



Overcoming the Curse of
Malnutrition in India:
A Leadership Agenda for Action

The Coalition for
Sustainable Nutrition Security in India

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Executive Summary

Although India has made tremendous advances in science, medicine, information technology and many other fields, and has experienced unprecedented economic growth over the past decade, malnutrition remains unacceptably high. Poor nutrition is a major cause of other health problems in the country, including high infant and maternal mortality. The Prime Minister, Dr Manmohan Singh, declared the problem of malnutrition to be a “curse that we must remove” from India, in his address to the nation on Independence Day, 15th August 2008.

The national costs of malnutrition¹ are very high: a vicious intergenerational cycle of poor health, high death rates, poor quality of life, decreased mental capacity and reduced worker productivity. Productivity losses are estimated at more than 10 per cent of lifetime earnings for individuals and 2-3 per cent of gross domestic product for the nation. This means that improvements in nutrition are important for a healthy and productive life as well as for continued economic growth and development⁵².

The Coalition for Sustainable Nutrition Security in India (the Coalition), chaired by Professor M S Swaminathan, is a group of public and private sector leaders who have united in an effort to improve nutrition security, ensuring that every Indian citizen has access to a balanced diet, safe drinking water, environmental hygiene, sanitation and primary health care. The Coalition has reviewed and released this *Leadership Agenda for Action* to promote policy, programme and budgetary focus on overcoming the curse of malnutrition (see text box “Developing the *Leadership Agenda for Action*”).

We recognise malnutrition as a complex and multi-dimensional issue, affected by poverty, inadequate food consumption, inequitable food distribution, improper infant and child feeding and care practices, equity and gender imbalances, poor sanitary and environmental conditions and limited access to quality health, education and social services. Therefore, the *Leadership Agenda for Action* takes a broad and

¹ For the purpose of this paper, the word ‘malnutrition’ refers to nutritional deficiencies as measured by wasting, stunting, underweight, micronutrient deficiencies and/or anaemia.

multi-sectoral view of *nutrition security*, defining it as “physical, economic and social access to, and utilisation of, an appropriate, balanced diet, safe drinking water, environmental hygiene and primary health care for all”.

Developing the Leadership Agenda for Action

In February 2008, the Coalition for Sustainable Nutrition Security in India requested an Expert Task Force to review nutrition security in India in order to 1) highlight the urgent need to address high levels of malnutrition in India; 2) develop recommendations for priority actions based on evidence and programming experience; and 3) help build awareness, capacity and commitment among policy and programme leaders for implementation of the recommendations.

The Coalition took the following approach to prepare the paper:

- Inviting recognised experts representing a wide range of groups and different perspectives to contribute as Task Force members
- Reviewing the evidence and literature about how to improve nutrition security
- Considering the available platform of a large number of Government schemes and programmes directly or indirectly related to nutrition
- Evaluating and prioritising the best opportunities available to improve nutrition security
- Seeking Task Force member agreement on the key recommendations to improve nutrition security

The Coalition requested USAID to support a Secretariat, which provided administrative and logistical support to the Task Force (see Attachment 3 for names and affiliations of the members of the Expert Task Force).

Following a participatory drafting and review process, the Expert Task Force submitted its recommendations to reduce malnutrition to the Coalition. The Coalition reviewed and endorsed this *Leadership Agenda for Action* in September 2008.

The Coalition calls for the following critical actions to achieve nutrition security.

What needs to be done:

A significant body of Indian and global evidence supports that these interventions are the most critical and effective to improve nutrition security:

1. Focus on proven, essential nutrition interventions, the timely initiation of

breastfeeding within one hour of birth, exclusive breastfeeding during the first six months of life, the timely introduction of age-appropriate complementary foods at six months (adequate in terms of quality, quantity and frequency), hygienic child feeding practices, improved nutrition for women (especially adolescent girls, pregnant women and lactating mothers), focusing on iron and folic acid supplements and deworming, and timely, high quality therapeutic feeding and care for all children with severe acute malnutrition (with leadership from the Ministry of Women and Child Development).

2. Focus on proven, essential primary health care interventions: full immunisation, bi-annual vitamin A supplementation with deworming for infants and young children, appropriate and active feeding of children during and after illness, including oral rehydration with zinc supplementation during diarrhoea and timely, high quality therapeutic feeding and care for all children with severe acute malnutrition (with leadership from the Ministry of Health and Family Welfare).
3. Promote personal hygiene, environmental sanitation, safe drinking water and food safety (with leadership from Ministry of Rural Development).
4. Integrate household food and nutrition security considerations into the design of cropping and farming systems (with leadership from the Ministry of Agriculture).
5. Expand and improve nutrition education and awareness as well as involvement and accountability for improved nutrition at the community level (with leadership from the Ministry of Women and Child Development and the Ministry of *Panchayati Raj* [local self government] and including others, such as the Ministry of Information and Broadcasting and the Department of Education).

How to do it:

Based on the Indian context and significant programming experience, the Coalition recommends the following ways to improve nutrition security.

1. Expand efforts to engage and empower vulnerable communities, particularly women in these communities, to overcome malnutrition (including through *Gram Sabhas* [local councils] and self help groups).
2. Ensure that nutrition related programmes focus on key nutrition outcomes and are reaching the priority target groups of children under two years of age, and women (especially adolescent girls, pregnant women and lactating mothers) in order to break the intergenerational cycle of malnutrition and to achieve the desired results.

3. Strengthen the focus on improving nutrition through a leadership and coordination mechanism with clear authority and responsibility, working from local to national levels (possibly through a mechanism like a Ministry of Nutrition).

More than 60 years after independence, many sources of data show that the nutrition situation has not improved as desired, with almost half of our children underweight, and more than 70 per cent of our women and children suffering from serious nutritional deficiencies such as anaemia. Although there are success stories in parts of the country which show what we can achieve, the level of malnutrition today is morally unacceptable and has enormous costs in terms of health, well being and economic development.

India is at an historic juncture with respect to development and its position in the world. The country faces critical choices in terms of benefiting from its recent economic growth. We can continue on the present course, leaving half of our people under-nourished, in poverty and suffering - risking the political and economic destabilisation that can result from such a divide. Or, we can take bold leadership steps to eliminate malnutrition and improve the health and well being of our citizens. The Coalition has accepted this *Leadership Agenda for Action*, in order to ensure that we take the path that will end the “curse” of malnutrition.

I. The Current Situation and Challenges

Introduction and Definitions

For this paper, *nutrition security* is broadly defined as physical, economic and social access to, and utilisation of, an appropriate, balanced diet, safe drinking water, environmental hygiene, and primary health care for all. (Appropriate diets are based on age, gender, physiological status, and activity levels.)

Despite an apparent surplus of food grains at the national level, malnutrition persists. This highlights that national level food production or availability (food security) alone is not sufficient to attain to nutrition security, especially at the household and individual level. The Coalition recognises nutrition security as dependent on several inter-related factors such as food production, community and household level food distribution, poverty, equity, access to health services, education levels, access to safe drinking water, environmental sanitation and hygiene and cultural beliefs and practices.

Good nutritional status is widely accepted as an important indicator of national development. However, the Coalition views nutrition security as not only an outcome – but also as a critical input that fuels further health, development and economic growth.

While recognising the growing problem of over nutrition, this paper focuses on the problems related to under nutrition. Malnutrition is defined here as the outcome of insufficient quality or quantity of food intake and recurrent infectious diseases. It includes being *underweight* for one's age, too short for one's age (*stunted*), too thin for one's height (*wasted*) and deficient in vitamins and minerals (*micronutrient malnourished*).⁵⁶

Magnitude of the Problem

Despite an impressive economic performance, with the gross domestic product (GDP) rising 8.4 per cent in 2005-06²⁹ and 9.2 per cent in 2006-07,³⁰ nutrition indicators still reveal an unacceptable situation – contributing to India's poor rank

of 128 among 177 countries on the Human Development Index in 2007⁵⁹. The lack of progress over the past decade and the current high levels of malnutrition have led to India being recognised as having, perhaps, the worst malnutrition problem in the world.

The data reveal an unacceptable prevalence of malnutrition in our children:

- 42.5 per cent of our children under the age of five years are *underweight* (low weight for age)
- 48 per cent of our children are *stunted* (low height for age)
- 19.8 per cent of our children are *wasted* (low weight for height)
- In poorer states the situation is even worse with over 50 per cent of children underweight

Our children often start out at a disadvantage. As a national average, 22 per cent of children are born with low birth weight (<2.5kg). The situation does not improve very much for adolescents or adults. Thirty-six per cent of adult women and 34 per cent of adult men suffer from chronic energy deficiency (BMI <18.5) with higher rates in rural and urban slum areas. In states like Bihar, Chhattisgarh and Jharkhand the rates are over 40 per cent²³.

The NFHS-3 survey highlighted widespread anaemia, with its prevalence actually increasing in some categories, such as in children between 6 – 59 months, where the rates increased from 74 per cent in NFHS-2 (1998-99)²² to 79 per cent in NFHS-3 (2005-2006)²³. Anaemia in women of reproductive age also increased from 52 per cent to 56 per cent over this same time period. Sixty-nine per cent of boys and 70 per cent of girls suffered from anaemia.

Although these figures indicate that the country has not yet attained nutrition security, many believe that India has achieved food security at the national level. However, there is a mismatch between food availability, food consumption and good nutrition in many parts of the country. Some areas have better nutrition despite lower food consumption. Other areas still suffer from seasonal hunger.

Consumption of all foods, except roots and tubers, is below the Recommended Dietary Intake in all age and sex groups. The consumption of protective foods such as pulses, green leafy vegetables, fruit and milk is the most inadequate, meaning that the intake of micronutrients, such as iron, vitamin A, and folic acid, is far below the recommended levels. In addition, only 51 per cent of households consume adequately iodised salt. These data reveal that food and nutrition security have

not been achieved at a household or individual level. (National Nutrition Monitoring Bureau studies).

One and a half million children are estimated to die of diarrhoea - related causes, which are closely related to poor hygiene and a lack of clean drinking water. The negative impact of diarrhoea on the nutritional status of children with marginal diets is well established. Poor hygiene is also linked with acute respiratory infections, another major killer of children. Today only 48 per cent of the rural population has access to toilets⁵⁸.

Although these data reveal an unacceptable situation, there are some hopeful signs and indications of change. The nutrition situation is considerably better in states like Kerala, Mizoram, Sikkim, Manipur, Punjab and Goa (NFHS-3)²³. Lessons from these successes could help other Indian states. Also, even in the poorer states, important indicators of nutrition such as early and exclusive breastfeeding have been improving, and, therefore, lessons from these states as well could help the others.

The Consequences

Malnutrition is the underlying cause of at least 50 per cent of deaths of children under five. Even if it does not lead to death, malnutrition, including micronutrient deficiencies, often leads to permanent damage, including impairment of physical growth and mental development. For example, iron, folic acid and iodine deficiencies can lead to brain damage, neural tube defects in the newborn and mental retardation.

Malnutrition also has a high economic cost. Over 73 million working days are lost due to waterborne disease each year, with a resulting economic burden estimated at \$600 million a year⁶⁰. Poor sanitation results in an annual loss of 180 million work-days, with an economic loss of \$275,000. Productivity losses related to poor nutrition are estimated to be more than 10 per cent of lifetime earnings for individuals and 2-3 per cent of GDP to the nation. Malnutrition and micronutrient malnutrition were estimated to have reduced the country's GDP between 3-9 per cent in 1996. A 1997 report of the National Strategies to Reduce Childhood Malnutrition revealed that the cost of treating malnutrition is 27 times more than the investment required for its prevention².

In 2004 a group of eminent economists, including a number of Nobel Laureates, reviewed the cost efficiency of various ways to address global development. They issued the Copenhagen Consensus which stated that micronutrient supplements

for children are the most important interventions, based on their cost and benefits⁴⁷. Among the top ten priorities selected by the panel, five were in the area of nutrition (micronutrient supplements, micronutrient fortification, bio-fortification, deworming and other nutrient programmes at schools and community-based nutrition programmes).

India ratified the Convention on the Rights of the Child in 1989, which is the first legally binding international instrument to incorporate a range of human rights - civil, cultural, economic, political, and social. This Convention protects children's rights through standards in health care and education as well as legal, civil and social services. Article 24 on the topic of health states "Children have the right to the best health care possible, safe drinking water, nutritious food, a clean and safe environment and information to help them stay healthy."³⁹

In summary, the consequences of poor nutrition extend well beyond poor quality of life and health. Poor nutrition affects our country's overall social welfare, human rights record and economy.

Determinants of Malnutrition

There are many determinants of malnutrition, which can be grouped as economic, environmental, agricultural, cultural, health and political factors. Some key factors are listed below.

Economic: poor purchasing power, poverty, livelihood insecurity, major inequities in asset distribution and control, including gender inequities

Environmental: lack of safe drinking water, poor sanitation, poor hygiene practices

Agricultural: failure to include nutrition concerns in major cropping and farming systems, leading to limited availability of nutrient rich foods, seasonal food shortages, inequities in food distribution, conversion to cash crops, and decreases in home gardening

Cultural: inadequate knowledge of nutrition, cultural beliefs and practices that lead to poor nutrition (e.g., expelling colostrums, restricting food consumption during pregnancy or sickness), cultural shifts to prefer less micronutrient rich foods, discriminatory intra-familial food distribution, high workload for women, inadequate time available for infant and young child feeding and care, early marriage, discrimination against girls and women, other forms of discrimination

Health: weak health service systems, inadequate human resources, especially in public health nutrition, weak health and nutrition educational systems,

poor utilisation of services, recurrent infections, low immunisation rates, lack of awareness of nutrition issues (such as which foods are the most nutritious, or proper infant and young child feeding practices), and many of the poor and vulnerable left “unreached”

Political and Administrative: many vertical programmes that are not coordinated, lack of a central coordinating mechanism for nutrition extending from the local to national level, lack of a nutrition surveillance system focused on nutritional outcomes, decision making that is not based on data or evidence, diffusion of effort, weak implementation and monitoring systems, lack of accountability, poor governance

Without a change in a critical number of these determinants taking place at the same time, the problem of malnutrition will persist.

II. Current Indian Response

The Government of India has been implementing a number of programmes, which have the potential to improve the current nutrition security situation, through the Ministries of Women & Child Development (MWCD), Health & Family Welfare (MHFW), Rural Development, *Panchayati Raj* and the Urban Poverty programme. The Government also has a number of cross cutting programmes including the National Rural Health Mission, National Food Security Mission, Horticulture Mission, National Rural Employment Guarantee Act, Jawaharlal Nehru National Urban Renewal Mission and the Rajiv Gandhi National Drinking Water Mission. The major Government programmes are listed in Attachment 1 as per a life cycle approach.

Although there are many programmes related to nutrition, there are significant gaps in these public sector efforts. It may be that taking account of the problem only at a national and state level is inadequate and there is a need for greater focus on the household and community levels. Among the challenges are the following:

- There is no comprehensive national programme or approach specifically aimed at improving nutrition, resulting in a lack convergence and synergy between existing programmes
- Many Government programmes which have the potential to impact nutrition, like the well-funded agricultural development programmes, lack a focus on nutrition as a major outcome
- Most programmes are not reaching the correct target groups, such as infants and young children, women, or the most needy and vulnerable
- India has not developed a cadre of *public health* nutritionists (although there is a cadre of academic and clinical research nutritionists)
- Insufficient national systems to collect and analyse data on nutrition outcomes, lack of appropriate data for monitoring and decision making
- Weak implementation systems and poor governance lead to the low effectiveness of most of these programmes

For example, the Integrated Child Development Services (ICDS) scheme, although often considered as the nation's main nutrition programme, has not shown an impact on nutrition over the past three decades of its operation. There are a number of reasons for this - its central mandate is to enhance child development (not eradicate malnutrition); its programmatic focus is on supplementary feeding (which is not an optimal nutrition intervention); and its primary target group is children 3-6 (who are not the most critical group to target). Decisions regarding the basic design or the on-going implementation of the ICDS scheme are not based on evidence of what works to reduce malnutrition, but on other considerations and desired results (e.g., early childhood development objectives). As with other programmes, it also suffers from weak implementation systems and governance.

A number of important areas have fallen in the gaps between these Governmental programmes. For example, there is no major programme focusing comprehensively on nutrition education or on nutrition monitoring. Even large, cross cutting missions, like the National Rural Health Mission have very little focus on nutrition. In addition, the public sector has not found ways to engage with, learn from and promote the involvement of the private sector in addressing the nutrition challenges.

In addition to the public sector, a number of academic, non-governmental organisations (NGO) and private sector agencies are contributing to nutrition security. For example, the Nandi Foundation, *Akshay Patra*, the Hunger Project, the Nutrition Foundation of India, CARE India, the University of Delhi, M.S. University of Baroda, *Avinashalingam* University for Women (Coimbatore), and various Home Science Colleges within Agricultural Universities have all contributed models and approaches to improve nutrition, which should be further documented and disseminated.

In order to improve the situation, our leaders must find a way to bridge these gaps.

III. Evidence and Programming Lessons

A review of recent, sound evidence from India and other countries reveals a number of lessons for tackling malnutrition, which are summarised below.

Complex causes of malnutrition: It is clear from the literature that there are multiple, interlinked causes of malnutrition and that there will not be one simple remedy for it. The evidence indicates that holistic and integrated interventions will be required to address malnutrition.

Core determinants: Most evidence indicates that malnutrition is closely linked to poverty and purchasing power. In addition, improving nutrition is linked with gender equity and increasing girls' and women's education, improving infant and young child care and feeding (e.g., early initiation, exclusive breastfeeding up to six months, timely and appropriate complementary feeding) and improving access to safe drinking water.

Target groups: Based on the available evidence, the most important target groups appear to be children under two years of age and women (adolescent girls, pregnant women and lactating mothers). The target group must also include the most vulnerable, such as both the rural and urban poor. In addition, it is important to determine the true "denominator" (the total number) of people who need to be reached with services and information - and to ensure that needy and vulnerable groups are not missed. Unfortunately, many Government programmes are not using a denominator based approach and, therefore, are not effectively planning for, or reaching out to the true number of persons in need.

Critical interventions: There are a number of interventions proven to contribute to improving malnutrition and overall health; timely initiation of breastfeeding within one hour of birth, exclusive breastfeeding during the first six months of life, timely introduction of complementary foods at six months, age-appropriate complementary feeding for children 6-24 months (adequate in terms of quality, quantity and frequency), safe handling of complementary foods and hygienic complementary feeding practices, full immunisation and annual vitamin A supplementation with deworming, frequent, appropriate and active feeding for children during and after

illness (including oral rehydration with zinc supplementation during diarrhoea), timely and quality therapeutic feeding and care for all children with severe acute malnutrition and improved nutrition for women (especially adolescent girls, pregnant women and lactating mothers)⁴⁸.

Empowerment and behaviour changes: Evidence and programming experience show that significant improvements in nutrition will require sustained changes in behaviours. Particularly important are changes in the areas of breastfeeding, complementary feeding and care of women before and during pregnancy. However, there is growing evidence that these changes may not be possible by merely providing nutrition services or information, but will require addressing social and cultural issues, such as the status and value of women and girls, son preference, the social exclusion of a number of vulnerable groups and control over assets and decision making by women and other vulnerable groups. This means that empowerment efforts will need to be combined with nutrition education and behaviour change activities².

Clean water and hygiene: The evidence shows significant impact on nutrition and health status can be achieved with access to clean drinking water and improved hygiene habits, especially hand washing. Young children are the most vulnerable to the effects of polluted water and poor sanitation, which contribute to diarrhoeal diseases, pneumonia, neonatal disorders, and malnutrition - the leading killers of children under age five. Improved basic sanitation (such as use of toilets) alone could reduce diarrhoea-related morbidity by more than a third; improved sanitation combined with hygiene awareness and behaviour change could reduce it by two thirds⁵⁷.

Food availability and access: Agriculture is fundamental to the achievement of nutrition goals, as it produces the food, energy and nutrients essential for human health and well being. The five main pathways by which agriculture affects nutrition are 1) increased consumption from increased food production (production for own consumption); 2) increased income from the sale of agriculture commodities (production for income); 3) empowerment of women agriculturalists and related gains in children's nutrition and welfare; 4) lower real food prices resulting from increased food production; and 5) macroeconomic growth arising from agricultural growth⁵⁴. In food-insecure populations, nutrition education or other interventions cannot have a positive impact without adequate food availability.

Micronutrient malnutrition: Evidence shows that micronutrient malnutrition can be addressed successfully through dietary diversification and through micronutrient supplements, depending on the situation. Some programmes showed success

in improving nutrition through locally produced low cost, nutrient-dense, ready to eat foods (e.g., produced by self help group). Food-based options as well as micronutrient supplementation and food fortification options should be considered and promoted, based on a number of local factors, such as availability of nutrient-dense foods, cost of such foods, availability of fortified foods or supplements, cost of fortified foods or supplements and therapeutic needs (such as for sick or malnourished children). Deworming has been shown to enhance the success of micronutrient programmes¹.

Successful pilots: India is home to a significant number of successful pilot programmes. The experiences of states such as Tamil Nadu and Kerala could inform and help to improve nutrition programming. The country needs to work to “convert the unique into the universal.” Successful programmes include models for community-based nutrition education and monitoring (including the “positive deviance” model), community accountability, intergenerational approaches, integrating nutrition interventions into primary health care programmes, girls’ education, enhancements to the Universal Public Distribution System, the Council for Advancement of People’s Action and Rural Technology’s strategy towards combatting malnutrition using the life cycle approach and block and local level coordination mechanisms between Ministries.

Monitoring and Evaluation: Successful programmes generally use reliable data to make programmatic adjustments and focus on key nutritional status indicators as their measures of success. Programmes that showed impact on nutrition outcomes have explicit goals and systems to track nutrition outcomes (not just process measures, like the delivery of supplemental food). Successful programmes also focus on defining the “denominator” or the total number of eligible beneficiaries that need to be reached to ensure good coverage (e.g., determining and then reaching all of the pregnant women in the catchment area). Programmes must have a correct understanding of the total population they should reach or a large number of beneficiaries can be missed or left out.

Benefits: Numerous studies have shown that nutrition interventions generate high returns. Decreases in malnutrition, and in micronutrient malnutrition in particular, improve health indicators. For example, investments in micronutrients have been shown to produce high rates of return as measured by disability adjusted life years (DALYs) and in terms of long term benefits such as improved education and economic effects⁵³.

Leadership: There is programmatic evidence that involving civil society and community leaders in nutrition programming leads to improved results. In addition,

global and Indian evidence indicates that high level leadership is needed. There is a need for champions, particularly among political leaders, public programme administrators, medical personnel, agriculture professionals, and education leaders, in order to make major improvements in the health and development areas^{11,12,48,51}.

The literature review revealed a number of nutrition success stories, which can guide and inform India's efforts. Many large and small countries, in Asia and beyond, have achieved major reductions in malnutrition in relatively short time periods.

Brazil was able to accomplish a 60 per cent reduction in child malnutrition (from 18 to 7 per cent) from 1975 to 1989, with reductions in infant mortality from 85 to 36 deaths per 1,000 live births in same period. This followed a period of economic growth and poverty reduction from 1970 to 1980. Brazil adopted a Zero Hunger Strategy which coordinated programmes from 11 Ministries and which had strong national level leadership (the brother of the President)⁵⁴. The major inputs used in this strategy were increased numbers of health care providers, investments in public and private food distribution programmes and in social-sector spending on water and sanitation, health, and education⁵.

Vietnam was able to reduce child malnutrition from 45 to 27 per cent between 1990 and 2006. This followed a period of economic growth starting in the mid 1980s that showed poverty rates falling from over 60 per cent in 1990 to 18 per cent in 2004. The country created successful child health and family planning programmes and increased awareness of nutrition. Nutrition goals were included in Vietnam's Socioeconomic Development Plan and programmes and included a wide range of stakeholders such as the Women's Union, the Youth Union, and the Farmer's Association. The proportion of the health budget dedicated to nutrition programmes was (and still is) high: nutrition accounts for 25 per cent of national target programmes for health, even though nutrition is only one of ten target programmes.

Thailand succeeded in halving child malnutrition between 1982 and 1986 (from 50 to 25 per cent in less than half a decade). Thailand's Second National Health and Nutrition Policy (1982–86) focused on targeted nutrition interventions to eliminate severe malnutrition, as well as on education and communication efforts to prevent mild to moderate malnutrition. Their approach relied on social mobilisation and community-based primary health care. The country invested in large numbers of health volunteers, with significant training. The volunteers reached a ratio of one volunteer for 20 households to ensure high coverage. Nutrition was also integrated as an important theme in the National Economic and Social Development Plan,

ensuring important linkages between agriculture and nutrition. Thailand also initiated a strong local surveillance system that was linked with a response and action effort. During this time, the country made a large investment in health and nutrition, accounting for approximately 20 per cent of total Government expenditure, along with a similarly high investment in education during these years.

China succeeded in reducing child malnutrition by two-thirds between 1990 and 2002 (from 25 to 8 per cent in 12 years). During this period China was able to channel rapid economic growth into a poverty alleviation strategy. The country implemented effective nutrition, health and family planning interventions on a large scale. China also invested in complementary programmes such as water and sanitation and education. During this period, illiteracy in women fell from 22.5 to 7 per cent. Central leadership was combined with the establishment of local government ownership. China established an effective data collection system that provides regular data for monitoring and policy making. The Government's health expenditure was between 3-4 per cent and the education expenditure was around 20 per cent during the 1990s⁵.

Kerala adopted an action plan for making the state malnutrition free in 2004. The programme included linking *anganwadi* centres to district and state level officers through computers, conducting publicly posted performance assessments of *anganwadi* centres, and focusing on the nutritional status of adolescent girls, through the provision of supplementary nutrition, health check ups and the formation of girls' clubs. A Citizen's Charter for *anganwadi* workers improved service delivery through accountability to established standards.

Tamil Nadu adopted an 18 point programme focusing on supporting the physical and mental development of children, particularly the girl child. This programme also focused on adolescent girls, pregnant women and lactating mothers and worked through the *anganwadi* centres in the state. Key approaches included social mobilisation, convergence of services and supporting a people's movement. Self help groups were an important approach for women's social and economic empowerment. Tamil Nadu also placed special focus on children under three, ensuring ICDS had one worker for children under three and one for children over three³⁵.

Analysis of Opportunities and Potential for Impact

The Constitution of India states explicitly in Article 47 that the "State shall regard the raising of the level of the nutrition and the standard of living of its people and the improvement of public health as its primary duties". In order to fulfil this duty, leaders will need to recognise and take advantage of all available opportunities, and sources

of support. A number of key opportunities and resources are described below.

- The body of global evidence, which was recently summarised in a series on maternal and child nutrition in The Lancet Journal⁴⁸
- A wealth of Indian, regional and global evidence and pilot programmes
- The existing infrastructure and ability to build on the comparative advantages of the major Government health and nutrition programmes
- High level leadership and endorsement (numerous indications of support for nutrition to be at the top of the development agenda, from the Prime Minister and other senior leaders)
- Financial and human resources (e.g., from community organisations, *gram sabha*, or graduates of Home Science Colleges)
- Technical assistance available from a large number of development partners including United Nations agencies, bilateral and multilateral organisations
- Experience and assistance from other potential partners such as Indian and international non-governmental organisations and civil society

This analysis of the current situation, the evidence of which interventions and approaches work to improve nutrition (summarised in an earlier section) as well as the best opportunities for impact, have led to the development of a list of key recommendations for action.

IV. Action Plan for Overcoming the Curse of Malnutrition

Critical actions are recommended based on this holistic approach and analysis (also see a Nutrition Security Framework in Attachment 2). These actions are divided into two categories: 1) what needs to be done; and 2) how to do it. The first set of recommendations (*what* needs to be done) are based on evidence of which interventions have been the most effective in India and other countries. There is also a need for some consensus about “*how*” to ensure these interventions are implemented. This leads to the second set of recommendations, which may be the most critical. These “*how*” recommendations are based on an analysis of the current situation and opportunities as well as on expertise and programming experience.

Recommendations: What Needs to be Done to Achieve Nutrition Security

A significant body of Indian and global evidence indicates that the following are the most critical and effective actions to improve nutrition security in India:

1. Focus on proven, essential nutrition interventions, the timely initiation of breastfeeding within one hour of birth, exclusive breastfeeding during the first six months of life, the timely introduction of age-appropriate complementary foods at six months (adequate in terms of quality, quantity and frequency), hygienic child feeding practices, improved nutrition for women (especially adolescent girls, pregnant women and lactating mothers), focusing on iron and folic acid supplements and deworming, and timely, high quality therapeutic feeding and care for all children with severe acute malnutrition (with leadership from the Ministry of Women and Child Development).
2. Focus on proven, essential primary health care interventions: full immunisation, bi-annual vitamin A supplementation with deworming for infants and young children, appropriate and active feeding of children during and after illness, including oral rehydration with zinc supplementation during diarrhoea and timely, high quality therapeutic feeding and care for all children with severe

acute malnutrition (with leadership from the Ministry of Health and Family Welfare).

3. Promote personal hygiene, environmental sanitation, safe drinking water and food safety (with leadership from Ministry of Rural Development).
4. Integrate household food and nutrition security considerations into the design of cropping and farming systems (with leadership from Ministry of Agriculture).
5. Expand and improve nutrition education and awareness as well as involvement and accountability for improved nutrition at the community level (with leadership from the Ministry of Women and Child Development and the Ministry of *Panchayati Raj* [local self government] and including others, such as the Ministry of Information and Broadcasting and the Department of Education).

How to Do It:

Based on the Indian context and significant programming experience, the Coalition recommends the following methods to improve nutrition security.

1. Expand efforts to engage and empower vulnerable communities, particularly women in these communities, to overcome malnutrition (e.g., through *Gram Sabhas*, self help groups).
2. Ensure that nutrition related programmes focus on key nutrition outcomes and are reaching the priority target groups of children under two years of age, and women (especially adolescent girls, pregnant women and lactating mothers), in order to break the intergenerational cycle of malnutrition and to achieve the desired results.
3. Strengthen the focus on improving nutrition through a leadership and coordination mechanism with clear authority and responsibility, working from local to national levels (e.g., possibly through a mechanism like a Ministry of Nutrition).

Discussion of Recommendations

What to Do...

1. **Focus on proven, essential nutrition interventions (with leadership from MWCD programmes).**

A review of evidence and experience indicates that the country should focus on the most effective interventions:

- Timely initiation of breastfeeding within one hour of birth
- Exclusive breastfeeding during the first six months of life
- Timely introduction of complementary foods at six months
- Age-appropriate complementary feeding (adequate in terms of quality, quantity and frequency)
- Hygienic infant and child feeding practices, safe drinking water and basic sanitation
- Timely, high quality therapeutic feeding and care for all children with severe acute malnutrition (SAM), including ready to use therapeutic foods, through a community- based approach combined with a facility based approach for children with medical complications of SAM
- Improved nutrition for women, including iron and folic acid supplements and deworming for adolescent girls, pregnant women and lactating mothers

2. Focus on proven, essential primary health care interventions (with leadership from the MHFW programmes).

A review of evidence and experience indicates that the country should focus on the most effective interventions:

- Full immunisation and bi-annual vitamin A supplementation with deworming for infants and young children
- Appropriate and active feeding of children during and after illness, including oral rehydration with zinc supplementation during diarrhoea
- Improved nutrition for women, including iron and folic acid supplements and deworming for adolescent girls, pregnant women and lactating mothers
- Timely, high quality therapeutic feeding and care for all children with severe acute malnutrition, including ready to use therapeutic foods
- Address micronutrient malnutrition in a holistic manner through a food cum fortification of appropriate foods strategy; promote and improve consumption of iodised salt

3. Promote personal hygiene, environmental sanitation, safe drinking water and food safety (with leadership from the Ministry of Rural Development programmes).

The proven priorities in this area should be:

- Promote use of safe drinking water

- Encourage personal hygiene and environmental sanitation, especially use of toilets and hand washing with soap
- Ensure safe food handling practices during storage, cooking and eating.

4. Integrate household food and nutrition security concerns into the design of cropping and farming systems (with leadership from Ministry of Agriculture).

- Promote agricultural and horticultural programmes and policies to increase the supply and consumption of safe, nutritious foods and to promote food based remedies for nutritional maladies, with emphasis on addressing micronutrient deficiencies
- Mainstream nutrition considerations into the National Horticulture and Food Security schemes such as *Rashriya Krishi Vikas Yojana*
- Expand availability of low cost nutritious foods in rural areas through the Universal Public Distribution System, public-private partnerships, women's self help groups and other mechanisms (including high quality complementary foods for children ages 6-24 months)
- Review and revise existing programmes, such as the Mid Day Meal Scheme to improve the quality of foods provided and the nutrition education elements of the programmes
- The National Commission of Farmers has produced important recommendations in this area, such as: (1) defending the gains of the Green Revolution in intensive agriculture areas; (2) developing contingency plans for different weather possibilities; (3) states with unutilised yield reserve should be encouraged to improve production and productivity; (4) more crop and income per drop of water continuing to work for completing the unfinished agenda of Land Reform; and (5) ensuring a remunerative price for farm commodities

5. Expand and improve nutrition education, awareness and involvement at community level (with leadership from the Ministry of Panchayati Raj and MWCD, together with assistance from others, such as the Ministry of Information and Broadcasting programmes).

- Increase PRI leadership in nutrition security:
 - Improve sensitisation and training of PRI members on priority nutrition issues

- Promote the formation and active functioning of Village Health and Sanitation Committees, with oversight from *Gram Sabhas*, in order to focus on nutrition and engage and empower vulnerable families
- Expand PRI role in monitoring the functioning and outcomes of nutrition programmes at community level
- Increase awareness of entitlements among poor households, especially women, for example, by the distribution of entitlement cards listing the various health, nutrition and development programmes available
- Promote the use of information technology platforms and innovations (e.g., *Gyan Chaupal*, e-governance, National Knowledge Mission) for nutrition education and monitoring efforts; Encourage the *Grameen Gyan Abhiyan Movement* (village knowledge movement) and *Gyan Chaupal* (village knowledge centres) to focus on nutrition; Establish Village Nutrition Literacy Centres
- Issue clear Government guidelines on the priority interventions and target groups for improving nutrition, to encourage all programmes to focus on these evidence based, priority interventions
- Improve the nutrition education and counselling skills of all frontline service providers (e.g., *Anganwadi* workers, Auxiliary Nurse Midwives, Accredited Social Health Activists); expand nutrition education for public health and medical professionals; promote the development of a public health nutritionist cadre
- Expand nutrition education programmes in schools
- Expand Government programmes to empower and educate women's self help groups and other community-based organisations about nutrition issues and key actions they can take (e.g., community production of high quality foods, dietary diversification, grain banks)
- Expand NGO, community-based organisations, civil society, citizen's charters and private sector involvement in nutrition, including public-private partnerships and corporate philanthropy, with appropriate regulations designed to protect the public's health (e.g., corporate support for nutrition education programmes)

How to do it ...

1. **Expand efforts to engage and empower vulnerable communities, particularly women in these communities, to overcome malnutrition**

- Make nutrition a top focus area for community or *Gram Sabha* level of the *Panchayati Raj* institutions; require the *Gram Sabha* to monitor and achieve improvements in malnutrition (with specific guidelines and indicators), with a focus on reaching the most vulnerable
- Issue guidance on community involvement and empowerment as critical nutrition security approaches for all programmes; encourage communities to hold public programmes accountable (e.g., through Village Health and Sanitation Committees)
- Fund and develop a cadre of “hunger fighters” or community workers to help communities improve nutrition; this cadre of workers (hunger fighters) should reach out to all community-based organisations and women’s groups (consider employing Home Science College graduates)
- Prioritise and disseminate key nutrition education messages for use at community level (led by the *Gram Sabha*), using a life cycle approach; coordinate nutrition education and information efforts to avoid conflicting messages
- Ensure that the *Gram Sabhas* include and empower women, and support active Health and Sanitation Committees; explore community led options for reaching the vulnerable (such as through *crèches* linked with ICDS programme)
- Encourage the *Gram Sabha* to introduce mechanisms to hold Government programmes accountable for providing mandated services

2. **Ensure that nutrition related programmes are focused on reaching the priority target groups to achieve the desired results: *children under two years of age and women (adolescent girls, pregnant women, and lactating mothers)***

- Issue guidance to direct all Government Missions, Ministries and programmes to focus on the priority interventions and target groups (children under two and women); require reporting on specific indicators
- Improve the estimates of the persons to be reached by nutrition programmes, therefore ensuring correct coverage targets and improving

the quality of data used for programming and monitoring (i.e., improved “denominators”); expand registration of children under two in ICDS

- Involve communities in identifying key target groups such as pregnant women, lactating mothers and infant and young children, through village mapping; use village maps for programme planning and outreach
- Hold regular reviews of progress on nutrition indicators at all levels (using the nutrition surveillance system); conduct problem solving and revise programmes as needed, use data and regularly measure progress toward targets
- Establish concurrent evaluation systems using external agencies to provide additional data needed to ensure successful programming
- Involve the media and public to increase awareness of the nutrition situation, the national effort and to review their progress; make progress reports public

3. Improve the focus on improving nutrition through a leadership and coordination mechanism with clear authority and responsibility for improving key nutrition outcome indicators (working at local, state and national levels)

- Increase awareness and promote leadership (and champions) in nutrition at all levels (local, state and national); improve “nutrition literacy” of policy makers and administrators through advocacy and (pre-service and in-service) training; promote all political parties to include nutrition security as a priority issue in their political/election manifesto; educate parliamentarians and legislative leadership on nutrition security and create opportunities for debates
- Utilise an existing mechanism (or create a new mechanism) to ensure current Missions, Ministries and Government programmes improve their focus and performance with respect to nutrition outcomes at all levels – this mechanism could be a Cabinet committee, a task force under the Prime Minister, an apex body, a National Nutrition Authority, or Ministry of Nutrition at the national level; ensure strong leadership for this coordinating mechanism
- Expand and strengthen the National Nutrition Monitoring Bureau to establish a robust national nutrition monitoring system in order to 1) provide nutrition outcome data for measuring progress and holding programmes

accountable nationally and at state level; 2) shift the focus to nutrition *outcomes* rather than process measures; 3) improve the estimates of the persons to be reached by nutrition programmes, therefore ensuring correct coverage targets and improving the quality of data used for monitoring and evaluation (i.e., improved “denominators”); and 4) set time-bound targets and hold Missions, Ministries, and programmes accountable for their performance

- Harmonize nutrition awareness programmes with guidance on nutrition literacy and key messages as well as critical indicators to track and guide major nutrition related programmes
- Use improved data on beneficiaries (denominator based approach) to ensure adequate funding levels to reach desired beneficiaries and coverage levels
- Make good governance an explicit objective at all levels (national, state and local); select and implement successful model efforts to improve governance; select indicators and set efficiency/good governance targets; measure and publicly share progress toward good governance targets; consider more focus on the block as the primary unit for nutrition programme planning and implementation, since it may be more realistic to improve governance at this level
- Strengthen and expand the human resource pool addressing malnutrition; utilise Home Science collage graduates for expanded nutrition programming; prioritise the development of public health nutrition as a profession; mandate nutrition to be included in pre-service training of professionals such as nurses and medical doctors
- Review and implement selected lessons from Indian states (e.g., Kerala, Tamil Nadu) and other countries that have made rapid progress toward eliminating malnutrition (e.g., China, Vietnam, Thailand, Brazil); organise two-way exchange and learning programmes

Conclusion

The eradication of hunger is a critical step in socially sustainable development. The Constitution of India states explicitly in Article 47 that the *“State shall regard the raising of the level of the nutrition and the standard of living of its people and the improvement of public health as its primary duties”*. Yet more than 60 years after independence, many sources of data show that the nutrition situation in India

has not improved as desired, with almost half the children underweight and more than 70 per cent of women and children with serious nutritional deficiencies such as anaemia. Although there are success stories and developments in parts of India which show what we can achieve, the level of malnutrition in our country today is morally unacceptable, and has enormous costs in terms of health, well being, and economic development.

The world is focused on the achievement of the Millennium Development Goals (MDGs), which are greatly dependent on tackling the critical problem of nutrition in India. Malnutrition affects every MDG indicator identified by the United Nations as the most meaningful indicators of human development: poverty, hunger, education, women's empowerment, child mortality, maternal mortality and infectious chronic diseases.

India is at an historic juncture with respect to development and its position in the world. The country faces critical choices in terms of benefiting from its recent economic growth. We can continue on the present course, leaving half of our people under-nourished, in poverty and suffering - risking the political and economic destabilisation that can result from such a divide. Or, we can take bold leadership steps to eliminate malnutrition and improve the health and well being of all of our citizens. The Coalition for Sustainable Nutrition Security in India has accepted this *Leadership Agenda for Action*, in order to ensure that we take the path that will end the curse of malnutrition.

Attachment 1: List of On-Going Government Programmes (listed by life cycle focus area)

Beneficiaries	Schemes
Pregnant and Lactating Women	ICDS RCH- II NRHM
Children 0 – 3 years	ICDS RCH- II NRHM IMNCI Rajiv Gandhi National Creche Scheme
Children 3 – 6 years	ICDS RCH- II NRHM Rajiv Gandhi National Creche Scheme
School going children 6 – 14 years	Mid Day Meals <i>Sarva Shiksha Abhiyan</i>
Adolescent Girls 10 – 19 years	Nutrition Programme for Adolescent Girls (NPAG) <i>Kishori Shakti Yojana</i>
Adults	Food for Work <i>Aam Admi Bima Yojana</i> NREGS Skill Development Mission Women Welfare and Support Programme Adult Literacy Programme
BPL Population	Universal Public Distribution System
<i>Antodaya Card Holder</i>	<i>Antodaya Anna Yojana</i>
Old and Infirm Persons	<i>Annapurna</i>
All Population	<i>Rashtriya Krishi Vikas Yojana</i> Food Security Mission Safe Drinking Water and Sanitation Programmes National Horticulture Mission National Iodine Deficiency Disorders Control Programme (NIDDCP) Nutrition Education and Extension <i>Bharat Nirman</i>

Attachment 2: Framework for Analysis of Nutrition Security



Note: The Expert Task Force used this framework to guide their analysis of Nutrition Security in India, which informed this paper.

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