevention programs are in place and these children will require treatment. Hence there is a clear need for programmes for (a) prevention of severely malnourished children from becoming severely acute malnourished, (b) treatment of severely acute malnourished child. There is no national policy and programme aimed at detecting and treating severely malnourished children.

ICDS is the largest program in India with increased emphasis on the provision of supplementary feeding and preschool education to children of three to six years old. It also provides

supplementary food to children in the age group of 6 months to 3 years, pregnant women and lactating mothers. ICDS measures weight for age (Underweight) as sole measure for malnutrition and does not recognize severe acute malnutrition (SAM) as measured by weight for height/length, as a serious issue.

Therefore, despite existing for decades, it has not been able to reduce the incidence of SAM perceptibly as for many years it focused on 3-6 years and providing supplementary nutrition (500 k. cal and 12-15% protein per day) which cannot be considered as optimal nutrition intervention. The Government has not focussed on detection and treatment of SAM, except through the Centre based Treatment. It is not part of the widespread outreach of the Government programmes and there is no active case finding and detection of SAM in India.

Therefore the real need is to make all the programmes for food and nutrition along with care and treatment of the severely acute malnourished children to work and deliver in an integrated manner. The following things are important in a successful integrated programme for prevention and treatment of severely acute malnutrition among children.

1. **The Algorithm** - How can one succeed in rehabilitating 60 to 70% of the children? Only facility based rehabilitation is not going to be enough. In facility based rehabilitation where there is no follow up connection, rate of relapse may be high. But, the relapse rate in community and home based programmes will be lower than facility based programmes because when it is done through home based rehabilitation we are actually also preparing the mother much more strongly. While there is a need for sustaining wherever we have facilities and clinics and expand them but, simultaneously work on community home based programme for rehabilitation of SAM. The algorithm would have several components:
 - i. Recognition,
 - ii. Initial orientation of the mother and the family,

- iii. Training of the workers - a combination of ASHA and AWW with a local volunteer may be one, and
- iv. A community structure that provides motivation and support to the family.
- v. High illness are recognized and treated early, motivation is built, and mother and rest of the family are supported until they begin to believe yes they can do it.

2. **Guidelines on Care and Feeding Practices** - There needs to be clear cut guidelines and goal on feeding, guidelines on hand washing, and prevention of infection. There is need to make the mother understand about what is being done, and train her in how to overcome the initial resistance of some children to eat frequently enough. It is endurance, its toughness; it is persistence for those six to eight weeks. In about 12 weeks or so almost 60 to 70 per cent children can be rehabilitated at home but not without the support system. Use of RUTF all the way for 12 to 16 weeks without the local support will not result in very high recovery rates. It is not only food; it is the support system, and the effective caring along with the therapeutic food that brings results.

In general, community care of sick children has to be strengthened, WASH has to be strengthened. There are issues about what additional things that you do for these children, what is the role of micro nutrients for them and these issues need to be discussed on the basis of evidence from science and scientific evidence must inform policy. The other issues that need to be taken care of are –

- a. **Post Recovery Strategy** - There will have to be effective strategies for post recovery phase which is linked to nutrition, counselling, feeding and health care regime you have in your district. And the system must be locally workable. The imported solutions don't work. New Delhi solution doesn't work. It has to be thought through at the district level, planned at PHC level and everybody has to be brought on board about the strategies.

- b. **Wider Coverage as Preventive Approach covering SAM and MAM children** - There may be children who have moderate reduction in weight for height or moderate impairment in mid upper arm circumference. The proportion of such children is so large that what is offered to them should be offered to all children below two years of age. A focus program can be done if 4 per cent or 5 per cent children are affected with SAM. But, if 30 to 40 per cent of children have a problem then it is a community problem and public health approaches are - don't discriminate but offer to everyone.
- c. **Integrated Approach** - In the past we have isolated food from sanitation and hygiene. Part of the reason why results in India is slow because in some places ICDS worked, in other places toilets have been improved and third place hand washing has been practiced. There is a need for convergence of food, health, and WASH at the same time operating in the same place.
- d. **Importance of Frontline Workers** - The community care of sick children in India at community level has to work at the level of Anganwadi, at the level of ASHA. Even ANM is too far away from me. High coverage for pneumonia, treatment of diarrhoea, treatment for common fever must be close to home.
- e. **Importance of data, tracking and surveillance** - IT enabled tracking and surveillance mechanism for detection and management of malnutrition should be institutionalised for speed, scale and accuracy.

Until recently there was no clearly effective treatment strategy to prevent deaths from severely acute malnutrition. Well-understood and evidence-based methods of treatment now exist with the development of new ready-to-use therapeutic foods (RUTF) in the form of energy-dense pastes or biscuits that is soft or crushable, palatable and easy for children to eat and containing no water so they would not support bacterial growth (which is a major drawback of milk-based liquid diets used earlier). Energy-dense RUTF products through community based management

of acute malnutrition have proved to be efficacious for the treatment of severe malnutrition reducing mortality rates and achieving rapid recovery rates. But it is not only the food that brings results, but the treatment protocol providing a full medical consultation, in conjunction with infant feeding counselling and provision of routine medical treatment, including essential drugs backed by adequate financial allocations to supplement therapeutic food is what going to address SAM in the country. However, this is not the medical treatment to address all forms of malnutrition in the country that, instead can be better undertaken through interventions such as exclusive breastfeeding for infants followed by breastfeeding with complementary foods for children aged 6–24 months; micronutrient supplementation for vulnerable children, access to high quality food, health care, safe water sources and basic sanitation.

We argue that while there needs to be a national effort for improving public health, water and sanitation scenario in the country for an all round and effective improvement on the malnutrition front, we can as an immediate step do one thing that is within our immediate reach and can be done without any time delay.

The analysis clearly points out that there has been a huge gap between requirement and allocation in ICDS and also that the small but very critical interventions catering to micronutrient supplementation and disease cure and control from the National Health Mission have not been implemented in the right earnest so much so that huge amount of the allocations have remained unspent. There is a need to develop an operational mechanism to make all these interventions work together in perfect coordination. This call for a administrative body of the Governments at the Union and State levels that works on the mission of reduction of malnutrition and facilitates convergence of all the schemes and the concerned departments. In fact there is already a National Nutrition Mission and many States also have similar Health and Nutrition Missions. All the health and nutrition schemes from various ministries that are working towards combating nutrition should be brought under direct purview of the Nutrition Missions with clear mechanism for monitoring and accountability.

We can introduce a Supplementary feed for the children in the age group of 6 months to 3 years with approximately the same as the existing cost but with an aim to fulfill the one third of the RDA for energy and protein for the child and the full RDA of micronutrients.

VII. Public Finance - Need for Further Study on Costing of Supplementary Food and Operational Protocols

We need to conduct a study of calculating the cost of all such supplementary food that are being used in the country in different projects and which meet the norms of one third RDA of energy and protein and full quota of RDA of micronutrient for children in the age group of 6 months to 3 years in an age appropriate manner. We can then calculate the total amount required for such SNP for all the children under SAM in India and recommend to the Government to make that allocation in the next budget.

This study also needs to cost the operational mechanism to deliver the programme in an integrated manner and then recommend the same for the Union and Governments to make the study finding the basis of programme planning of comprehensive and integrated intervention for combating child malnutrition.

Please see Annexure 1 for the concept note on costing and cost effectiveness study.

Annexure 1

CONCEPT NOTE: COSTING and COST-EFFECTIVENESS STUDY

PRODUCT: AGE-APPROPRIATE SUPPLEMENTARY NUTRITION FOR CHILDREN

AGE GROUP: 6 – 36 MONTHS

Context

The revised norms for the Supplementary Nutrition Component under restructured ICDS are –

- i. Rs. 6 per child per day for children in the age group of 6 – 72 months,
- ii. Rs. 9 per severely underweight child per day, and
- iii. Rs. 7 per Pregnant Woman and Lactating Mother per day.

The hot cooked meal and the take home ration for all children in the age group of 6 to 72 months as well as pregnant women and lactating mothers is the same. There is no difference in the food for children of the different age groups and that for the women.

A study of Cost Analysis of Supplementary Nutrition Programme (SNP) under ICDS was carried out by FLAIR (Forum for Learning and Action with Innovation and Rigour) and it was found that in the field reality the actual cost would be as follows –

- i. Rs. 12 per child per day for children in the age group of 6 – 72 months,
- ii. Rs. 24 per severely underweight child per day, and
- iv. Rs. 26 per Pregnant Woman and Lactating Mother per day.

These costing norms have been derived from Experiential Field Study in the States of Bihar & Rajasthan in 2014.

Table 1 shows items under SNP, the quantity requirement per month in each AWC, and the associated costs to purchase those items, thereby calculating the actual cost requirement per AWC per month (25 days in a month) and the cost, per beneficiary per day⁷.

Table 1: Item wise cost analysis for Supplementary Nutrition Programme (SNP)

COMPONENT	CATEGORY	ITEM	RATE (Rs/KG)	REQUIREMENT	COST		
Supplementary Nutrition Programme	Children (6- 72 months)	Rice	22 /Kg	80 Kg per month	Rs 1760 /Month		
		Pulses	70/KG	22 Kg per Month	Rs.1540 /month		
		Gram	52/KG	5 Kg per month	Rs. 260/month		
		Vegetables	15 /Kg	125 Kg per month	Rs.1875 /month		
		Jaggery	45/KG	15 Kg per month	Rs. 675 /month		
		Ground Nut	110/KG	15 Kg per onth	Rs. 1650/month		
		Common Salt	16/KG	5 Kg per month	Rs.80 /month		
		Edible Oil	90/KG	8 Litre per month	Rs.720 /month		
		Spices	200/kg	Assortment - 5 KG per month	Rs. 1000/month		
		Fuels	450/Quintal	2 Quintal	Rs. 900/month		
		Transportation for purchased food item	NA	600 Per month	Rs. 600/month		
		Snacks	NA	1000 per month	Rs. 1000/month		
		Total Cost - Per AWC per month (25 days)					Rs.12060/ month
		Total Cost - Per Child per Day*					12.06
Total Cost - Per Child per Day (Severely Underweight Child)**			Additional 200 ml milk per child per day @Rs.8.00 and additional egg or banana per child per day @Rs.4.00		24.06		
Total Cost - Per Woman per Day (Pregnant Woman and Lactating Mother)***			Additional 200 ml milk per woman per day @Rs.8.00 and additional egg or banana per woman per day Rs.4.00 and increase in the quantity of food amounting to an increase in cost by 15 per cent (Rs.12.06x15%)		25.87		

⁷ Sinha Ajay Kumar, Bhattacharyya Dolon, Costing and Budget Analysis, National Flagship Programmes for Children, FLAIR and Save the Children, 2014

* Calculated based on the fact that one AWC is serving 40 children, as per the empirical field report for 25 days in a month, therefore per child per day stands at $(Rs.12060/40 \text{ children})/25 \text{ days}$

**Cost per child (severely malnourished) per day is an additional Rs. 12 for 200 ml milk per day @Rs.8 and additional egg or banana @Rs.4 per day over and above of cost per child per day of Rs.12.06, that is a total of $Rs12.06+Rs.8+Rs.4= Rs.24.06$

***Cost per P&L woman per day calculated as an additional 200 ml milk per woman per day @Rs.8 and additional egg or banana per woman per day @Rs.4 and increase in the quantity of food amounting to an increase in cost by 15 per cent $(Rs.12.06*15/100=Rs. 1.80)$, that is total cost= $Rs.12.06+Rs.1.80+Rs.8+Rs.4= Rs.25.87$

PROPOSED STUDY

There have been many successful models and pilots of production, distribution and feeding of supplementary nutrition to children apart from those through the regular ICDS programme and government has been a partner with quite a few of them.

We propose to do a costing study of the innovative projects of SNP of development agencies and various State Governments. We will evaluate the products based on the data of its cost and composition to meet the RDA.

We propose to carry out a mapping and evaluation exercise of the ongoing innovative projects of supplementary feeding.

We will analytically describe the products and services on the following criteria –

1. Material cost and their variance from the cost norm of SNP under ICDS
2. Analysis of the composition – variance with the RDA for Energy, Protein and Essential Micronutrients

We will analytically study approximately 20 supplementary food products used at innovative projects. These products will be selected for the study based on a consultative process of the prominent experts (individuals and organisations) in the nutrition sector in India.

We will do a plotting for what cost a single supplementary feed meets what percentage of RDA and what are the variances. This exercise will be done for the reference age group of 6 to 36 months children. The analysis will be done keeping age - appropriate RDA in mind and for this purpose children in the age group of 6 to 36 months will not be treated as one homogeneous group.

We will present the study findings at a consultative workshop of the experts and formulate a recommendation for the government to consider deployment of a Supplementary Food at SNP of ICDS centres so that the RDAs for children in the age group of 6-36 months could be met in a more cost effective manner.

We will also find out the cost for the operational mechanism to deliver the programme in an integrated manner and then recommend the same for the Union and Governments to make the study finding the basis of programme planning of comprehensive and integrated intervention for combating child malnutrition.

ACKNOWLEDGEMENTS AND CREDITS

This Policy Paper has been written by Raj Bhandari and Ajay Kumar Sinha based on the FLAIR and NACDOR research paper: Ajay Kumar Sinha and Dolon Bhattacharyya (2014) Budget Analysis: Food and Nutrition Programmes in the Union of India and States of Bihar, Jharkhand, Uttar Pradesh, Odisha and Madhya Pradesh (2011-12 to 2014-15). Readers are encouraged to quote or reproduce material from FLAIR Policy Papers in their own publications. In return, FLAIR requests due acknowledgement and a copy of the publication. FLAIR (Forum for Learning and Action with Innovation and Rigour) is an organisation for creating, nurturing and operating spaces for learning and action, where all stakeholders work together in the true spirit of partnership to ensure health, nutrition and education of poor and marginalized people or communities with equity, justice, liberty and dignity.

The full text of all FLAIR publications and more information about our work is available on our website www.flairindia.org

C-102, J. M. Orchid

Sector 76, NOIDA – 201301

Ph.: +91-120-6161223

Email: info@flairindia.org