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The Cycle of Malnutrition in Children and Women in India

If you had 75 billion dollars to invest in the mitigation of the most critical problem in the world today, what issue would you choose? In May 2012, the Copenhagen Consensus, a group of over forty respected economists and nobel laureates, identified “bundled micronutrient interventions” for the world’s undernourished as the most urgent issue; malnutrition also came on top of the Consensus list in 2008. Its cost-benefit ratio is extraordinary; each dollar spent on nutrition results in \$8 and \$138 of benefits indicating an extraordinary cost-benefit ratio in terms of “increased health, schooling, and productivity” (Copenhagen Consensus). While at least a billion people go to bed hungry every night, another billion simply do not get the right vitamins and minerals to thrive mentally and physically.

The cycle of malnourishment that lasts generations, often starts in the womb with malnourished mothers giving birth to malnourished children. One of the most cost-effective ways to combat poverty is to fight this “hidden hunger” by breaking the cycle of malnutrition, and ensuring that women and children have the right food at the right time. If children during the first 1000 days of their life do not get the right nutrition, irreversible damage is done to their physical growth and cognitive abilities. An investment in nutrition security is central to attaining human rights, especially those of the most vulnerable segments of society such as children and women. Improving what people eat is the best way both to reduce hunger and poverty, and it simultaneously improves health, welfare, education and productivity. For the purpose of this paper I will shift the debate from food security to nutrition security, focusing on malnutrition in the children and women in India. Although obesity is also associated with malnutrition, I will specifically focus on undernutrition, using the term synonymously with malnutrition and “hidden hunger.”

India’s economic transformation and growth have received much attention in recent years and it has made considerable progress in the expansion of schooling, and bridging the gender gap in education, especially at the primary and lower secondary levels. However, in the sphere of hunger and malnutrition, India has fared dismally. Child malnutrition in India is among the highest in the world, with almost one-half of children under age 3 being either underweight or stunted. The three common indicators of child malnutrition are: the proportion of children stunted, those underweight and those wasted. Stunting refers to low height at a given age, underweight refers to low weight at a given age, and wasting refers to low weight at a given height, regardless of age. According to the National Family Health Survey data from 2005-6 more than 54% of all deaths under age 5 in India are connected to malnutrition (NFHS). Approximately 43.5% of children under 5 are underweight and 47.9% stunted. Moreover, 46% of children under 5 in rural areas are underweight; infant mortality is 50% higher in rural areas (NFHS). Gender-related statistics are dismal: 33% of adolescent girls are undernourished; 56% of adolescent girls are anemic; 30% of women gave their first births before they were 18 years old, contributing to a high maternal mortality rate and anaemia; the dropout rate for adolescent girls in secondary school is 63.5%; in the 15-19 age-group, and almost half the total adolescent girls are undernourished (Goswami). As long as these numbers remain true, India cannot rightfully claim to being one of the most promising emerging economies. It is now commonly known that child malnutrition rates are higher in India than in many countries of sub-Saharan Africa, this despite having significantly higher income levels and lower infant and child mortality rates. Between 2005 to 2012, India finished second to last on the child underweight parameter -- below Ethiopia, Niger, Nepal and Bangladesh (Heady et al). Since 1950, India’s food-grain production has quadrupled, outpacing it’s population growth; there has been a substantial increase in available food-grain per capita. India is now among the largest producers of rice, wheat, and milk. The

beneficiaries of aid and food programs are poor and politically marginalized and therefore lack the resources with which to purchase the available food. Additionally nutrition is a difficult multi sectoral problem to solve since it relies on, and simultaneously influences, improvements in health, education, agriculture, sanitation, and welfare. Improving childhood malnutrition is associated with increased smallholder farming, maternal literacy rates, and level of female empowerment (Blalock).

Though the population in urban areas is increasing at a faster rate than the population in rural areas, overall, a much more significant portion of India's population still lives in rural areas. Almost 70% of India's population (1/6th of world's population) resides in the villages, this population majority only contributes to 23% of GDP. Most of India's economic growth comes from the urban, non-agricultural sector. The median household size in rural India decreased and is now between 4-5 for the first time in history (Copenhagen Consensus). However, joint families are still more prevalent than nuclear families, making the actual number of people who live and share resources much larger. The majority of India's hungry and poor is composed of small holder farmers and landless agricultural workers living in rural villages. Farming is small scale and not mechanized with 80% of farms being less than 2 acres in size. Illiterate farmers sell their crops in a government marketplace called a *mandi* to intermediary traders who act as purchasing agents for large buyers. Farmers lack market information of crop price trends and are exploited and forced to accept whatever price they are offered. They lack accurate information on weather forecasts and improved farming inputs, reducing their profits even more. Often they become lifelong debtors when they seek financial assistance, drawn by deceptive advertisements and lowered interest rates, to buy seeds and sow it with hopes of high yields, which often fails. Faced with these barriers to increased productivity and wages, rural families are reduced to insufficient food and nutrition deficiencies.

The typical diet in rural India remains undiversified and deficient in both macro and micronutrients. Calorie, protein, and fat deficiencies are all important sources of dietary undernutrition. Calorie deficiencies of children are 25% below requirements, protein deficiencies are 58% of requirements, and fat intake is 30- 50% of recommended levels. Micronutrients are extremely important for both physical and cognitive development, and consumption of vitamin A, Zinc, Iodide and Iron for young children in India fall short of recommended levels (Heady et al). Discrepancy in data makes it difficult to assess the current status of macro and micronutrients. Data from India's National Sample Survey (NSS) and National Nutrition Monitoring Bureau (NNMB) show declining calorie and protein intakes over the last 25 years (Deaton and Dreze), but FAO data shows a slight increase (FAO). However, all three data sources show large increases in fat consumption. The largest driver of decreased protein availability has been the 50% decline in pulse consumption between 1960-2007. Protein intake has decreased 17% since 1960 because of a fall in pulse and coarse grain production (Heady et al). While the father of the Green Revolution, Norman Borlaug, transformed Indian agriculture during 1965-1985, eliminating disastrous famines and securing national food security with drought resistant high-yielding seeds, at affordable prices, it also relied excessively on water resources, fertilizers and pesticides. The subsidies promoted only cereal production and contributed to a lack of diversity in the farmers diet. Combined with unfavorable weather and low international prices, the indebted farmers saw a decline in overall output, especially pulse production - the poor man's meat and main source of protein (Heady et al).

There has not been much change in the predominantly cereal-based dietary intake in India over the last three decades, except among affluent segments of the population. In spite of strong agricultural output of wheat and rice, and moderate increase in coarse cereals (such as maize, sorghum and pearl millet), mean calorie intake in the country has actually declined by about 10% in the rural areas and 4% in the urban areas (Heady et al). Because of the advances made by agricultural revolution over the last five decades, India saw sufficient cereal availability to meet the recommended dietary allowances by 1991. However, undernutrition rates remain high starting in the womb, aggravated by poor infant feeding practices and perpetuated in childhood by poor access to food and health care. The Millennium Development Goal of

reducing chronic hunger by half 2015 remains a distant dream for India. The proportion of underweight children should be reduced to 26% by 2015 from 52% in 1990, but is estimated to come down to only 33%. Mortality rate for children under 5 years should be 42 per 1,000; it is 52 per 1,000. The gap between the rich and the poor makes malnutrition even harder to accept; while Meena from Madhya Pradesh who can afford only one meal a day and tea, she remains only slightly above the 53 Cents a day poverty line; the combined wealth of India's 55 wealthiest people is \$246.5 billion (Mander). The appalling poverty costs India lost productivity as only 7% children graduate from high school. Even though, elementary education has significantly increased (74.04% literacy rate), including a rise in female literacy, an average rural family steeped in poverty pulls children out of school to join the work force and contribute to the family's limited resources. Lack of education directly contributes to the vicious cycle of malnutrition and UNICEF reports that the percentage of severely underweight children is 5 times higher when mothers have no education, compared to children whose mothers have 12 or more years of education.

Malnutrition is closely related to health care; more than 54% of infant mortality before age 5 is related to malnutrition, but often attributed to other illnesses and infections (NFHS). Although India has a universal health care system, many parts in rural areas have inadequate medical facilities. In early 2012, the Prime Minister Manmohan Singh called India's healthcare system, where a newborn baby dies every 20 seconds a matter of "national shame." India's gross domestic product for health care is very low at less than 2%. In 2005 the Indian government increased its focus on health care by launching the National Rural Health Mission (NRHM), and deploying thousands of health workers, midwives, nurses, health activists in rural villages. It established local sanitation committees and appointed representatives who would together strengthen the health care infrastructure; the program has been largely successful in alleviating malnutrition. Unsafe water and poor sanitation are the biggest causes of infection in India that aggravates health of children already afflicted with malnutrition. Poverty is worse in Sub-Saharan countries but India has larger numbers of children with stunting and malnutrition. The reason is because energy is diverted to fight off infection rather than towards growth. Open defecation is prevalent in more than half of India compared to just 4% neighboring Bangladesh which is much poorer (Sharma, S.), which contaminates food and water and causes infections. This in turn causes weakened immune systems, diarrhea, worm infestations, malaria and pneumonia. One third of child mortality is due to diarrhea and those who survive become underweight and malnourished. This severely impacts their education and productivity for the rest of their lives (Basu).

India's inability to reduce child malnutrition is partly due to ineffective policies. The National Plan of Action for Children 2005 was unrealistic when it targeted to reduce malnutrition by half in children under age 5 from 2005-2010. Biological changes in growth take much longer to take place. An Indian child is afflicted with malnutrition very early, while she is in the womb. Weighing merely 2.5 kgs, she starts out life at a disadvantage of low birth weight. A quarter of all children are born with low birth-weight: they have mothers who are also underweight with Body Mass Index (BMI) of less than 18.5, and suffer from anemia or iron deficiency (nearly 60% of pregnant women suffer from anemia) (Deolalikar). Maternal undernutrition is closely tied to the health of the offspring. Pregnant women in India gain only half of the recommended weight (Heady et al). The problem is circular in nature because their weight is the result of the undernutrition that influenced their own mothers. Combined with post womb factors such as low calorie intake, nutrient deficient diets and other socio economic factors such as illiteracy, early childhood marriages and childbirth and it is difficult to escape the vicious circle of malnutrition. Low birth weight babies are more prone to infections and therefore are more likely to die. Malnutrition peaks during the first two years of child's life; 11.9% of 0- 6 month old infants are malnourished but 58.5% of 12- 23 months old children are undernourished. This steep rise in malnutrition during the first two years is mainly due to poor infant feeding practices. Often young, uneducated mothers do not know that colostrum, or the first milk has nutrients that would protect their offspring from infection and disease for lifetime. Delayed breastfeeding, combined with early introduction of other forms of nourishment sets the infant on the path of malnutrition very early in life. Out of 98% mothers who breastfed their child, only

one quarter do it within the first hour of birth and slightly more than half do it after one day of birth. Less than half of children under 6 months of age are exclusively breastfed and that figure drops to only 28% by 4- 5 months of age (NFHS).

In January 2008 the Lancet five-series publications on maternal and child nutrition was a call for the world, and in particular for India, to the importance of nutrition as the critical component of health and economic development. The Director of Health, Nutrition and Population Department of the World Bank said “The messages we need to get out there are that malnutrition kills, it is irreversible, and it creates a next generation of poor, uneducated, unproductive people, more susceptible to early onset of adult chronic diseases” (Gustafson).

Undernutrition during pregnancy and the first year of life causes structural and metabolic damages to a child’s brain function, that manifests negatively in education (Lozoff et al). Insufficient calories during the initial stages of life puts the body into survival mode, altering the energy balance to a lower level of consumption. This results in smaller stature seen in the Indian population, which takes several generations to reverse. Goiter caused by iodine deficiency, blindness by vitamin A deficiency (VAD) and anaemia by iron and folate deficiency are major public health problems in India. Over the last three decades, there has been a rapid decline in keratomalacia, an eye disorder, caused by severe VAD. Malnutrition is higher among children whose mothers are uneducated or have less than five years of education. (Sharma, P.).

India has started a critical review to understand the multifaceted problem of hidden hunger and its longterm impact on individuals. The President’s National Council on India’s Nutritional Challenges is developing multi-sectoral program to address maternal and child malnutrition in selected 200 high-burden districts, during 2012-13 (Rao). Based on the outcome of research done at India’s various institutions such as the Indian Council of Medical Research, Indian Council of Agricultural Research, and Indian National Science Academy, the central government will initiate approaches like supplementation programs, fortification of salt, cereals and oil, bio-fortification and food-food fortification (diet diversification), and enhanced agricultural production of healthy pulses and millets through soil and agricultural science. Dr. M. S. Swaminathan Research Foundation (MSSRF) has joined hands with Harvest plus and is starting a Malnutrition Free Odisha Programme in April, 2013, that will support biofortification of land and crops, with nutrients like iron, zinc and Vitamin A (Sahu).

India malnutrition persists despite economic growth, increasing literacy and an abundance of food grains. Programs such as a large Public Distribution System, where staple foods such as food grains and sugar are made available through ‘fair-price shops’, food-for-work programs, employment guarantee schemes such as Mahatma Gandhi National Rural Employment Generation Scheme (MNREGA), direct nutrition supplementation programs such as the Midday Meal Scheme, available in all the states, and Integrated Child Development Services (ICDS), the largest supplementation program in the world. The government allocation for the ICDS program alone in 2012-13 is nearly \$3 billion. In the past, these programs have not made much of a difference in either macro undernutrition caused by a lack of calories and proteins or severe child malnutrition caused by lack of micronutrients. Economists such as Jean Drèze think that certain basic flaws undermine policies and programs even before they start. For example, India’s Planning Commission determined in 2012, that the poverty line will be a mere Rs 29 (54 cents a day). According to Drèze, a basic food basket meeting essential micronutrient requirements, for a family of five, costs around Rs 235. However, 77% of indians live on Rs 20 a day (Drèze). MNGREA allows a maximum of Rs 100 a day for 100 days and is not enough to meet nutrition security; below poverty line threshold needs to be at least twice as high to be adequately nourished. According to a national sample survey data: among the poorest 20% of rural households, 53% don’t have a BPL card (below poverty line) - so it is a hit and miss approach which leaves a lot of people out and is incompatible with the notion of right to food. Services for the poor end up being poor services, as famously said by Amratya Sen, India’s leading developmental economist. Dr. Banerjee of MIT says that the government has to use a cut off number to

allocate resources to the most vulnerable - the bottom 20-30% of its population, but it can have “different thresholds for each program, intended to target different beneficiaries. For example, since housing is unaffordable for many more people than, say, food grains, it would be legitimate for housing programs to have more generous cutoffs than the public distribution system (PDS) which gives the poor access to subsidized food” (Gill).

Nutritional issues are complex and multidimensional and involve several stakeholders, requiring improvement in health services, water quality, sanitation, habitat, feeding and care practices, gender imbalance, agricultural practices, food intake, and access to goods and services (TheLancet.com). The challenge is tying together programs that address the underlying causes of widespread malnutrition. Targeting children and women will further create nutritional impact that will last for generations. These interventions would address the immediate causes of undernutrition such as inadequate diet. Interventions include supplementations for vitamins and minerals like Vitamin A, iron, and iodine, education programs for mothers on the importance of breastfeeding and eating enough during pregnancy, and fertilizers for soils deficient in zinc.

The lack of fortification programs has resulted in the prevalence of blindness (due to lack of Vitamin A), anemia (due to lack of iron), and goiters (due to lack of iodine).

Vitamin A is an essential micronutrient for visual health, cellular proliferation and differentiation, controlling development, and maintaining reproductive functions. There has been some improvement in severe forms of VAD in children, including blindness that is now very rare. All the large national surveys (NNMB 2001-2002; ICMR, 2004) have shown that clinical VAD in children under 5 is now less than 1%, thanks to dietary diversification programs and micronutrient supplementation such as Massive Dose Vitamin A Programs targeting children aged nine to 36 months old. Continuation of such programs is recommended.

Currently, over half of India's soils are deficient in zinc. In a country like India where cereals make up a main source of calories, zinc-deficient soil has a direct correlation with zinc-deficient diets. In addition to the lacking soil, viral and bacterial pathogens cause changes in intestinal absorption that cause diarrhea and zinc to be lost in the feces. Zinc is especially important for growth spurts in infants and children as well as in mothers during pregnancy. Conversely, a lack of zinc can stunt growth and cause dehydration due to watery feces. In children under the age of 5, zinc deficiency can have severe neurologic repercussions. A simple solution to the health and agricultural problems caused by zinc deficiency is having zinc additives in fertilizer. These additives can improve agricultural yields for farmers as well as improve overall nutrition.

Anemia causes fatigue and low energy levels; 56% of married women and 79% of children age 6-35 months are anemic (Bhook.com). The cereal rich diet, with little or no red meat, means there is almost no iron found in the diet. The situation is worsened by chronic blood loss caused by infections such as malaria and hookworm. An hemoglobin of 9 in the US is cause for transfusion while if it is under 6 in India, it is cause for relief. Coverage of The National Nutritional Anemia Prophylaxis Program to prevent anaemia among pregnant women and children is low. High rates of anaemia in pregnant women persist, and the impact of severe anaemia on birth weight and maternal mortality remains unchanged. Recommendations for anemia reduction include diets fortified with iron and folate rich foods and not overconsumption of cereals that impedes iron absorption. Biofortification of food, health and nutrition education and screening for early detection, especially in adolescent girls and pregnant women is recommended. Hemoglobin level improved when iron supplements were added and decreased when women breastfed beyond one year. Nursing beyond 1 year for anemic mothers should be discouraged.

Iodine deficiency disorder (IDD) afflicts every person in every single Indian territory. It results in high prevalence of goitre in six- to 12-year-old children. Universal use of iodized salt is a simple, inexpensive method of preventing IDD but since 1962 the government has launched, banned and relaunched various National Iodine Deficiency Disorders Control Program. Inconsistent interventions have resulted in disappointing reduction of IDD. The failure of a program as simple and inexpensive as salt iodination is the perfect example of how India is its own worst enemy.

Nutritional sensitive, or indirect, interventions address the underlying causes of malnutrition, in the sectors of agriculture, health and education that target illiteracy, gender imbalance in feeding practices, poverty, poor sanitary conditions, and failure to include nutrition concerns in farming practices. Indirect nutrition interventions can be part of a multi-sector development assistance program, like those in food security, education, or health. These programs don't necessarily have nutrition as their main objective.

For example maternal age at childbirth of less than 20 years is associated with a 50% excess risk of mortality compared with childbirth at older age. This shows the importance of delaying childbirth and birth spacing as interventions to improved child survival (TheLancet.com). Safe drinking water and sanitation will not provide needed calories but it will greatly reduce diarrhea and infection, and prevent nutrition wastage. Public works schemes such as MGNREGA assigned one third quota of employment for women but failed to take into account time constraints faced by women. Child care should be extended consistently to attract more women to further increase the opportunities the program has to offer. 83% of women in rural areas work in the agricultural sector. Indian women in agriculture work extremely hard, to the detriment of their own nutrition and that of their children (Heady et al).

Does agricultural production influence nutritional status? A study done by International Food Policy Research Institute in 2012 found that there exists a disconnect between nutritional growth and agricultural productivity (Heady et al). Agriculture is still India's largest source of employment, including for women, but the employment of women in agriculture affects negatively the health of pregnant women and mothers of young children, which in turn affects their children's health, characterized by persistent low birth weight. From 1995 to 2005, agricultural growth averaged around 2.5–3.0 % per year while other sectors experienced average growth rates in excess of 6% (1985-1999) and 7.5 percent (2000 to 2008). Agricultural growth from 1996-2003 saw zero growth in food production per capita. Additionally, the growth in non agricultural sector was less labor intensive leading to “jobless growth phenomenon”. So even though national per capita income increased it did not translate to real income growth in the rural sector as shown by the household survey data. The underweight percent declined by around 22% over the Green Revolution period (1977–1992), but as food production per capita slowed in the 1990s, nutritional improvements stagnated too. Indian states with large agricultural growth were not necessarily followed by an improved nutritional status. Even though the agricultural gross domestic product per worker in Gujarat and Madhya Pradesh increased by 17 and 40% from 1998 to 2005 while the prevalence of underweight and stunted children increased by 5% points over that period in both states. Conversely, states that had a stagnation in grain production associated with significant nutritional improvement are Assam, Goa, Maharashtra, Tamil Nadu, Kerala, and Himachal Pradesh. Kerala, Tamil Nadu, and Andhra Pradesh show a disconnect between nutrition and health: lower undernutrition rates and decreased caloric intake has better health outcomes than Punjab and Haryana. Although it had been assumed that increased agricultural production would be a major determinant of nutrition outcomes, IFPRI found no evidence to confirm it. Growing more traditional crops (like rice, corn, or wheat) doesn't by itself improve nutrition.

Stagnant nutritional performance in the face of strong economic growth further deepens the Indian enigma. Conflicting data from FAO and renowned economists' (Deaton & Drèze) data from India's Sampling Survey and National Nutrition Monitoring Bureau further cloud the problem. While the former showed an increase in calorie consumption, the latter marked a 10% decline between 1983-2005). With a decrease in poverty, underweight prevalence of children remained stagnant at 50%. Diets switched from

coarse grains to cereals, oils and rice due to taste, not translating into any nutrition improvement. Sedentary lifestyles due to increased mechanization reduced calorie requirement, which even the poor then allocate towards the purchase of non agricultural items such as cell-phones and television. In both rural and urban groups, higher incomes did not translate into increased calorie consumption (Deaton & Drèze).

Divergent views of different stakeholders makes creation and implementation of multisectoral nutritional programs difficult. The 12th Planning Commission recommends focusing on children, particularly those under the age of 2, adolescent girls and women. The role of ICDS and anganwadi workers will have to be redefined. Women and children have been left behind from planned development in India despite having many programs in place (The program increased from 33 projects in 1975 to 7073 projects in 2009) (ICDS). For every two male, only one female is admitted to a health facility (ICDS). The ICDS program is centered around anganwadi workers - women who work in villages, do home visits and provide nutritional education and supplemental feedings. It mostly targets children between 3-6, and fails to neglect children between 0-2 years old, missing the critical window of opportunity to tackle undernutrition. Data showed that almost three quarter of children and women did not receive any supplements and coverage in the previous year of survey and about 20% of children lived in areas that did not have an anganwadi centre (NFHS). Better record keeping should be enforced to evaluate progress of these programs: Frequently there are only 5-6 children attending the centre, but the records will show 100 (JNU).

Support needs to be given to lactating mothers on the importance of breastfeeding. Priorities need to be redefined. "A review of the yearly plans of different states shows that only politically visible schemes (such as Janani Suraksha Yojana, health campaigns, and special-care baby units), received emphasis, ignoring critical interventions such as those for diarrhea, acute respiratory infections, nutrition, and postnatal care" (ICDS). The government has to reevaluate the Food Security Bill and rethink its strategy of subsidizing cereals since it is already the largest and the most affordable component of a poor family's diet. Instead, interventions to increase the affordability and accessibility of fruits, vegetables, lentils and animal products (India is secure in the production and consumption of milk and eggs) need to be exercised for better nutritional outcomes (Bhattacharya). Consuming more rice and wheat is not enough to change the malnutrition status among children and women in India. Simply counting calorie availability influences policy debates, such as the Public Distribution System (PDS) in favor of distributing rice and wheat; food policies need to influence micronutrient availability to children and women. While hunger is visible, nutrition is "hidden" and it needs advocates to change.

Only recently has India's attitudes about biofortification have changed. M.S. Swaminathan Foundation is working with Harvestplus, a global leader in bundling micronutrient interventions for the alleviation of malnutrition. Howarth Bouis, the director of Harvestplus says "Agricultural scientists believed their job was mainly to raise yields and protect plants from pest; they were not interested in developing more nutritious breeds. Nutritionists were uninterested in agriculture. Over time, and especially over the past few years, there has been a growing awareness that agricultural policies have a huge impact on nutrition" (Bhattacharya). The Malnutrition Free Odisha Program will focus on large scale production of crops like Vitamin-A rich sweet potato, iron-rich drumstick, protein-high maize, iron-rich beans as well as bio-fortification of farms that produce staple crops such as wheat and rice. The fortified orange sweet potato's success in Africa is being scaled up in India, so that the vulnerable can have easy access to nutritious food (Sahu). India has the world's largest school lunch program that feeds 120 million children a day. When it first started, families were given free grain to feed their children who went home for lunch. The grain was sold by poor families for additional income and children went hungry. Now organizations such as Akshya Patra Foundation takes fortified grains, makes food and deliver it to schools. Today children get fortified meals including biscuits targeting micronutrient deficiencies. The biscuit industry in India has grown at over 14% per year for the last three years compared with an annual average agricultural growth rate of less than 4%.

The human and economic cost of India's stubborn malnutrition is immense. Malnutrition is costing India's economy 4-5% of its GDP in terms of lost labor and productivity. Malnourished children are additionally at risk to develop chronic illnesses; India has the largest prevalence of type 2 diabetes in the world. Malnutrition persists despite gains in literacy, economic growth, agricultural productivity and a host of welfare programs. Local context has to be kept in mind and those at the heart of the problem have to become key stakeholders in the debate on nutrition security. Rising tide does not lift all and economic and agricultural growth is not enough to ensure nutrition security. The poor don't choose to spend their hard earned money on food that maximizes micronutrients intake. Government policies influence diet and it needs to reduce bias towards wheat and rice in favor of pulses, fruits and vegetables. Policies and programs should capture and target children, especially between 0-2 years old and women with a view of preventing "hidden Hunger," and breaking the cycle of malnutrition. A shift in focus from staple food to increasing dietary micronutrients will improve nutritional health of the most vulnerable in India's population.

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