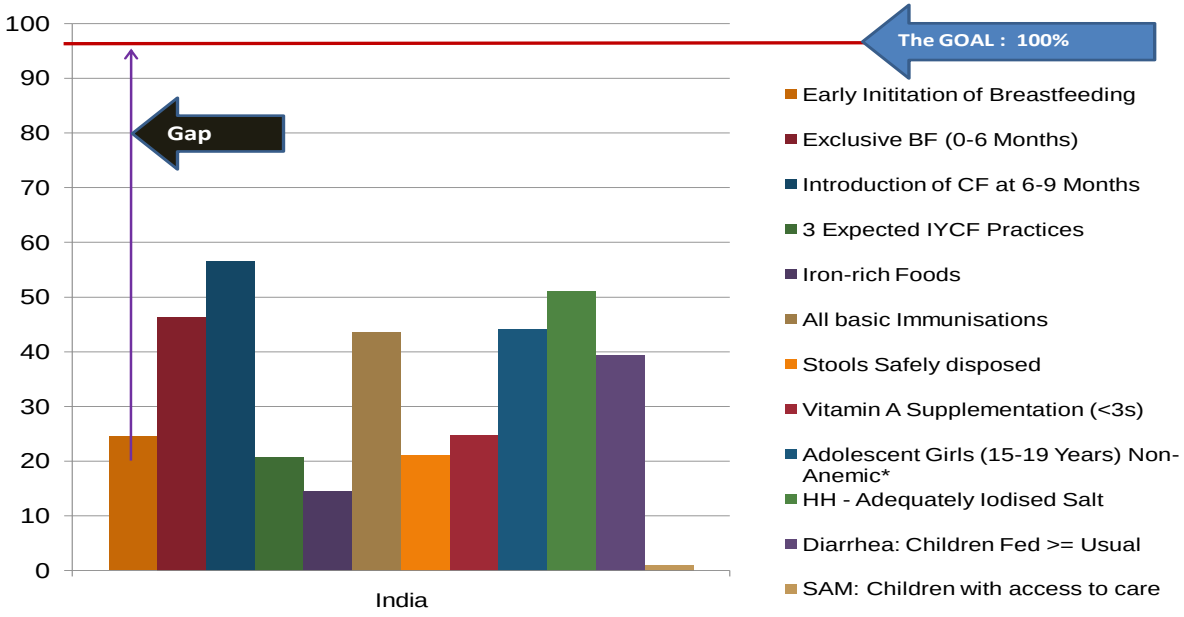
India: Situation analysis for Transform Nutrition

1. Introduction

Preventing undernutrition, especially during the 1000 day period - conception to 2 years of age - has emerged as one of the most critical challenges to India's development planners in recent times (Menon & Aguayo, 2011). The Global Hunger Index (GHI) for India (which is ranked number 67) in 2010 was 24.1; this placed it in the "alarming category" (von Grebmer et al., 2010). India currently has the largest number of undernourished people in the world, 212 million – only marginally below the 215 million estimated for 1990–92. Under nutrition rates are not only high, but have also been persistent over the years; in the last eight years, they have only come down by 1% (NFHS-3, 2005-06).

If we examine national data on essential nutrition interventions in India (Figure 1; interventions from Swaminathan, 2009), the picture seems dismal with most interventions not even covering half of the target group (Menon & Aguayo, 2011). In this context, focusing on the 1000 day period has been advocated for by several institutions. The first 1000 days of a child's life are important for his/her long-term physical, mental and emotional development, and this is especially true from a nutrition perspective. Inadequate nutrition during this phase can have severely negative consequences. In the short run, it impacts morbidity, mortality and impaired intellectual development. It has been recognized that the long-term effects of early undernutrition and inadequate infant feeding leads to obesity and chronic diseases, including diabetes and cardiovascular diseases (Caulfield et al, 2006).

Figure 1: Coverage of essential nutrition interventions to reduce stunting in India
Source: Data from National Family Health Survey-3 (2005-2006), reported in (



Undernutrition amongst women is one of the primary causes of low birth-weight babies and poor growth. Low birth weight is a significant contributor to infant mortality. Moreover, low birth-weight babies who survive are likely to suffer growth retardation and illness throughout their childhood, adolescence and into adulthood, and growth-retarded adult women are likely to carry on the vicious cycle of malnutrition by giving birth to low birth-weight babies.

This situation analysis not only presents the overall nutrition (undernutrition) picture of India with respect to the 1000 day focus but also narrates the status of current programs and policies designed towards addressing the undernutrition silent emergency. It also identifies the existing institutional and research capacities and discusses briefly how they are being leveraged. The analysis concludes with a forward-looking view towards existing challenges and opportunities and how future plans can be best designed and implemented for tackling this problem successfully.

Nutrition Outcomes

Several studies and cross sectional surveys have been conducted in order to provide data on child nutrition as well as other reproductive and child health related variables. However, sources of nationally available nutrition data in India are sparse, the **National Family Health Survey (NFHS)** being the only major one (and in fact, this has been discontinued as of April 2012). This cross sectional nationally representative survey was carried out in three rounds from 1992-2006, and it presented a dismal picture of the status of child nutrition. Based on the latest NFHS 3 estimates, the prevalence of stunting, wasting and underweight in India is 45%, 23% and 40%, respectively (Table 1). Under-nutrition is the underlying cause for about 50% of the 2.1 million under-5 deaths in India each year. The prevalence of under nutrition is the highest in Madhya Pradesh (55%), Bihar (54%), Orissa (54%), Uttar Pradesh (52%) and Rajasthan (51%), while Kerala (37%) and Tamil Nadu (27%) have lower rates.

Table 1: Scenario of Undernutrition in India

Nutrition Indicators	NFHS-1 (1992-1993)	NFHS-2 (1998-99)	NFHS-3 (2005-06)
Stunting (children <3)	53%	51%	45%
Wasting (children <3)	24%	20%	23%
Underweight (children <3)	47.5%	43%	40%
Anaemia (<11.0g/dl) (children 6-35	NA	74%	79%
Vitamin A deficiency (children < 5)	NA	NA	57%
Women with BMI < 18.5	NA	36%	33%
Women with anaemia	NA	52%	56%

Source: National Family Health Survey-3 (2005-2006)

The recent **HUNGaMA (Hunger and Malnutrition) survey** findings, released by Naandi Foundation and released by the Prime Minister also revealed abysmal statistics for under nutrition in the 100 poorest districts. This survey measured the nutritional status of over 100,000 children less than five years of age and interviewed about 74,000 mothers in nine states and 112 districts. Notwithstanding the positive trends in underweight reduction (2.9% annually), the overall burden of under nutrition in the 100 high burden survey districts is staggeringly high: 59% of children are stunted (low-height for age, an indicator of chronic deprivation) and 42% are underweight (HUNGaMA Survey, 2011).

About a third of newborns in India are born with low birth weight, and 52% of women and 74% of children are anemic. Other major nutritional deficiencies of public health importance in the country are vitamin A deficiency and iodine deficiency. According to National Nutrition Monitoring Bureau, over 50% of Indian children have subclinical or biochemical deficiencies of Vitamin A, B, Folate and vitamin C (Upadhyay, 2011).

General under-nutrition, characterized by under-weight among children is more prevalent amongst rural children, scheduled castes and tribes, and amongst children with illiterate mothers. The contributing factors which agreed upon as causes of undernutrition among these children are household food insecurity and intra-household food distribution, poor diets, inadequate preventative and curative health services, and insufficient knowledge of care and infant feeding practices (Reddy, 2011).

Nutrition Relevant Programs and Policies

Drawing on the Scaling Up Nutrition framework, nutrition relevant programs and policies can be categorised into two groups. One group addresses the immediate determinants of child and maternal undernutrition, and refer to the nutrition specific programs and policies. The other addresses the underlying and basic determinants of child and maternal undernutrition, which refer to the nutrition sensitive policies and programs. The latter cluster is also termed as long route or indirect interventions and is critical for enabling action to address the immediate determinants including access. In India there are dedicated ministries to implement policies and programs of both categories (although nutrition is not an explicit goal for most programs implemented by the various ministries).

Nutrition-Specific Programs and Policies

Nutrition-specific programs range from early and exclusive breastfeeding and age appropriate complementary foods and feeding practices, to the provision of micronutrient-rich foods and prevention of infections and illness through immunization and appropriate hygiene practices.

India's commitment to addressing child and maternal undernutrition can be traced back to as early as 1962-63 with the centrally sponsored mid-day meal scheme to provide for the nutritional needs of school children. In 1970-71 the Special Nutrition Programme was launched which focused on feeding preschool children, and pregnant and nursing mothers.

In 1975, the *Integrated Child Development Services Scheme* (ICDS) was launched with the aim to make a stronger impact. The scheme directly tackles the health and nutritional needs of children from 0-6 years of age, adolescent girls, and of pregnant and lactating mothers. The program also aims to improve school attendance, reduce morbidity and mortality, and to support mothers who look after the nutrition and health of their children. In 2001, the Supreme Court ordered the government of India to universalize ICDS and to let village communities and self -help groups buy and prepare meals for children offered in Anganwadi Centres (AWC). This was followed by an order in 2006 to extend services to all children under the age of six, pregnant and lactating mothers, as well as all adolescent girls. ICDS provides services such as immunization, supplementary nutrition, nutrition and health education, health check-ups and referral services. It also promotes preschool non-formal education. This scheme is delivered through the Ministry of Women and Child Development.

While a centrally sponsored mid-day meal scheme was first launched in 1962-63, *The National*

Programme of Nutritional Support to Primary Education or Midday Meals Program was launched in 1995 to make the scheme stronger and wide spread. It serves 120 million primary and upper primary schoolchildren in public and government aided schools in the country. The Midday Meals Program was expanded in 2002 to improve nutritional levels among children in classes I-V, but also those attending Education Guarantee Scheme and Alternative and Innovative Education (EGS and AIE) centres. Offered in 1,265,000 schools, it is the largest school feeding programme in the world. The scheme ensures a universal feeding program and directs states to prepare cooked mid-day meals for schoolchildren at least 200 days of the year. The midday meals program is implemented by the Ministry of Human Resource Development, Department of School Education and Literacy.

The *Indira Gandhi Matritva Sahyog Yojanaor Conditional Maternity Benefit Scheme* started in 2010 and is implemented by the Ministry of Women and Child Development. It aims to improve the health and nutritional status of expectant and lactating mothers by promoting positive health behaviours such as service utilization during pregnancy, safe delivery and lactation practices; encouraging women to follow optimal infant and young child feeding practices including early and exclusive breastfeeding for six months; and providing cash incentives for improved health and nutrition of mothers. The primary delivery platform is the ICDS, making the Anganwadi a focal point for services for pregnant women aged 19 and above. These maternity benefits are restricted for only the first two live births.

Another maternity benefit scheme that falls under the National Rural Health Mission of the Ministry of Health and Family Welfare is the *Janani SurakshaYojan (JSY).* This scheme aims to encourage service utilization during pregnancy (pre-and antenatal care) and institutional deliveries by providing cash incentives to pregnant mothers. JSY especially targets states that have low institutional delivery rates (low performing states) such as Uttar Pradesh, Uttaranchal, Bihar, Jharkhand, Madhya Pradesh, Chhattisgarh, Assam, Rajasthan, Orissa and Jammu and Kashmir.

The Rajiv Gandhi National Creche Scheme for the Children of Working Mothers is designed to support working mothers and provide a safe and nurturing environment for their children. It is also geared to enhance the wellbeing of children through provision of medical and health programmes and quality day care services. By targeting children of 3-6 years of age the scheme is implemented by the Ministry of Women and Child Development and theMinistry of Human Resource Development.

The *Rajiv Gandhi Scheme for the Empowerment of Adolescent Girls* (RGSEAG) implemented by the Ministry of Women and Child Development for adolescent girls between the ages 11-18 years kick started in 2010*.* It was a result of the undesired impact of the *Kishori Shakti Yojana Scheme of 2000* which looked at the overall development of the adolescents and the *Nutrition Programme for Adolescent Girls of 2002-03*, which aimed to provide food to undernourished adolescents. RGSEAG seeks to address supplementary nutrition, IFA supplementation, health check-up, referral services, nutrition & health education, counseling/guidance on family welfare, child care practices and home management, life skill education and access of public services, and vocational training.

In 1993, the Ministry of Human Resource Development announced a *National Nutrition Policy* for which the Department of Women and Child Development published a document. It highlighted the importance of a multi-sector approach in combating maternal and child undernutrition by encouraging different ministries to incorporate a nutrition focus in implementing their programs and policies. It also highlights the importance of building capacity and skills for implementing nutrition specific programs.

Table 2 gives the list of nutrition-specific programs and policies in chronological order currently being

implemented in India.

Nutrition-Sensitive Programs and Policies

The actions at the immediate and basic level that determine undernutrition are inadequate income, agricultural production, gender inequality, women's education and clean water and sanitation. These have been known to have a powerful impact over time in preventing undernutrition (12).

The policy of the *Essential Commodities Act of 1955* that determines access to food is the *Targeted Public Distribution System*, implemented jointly by the state and the centre through the *Ministry of Consumer Affairs, Food, and Public Distribution*. The TPDS seeks to provide subsidized food grains along with sugar and kerosene oil to families below the poverty line. Before the TPDS started in 1997, the *Universal Public Distribution System* was in operation since the establishment of the Food Corporation of India in 1965, ensuring a minimum support price for farmers along with distribution of the above mentioned commodities at fair prices. *Antyodaya Anna Yojana*, which targets the poorest of the poor, was started in 2000 by the Ministry of Consumer Affairs, and Public Distribution to supplement TPDS. It is geared towards serving all households that are at risk of hunger. These households include those headed by widows, the terminally ill, disabled persons and senior citizens with no regular source of income or support, tribal households, landless workers, including farmers, craftsmen, slum dwellers and members of the informal sector in rural or urban areas.

Wage employment related policies implemented by the state with central assistance that enhance family and individual income levels have also been operational for a long time. The *Jawahar Rojagar Yojana of 1989*, which uses a right's based framework, became *the National Rural Employment Guarantee Scheme in 2005*. The NREGA guarantees 100 days of wage employment in a financial year to a rural household whose members volunteer to do unskilled manual work.

The *National Rural Health Mission of 2005,* implemented by the state with assistance from the centre, is another poverty alleviation policy to improve public health care services in rural India through dedicated programs.

The link between agriculture and nutrition has recently caught attention. In the Indian context there is some tentative evidence to support the fact that when there was a decrease in food production in India, nutritional improvement also slowed down. Besides the obvious linkage of food production with nutrition, an agricultural system that takes into consideration nutritional outcomes could improve household and community capacity to care for women and children in particular. Perhaps the most progressive agricultural reforms in the area of *production, procurement, food pricing and the market*, took place between 1951 and 1990, in the form of the *Green Revolution*, which focused on using modern technology for self-sufficiency for food production in India. Post 1991 saw market liberalization giving way to another set of policies focusing on the diversification of food demand into non-food grain crops. Today, the major policies that seek to strengthen the agriculture sector in India include the *2007 Rashtriya Krishi Vikas Yojana*, which provides state governments incentives to develop consolidated plans for the agricultural sector that clubs poultry and fish farming with the crop sector[3]. *The National Horticulture Mission* that came into play in 2005-06 provides incentives to increase the production of horticultural crops in India. The National Food Security Bill plans to provide 25 kg of staple cereals to each below poverty line family at Rs. 3 per kg every month. The Bill, that is still in the making , will also

contain other provisions that relate to a sustainable food distribution system.

Table 3 provides a list of nutrition-sensitive policies and programs that are being implemented in India.

Institutional Arrangements for Nutrition in India

Nutrition as a subject/department in India does not fall under any one specific organization or ministry, even though the Ministry for Women and Child Development has long been informally charged with undernutrition given the focus and reach of the ICDS program implemented by this ministry. The related policies and programs explained in the above sections are formulated and implemented by a group of Central Ministries of the Government of India - particularly Ministry of Health and Family Welfare (MoHFW), Ministry of Women and Child Development (MWCD) and several others. The MoHFW, implements the NRHM (2005-12) which seeks to provide effective healthcare to the rural population throughout the country with a special focus on 18 states, which have weak public health indicators and/or weak infrastructure. It aims at effective integration of health concerns with determinants of health like sanitation and hygiene, nutrition, and safe drinking water through a District Plan for Health. It aims to undertake architectural correction of the health system to enable it to effectively handle increased allocations as promised under the National Common Minimum Programme and promote policies that strengthen public health management and service delivery in the country.

The MoHFW primarily implements programs in the area of facility based management of children with Severe Acute Malnutrition, micronutrients, especially Iron Folic Acid, provides policy guidelines on National Iodine Deficiency Disorders Control Programme and Vitamin A Supplementation Programme in Children.

The Department of Women and Child Development (DWCD) is the custodian of the National Nutrition Policy under whose auspices ICDS is implemented. The *anganwadi* workers (AWW) are the main implementation agents of ICDS and are responsible for, among other duties, mobilizing communities to support ICDS and recruit participants, growth monitoring and promotion activities, preparation of ready-to-eat supplementary snacks or meals. The Planning Commission of India, under the Government of India, also plays a role in giving shape to the nutrition policies, by formulating policies during the formation of the five year plans. Other ministries which have had nutrition-related sectoral plans include Agriculture, Public Distribution, Education, Forestry, Maternal and Child Health, Food Processing, Information and Broadcasting, Labor, Rural Development and Urban Development. However, since these plans have not been accompanied by additional resource allocations, coordinated efforts or serious monitoring, these plans have also remained largely on paper.

Nutrition relevant capacities

Nutrition relevant capacity analysis involves identifying and building upon existing capacities as well as addressing the gaps at each of the various levels (research, implementation and policy) of capacity building. Thus we have mapped/listed the most prominent nutrition institutions working in the area of any of the three levels.

Research

Research in the area of nutrition is conducted by many government agencies, independent research groups, non –governmental organizations, and nutrition departments of universities and hospitals. In India, the primary groups working on nutrition research include the National Institute of Nutrition,which is a part of Indian Council of Medical Research, Nutrition Foundation of India, Home Science colleges, and NGOs working on nutrition. Many economists and their research groups have also been active in working on nutrition related research in India. In recent years, International Food Policy Research Institute and Public health Foundation of India, have also entered the nutrition research space.

Most of the existing data on nutrition and health is available from the National Nutrition Monitoring Bureau (NNMB), which undertakes diet and nutrition surveys periodically in 8-10 States in the country and projects the State level scenario for these States. NNMB continues to function in a project mode under ICMR since 1972. The National Family Health Survey (NFHS) was another important nutrition data source used for secondary analyses and research purposes. The fourth round of the NFHS was due to be carried out in 2012-13; however it has recently been discontinued. Instead, the government plans to develop an integrated National Health Survey (NHS) which will replace three existing surveys (the NFHS, which provided data on key health indicators – including nutrition - at state and national level, the district-level health survey (DLHS) and the Annual Health Survey (AHS).The NHS will provide district and state-level data, comparable to the NFHS. The NHS will commence in 2014, nearly 10 years after the last round of the NFHS in 2005-06. The DLHS' fourth round is currently being conducted but its reliability is considered to be lower than the NFHS. The AHS does not collect data on nutrition.

The government also recognizes the role of the National Institute of Health and Family Welfare, Central Health Education Bureau, Home Science and Medical Colleges and NGOs in assisting NNMB with research. Bill & Melinda Gates Foundation, The World Bank, The Department for International Development and USAID have been instrumental in funding and shaping research on nutrition in India. There are also independent research organisations involved in research on nutrition, many of them have been delineated in the Table 4.

Implementation

Every factor causing undernutrition needs to be considered, including adolescent girls, newly-wed women, expectant and new mothers, breast and supplemental feeding in infancy, and the preschool years. Such a response clearly calls for multi- sectoral coordination, which has not been evident previously. Nutrition has long been an "orphan child"—jurisdictionally claimed by many departments but operationally owned by none. The need for convergence in planning and implementation is acknowledged by policy makers, but effective platforms for consultation and coordination are not yet visible (Haddad, 2011, 2009).

The responsibility of implementation of nutrition policies and programs rests with nodal central ministries and concerned departments working under the ministries as explained in section 2C. For example MoWCD implements the ICDS Scheme, the Nutrition Programme for Adolescent Girls (NPAG), and the Nutrition Advocacy and Awareness Generation Programmes of Food and Nutrition Board.

Also, the MoHFW implements the Iron and Folic Acid Supplementation of pregnant women, Vitamin A supplementation of children of 9-36 months age group and National Iodine Deficiency Disorders Control Programme, and the Department of Elementary Education and Literacy implements the Mid Day Meal for primary school children. The National Institute of Public Cooperation and Child Development (NIPCCD) is also an apex institution for training NGOs all over India in the area of nutrition research and

program implementation. As a nodal resource agency, it has also been entrusted with the responsibility of training and capacity building of functionaries at the national and regional level. United Nations International Children's Emergency Fund (UNICEF) has provided training to Anganwadi workers in several states. But there is still a great need to improve implementation capacity at the ground level, as it is a major pitfall for the success of most of the nutrition programs and policies.

Policy advocacy

There are many organisations and NGOs that advocate to the government on the importance of nutrition. These include UNICEF, World Bank, Department for International Development (DFID), the Right to Food Campaign, Action Aid India, Save the Children, Breastfeeding Promotion Network of India, Care India, Clinton Foundation, and MS Swaminathan Foundation and many more. These organisations are known to be influential in advocating at the state and central level with the Ministry of Women and Child Development and the Planning Commission of India. In India, media also plays a powerful advocacy role. Other organisations mentioned under research have also advocated to the government at different forums, but to a lesser extent than research organizations.

Challenges, Opportunities and Future Plans

The glaring problem of undernutrition in India has multi-factorial interlinked causes, which leads to innumerable challenges. Most important challenges include poor convergence and coverage of nutrition-specific interventions, as well as a large set of issues related to underlying factors. Major challenges include high levels of poverty, lack of improvement in agricultural productivity owing to inadequate resources, lack of education and inadequate job opportunities, and the poor status of women. Increased informal workforce due to rural-urban migration along with unplanned growth of slums is one of the key issues in urban areas. Other issues catalyzing the problem include overpopulation, inadequate distribution of food through public distribution mechanisms and lack of coherent nutrition policies. Also, the main challenges for effective implementation of nutrition programs are weak ability of civil society to demand improved services. For instance, poor incentives for ICDS to improve nutrition outcomes, few consequences of limited ICDS performances, and a lack of ability to link ICDS services to improved outcomes due to the weak state of monitoring and evaluation. .

Challenges

Some of the key challenges currently faced by India, in coming up with an effective national nutrition strategy and failure to tackle nutrition problems are:

- Lack of coherent leadership
- Lack of dedicated resources
- Co-existence of several health inequities(prevalence of both over and under nutrition)
- Lack of clear, enforceable, flexible policies at the central and state level
- Dearth of private-sector engagement in the nutrition field
- Uncertainty about best practices in nutrition intervention

Opportunities

There are opportunities emerging in the nutrition policy space with the drafting of the *National Food Security Bill,* where there is struggle to incorporate nutrition interventions in the first 1000 days since

conception. The other major opportunity lies in the restructuring of the ICDS programme which is also focusing on service delivery in the first 1000 days, and the need to improve capacity within the programme. This process of restructuring is ongoing and is an important consideration for the 12th five year plan of the Planning Commission. There is also potential to scale up direct and indirect inputs for nutrition through the many implementation platforms that already exist in India. These include the NRHM, Mid-day Meal, income enhancing platforms such as NREGA and others**.** For instance in 2010 NRHM initiated Malnutrition Treatment Centres and Nutritional Rehabilitation Centres. There is also an opportunity to improve capacity linked to these implementation platforms by improving technical knowledge, management skills of frontline workers and community resource persons. There is potential for strong partnerships with technical and management resource institutions, which are not lacking in India, coupled with creative approaches for quality training, guidance, support, recognition and motivation to frontline workers and community resource persons.

Future Plans

In 2011, the National Advisory Council had a consultation meeting on ICDS restructuring and there is progress towards operationalizing a revamped ICDS . At the ministry level, the MWCD is known to be working on the recommendations of the Prime Minister's National Nutrition Council. The Food Security Bill seeks to incorporate a strong nutrition component.

Some of the future plans and challenges that need attention and/or incorporation in our programs and policies to curb undernutrition include:

- Multi-dimensionality of the problem which necessitates investigating underlying factors and innovative solutions.
- Community motivation and involvement should not only be a must for nutrition programmes but also be the central core of the primary health care.
- Stronger governance in accelerating capacity, accountability, and responsiveness of society in dealing with the challenges it faces.
- Strong national Leadership- it is important to establish a national nutrition strategy with government leadership to ensure that undernutrition is given the priority it deserves.
- Capacity building and addressing this huge shortfall of professionals working towards tackling undernutrition
- Strengthening nutrition education/curriculum in India to integrate multi-disciplinarily approach.
- Identifying nutrition champions and emphasizing on mentoring and nurturing the young professionals interested in contributing towards this cause.
- Investment in health, sanitation, agriculture, women's status, and women's status and food and nutrition programs
- Coordination and prioritization in terms of developing new mechanisms for cross-departmental working.
- Lessons have been learnt that the tendency is to take the programme to areas which are most convenient to reach. This should be discouraged.
- There is a need to develop and scale up new community feedback mechanisms on the performance of nutrition interventions.
- Greater transparency and accountability in analyzing cost-effectiveness of nutrition interventions.
- A high level of responsiveness is required to deal efficiently with emergencies like droughts, floods, and infection. Also, collection of data on nutritional status frequently will help in bridging the gaps.

Calling undernutrition "a national shame", Prime Minister Dr. Manmohan Singh recently (Jan 2012) said India cannot hope for a healthy future with 42% of children aged below five years being underweight. Thus all future plans not only need to incorporate strategies to tackle undernutrition but also how to effectively implement them in a huge and diverse country like India. Not only do the statistics change for this problem in every state, region but also its determinants or underlying factors. Thus it is essential to learn from successes and failures of other developed as well as developing countries, buto help develop local solutions for this pervasive and omnipresent problem.

Table 2: Nutrition Specific Policies/Programmes in Chronological Order

Nutrition Specific Policies/Programmes	Year of Commencement	Development Outcome
Special Nutrition Programme	1970	Supplementary feeding to pre-school children and expecting and nursing mothers
Integrated Child Development Services Scheme	1975	Providing for nutritional and health needs of children (0-6 years of age), adolescents and pregnant and lactating mothers
National Nutrition Policy	1993	To address the multi-sector determinants of nutrition
Janani Suraksha Yojana under National Rural Health Mission	2005	Better diet for pregnant women from BPL families
Rajiv Gandhi National Creche Scheme for the Children of Working Mothers	2006	Addressing children's nutritional, hygiene and overall development while mother is at work
Indira Gandhi Matritva Yojana or Conditional Maternity Benefit Scheme	2010	Providing for nutritional and health needs of expectant and lactating mothers

Table 3: Nutrition Sensitive Policies/Programmes in Chronological Order

Nutrition Sensitive Policies/Programmes	Year of Commencement	Development Outcome
Essential Commodities Act	1955 onwards	Food distribution
Mid-day meal Scheme	1962	To provide nutritious food to primary school children
Public Distribution System	1965 – 1997	Food distribution with minimum support price for farmers
National Rural Drinking Water Programme	1972	Improving access to quality water
National Policy on Education	1986	Improving Literacy
Jawahar Rojagar Yogana	1989 – 2005	Employment generation
Rajiv Gandhi National Drinking Water Mission	1991	Improving access to quality water
The National Programme of Nutritional Support to Primary Education or Mid-day Meals program	1995	Providing nutritious food to primary and upper primary government school children
Indira Awaas Yojana	1996	Ensure Housing
Targeted Public Distribution System(TPDS)	1997	Food distribution with minimum support price for farmers for targeted population
National Housing and Habitat Policy	1998	Ensure Housing

Total Sanitation Campaign	1999	Improving Sanitation
Swarnjayanti Gram Swarozgar Yojana	1999	Providing income generating assets
Antyodaya Anna Yojana(AAY)	2000	Food distribution to below poverty line households
Sarva Siksha Abhiyan	2001	Improving education in schools
Nirmal Gram Puruskar	2003	Improving Sanitation
National Rural Employment Guarantee Scheme	2005	Employment generation
National Rural Health Mission	2005	Improving health services
National Horticultural Mission	2005	Promotion of Non-Farm Crops
National Rural Drinking Water Quality Monitoring andSurveillance	2005	Improving access to quality water
Bharat Nirman	2005	Improving rural infrastructure
Mahatma Gandhi National Rural Employment Guarantee Act	2005	Improving incomes of families who live in rural communities
Jawaharlal Nehru National Urban Renewal Mission(JNNURM)	2006	Improving urban infrastructure
Rashtriya Krishi Vikas Yojana	2007	Improving consolidated agriculture planning
Rajiv Gandhi Scheme for the Empowerment of Adolescent Girls(RGSEAG) & Kishori Shakti Yojana(KSY)	2010	Providing for nutritional and health needs of adolescents and their overall development
National Rural Livelihoods Mission	2011	Rural infrastructure

Table 4: India based organisations that are involved in research, implementation and policy advocacy

Name of the organisations	Place	Thrust Areas
1. Nutrition Society of India	Hyderabad, Andhra Pradesh	Research and policy
2. Indian Council of Medical Research	New Delhi	Apex body involved in formulation, coordination and promotion of biomedical research
3. National Institute of Nutrition including National Nutrition Monitoring Bureau	Hyderabad, Andhra Pradesh	Multi-disciplinary institute involved in food research, clinical trials, training, dissemination, consultancy
4. Public Health Foundation of India	New Delhi	Establishing public health institutes, research, policy advocacy
5. Center for Chronic Disease Control	New Delhi	Research, implementation and advocacy
6. St John's Medical college	Bangalore, Karnataka	Research
7. Agriculture Universities	In various states of India	Research and implementation
8. Nutrition Departments in Central Universities	In various states of India	Research and implementation
9. South Asia Network for chronic	New Delhi	Research and training

disease		
10. International Life sciences Institute –India	New Delhi	Research
11. Nutrition Foundation of India	New Delhi	Research, implementation, policy advocacy
12. Indian Dietetic Association	State chapters all over India	Publishing journals and conducting conferences
13. All India Institute of Medical Sciences	New Delhi	Research, advocacy and implementation
14. Food Science and nutrition academy	Kottayam, Kerela	Food science research
15. M.S.SwaminathanResearch Foundation	Taramani, Chennai	Research and advocacy in food security
16. Nutrition departments of Hospitals	In various states of India	Research and implementation
17. Protein foods and nutrition development association of India.	Mumbai	Research in food technology
18. National institute of health and family welfare	New Delhi	Government body, education, training, research, evaluation, consultancy and specialised services
19. National Institute of Public Cooperation and Child Development	New Delhi	Research, advocacy and implementation
20. Sustainable nutrition security in India	New Delhi	Nutrition security policy and advocacy

Box 1: Major Challenges: Integrated Child Development Services (ICDS) Scheme
A Case Study

- Service delivery not focused on the young children(0-2 Years), overemphasis remains on older children (3-6 years)
- Paucity of transparency and low levels of responsiveness
- Wide gap between original design and actual implementation
- Per child spending is higher in richer states
- Quality of services is poor
- Design is standardised and does not reflect local needs
- Some of the poorest and most vulnerable groups are not reached
- Lack of capacity building of trained frontline workers
- Inadequate governance
- Lack of integrating nutrition with existing policies and programs in other sectors - agriculture and education
- Need to improve nutrition outcome reporting

Source: *Gragnolati et al. 2006*

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