



Sisters Savitri and Sarita learn the alphabet together. They are Musahars, a community of two million known as the Dalits of the Dalits that often live at the edge of starvation. (*Photo: Marcus Perkins – Ecce Opus*)

Food, Nutrition and Exclusion

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Food and Nutrition as a Public Good

In the language of this series of exclusion reports, a public good is understood as a good, service or capability that is necessary for a life with dignity. Life is literally impossible without adequate and assured food. An active and healthy life is dependent on adequate food and nutrition without which a person would simply become enfeebled and would die over time, unable to work and succumbing to ailments that she would have been able to withstand if she were well-nourished. In this chapter, we look at those groups that are fully or partially excluded from this right to food and nutrition, locating them in the larger macroeconomic context as well as the multiple determinants of malnutrition.

Our studies¹ of how people cope with endemic hunger reflect both intense suffering and indignity. People train their bodies to survive with less and less food, or forage for 'pseudo-foods' (with hardly any nutritive value) that can be gathered without cost, such as grasses, tubers, mango kernels and the like, and fill their bellies. Another way of coping is by making desperate choices, such as migrating to distant lands in search of any kind of work² on any

terms, sending one's young child out to work, sometimes in faraway places, putting oneself or one's children into bondage, or even selling one's child.

The idea of public good in this report is also closely tied up with the idea of the role of the state. The important aspect of food and nutritional denials is that today these are entirely preventable by suitable public policies – sensitively designed, adequately resourced and effectively implemented. People can secure food with dignity in multiple ways – by growing food, by buying food (this requires adequate income) and/or through state provisioning. Each of these are critically dependent on state policies and institutions.

While having sufficient food is central to ensuring that people are well-nourished, malnutrition is affected by multiple factors. Along with consuming food in adequate quantity and good quality (in terms of nutritional content), absorption depends on a number of other factors, particularly related to health care and sanitation. A conceptual framework to understand (maternal and child) malnutrition de-

1 See for e.g. Mander, H., 2012. *Ash in the belly: India's unfinished battle against hunger*. Penguin UK.; Rai and Mander, 2008. *Living with Hunger: Chronic Food Deprivation Among Aged People, Single Women and People with Disability*. Centre for Equity Studies. Delhi. For further studies, see reports available on the Centre for Equity Studies website: <http://centreforequitystudies.org/>

2 The way 'work' is generally defined and referred to in official documents, statistical reports and surveys, on which

research studies are generally based, is limited. Given the patriarchal social norms and resulting sexual division of labour, women generally tend to be engaged in far more work that is accounted for, including unpaid work such as domestic work and care work. There cannot be a complete understanding of women's work, and work in general, without accounting for the various unpaid work burden that generally falls on women. While being cognizant of this lacuna in the understanding of work, we have restricted ourselves to the usage of work as understood officially. This restricted usage is in no way meant to undermine the unrecognised work that women do.

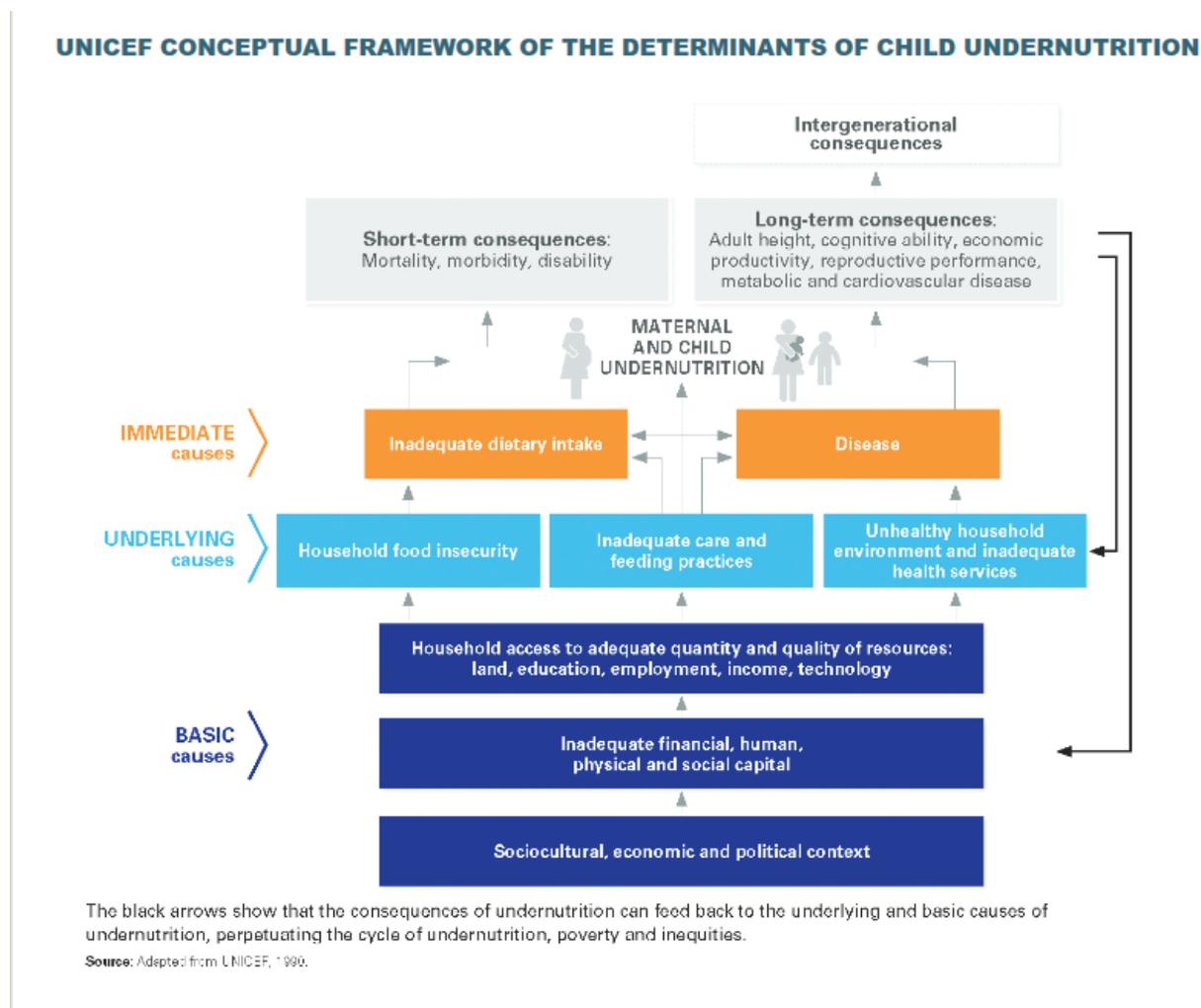
veloped by UNICEF in 1990 is widely used as the starting point to understand factors affecting child nutrition outcomes. This conceptual framework as seen in Figure 1, identifies inadequate dietary intake and disease as the immediate causes of malnutrition. Household food security, inadequate foods, feeding and care practices, housing, environment and health services are identified as the underlying causes. Basic causes include inadequate access to services, inadequate financial and human resources and the sociocultural, economic and political context. In the sections below, we explore exclusion, in the context of such a framework of multiple determinants.

A Lancet special issue on maternal and child nutrition in 2013 further developed this framework to talk about nutrition-sensitive and nutrition-specific

interventions and programmes that are effective in improving maternal and child health nutrition.³ Nutrition-specific programmes include interventions towards improving breastfeeding, infant and young child feeding, supplementary feeding, micronutrient supplementation, adolescent and maternal nutrition and so on. They also include programmes for improving agriculture and food security, social safety nets, women’s empowerment, child protection, water and sanitation, health and family planning services etc (Black, et.al 2013). Effective enforcement of laws protecting labour rights, and the abundant availability of opportunities for decent work can also

3 Special Issue on “Maternal and Child Nutrition” of the Lancet available at <https://www.thelancet.com/series/maternal-and-child-nutrition>, published on June 6, 2013, accessed on March 22, 2019

Figure 1: Conceptual Framework – Malnutrition



Source: https://www.unicef.org/nutrition/files/Unicef_Nutrition_Strategy.pdf, p.9

be thought of as being included in nutrition-sensitive approaches. A number of these related issues (e.g. health services, sanitation, women's education, decent work) are also public goods and the state has a crucial role to play in ensuring these. Previous reports of the India Exclusion Report (IXR) have included chapters on many of these.

2. Groups Excluded from Food and Nutrition

The Indian subcontinent has had a history of severe famines and famine related deaths in the pre-Independence period. Although there have been no recorded famines after Independence in India, the problem of chronic malnutrition is still widespread. Reports of starvation deaths continue to come up even now. Amartya Sen's work has shown that famines are not so much a result of shortage of food but a failure of public action in ensuring entitlements to people. Scholars have argued that in a democracy, a free media and active civil society ensure that there are no famines (Sen, 1982, Dreze and Sen, 1989)⁴. It is unfortunate that the prevalence of severe malnutrition, hunger and even starvation in some pockets has not elicited that kind of a response in India even though there is democracy, an active media and a relatively free press.

Mander's (2012)⁵ work on colonial famine codes and scarcity codes of post-colonial India shows that although not legally binding, they spurred local administrations to take some action mainly in the form of creation of public works programmes. For a long time, district authorities in many regions of the country were guided by locally updated, adapted and amended versions of these Famine Codes during episodes of food scarcity caused by drought and failures of rain. These codes detailed the duties of governments in times of distress and included instructions on how to anticipate famines and to save life, albeit explicitly at the lowest possible cost to the exchequer, by providing employment at subsistence wage, and 'gratuitous' relief to the 'unemployable'. These codes however limited they were, are not at all used these days. This is mostly because rights-based

legislations such as the MGNREGA and NFSA are supposed to be preventive measures and it is believed that in the presence of the schemes under these Acts as well as the economic growth that India has witnessed in the recent decades, starvation is a thing of the past. However, as the recent reports of starvation deaths that have occurred in Jharkhand, Delhi and elsewhere have shown these entitlements and schemes have not been fool-proof with many of those who succumbed to hunger having been denied of their entitlements for various reasons. Acute food deprivation among many households persists to a significant degree but is shrouded in official denial⁶.

Famines have given way to the persistence, even in normal times, of endemic hunger and widespread malnutrition. The most affected are children, disabled and infirm persons, old people without caregivers, single women in particular and women in general, and socially most vulnerable groups such as Dalits, Adivasis, minorities, urban slum dwellers and homeless people (Mander, 2012; Sahu, 2018). In the last year itself (2017-18), there have been more than 20 starvation deaths from across the country that have been reported in the media⁷. Almost all of these have been followed by civil society led fact-finding visits to affected families which have found a serious denial of entitlements such as PDS rations, old age or widow pensions, school mid-day meals and so on. Most of these cases also showed that the groups that are most vulnerable to starvation belong to demographic groups such as the aged, single women, children, disabled; social groups such as Dalits and Adivasis⁸ and occupational categories such as agricultural labourers and migrant urban informal sector workers. While the reported deaths are the tip of the iceberg, they usually reflect the situation of hunger and destitution in the family and immediate community.

4 Sen, A., 1982. *Poverty and famines: an essay on entitlement and deprivation*. Oxford university press. And Dreze, J. and Sen, A., 1989. *Hunger and public action*. Oxford University Press on Demand

5 Ash in the Belly

6 See responses of various state governments to recent reports of starvation deaths. For e.g. <https://thewire.in/rights/even-after-18-starvation-deaths-jharkhand-govt-sidesteps-all-blame>

7 The Right to Food campaign has been updating a list based on media reports as well as fact-finding missions, available on <http://www.righttofoodcampaign.in>

8 Dalit and Scheduled Caste; Adivasi and Tribals and Scheduled Tribes have been used interchangeably. Dalit Muslims and Dalit Christians are not included within the official Scheduled Castes. Many Adivasi and Tribal groups are also not included under Scheduled Tribes.

A large number of people have some access to food and nutrition and are able to partially fill their stomachs or eat adequate quantities but of poor-quality food or are unable to absorb the nutrients due to the disease environment. There are a number of groups that we can regard to be 'adversely included', meaning that they are not completely deprived but they suffer significant discrimination and denials related to their disadvantages of age, gender, caste, disability, geography, ill-health, and many others. We shall look at some of these below.

2.2 Food Insecurity and Malnutrition Among Socially Excluded Groups

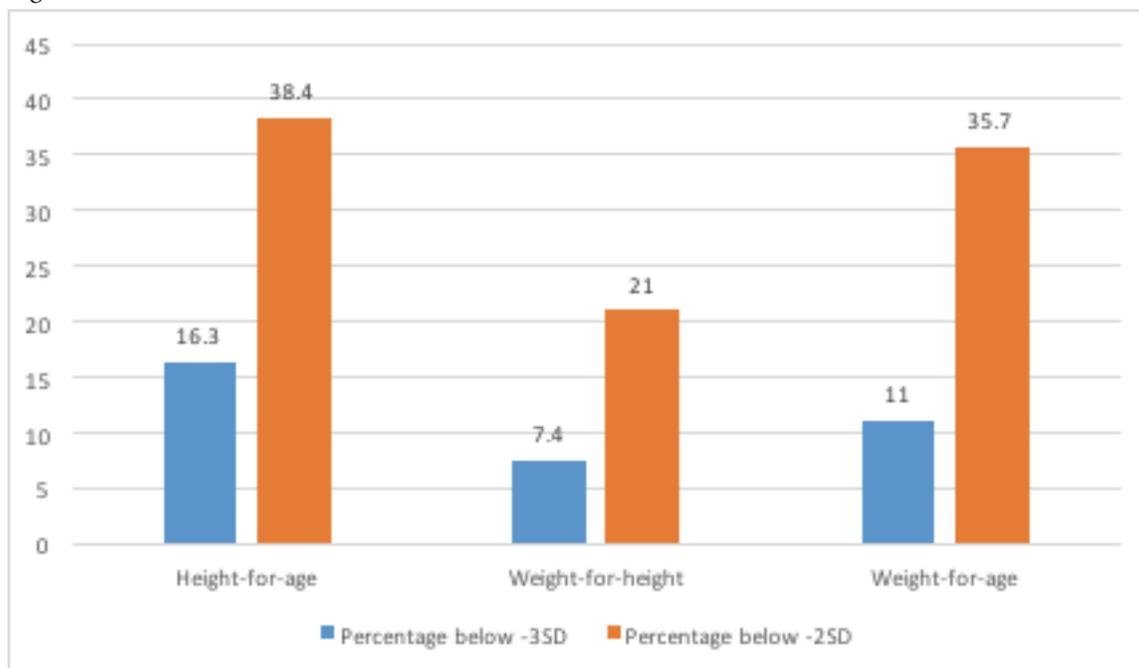
Children

Child malnutrition is considered a very sensitive indicator of the overall levels of food security and hunger. Stunting and wasting amongst children along with child mortality rates are the main components of the Global Hunger Index (GHI) as well. Much of the malnutrition that sets in before the age of two years is irreversible. Eighty per cent of brain development occurs in the first six years of life. Therefore it stands to reason that good nutrition and prevention of illness at this stage is very critical for life long

physical and mental development. Nutrition status of children at this age is also inextricably linked to the status of the mother – both biologically because how healthy she is before and during pregnancy contributes to the birth weight and health of the child as well as socially, as the mother is the primary caregiver of the child.

The most commonly used indicators of child malnutrition are the anthropometric indicators based on height and weight. Stunting which is low height for age represents chronic malnutrition, whereas wasting which is low weight for height represents a more acute condition. Underweight i.e. low weight for age is the measure that is most often used in large scale public programmes, is a composite indicator. Due to the ease of measuring weight compared to height underweight as an indicator is used widely. It is also well understood that heights take longer to change and are inter-generational whereas even short-term interventions can have an impact on wasting. Severe acute malnutrition (SAM) which is basically severe wasting is given prominence in policy making (especially in recent times) because it is argued that the risk of mortality associated with SAM is very high. Even stunting and underweight contribute to mortality, with the WHO estimating

Figure 2: Indicators of malnutrition in children



Source: NFHS IV

that about 45% of child mortality has malnutrition as an underlying factor (World Health Organisation, 2018).

The data from NFHS-4 show that in India 38.4% of children are stunted (i.e. have low height for age) and 35.7% children are underweight, indicating that four in ten children in the country are chronically undernourished. Further, 21% children 'wasted' indicating acute malnutrition. In terms of the WHO cut-off values for public health significance for these indicators, a prevalence of wasting of more than 15% is considered "critical" and stunting prevalence between 30-39% is "high prevalence" (underweight above 30% is "very high prevalence") (World Health Organization, 2010). 58.5% children in the 6-59 months age group are anaemic, with more than 30% being moderately or severely anaemic.

High prevalence of childhood malnutrition in India has been a problem in India for long and has been widely written about. According to the latest Global Hunger Report, India ranks 103 out of 199 countries (GHR, 2018). Malnutrition rates that are higher despite lower mortality rates compared to sub-Saharan Africa has been referred to as the South Asian Enigma. A number of explanations have been put forward to explain the South Asian Enigma – the most influential being the role given to the poor status of women in South Asian countries (Ramalingaswamy, 1996) and more recently, the role played by poor sanitation and open defecation which is highly prevalent in India (Spears, 2013)⁹.

Among children, there are huge differences between different social and economic groups (as seen in sections below). The overall situation of malnutrition among children also indicates issues beyond the differences between socio-economic groups. For instance, only 9.6% of children in the age group of 6-23 months in the country, according to NFHS-4, are being given a minimum acceptable diet¹⁰. Young

children of this age group need calorie dense and diverse home foods to meet their nutritional requirements. Further, for children of this age group there needs to be an adult caregiver as they need to be fed frequently. Therefore, the fulfilment of nutritional requirements for children not only depends on the availability of nutritious food but also an adult caregiver who is able to ensure frequent and appropriate feeding. In the Indian context, where the burden of childcare is almost solely placed on the mother, this raises issues of childcare services (or presence of other female adults in the household) when the mother is engaged in paid or unpaid work within or outside the house (which is the case with most women).

Women

The poor state of child malnutrition is to a large extent a reflection of higher malnutrition amongst women. One of the outcomes of patriarchy is that women and girls get a lower share of resources within the household. Women produce between 60 and 80 per cent of the food in most developing countries, they are responsible for half of the world's food production, and are culturally food providers in most homes. Yet social and cultural practices in India dictate that within households, women not only eat least and last, but in situations of absolute household food insecurity, they may not eat at all. Intra-family inequities deprive women of adequate nutritious food even in homes whose food supply would be sufficient for all were it distributed evenly. Because of the various forms of discrimination faced by females, such as those within the family, in owning land and other means of production and in accessing livelihood opportunities, a large proportion of women and girls are highly vulnerable to food insecurity (Krishnaraj 2005). Women and girls also face barriers greater than their male relatives in accessing education, healthcare, clean drinking water and sanitation. In families where food is scarce, women and

ments. If the child is breastfed, the indicator is based on the amount of energy needs not met by breastmilk. Breastfed children are considered to be consuming a minimum meal frequency if they receive solid, semi-solid, or soft foods at least twice a day for infants 6-8 months and at least three times a day for children 9-23 months. Non-breastfed children ages 6-23 months are considered to be fed with a minimum meal frequency if they receive solid, semi-solid, or soft foods at least four times a day.

9 Spears, D., 2013. *How much international variation in child height can sanitation explain?*, The World Bank.

10 Minimum acceptable diet is different for breastfed and non-breastfed children. The WHO minimum acceptable diet recommendation is a combination of dietary diversity and minimum meal frequency. Dietary diversity is a proxy indicator for adequacy of the micronutrient-density of foods. Minimum dietary diversity means a food intake from at least four different food groups. The minimum meal frequency is a proxy for a child's energy require-

girls often not only get less food to eat, but may also be forced to eat food which is inferior in quality and nutrient content (Mukherjee and Mukherjee 1994; IFPRI, Bangladesh Institute for Development Studies and the Institute of Nutrition and Food Science 1998; Choudhury and Parthasarathy). Women engage in unpaid work including heavy manual labour such as carrying drinking water, collecting firewood or forest produce, agricultural labour on family farm, etc., is often not recognised as work or measured as such. This also contributes to intrahousehold differences in access to food due to the prevalent patriarchal notion of men engaging in more physical work and hence requiring a greater share of nutrition.

This is reflected in the malnutrition data disaggregated by gender. According to NFHS-4, 22.9% women in the age group of 15-49 have a BMI which is less than “normal” (18.5); whereas the corresponding figure for men is 19.7%. 55.3% of women are anaemic, while 23.3% men are anaemic. While there is a difference between men and women (both due to social as well as biological reasons), it is also seen that in general the undernourishment among adults is high both amongst men and women. About one in five adults in the country are undernourished.

Women’s nutrition assumes further importance because of the instrumental reason that the child’s nutritional status is also determined by the mother’s level of nutrition. 18.2% of babies are born with a low birth weight and this is a reflection more of maternal nutrition than child nutrition. The Rapid Survey on Children (Ministry of Women and Child Development) carried out in 2013 found that 44% of the adolescent girls (10-19 years) were severely thin and an additional 19% were moderately thin. In all, 63% of the girls were thin or undernourished. Recent research has shown that not only nutrition during pregnancy but also during the adolescent period is important for the nutritional status of the child (Black, et.al 2013).

The poorer nutritional status of women compared to men is also reflected in data on food intake. The NFHS-4 has asked some basic questions on consumption of major food groups based on which it can be seen that especially with higher quality foods, more men consume these compared to women. For instance, as seen in figure below, while almost 30% women reported never consuming fish or chicken or meat, 22% men did so. 29% women never consumed

Table 1: Frequency of consumption of different types of food – (a) Women (b) Men				
Women – Frequency of Consumption				
<i>Type of food</i>	<i>Daily</i>	<i>Weekly</i>	<i>Occasionally</i>	<i>Never</i>
<i>Milk or curd</i>	45	22.9	24.7	7.3
<i>Pulses or beans</i>	44.8	45.1	9.5	0.6
<i>Dark green, leafy vegetables</i>	47.2	38.3	14.1	0.4
<i>Fruits</i>	12.4	33.2	51.8	2.6
<i>Eggs</i>	4	37.4	29.4	29.3
<i>Fish or chicken or meat</i>	6.1	36.6	27.3	29.9
Men – Frequency of Consumption				
<i>Type of food</i>	<i>Daily</i>	<i>Weekly</i>	<i>Occasionally</i>	<i>Never</i>
<i>Milk or curd</i>	46.2	28.8	20	5
<i>Pulses or beans</i>	46.5	44.1	9	0.4
<i>Dark green, leafy vegetables</i>	46.6	41.5	11.4	0.5
<i>Fruits</i>	10.9	39.6	47.6	1.9
<i>Eggs</i>	4.9	44.7	30.7	19.6
<i>Fish or chicken or meat</i>	5.7	43.2	29.5	21.6
<i>Source: National Family Health Survey (NFHS-4)</i>				

eggs while 20% men didn't. 51% men consumed fruits daily or weekly while 47% women did so.

Intersectionalities based on caste, region and class exist within women in the consumption of food and nutritional outcomes. One of the groups among women who are particularly vulnerable are single women.

Single women¹¹

Single women face additional discrimination and social barriers to food and livelihood. Single women include those who may have never married, they may have left their spouses or have been abandoned by them, they may have been widowed young or old, they may live with natal families, or with the family of their spouse, or with children, with unmarried partners or alone. They may be rich or poor, and may have been born and married into varied caste or faith groups with their diversity of rules and norms. But what binds them all together is the absence of male 'protection' and 'security' which erodes their social status in our largely patriarchal society.

In the 'Living with Hunger' (Mander, et al, 2014) study areas, less than 40 per cent of single women who were surveyed reported any land holdings. Another study in Muzzafarpur district of Bihar¹² found that across castes, all the widows interviewed declared that they were the rightful heirs to their husband's land. But they defined their right as use rights rather than ownership rights. In a 1994 study, 30 per cent of the widows reported serious conflicts over inheritance, land, property, and residence.¹³ A study in Rajasthan found that 55% of widows were landless. Further, while 45% had some ownership of land, 18.5% owned unirrigated land (almost nil production), 6% owned land but the land was controlled

and cultivated by others and only 20.5% of the widows were sole owners of irrigated land¹⁴.

Single women-headed households are invariably asset-poor: as observed, typically they lack access to land owned by their husband's family, have fewer educated household members, they have limited access to institutional credit; and often in the case of young widows with children, the additional burden of domestic work. These limitations worsen the poverty and livelihoods of households headed by destitute women.

Due to the undue disadvantages in the access to livelihood and assets, single women are more food insecure. They have to struggle harder in order to access food. Even in cases of single women living with families, of which they are the not the primary earning members, they do not have an equal access to food as a result of their low status in the household.

Table 2: Meal consumed during the day of the survey			
Only 8 per cent of single women surveyed had had a filling meal on the day of the survey			
	<i>Morning</i>	<i>Noon</i>	<i>Night</i>
<i>Filling Meal</i>	0.5 per cent	7 per cent	8 per cent
<i>Partial Meal</i>	18.6 per cent	85 per cent	83 per cent
<i>No Meal</i>	81 per cent	8 per cent	8 per cent
<i>Source: Mander and Rai (2007), Living with Hunger, Centre for Equity Studies</i>			

Older People

Older people are another group in India who are excluded from many benefits because of both their physical vulnerability as well low social status, and even programmes addressing food security often exclude any special mention of the elderly. The physical disadvantages of ageing can seriously hamper the ability of old people to look after themselves and result in a dependency on familial or institutional support. With inadequate social security mechanisms and the fact that most are employed in the informal sector, most elderly in the country (especially those who belong to poorer sections of society) work for as long as they can. In rural areas, 66% of elderly men

14 Budget Analysis Rajasthan Centre (BARC) (2007) *The Destitution of Widows in Rajasthan: What Role has the State Played?*, BARC Working Paper No. 4

11 This section derives substantially from the Eight Report of the Commissioners of the Supreme Court titled 'A Special Report on the Most Vulnerable Social Groups and Their Access to Food.'

12 Mishra, S. and E.G. Thukral. (1998) 'Widows and property rights: a study of two villages in Bihar' in M.A. Chen (ed.) *Widows in India: Social Neglect and Public Action*, New Delhi: Sage Publications

13 Chen. M. A. (1998), *ibid*

and 28% of elderly women were employed, while in urban areas 46% of elderly men and about 11% of elderly women were employed¹⁵.

As India undergoes a demographic transition, the share of older people in the population has been increasing over time, with 8.6% of the population being over 60 years according to Census 2011. The National Policy on Older Persons (1999) estimated that about seventy per cent of the population above 60 were economically 'fragile'.¹⁶ Poor and declining health, unfavourable socio-economic conditions, widening inter-generational gaps and non-working status contribute towards the vulnerability of the aged, as has been seen in several studies¹⁷.

A study conducted by Kumudini Dandekar in rural Maharashtra (1993, pp. 1188-1194¹⁸) found that unlike the small section of the elderly who can fall back on their provident fund, pension, savings, insurance or property, most are totally econom-

ically dependent on others. 65 percent of the aged depend on others for their day-to-day existence¹⁹. Women are particularly vulnerable. 85 percent of elderly women are economically dependent on others, largely because of cultural constructions of gender relations and opportunities and preparation for self-reliance.

It is also important to note that the ones who are not 'dependent' cannot be assumed to be free from vulnerability either. The study by Dandekar of the aged in rural Maharashtra (1993) found that 18 per cent old people in villages lived alone, comprising 4% men and 14% women. Often, this economic independence is forced upon them. A study of elderly conducted in Bangalore found that as compared to those persons who were living with their spouses and children, malnourishment or risk of malnourishment was more prevalent among those who were living alone (57.34% vs 78.56%) (Ramya, et al, 2017, p. 1730²⁰).

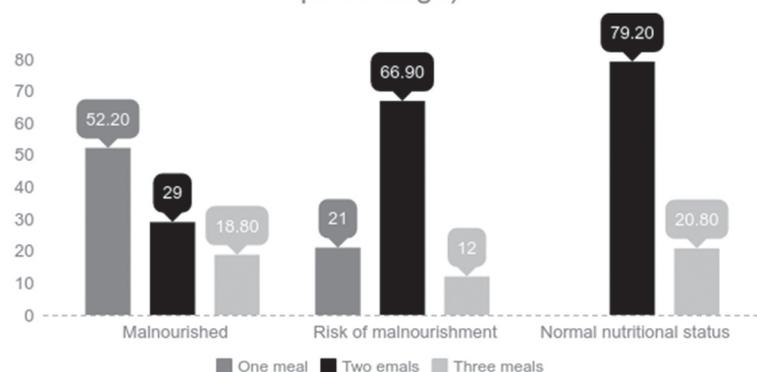
It also found that nutritional status of the elderly significantly worsened with advancing age, dependent financial status and awareness and utilisation of the Indira Gandhi National Old Age Pension Scheme (IGNOAPS) pension. Another study conducted in Arkhali village in West Bengal shows the link between malnourishment and number of meals consumed daily (as shown in Figure 3) (La-

- 15 Ministry of Statistics and Programme Implementation, Government of India. *Elderly in India 2016*. Retrieved August 11, 2018, from http://mospi.nic.in/sites/default/files/publication_reports/ElderlyinIndia_2016.pdf
- 16 Ministry of Social Justice, Government of India. *National Policy for Older Persons Year 1999*. Retrieved August 11, 2018, from <http://socialjustice.nic.in/writereaddata/UploadFile/National%20Policy%20for%20Older%20Persons%20Year%201999.pdf>
- 17 Dandekar (1996) cited in S Mahendra Dev et al (2001) *Social and Economic Security in India*, Institute of Human Development, New Delhi.
- 18 <https://www.epw.in/journal/1993/23/special-articles/aged-their-problems-and-social-intervention-maharashtra.html>

- 19 National Sample Survey Organisation (2006), *Morbidity, Health Care and the Condition of the Aged*: Report No. 507, NSS 60th round.
- 20 <http://www.ijcmph.com/index.php/ijcmph/article/view-File/1210/1136>

Figure 3: Nutritional status according to daily meal consumption

Nutritional status according to daily meal consumption (in percentage)



Source: Lahiri, 2015

hiri, 2015).²¹ A study conducted by PHRS in Delhi found that out of 102 persons of the age group 40 to 80 years of age, 39 persons (38.23%) were underweight. 14 persons out of these 39 were found to be severely underweight (Pension Parishad).²²

Amongst the elderly; poor people, widows and disabled people are invariably the most disadvantaged, needing some form of supportive services specially to take care of their basic needs (Commissioners of the Supreme Court, 2008).

Persons with disabilities

In addition to the physical challenges that are faced by persons with disability, institutional and societal neglect; social prejudice and ostracism aggravate their struggles. In spite of the fact that disabled people are also disproportionately numerous amongst the poorest of the poor across the world their problems are almost invisible.²³

As per Census 2011, 2.21 per cent of the population of India i.e. 26.8 million people are disabled. The UNDP estimates that on an average the global disabled population is 5 per cent.²⁴ In other words, one person in 20 has a disability and more than 3 out of 4 of these live in developing countries.²⁵ Disabled people are estimated to make up 15 to 20 per cent of the poor in 'developing' countries.²⁶

Poverty and disability have a mutually vicious relation. Families with members with disability are

21 <https://www.ejmanager.com/mn-stemps/67/67-1419613304.pdf>

22 <http://phrsindia.org/wp-content/uploads/2015/03/REPORT-ON-HEALTH-NUTRITION-STATUS-OF-ELDERLY-PERSONS-.pdf>

23 Yeo Rebecca (2001) *Chronic Poverty and Disability*, Somerset: Action on Disability and Development.

24 Yeo Rebecca (2001) *ibid*.

25 Mom Beverly Beckles (2004) *Poverty and Disability: Advocating To Eliminate Social Exclusion*, Trinidad and Tobago: National Centre for Persons with Disabilities.

In 1981 WHO studies estimated that on average 10 % of national populations are disabled.

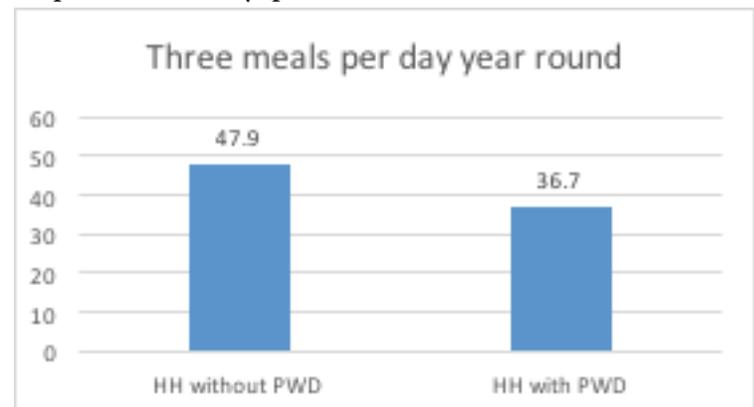
However in 1992, this estimate was modified to 4 per cent for developing countries and 7 per cent for industrialised countries. Because of the different estimates also there is no agreement on which figures to use USAID use 10 per cent, DFID use 4-7 per cent.

26 Elwan Ann (1999) *Poverty and Disability: A Survey of the Literature*, Social Protection Unit: World Bank.

more likely to be impoverished (Commissioners of the Supreme Court, 2008, p. 38). Besides the increased expenditure on health care, basic needs, transportation etc., the lack of adequate employment opportunities and the indirect cost of care borne by the family of the person with disability result in a lesser income for the household.

The Living with Hunger study (Mander, et al, 2014) shows the lack of social support for persons with disability. Almost 76 per cent of the the disabled respondents indicated that they had to primarily work to meet just their minimal survival needs like food.²⁷ Government support was the second most important source of food security but catered to only 11 per cent of the the disabled respondents. Another source of food is charity provided at places of worship and roadside pavements — a source where food is largely provided without dignity.

Figure 4: Reduced Food Security in Households with People with Disability (per cent)



Source: O'Keefe Philip (2007) *People with Disabilities in India : From Communities to Outcomes*, India: World Bank

A World Bank study which compares food security of households with and without people with disability found a ten percentage point difference in their access to three square meals round the year (see Figure 4).²⁸

It should also be noted that there is a reverse causality between hunger and disability as well.

27 135 disabled respondents were interviewed across three villages each in Orissa, Rajasthan and Andhra Pradesh for the study.

28 Uttar Pradesh and Tamil Nadu village survey, 2005 quoted in O'Keefe Philip (2007) *ibid*.

Malnutrition and lack of access to health care often result in disability of various kinds. The World Health Organisation estimates that up to 70 per cent of childhood blindness and 50 per cent of hearing impairment in Africa and Asia are preventable or treatable.²⁹ Malnutrition can have intergenerational impact including direct impairment of mental and physical functioning, as well as indirectly to the weakening of the body causing it to be disease prone and likely to suffer impairment.³⁰

Disability among children often keeps them out of school and as a result also away from the entitlements such as mid-day meals that are available only for children in schools (Dawn 2014).³¹

29 Yeo Rebecca (2001) *ibid.*

30 Grech Shaun (2006) 'Words for Numbers: Exploring the Cycle of Poverty and Disability in Rural Guatemala', Research Report Submitted to University of London, Imperial College, London.

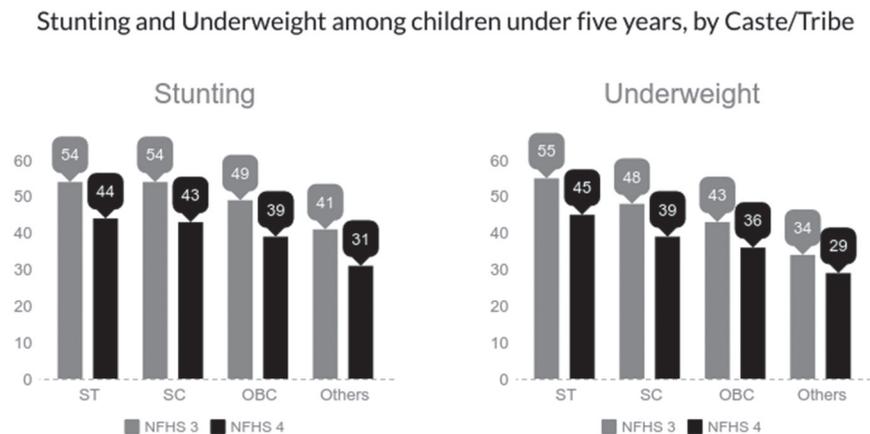
31 https://www.epw.in/system/files/pdf/2014_49/22/Education_of_Children_with_Disabilities_in_India.pdf

Dalits and Adivasis

Not only are malnutrition rates in India high on an average, the situation is even worse for Dalit and Adivasi children when compared to those belonging to the 'Other' category. Mamgain and Diwakar (2012) collate many studies such as Thorat and Sabharwal (2011), Sabharwal (2011), Baru *et al.* (2010), Baraik and Kulkarni (2006) and Roy *et al.* (2004) which establish that the incidence of malnutrition is significantly higher among poor households, mothers of children without any education and those belonging to SC and ST social groups.

As can be seen in figure above, both in terms of stunting (low height for age) and underweight (low weight for age); the prevalence amongst ST populations is higher than all other groups in both the surveys of 2005-06 and 2015-16, followed by the SC categories. Around 44% of children belonging to ST communities are stunted, 43% children of SC communities. In terms of prevalence of underweight, 45% of Adivasi children and 39% of Dalit children are underweight. The corresponding figures for the 'Others' are around 30%. While the prevalence

Figure 5: Stunting and underweight among children under 5 years by caste/tribe category



Source: National Family Health Survey (NFHS-4)

of malnutrition is unacceptably high amongst all groups, it is still striking that there is such a wide gap amongst the 'general' population compared to the vulnerable groups.

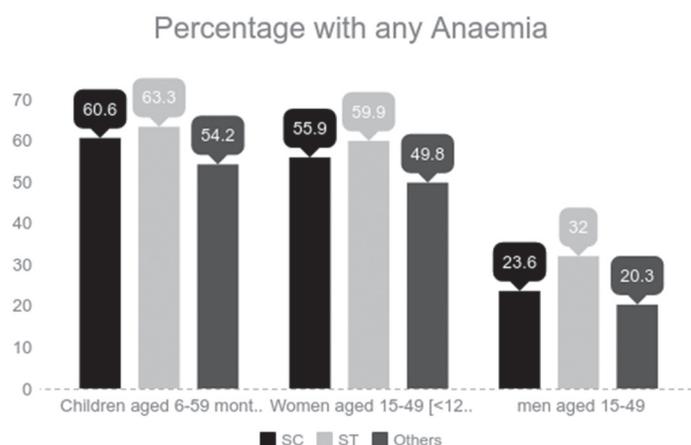
Further, between NFHS-3 and NFHS-4 the gap remains as wide. In this ten-year period, the gap in stunting prevalence continues to be around 13 percentage points between "others" and "STs" while in underweight prevalence the gap has declined slightly from around 19 percentage points to 16 percentage points. For any catch up to happen the improvement amongst STs and SCs must be much faster. Putting it differently, the prevalence of malnutrition amongst tribal populations in 2016 is even higher than the prevalence for the 'Other' groups was in 2005. Therefore, while 44% ST children are stunted in 2016, 41% of children in the 'Other' category were stunted in 2006 (for underweight it is 45% for ST 2016 and 34% for 'Other'). So, there is a more than ten-year lag pe-

riod in the malnutrition levels between ST children and others.

The prevalence of anaemia, as seen in the NFHS-4 data, continues to be very high. 53% women in the age group of 15-49, 58.4% children in the age group of 6-50 months and 23.3% men in the age group of 15-54 were found to be anaemic by haemoglobin level in the NFHS-4 survey. Disaggregated by social group, anaemia is about 10 percentage points higher for tribal (ST) populations than for the 'others'. Therefore, while anaemia amongst children is 63.1% for STs, it is 53.9% for Others, amongst women in the reproductive age 59.8% among STs and 49.6% among Others and amongst men in the reproductive age 31% among STs and 20.1% among Others. Sickle-cell anaemia which is a disease passed on genetically, is highly prevalent in the tribal belt of Central, Western and Southern India³². Scientists have

32 <http://pib.nic.in/newsite/mbErel.aspx?reid=142363>

Figure 6: Percentage with any anaemia



Source: National Family Health Survey (NFHS-4)

Caste/Tribe	Among all children 6-23 months, percentage fed			
	Breastmilk, milk, or milk products	Minimum dietary diversity	Minimum meal frequency	Minimum acceptable diet
Scheduled Caste	94.8	21.3	35.2	9.4
Scheduled Tribe	92.9	20.6	35.2	8.7
Other Backward Classes	94	21.4	36.7	9.3
Other	93.9	24.5	35.8	10.7
Total	94	22	35.9	9.6

Source: National Family Health Survey (NFHS-4)

argued that there is a relationship between the genetic mutation and malnutrition.³³

In a situation where the Infant and Young Child Feeding (IYCF) status is extremely low, the Dalits and Adivasis are worse off than the rest of the population. Among Adivasi children, 20.6% receive minimum dietary diversity, 35.2% get adequate minimum meal frequency and 8.7% get a minimum acceptable diet.

Muslims

According to the Sachchar Committee Report, as a “socio-religious category” (SRC), Muslims in India suffer from various kinds of deprivation that directly and indirectly affect their nutritional status. The report reveals that Muslim children suffer from the highest rate of stunting and second highest rates of underweight children among all SRCs — SC/ST, Other Hindus, Others.

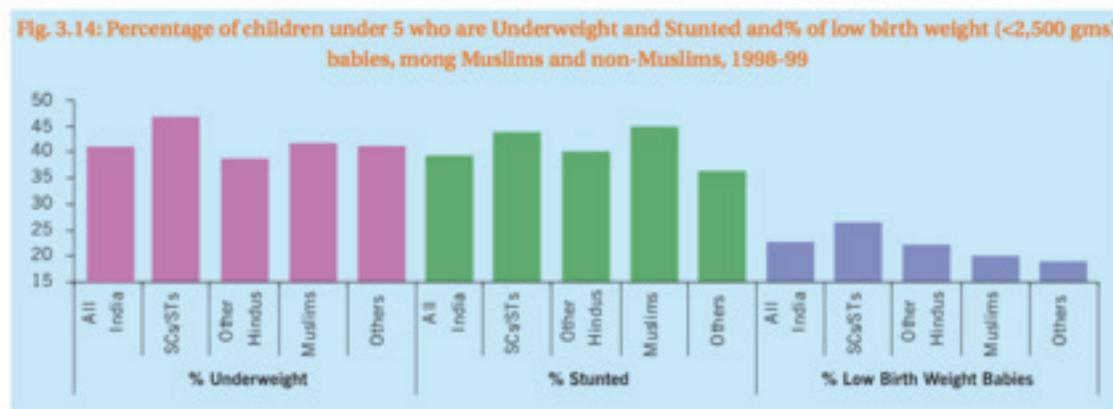
Among the different SRCs, the Mean Years of

schools, are few of the reasons which forces Muslim children to either enrol in private schools, for those who can afford, or dropping out of education. Low participation in salaried jobs, especially public sector jobs, high concentration of Muslims in self-employed related activities which may not be formal and a high intensity of poverty pose a big question on the food security among Muslims.

Economically Disadvantaged

Amongst all social categories, as might be expected, those who are poor and have few assets are more food insecure. NFHS data clearly show that as the wealth quintile increases fewer children are malnourished. For instance, while 51.4% of children in the lowest quintile have a low height for age, less than half i.e. 22.2% of children in the highest quintile fall under the same category. Once again it is seen that while malnutrition is a problem that plagues all wealth quintiles in the country, there is still a clear

Figure 10: Malnutrition among children according to Socio-Religious Category



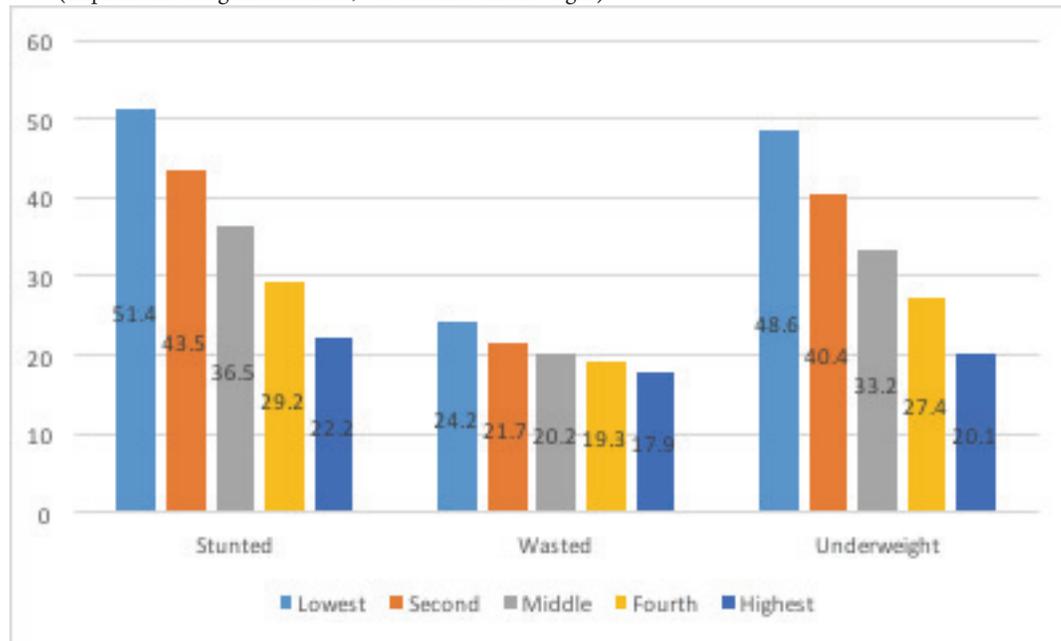
Source: Sachchar Committee Report

Schooling is lowest for Muslims at three years and four months. As many as 25% of Muslim children in the 6-14 years of age bracket, have either never attended school or have dropped out. This puts schemes such as the Mid-day Meal out of bounds for these children, significantly affecting their nutritional status. Lack of schools in the vicinity Muslim-dominated areas and hostility faced in other

gradient showing that the poor are much more affected than the rich (Figure 7). Amongst adults as well a similar pattern is observed. The prevalence of low BMI or thinness both among men and women is much greater among the lowest quintiles than the upper quintiles (Figure 8). While such a gradient is observed for anaemia as well, in this case the difference is smaller and it is widely prevalent amongst all quintiles.

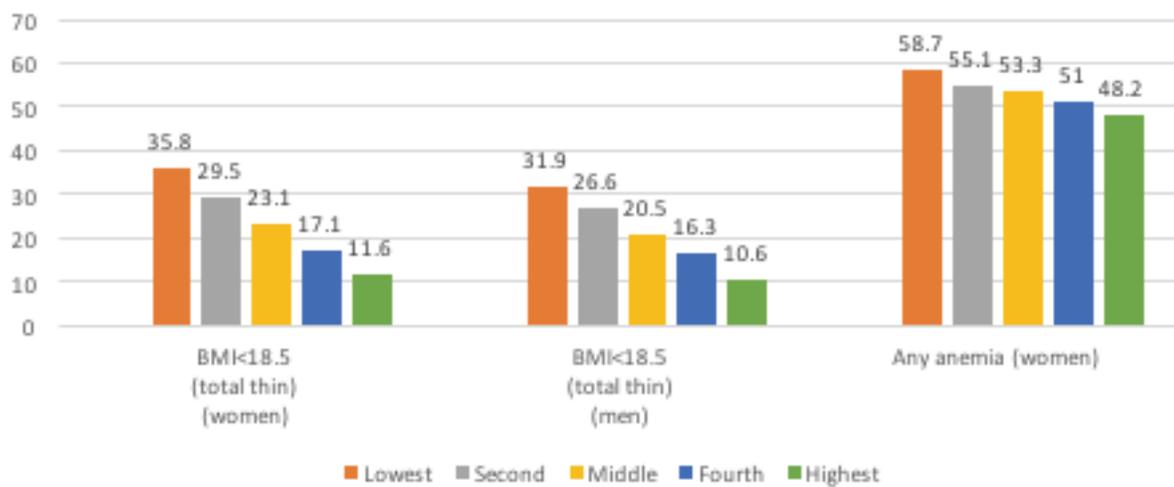
33 <http://www.thehindu.com/news/cities/Vijayawada/sickle-cell-anaemia-spreading-among-tribals/article6284614.ece>

Figure 7: Percentage of children under age 5 years classified as malnourished
(Explain the categories stunted, wasted and underweight)



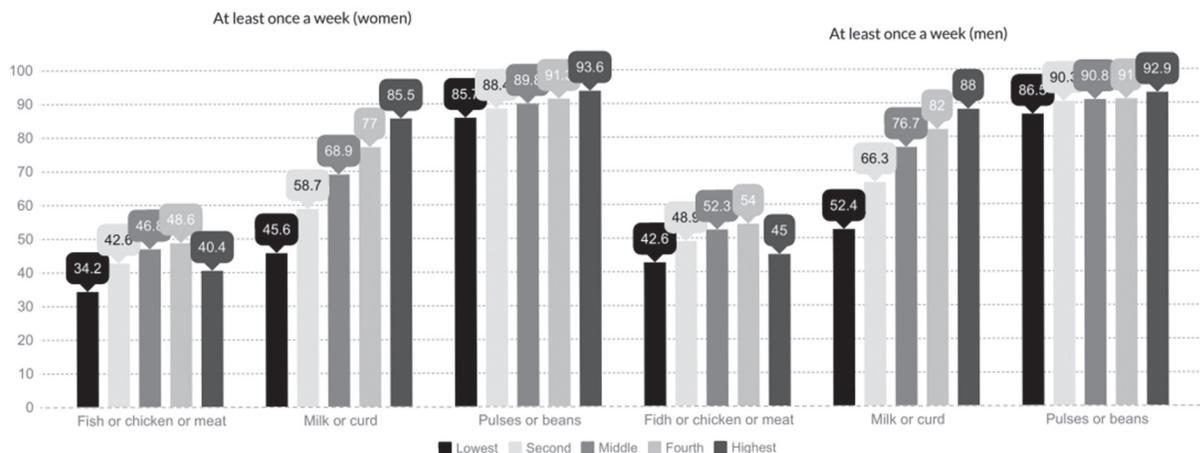
Source: National Family Health Survey (NFHS-4)

Figure 8: Malnourishment in adults according to wealth index



Source: National Family Health Survey (NFHS-4)

Figure 9: Food consumption according to wealth index



Source: National Family Health Survey (NFHS-4)

As seen in Figure 9, even in the data available on the consumption of food items a similar difference is found. While 85% women (88% men) of the highest wealth quintile reported having consumed milk or curd at least once a week, only 46% women (52% men) in the lowest wealth quintile do so. In the case of non-vegetarian items as well, similar difference is found except that, the consumption amongst the top-most quintile is less than the middle groups. This is most probably due to the wealthiest quintile also comprising mostly those from the upper castes who have caste-based restrictions on consumption of non-vegetarian food.

Informal Sector Workers

The Arjun Sengupta Committee, in its 2007 report, estimated that 92% of the workforce comprises of informal sector workers. 40.4% of unorganised workers are extremely poor, poor or marginally poor; another 38.4% are identified as “vulnerable” based on expenditure. A major chunk of their expenditure is on cereals, pulses, other food items and some essential non-food items. Given the precarious nature of employment that is characterised by informal employment as well as the lack of any employment benefits, food security and nutritional intake are at bare subsistence level. It is both about the poor working conditions – including low wages – as well as precarious nature of work. In that the following categories

of homeless, informal sector workers, etc. have overlaps with each other but the differentiation suggests that different approaches need to be taken to deal with malnutrition including housing for homeless (which may ensure availability of food) and social security for informal sector workers to improve their consumption expenditure on nutritious food, etc.

Homeless persons

According to Census 2011, there are about 1,81,544 homeless people in 2011. However, as the 8th Report of the Supreme Court Commissioners observed, this may be a gross underestimate given the invisibility of homeless persons. Criminalised by various regressive laws such as anti-begging laws, the homeless sustain by engaging themselves in various informal, casual and exploitative jobs with meagre wages. Most have to depend on external sources such as foraging, receiving food on charity or purchase of low-cost, low-quality food. A study of homeless persons in Delhi conducted by PHRN and CES revealed a high dependence on purchased food among the sample of 190 persons with about half of the day’s earning being spent on food on an average only 4% depended on charity. The lack of shelter further makes matters worse. The homeless not only suffer from a chronic inaccessibility to nutrition and hence are vulnerable to health risks but are also unable to access health care in times of illness. Home-

lessness also automatically excludes them from various public schemes.

Persons living with Debilitating and Stigmatized Ailments

As has been pointed out in a number of Commission reports, persons with debilitating and stigmatized ailments, like HIV AIDS, TB, mental illness have special nutritional requirements and are often excluded from food and work schemes due to the stigma associated with their illness. On the other hand, with the emergence of NCDs like diabetes and hypertension even among the poor, the issue of access to healthy diets is even more important for health than ever before.

3. Processes of exclusion³⁴

Such high levels of hunger and malnourishment in a country with the wealth, food production, democratic institutions and state capacities to ensure food and nutrition for all that India has, has been a puzzle. This question has been variously described as the Indian food security enigma (Pritchard *et al.* 2013), India's great paradox (Mander 2012), and India's nutritional emergency (Dreze 2003). As mentioned earlier in the chapter, the reasons for so many being excluded from good nutrition is looked at from three axes – food availability or the ability to grow food, access to food through markets determined by access to livelihoods, resources and social status and finally the role of public programmes towards food security and nutrition. We also briefly look at other determinants such as health and sanitation, which are important to ensure nutritional outcomes. This also fits in broadly with the FAO's definition of food security where it includes the components of availability, access and absorption (FAO 2003).

3.1 Food Security

After some insecurity in the early decades after Independence, as far as cereals are considered, India is now self-sufficient. However, there are concerns in terms of availability of certain food crops such

as pulses and edible oils for which India is import dependent. In the case of cereals, although self-sufficiency has been achieved, the growth rate of production has not kept pace with population growth. Further, the agriculture sector overall has been in crisis in recent years, thereby making the millions of people dependent on farming, as farmers and labourers, as well as food production itself has become vulnerable (Ghosh, 2012).

Self-sufficiency was achieved primarily with the aid of new high-yielding technologies of Green Revolution which focussed on a few agriculturally prosperous regions and on technologies which required levels of investment and risk-taking which were not feasible for small farmers. The impoverishment of the small farmer in rain-fed agricultural regions was aggravated by the subversion of land reform laws and the sluggish growth of the non-farm sector. Grave situation was created by indiscriminate application of chemical fertilisers and pesticides, irrigation without drainage, leading to land degradation, ground water and forest depletion (Gupta, *et al.*, 2018).

However, the crisis deepened with the policies of structural adjustment initiated in the 1990s, which many felt integrated the farmer with the global economy too quickly and without sufficient protections or preparation; this was accompanied also by a decline in public investment in agriculture. Agriculture employs nearly 58 per cent of India's total workforce and generates more than 55 per cent of rural income (Kadiyala *et al.* 2012) but public investment is as low as 5%. And much of this investment again benefited disproportionately the large farmer, with high subsidies on chemical fertilisers, pesticides and electricity (Singh, 2004) (Gill and Nehra, 2018).

Annual agricultural growth decelerated from 3.5% during 1981-1997 to 2% during 1997-2005. Drawing from the Economic Survey 2011, Saxena points out that foodgrain production in India dropped from 208 kg per annum per capita in 1996-97 to 186 kg in 2009-10, a decline of 11 per cent. Further, the cereal intake of the bottom 20 per cent of the population continues to be at least 20 per cent less than the cereal intake of the top decile of the population, despite the rich doing less manual work and consuming many expensive and nutritious non-cereal foods (Saxena 2012). Production

³⁴ This section derives substantially from Mander and Parulkar's paper for NCAER IDS *The Elephant in the Dark: Finding Ways to End India's Hunger and Malnutrition*

lags have recently recovered but the sustainability of agriculture in India remains a worry – since the 1991 economic reforms, farmers have experienced declines in farm income, consumption, employment, and credit availability (Pal and Ghosh 2007; Bello 2007; Sainath 2012; NSSO; Singh 2006).

Trying desperately to cope with the double whammy of globalisation and a retreating state, middle and small farmers fell more and more into debt from unregulated, mainly private creditors, and over-exploiting ground water and chemical inputs in ways that pushed down ground water to alarming levels and gravely compromised soil fertility. This led to bad debts and an epidemic of farmer suicides. Jayati Ghosh (2005) argues that agriculture in India was hurt by trade policies that favoured large farmers and overall economic policies that scaled back the state but also because no specific agricultural reforms accompanied the dramatic policy shifts of the early 1990s. The lack of such reforms negatively impacted not only agricultural production but also, for instance, protection of resources which are increasingly under the control of corporations and private interests and overall rural employment. Yet, the direct relationship between trade, liberalization, and agriculture is complex, she notes, as farmers bear the costs and benefits of a range of factors impacting both international and domestic markets. These factors are not easy to predict or identify as crop price fluctuations in world markets are volatile. But the most relevant factors, of course, are those that create possibilities for agricultural growth, sustainability of cultivation, as well as impacts on employment and food security. Economic reforms not only resulted in trade imbalances in agricultural goods, she argues, but have also affected the conditions and patterns of cultivation for the small farmer (Ghosh 2005).

The Right to Food Campaign and other critics point out that ironically, food producers such as small and marginal farmers and agricultural labourers whose ‘access’ to food is ‘directly connected with their livelihood’, are among those most afflicted by hunger. Most of India’s 231 million hungry people live in rural areas and depend on some form of agricultural work to survive. As net consumers of food their livelihood security and purchasing power are at the mercy of policies that impact agricultural

production and food prices, which have been rising since the initial 2007-08 food price hikes (International Labour Organization 2011; Patnaik 2009).

India’s crisis in hunger is therefore linked to its crisis of agriculture, which has resulted in the growing realization that the revival of the agrarian sector is a key to economic growth as well as food security (Himanshu 2012). Specifically, critics argue that to achieve food security it is imperative to assure farmers inviolable and equitable access to land, water, and affordable inputs required to meet India’s food requirement (Sinha 2011). But this goal will remain elusive if farmers continue to suffer from unemployment, displacement, landlessness, and chronic hunger.

3.2 Poverty and Social Discrimination

The obvious and yet forgotten fact is that people go hungry most of all because they are desperately impoverished and either unemployed or inadequately employed. Significant numbers of households in rural India are landless or have unviable small or marginal rain-fed holdings. Other rural poor households include nomads, livestock rearers, fisher-folk and artisans. At the margins of even these communities are people of stigmatised castes, bonded and child workers, the uncared aged, the disabled and single women and their dependents. Migrants to cities are also trapped in low-end, low-paid and casualised work, as daily wagers, rag-pickers, rickshaw –pullers and domestic workers. It was expected that the period of rapid economic growth would yield both wealth and jobs. But the evidence is that the period of high growth has been one also of nearly jobless growth, and the employment that is generated is largely contract-based and casual, with reliance also on home-based work which disguises child labour and denials of minimum wages. India has a plethora of more than 200 labour laws, but these are defied openly, routinely and with impunity, resulting in the exclusion of people from their right to decent work (Express News Service, 2018) (PUDR Team, 2009) (Bhattacharya and Purkayastha, 2018) (HRLN, 2019) (Centre for Equity Studies, 2014).

It is possible to argue that India’s enigma of widespread hunger in the era of high growth can be explained substantially by the failures both of the

growth strategy and the regulatory regimes to ensure decent work for all, assured employment at legal wages. Lack of decent employment and poverty is one of the primary reasons because of which households lack access to sufficient food, clean drinking water, sanitation, decent housing, health-care and good-quality education is and poverty.

Still another factor for hunger amongst poor, marginalized groups is discrimination, as seen above in the case of different social categories. Besides direct discrimination against members of vulnerable groups, there are complex forms of exclusion of such groups – on the basis of gender, caste, tribe and religious identity – from access to basic rights and services that lead to poor group health and nutrition outcomes relative to the rest of the population. The reasons for the close association between SC, ST and Muslim identities and poverty and malnutrition, can be found in the greater social barriers faced by people of these communities in owning and retaining land and other productive assets (especially forest in the context of STs), in accessing employment in non-stigmatised, safe and relatively well-paid occupations, and in accessing formal credit. For Muslims, it is the ‘development deficits’ that a majority of them face that underscores their poverty and state of malnutrition (Centre for Equity Studies et al 2011).

The barriers to owning and accessing productive assets and remunerative work faced by these vulnerable communities come in the way of the first two ways that a household can access food with dignity: namely growing one’s food requirements (or collecting these from forests, rivers or the seas); or earning enough to purchase this food. These also are barriers in accessing the other key requirements of nutrition: clean water, sanitary environments, health-care and education. These socially discriminated identities are in addition barriers to the third way that households can theoretically access food: by government food provisioning.

The barriers faced by these groups also extend to accessing government institutions and services. The 2006 report of a national survey of the continued prevalence of untouchability finds untouchability a social barrier for SCs in all local state institutions (Shah et.al). A shocking 27.6 per cent Dalits were prevented from entering police stations and 25.7 from ration shops. 33 per cent public health workers

refused to visit Dalit homes, and segregated seating for Dalits was found in 30.8 self-help groups and co-operatives, and 29.6 per cent Panchayat offices. In 14.4 per cent villages, Dalits were not permitted even to enter the panchayat building. They were denied access to polling booths or forced to form separate lines in 12 per cent of the villages surveyed. Despite being charged with a Constitutional mandate to promote social justice, various local institutions of the Indian state clearly tolerate and even facilitate the practice of untouchability (Mander 2006).

A number of studies map a series of discriminatory and exclusionary practices in ICDS and school meal programmes, against children from disadvantaged groups (Thorat and Lee 2005, Ramchandran 2005, Mander and Kumaran 2006, Jan Sahas 2009, Thorat and Lee 2010, IIDS-UNICEF 2012, Mamgain and Diwakar 2012, Swain and Kumaran 2012). These include separate seating and separate plates. This discrimination was also found to extend to service providers from these communities. One of the authors of this paper found in an extensive field study in four states (Mander and Kumaran 2006) various forms of exclusion: geographic by locating the services in habitations in which low-caste children do not feel welcomed, social by ill-treatment and humiliation of children from disadvantaged communities, and economic such as the pressures of working women to not be able to carry the children to the centre and the unwillingness of ICDS staff to fetch these children. Ghanshyam Shah *et al* 2006 have also documented discriminatory practices in the PDS. Swain and Kumaran chronicled the list of reasons given by the Planning Commission (2005), the Wadhwa Commission (2009) and the Supreme Court Commissioners’ Office for malfunctioning of programmes based on discrimination, which include poor monitoring systems leading to leakages, corruption caused by upper-caste control over service delivery, and most importantly, direct discrimination against people on the basis of caste, gender, and religion (Swain and Kumaran 2012).

3.3 Gaps in State Provisioning of Food

The last section discussed how inequalities and discrimination based on gender, class, caste, ethnicity and religion act as formidable barriers to accessing sufficient food with dignity. In this section, we will

turn to state duties to provision food to people insufficiently able to feed themselves. The case in favour of public provisioning of food to children and households which are food and nutritionally insecure centres firstly on India's Constitution and Supreme Court rulings which expand the fundamental right to life with dignity to include the right to food and all that is necessary to make such a life possible. One of the writers of this chapter has separately described the decade long case in the Supreme Court which affirmed and explicated the right to food through over a hundred court rulings, and an independent mechanism of Supreme Court Commissioners (Mander 2012a, 2012b). There are also developments in the international framework of human rights, reflected in a series of international covenants, which recommend a legally enforceable right to food, and a scaffolding of social protection for all persons.

The state may provision food in many ways: by subsidising raw food such as through ration shops or cooked food through soup kitchens; by free meals such as in schools, small child feeding centres or destitute feeding; by public employment works; or by cash transfers, such as welfare doles, pensions for the aged and disabled, and maternity benefits. The Indian government has long provisioned food in many of these ways: through PDS ration shops, school meals and ICDS feeding centres for children below 6 years, public employment works and old age pensions. But until recently none of these – except the public employment programme – were guaranteed by law. This has changed firstly by a series of rulings by India's Supreme Court, then by the passage of the National Food Security Act (on 26 August 2013). The National Food Security Act addressed a major part of food access by ensuring the right of 66% Indians (75% rural India and 50% urban India) to subsidized grains from government fair price shops, entitlements to children below the age of 6 and pregnant and lactating mothers to free meals through local anganwadis, and provision of mid-day meals to school children.

Through the NFSA for the first-time legal duties on the state are in place which guarantee large populations of hungry and malnourished people access to food. Still, the concern is that the law does not go far enough: it is not universal, neglects agriculture, does not include provisions for the starving and des-

titute, and ignores cohering dimensions of food and nutritional security, such as water, sanitation and health care. It also fails to establish a robust and independent enforcement mechanism critical for the implementation of any rights-based law. The focus here is on what is in the NFSA, while some of the other important policies and programmes have been looked at in previous reports of the IXR series (Centre for Equity Studies, 2015, 2016) and others will be included in the upcoming reports.

This section examines the experience of implementing the NFSA in the five years that had elapsed since its passage. The law was passed in 2013 under the leadership of the UPA government towards the end of its second term, and the responsibility for leading its implementation fell on the shoulders of the BJP-led government that came into power in 2014. There was a delay in the implementation of the Act through successive administrative orders and the full implementation was declared only in 2016, two years after the deadline set by the Act for roll out. While the coverage in PDS has now been expanded beyond the earlier BPL ratios, exclusions still remain.

There has been in some cases a gradual erosion of entitlements by resort to definitions and criteria that have the effects of diluting entitlements or of enabling the exclusion of those who should have access to the entitlements under the law. This applies in particular to entitlements under the Public Distribution System (PDS) and maternity benefits. The PDS Control Order 2015 for instance restricted eligibility to receive entitlements under NFSA only to citizens and 'recognised refugees', in effect excluding a massive number of undocumented persons.³⁵ This Order also states that it freezes any expansion in numbers of persons covered by the PDS until next Census figures are available (effectively until Census 2021 data are available). This is in conformity with the letter of the law. But with a growing population, this would result in reducing continuously the percentage of population covered from levels prescribed in the law of 75 percent for rural and 50 percent for urban areas.

Exclusions have also been observed due to the insistence on mandatory Aadhaar-linking to PDS and use of biometric authentication to get monthly

35 <http://dfpd.nic.in/pds-control-order-1.htm>

rations in a number of states. Dreze describes this as a ‘juggernaut’ which ignores rural realities.³⁶ ‘This system requires multiple fragile technologies to work at the same time: the PoS machine, the biometrics, the Internet connection, remote servers, and often other elements such as the local mobile network. Further, it requires at least some household members to have an Aadhaar number, correctly seeded in the PDS database. This is a wholly inappropriate technology for rural India, especially in the poorest states (Joshi et. al., 2016). Even in urban areas, including state capitals, network failures and other glitches routinely disable this sort of technology (Nayak and Nehra 2017³⁷, Drèze et. al. 2017)³⁸ In villages with poor connectivity, it is a ‘recipe for chaos’. In a number of hunger deaths recently reported, it has been found that in most cases there has been a failure of access to entitlements such as PDS and rations and in many this has been as a result of Aadhaar related failures.³⁹

The NFSA leaves it to state governments to establish the criteria of who should be included and excluded for PDS entitlements. A careful study of procedures and criteria adopted by 23 States and union territories for which we could collect information revealed that several of these had the unfortunate effect of excluding the deserving households from these entitlements. While some states such as Odisha used new lists based on the SECC or otherwise, a number of states like Karnataka and Maharashtra continued to rely on the old flawed BPL lists as the starting point. Further, many states included incomes as criteria for inclusion or exclusion (UP, MP, Rajasthan, Haryana, Tripura, Odisha, Bihar, Delhi, West Bengal and Chhattisgarh). Incomes of rural and urban poor households are rarely verifiable and objective because most members of such households are engaged in informal work, much of this self-employed, intermittent and casual, for which actual earnings are impossible to assess trans-

parently. Because of this, worries remain that any income criterion can lead to harassment, exclusion and corruption.

The scheme that has been launch for the purpose of delivering the maternity benefits created by the NFSA have seen significant curtailments of entitlement.⁴⁰ Pradhan Mantri Matru Vandana Yojana (PMMVY) restricts the benefits to only the first pregnancy and reduces the amount to Rs.5000 which is in violation of NFSA’s mandate to provide every pregnant and lactating woman an amount of Rs 6000.⁴¹ Excluding women who have two children or more would deprive 60 percent poor pregnant women from the scheme. This would have been tantamount to putting their lives at risk and contributing further to the unconscionably high rate of maternal mortality.

To support the nutrition of the new-born child, the mother requires maternity benefits to enable her to rest, get better nutrition and stay at home; as well as crèches near her work-place which would allow her to regularly breast-feed her child in the months after she returns to work. The final law contained provisions of near-universal maternity benefits for the first time in the country. NFSA creates a near-universal entitlement of a minimum of Rs. 6000 to all pregnant and lactating women, subject to such schemes as may be framed by the Central Government. It excludes all pregnant women and lactating mothers in regular employment with the Central Government or State Governments or Public Sector Undertakings or those who are in receipt of similar benefits under any law for the time being in force. In a country in which more than 90 percent women work in the informal sector, with very high burdens of unpaid care work, the importance of this entitlement cannot be over-emphasized (ICSSR,

36 <http://www.thehindu.com/opinion/lead/Dark-clouds-over-the-PDS/article14631030.ece>

37 <https://www.epw.in/node/148928/pdf>

38 https://www.epw.in/system/files/pdf/2017_52/50/SA_LII_50_161217_Jean_Drèze.pdf

39 http://www.frontline.in/columns/Jayati_Ghosh/obscenity-of-hunger-deaths/article9998710.ece; <https://scroll.in/article/862338/jharkhand-hunger-death-girl-died-crying-for-food-her-family-is-now-accused-of-shaming-the-nation>

40 (Incidentally, near-universal maternity benefits are in some ways the ‘crowning glory’ of the NFSA, because the ICDS and MDM universal entitlements had already been created by the Supreme Court and were only being incorporated into the law, and PDS was being expanded, but effectively universal maternity benefits were an almost new and substantial entitlement for nutritionally vulnerable women.)

41 Kundan Pandey [downtoearth.org](https://www.downtoearth.org) – 57% <https://www.downtoearth.org.in/news/health/mothers-of-57-new-borns-not-entitled-to-maternity-benefits-61737>

2015; Sinha, 2017)^{42, 43, 44}. However, as seen above the scheme in design itself is highly inadequate.

*Adequacy of Resourcing and Coverage*⁴⁵

Under the NFSA, the entire costs of food grain mandated by the law (including procuring this grain from the farmers, its scientific storage and the subsidy to the consumer) has to be borne fully by the central government. The Union Budget in 2016-17 showed a decline by 45.84 billion rupees compared to the 2015-16 Revised Estimate of 1390 billion rupees (Ministry of Consumer Affairs, 2016-17)⁴⁶. However, this improved in the year 2017-18 when the Budget Estimate under NFSA was 1490 billion rupees, which is 121.65 billion rupees higher than the Revised Estimate of budgetary allocation under NFSA in the year 2016-17.

But the situation is much more complicated for other obligations under the NFSA because the responsibility to ensure adequate finances for these vests with both the central and state governments. There is evidence that funding for many of these entitlements fail to cover the requirements if the law is to be complied with. For instance, the obligations for pre-school feeding are operationalized through ICDS. The official mission document of the Government of India for ICDS calculated a total requirement of 300.25 billion rupees for the year 2017-18 to universalise this scheme as required under the law. The actual budgetary allocation in 2017-18 under ICDS was 167.45 billion rupees, representing a shortfall of 130 billion rupees against the amount calculated by the ICDS mission document itself.⁴⁷

The Union Government allocations for ICDS saw a drastic 100 billion rupee fall in the 2015-16 Budget Estimates, compared with allocations in the 2014-15 Budget (MWCD, 2015-16).⁴⁸ However, only

after the first and second supplementary budgets were these shortfalls met, and these came closer to the earlier year, at 154.89 billion rupees. The 2016-17 Budget Estimates show a reduction to 140 billion rupees (Krishnan, 2016).⁴⁹ Likewise, the Mid-Day Meal scheme (MDM) saw high budget cuts of 8.23 billion rupees in the 2016-17 budget (97 billion rupees) and 5.23 billion rupees in the 2017-18 budget (100 billion rupees) as compared to the actual expenditure in the FY 2014-15 (105.23 billion rupees), and unlike for ICDS, these shortfalls were not made up in supplementary budgets.⁵⁰

Saumya Shrivastava of the CBGA has analysed the budgets of four states to assess their spending on ICDS and the Mid-Day Meal scheme.⁵¹ In Madhya Pradesh for instance, she found a decline in allocations for ICDS in 2014-15 over the previous year's spending and a marginal increase in the MDM despite the fact that Madhya Pradesh has a higher proportion of stunted and wasted children than the national average. Odisha also shows a substantial decline in ICDS allocations. She concludes that the budget cuts for nutrition related schemes in the 2015-16 Union budget, although reversed to some extent in supplementary grants, has adversely impacted investment in nutrition in some states.

India's birth rate is around 20 per 1,000.⁵² The current population is around 1.3 billion.⁵³ So the number of births per year must be around 26 million. Thus as mandated by the law, at 6,000 rupees per birth, if universal maternity entitlements are to be ensured which surely is the spirit of the NFSA, then (assuming optimistically that 10 percent births are already covered under the formal sector) this would conservatively cost 140 billion rupees per year. However, in the financial year 2015-16 (actuals) the budgetary allocations under the Maternity Benefit scheme was actually reduced by 1.1 billion

42 Op. cit.

43 <https://www.ncbi.nlm.nih.gov/books/NBK233141/>

44 <http://www.isec.ac.in/CWGS-Semian-brochure.pdf>

45 This section has been assisted greatly by Centre for Budget and Governance Accountability.

46 <http://indiabudget.nic.in/ub2016-17/eb/sbe17.pdf>

47 <https://www.bpni.org/WBW/2013/Broad-Framework-of-Implementation-ICDS-Mission.pdf>

48 (The State and UT Plan budget declined from Rs. 18,108 crores in 2014-15 to Rs. 8245.77 crores) <http://indiabudget.nic.in/budget2015-2016/ub2015-16/eb/sbe108.pdf>.

<http://www.thehindu.com/news/national/Huge-budget-cut-for-ICDS/article14133084.ece>

49 <http://www.thehindu.com/news/national/Huge-budget-cut-for-ICDS/article14133084.ece>

50 http://unionbudget2017.cbgaindia.org/nutrition/mid-day_meal.html

51 Op. cit.

52 http://censusindia.gov.in/vital_statistics/SRS_Bulletins/SRS%20Bulletin%20-Sep_2017-Rate-2016.pdf

53 <http://www.mospi.gov.in/statistical-year-book-in-dia/2016/171>

rupees, from 3.43 billion rupee in the financial year 2014-15 to 2.33 billion rupees in the year 2015-16 (actuals). Only 27 billion rupees were allocated under this scheme in the year 2017-18, which was only a third of what is required for universal coverage as per NFSA norms.⁵⁴

Not just low budgetary allocations, other entitlements under the NFSA are also covering lower populations than what the law guarantees. Although the ICDS scheme should cover all children below six and all pregnant and lactating mothers who seek and need its supplementary nutrition, as per the Rapid Survey on Children RSoC (2013-14) data only 48 per cent lactating mothers of children aged 0-5 months and 46 per cent pregnant women reportedly received at least one service from ICDS centres. Further, among the children aged 6-35 months and 36-71 months, only 54 per cent and 48 per cent respectively received at least one service available from these centres.⁵⁵ Only 54.5 percent of children below six and 70.3 percent of pregnant mothers are covered by the services of ICDS.

The situation is only slightly better for free mid-day meals through schools. According to official data from 2017, the scheme covers 75 percent of the children (Primary and Upper Primary) enrolled in schools, resulting in deprivation of entitlement to as many as 32 million children out of total 129 million children enrolled.⁵⁶ Among the states and UTs with large segments of children uncovered are around 54% in Chandigarh, 45 percent in Jammu and Kashmir, and Uttar Pradesh, 41 percent in Jharkhand and Delhi, 40% in Bihar and between 27 and 31 percent in Rajasthan, Puducherry, Madhya Pradesh and Gujarat.

Failures of Enforcement

In the final analysis what distinguishes a scheme or programme of government from a rights-based law, is the independence and powers of the institutions established under the law to enforce its provisions,

54 <http://indianexpress.com/article/india/maternity-benefit-scheme-still-not-functional-economists-write-to-arun-jaitley-4992225/>

55 <http://wcd.nic.in/sites/default/files/RSoC%20National%20Report%202013-14%20Final.pdf>

56 PAB – MDM 2017-18

redress grievances, and award deterrent punishments in case of violations by public officials. The NFSA law was a union law but it did not create any independent oversight and grievance redress institution at the national level such as a National Food Commission. The NFSA envisaged oversight institutions at the state and district levels, and left the appointment of the State Commissions and the District Grievance Redressal Officers (DGROs) to the discretion of the respective state governments. From the information available, it is seen that while State Food Commissions have now been set up in most states, the states that have chosen not to establish dedicated bodies at the state level under the law, instead authorise other existing bodies to additionally undertake this work such as Consumer Commission in Madhya Pradesh, a committee of secretaries in Maharashtra, Commission for Women in Goa and so on. As far as the DGRO is concerned, there is a common pattern in all states, and this is to designate an officer who is part of the district administration (such as the District Collector or SDM or in some cases even the District Supply Officer) to undertake this task of oversight (Draft Report, Centre for Equity Studies). In such cases, where the implementing authorities are themselves given the responsibility of grievance redressal, the grievance redressal process and outcomes may not be satisfactory because of a clear conflict of interest.

3.4 Failures of Non-food determinants of Nutrition

Malnutrition and disease have a two-way relationship. People are unable to absorb nutrients in their food, because of infectious diseases such as diarrhoea.⁵⁷ Malnutrition in turn makes the body more susceptible to infectious diseases, thereby triggering a vicious cycle, especially amongst children (WHO 2009). Unsanitary living conditions and unclean water lead to repeated infections which result in malnutrition (Ghosh 2006). Inadequate access to healthcare prolongs the duration and/or severity of the infections, which exacerbates the inability of the body to absorb nutrients.⁵⁸

57 In diarrhoea, the frequent stools prevent the adequate absorption of nutrients.

58 Ibid.

There has recently been an important contribution to understanding the paradox of high persisting malnutrition in India by stressing the major contribution of lack of sanitation. Robert Chambers and Gregor von Medeazza (2013) write that ‘the puzzle of persistent undernutrition in India is largely explained by open defecation, population density, and lack of sanitation and hygiene’. They rely on a study by Dean Spears (2012), which analyses 140 demographic and health surveys to conclude that open defecation accounts for much of the excess stunting in India, where 53 per cent people defecate in the open. This exposes children to faecally-transmitted infections and not just the diarrhoeas, which have attracted at least some attention so far. They conclude that sanitation has been a ‘blind spot’ in understanding malnutrition in India and believe that ‘in hygienic conditions much of the undernutrition in India would disappear’. Adi Narayan in *Bloomberg* (2013) writes how extra food means nothing to stunted kids with bad water. ‘You really can’t address stunting unless you clean up the sanitary environment,’ said Clarissa Brocklehurst, UNICEF’s former chief of water, sanitation and hygiene, who worked in India from 1999 to 2001. ‘It doesn’t matter how much extra food you try to stick into kids or how much dietary supplements you give them, it will all just go through them.’

The toll taken by repeated infections is higher because of very poor public health services, which must also be understood as a major contributing factor to malnourishment. Public expenditure on health, at just 1.2 per cent of India’s GDP, is much lower than by a third of the average of 2.8 per cent in low and middle-income countries, and even far lower than industrialised countries. Public health expenditure would benefit the poor – who carry a much higher burden of disease due to poor nutrition, water, sanitation and housing – if it focused on preventive, promotional and primary curative health care, which are starved of resources. Even this low public expenditure is mostly on tertiary care, of which the poor are not major beneficiaries. An estimated 87 of total health financing is private financing, much of is out-of-pocket payments (user charges), most of all on medicines (Economic Research Foundation, 2006).

It is clear that because of the extremely high incidence of malnutrition in India, it is imperative for the country to focus not just on food security but also nutrition security, which comprises access to adequate amounts of nutritious food, clean drinking water, sanitation, maternity support, child-care services, and public health care. But while each of these interventions are vital, they do not exclude the need for simultaneous action on other fronts as well.

4. Consequences of exclusion

There are a number of observable and unobservable consequences of being excluded from food and nutrition. Preventing malnutrition among young children not only helps in improving their health but also contributes to longevity and productivity in adulthood. The effects of poor nutrition are intergenerational passing on from the mother to the child.⁵⁹ Malnutrition can result in people trapped in a poverty cycle, which needs to be broken by good nutrition and health services in childhood.

Preventable Starvation

The starkest consequence of lack of food and nutrition is starvation and also death due to starvation. Inadequate food consumption over sustained periods of time not only has it physical health consequences but also makes people listless, lose interest in life and often times forced to lose their dignity in their struggle to access some food. Even after death, there is the indignity of various people fighting over the cause of death and trying to establish starvation, sometimes through post-mortems questioning the fact of hunger by finding a few morsels of grain or even coping foods like mango kernels in the stomach (Johari, 2016).

Extreme food shortages and common childhood illnesses as a result can lead to severe acute malnutrition, which left untreated increases the risk of death. Malnutrition is also the underlying cause for about 45% of child mortality (World Health Organisation, 2018) – these are lives that could have been saved simply by ensuring proper nutrition for the mother and the child.

59 K. Srinath Reddy (2016): ‘Unequal by Birth: Time to Break the vicious cycle’, *The Hindu*, March 2016.

Succumbing to ailments

As seen above, the interplay between the two most significant immediate causes of malnutrition – inadequate dietary intake and illness – tends to create a vicious circle: A malnourished child, whose resistance to illness is compromised, falls ill, and malnourishment worsens. Children who enter this malnutrition-infection cycle can quickly fall into a potentially fatal spiral as one condition feeds off the other. Malnutrition lowers the body's ability to resist infection by undermining the functioning of the main immune-response mechanisms. This leads to longer, more severe and more frequent episodes of illness. Infections cause loss of appetite, malabsorption and metabolic and behavioural changes. These in turn increase the body's requirements for nutrients, which further affects young children's eating patterns and how they are cared for.

Improved nutrition on the other hand can reduce the negative impact of infections on growth in a number of ways including strengthening the child's immune system, providing extra amounts of nutrients to compensate for those that not well absorbed or are lost during infection, allowing for catch-up growth after infection and so on.

Body and brain not forming to full potential

Long-term insufficient nutrient intake and frequent infections can cause stunting, whose effects in terms of delayed motor and cognitive development are largely irreversible. The consequences of stunting on education are also dramatic. Various studies show that child stunting is likely to impact brain development and impair motor skills. According to UNICEF, stunting in early life is linked to 0.7 grade loss in schooling, a 7-month delay in starting school and between 22 and 45 percent reduction in lifetime earnings (Grantham-McGregor et. al., 2007). Stunted children become less educated adults, thus making malnutrition a long-term and intergenerational problem. Other indirect losses for the country's economy are caused by poor cognitive function and reduced school attainment that originate in early childhood undernutrition. In fact, the education gap and consequent lower skill-level of workforce substantially delays the development of countries affected by malnutrition. Undernutrition in early

childhood also makes an individual more prone to non-communicable diseases later in life, including diabetes and heart disease significantly increasing health costs in resource constrained health systems.

Poverty traps

Economists have long debated the effects of nutritional intake on labour productivity and wage rates. The efficiency wage hypothesis argued that in the developing countries, particularly at low levels of nutrition, workers are physically incapable of doing hard manual labour. Hence, their productivity is low which then implies that they get low wages, have low purchasing power and therefore, low levels of nutrition, completing a vicious cycle of deprivation. These workers are unable to save adequately so that their assets—both physical and human—are minimal. This reduces their chances of escaping the poverty nutrition trap (Strauss and Thomas, 1998). The existence of the poverty nutrition trap has since been empirically challenged, with a number of scholars showing how it works while considering calorie deficiencies as well as micronutrient deficiencies (Jha et. al., 2009). A recent survey conducted in India – ICE 360 conducted by People's Research on India's Consumer Economy (PRICE) – found that food dominates the routine monthly consumption expenditure in India. The bottom quintile (poorest 20%) spends nearly 60% of its monthly budget on food while the top quintile (richest 20%) spends 44% on food. Within urban India, the bottom quintile spends 53% on food while the top quintile spends 41% on food.⁶⁰

Intergenerational Cycle

The nutritional status of newborns and infants is directly linked with the health and nutritional status of the mother before, during and after pregnancy. Malnutrition often begins at conception. When pregnant women consume inadequate diets, have excessive workloads, or are frequently ill, they give birth to smaller babies with a variety of health problems. It is estimated, for example, that half of all child stunting occurs in utero (Onis and Branca, 2016). Children born to malnourished mothers are more likely to die as infants. If they survive, by the second year of

⁶⁰ <https://www.livemint.com/Consumer/O0I6Mgk5VqBsr-prjtDslOO/How-India-spends.html>

life they may have permanent damage. The effects of early childhood malnutrition persist into the school years and even adulthood, lowering productivity and quality of life. Small adult women who were malnourished as children are more likely to produce small babies and the cycle of malnutrition and illnesses continues. In general, malnourished women and girls of reproductive age have higher chances of giving birth to smaller babies (weight and height), continuing the cycle of malnutrition into future generations. The effects of malnutrition are long-term and trap generations of individuals and communities in the vicious circle of poverty UNUP (2000).⁶¹

Economic Impact

Malnutrition imposes high costs on individuals as well as nations. These direct and indirect costs are a result of the number of ways in which malnutrition impacts health and well-being. Malnutrition slows economic growth and perpetuates poverty. Mortality and morbidity associated with malnutrition represent a direct loss in human capital and productivity for the economy. There are costs in relation to the economic growth forgone, lost investments in human capital, preventable child deaths, reduced adult labour productivity as well as impaired learning potential and so on (Global Panel 2016).^{62, 63} A number of studies have tried to estimate the economic cost of malnutrition (see Global Panel 2016 for a useful review of literature on this). For instance, FAO estimates that the impact of malnutrition on the global economy could be as high as US\$3.5 trillion per year, or US\$500 per individual (FAO 2013).⁶⁴

61 UNUP (2000) Food and Nutrition Bulletin – Ending Malnutrition by 2020: An Agenda for Change in the Millennium

62 http://www.indiaenvironmentportal.org.in/files/file/Food_for_Thought.pdf <https://www.younglives.org.uk/sites/www.younglives.org.uk/files/YL-WP55-Lopez-Boo-CognitiveSkillsInIndia.pdf>

63 Global Panel on Agriculture and Food Systems for Nutrition (2016). The Cost of Malnutrition: Why Policy Action is Urgent, Technical Brief No. 3, July 2016 available at <http://www.glopan.org/sites/default/files/pictures/CostOfMalnutrition.pdf>

64 FAO (2013). Food and Agriculture Organization of the United Nations. State of Food and Agriculture 2013: Food systems for better nutrition 2013 Rome, Italy.

The direct costs of all kinds of malnutrition, stunting, wasting and micronutrient deficiencies, have been estimated at between US\$1 and US\$2 trillion globally. Cross-country data of Sub-Saharan African countries suggests that a loss of 1% of potential attained height in adulthood reduces earnings by 2.4% (Hoddinot, 2016).⁶⁵ Another study estimates that at the national level, the loss of individual height translates to an annual loss in resource-poor countries of as much as 12% of GDP (Global Panel 2016. Steckel and Horton, 2011).⁶⁶ A reduction in global levels of stunting by 20% would represent a rise in income of 11%, through higher schooling and better cognitive levels. Further, estimates show that stunting, and vitamin and mineral deficiencies together result in losses of up to 3% of GDP in low-income developing countries (FAO 2013). A World Bank report finds that investments in nutrition are among the best in development, with a return of between \$4 and \$35 for every \$1 invested (Shekar et al. 2016). According to the Copenhagen Consensus, ensuring good nutrition is the single most important, cost-effective means of advancing human well-being (Copenhagen Consensus, 2012).

5. Good Practices

A number of government schemes, both under the NFSA and beyond, exist to address the issue of food security and malnutrition among the poor. As seen in the sections above, their implementation has been tardy and uneven. In this section, we briefly look at some of the initiatives that have been undertaken by governments sympathetic towards the issues of the marginalised.

School Meals and Supplementary Nutrition in States – Eggs

Following the Tamil Nadu model of providing eggs in school and anganwadi meals, a number of states have now made provisions for eggs in these schemes

65 Hoddinot, J., The economics of reducing malnutrition in sub-Saharan Africa. Global Panel on Agriculture and Food Systems for Nutrition Working Paper 2016

66 Steckel, R. and Horton, S., Malnutrition: Global economic losses attributable to malnutrition 1900-2000 and projections to 2050. Assessment Paper for the Copenhagen Consensus on Human Challenges, 2011

using their own funds (Narayan, 2019). Eggs are considered to have all the nutrients that we require (except Vitamin-C). They are also easy to manage logistically and known to be popular among children.

*PDS Reforms*⁶⁷

A number of states carried out PDS reforms – the best known are Tamil Nadu and Chhattisgarh. Studies have shown that the leakages in PDS are the lowest in these states (Drèze and Khera, 2013). The reforms included expanding the coverage of PDS (universalisation in TN), de-privatization of fair price shops (shops are run by public bodies including panchayats, co-operatives, forest production committees and women's Self Help Groups). Further, in these states, technology was used creatively to ensure transparency as well as real-time monitoring without disrupting the services to the beneficiary.

*Amma Canteens*⁶⁸

Amma canteens were set up by the Jayalalitha government in Tamil Nadu in order to make available nutritious cooked meals in urban areas. These community kitchens supply *idlis* with *sambar* at one rupee each, and 350 grams of *sambar* rice or *pongal* at Rs.5. The subsidy for each *idli* is 86 paise, and for *sambar* rice Rs.5. This subsidy is met by the Municipal Corporation, except the cost of rice which is supplied by the state government at one rupee a kilo. In private eateries where they ate earlier, the same meal cost about Rs.40-50. Around one lakh people eat daily at the Amma canteens. These canteens can be used by anyone. They are clean and well-lit, filtered drinking water is provided for free and the general reports are that the food is tasty. Every canteen is run by 16 women from a slum-based self-help group. Their daily wage is Rs.300 with one weekly day off.

*Fulwaris in Chhattisgarh*⁶⁹

The Government of Chhattisgarh has launched a scheme in 2012 called the Fulwari under which a

community managed nutrition and day care centre is run in the tribal blocks in the state. The Fulwari is managed and run by group of local women. Children are fed three hot cooked meals and pregnant women two meals a day. The menus is prepared by the group of mothers based on guidelines which give emphasis to the inclusion of eggs, vegetables and oil. The take home rations available at the Anganwadi centre are also fed at the Fulwari centre as breakfast.

These day care centres also function as demonstration sites for feeding and care related behaviours like – use of eggs, oil, vegetables in diet, frequent feeding, hand washing, handling of drinking water, use of bed-nets etc. In the regular meetings of the mothers' group to manage the centre, the Mitani (health worker) also participates and provides nutrition and health education messages, as well as referral care and growth monitoring. An external assessment conducted by Ravishankar University and JN Medical College Raipur in August 2013 showed that children in a Fulwari were gaining weight much faster than those who were outside. Another evaluation by UNICEF found that the overall child malnutrition rate came down by 24% which was faster than what was achieved in the state in a longer period, and severe malnutrition among children declined by 38%. Preliminary assessments also showed an improvement in birth weights.

6. Recommendations

Addressing the challenge of food and nutrition for all would require multiple direct interventions as well as overall economic development which is inclusive and employment generating. Food producers must be supported so that they receive adequate remuneration and are also able to feed themselves. Legislations related to protection of labour rights, promotion of gender equality and disability rights in work, etc must be strengthened and public interventions towards these expanded. The existing framework for food provisioning as social protection needs to be augmented with more resources as well as design changes to ensure social inclusion. Further, other services such as access to clean water, sanitation and healthcare need to be universally available.

Some of these major recommendations are elaborated below:

67 Include reference to PDS to Go report and add reference

68 From: https://www.thehindu.com/opinion/columns/Harsh_Mander/food-for-thought/article5096164.ece
Needs paraphrasing and reference

69 http://www.cips.org.in/documents/2014/23rd_June/Shri_Samir_Garg.pdf. Add other references

Agriculture, Wages and Livelihoods

We have observed the cruel irony that the largest population of food insecure people are food producers – farm workers, tenants, marginal and small farmers; also, fish workers and forest gatherers. Often, the producers — who are majorly small and marginal farmers — themselves have to depend on the market to procure food. With growing agrarian distress, the income of farmers has dwindled which resulted in this ironic situation of food insecurity for the producers of food.

Indian agriculture is largely rain-fed. With erratic rainfall, the availability of water for irrigation facilities are indispensable for food production. India's response to making water available for irrigation purposes has been the construction of big dams which, as historical evidence shows, not only fails in making irrigation facilities accessible for all but also results in negative externalities such as the problem of large-scale displacement of people and their rehabilitation and an adverse, irreversible ecological impact. Instead, comprehensive watershed development and small and micro-minor irrigation works are required on a massive scale. This should be linked with an expanded and effectively managed rural employment guarantee program, with focus on land and watershed development, small irrigation and afforestation.

This is vital for the most vulnerable among the farming community: the over 55% rural households with no land at all (according to the 2011 SECC). NREGA was a landmark policy for increasing employment opportunities in rural India as well as positively affecting the rural wages. However, NREGA, like other schemes, suffers from delayed and rejected payments. There is a need to increase funding for NREGA and increasing the number of days of employment guarantee, especially in areas where other sources of income are either unavailable or available only during a small period during the year.

Over the past few years, farmers' agitations have intensified and demanded different forms of intervention to improve their situation from loan waivers to Minimum Support Price on the lines of the Swaminathan Commission report which requires minimum income support for farmers and financial security for the families of farmers who have committed suicide, among other demands. According

to the Swaminathan Commission report, 85.29% of households are landless or have sub-marginal, marginal or small land holdings. Apart from small holding size, productivity levels are also lesser.

A comprehensive land reforms program including recording and security for tenants, a land redistribution programme, along with state enabled provisioning of seeds, fertilizers and other farm implements at subsidized rates, encouraging soil and weather specific interventions in agriculture (which has been tried to be implemented by the Soil Health Care scheme albeit in an unsatisfactory manner), better access to rural credit and insurance schemes for farmers which provides a realistic and reliable coverage for crop failure are some urgent interventions that can help assuage the agrarian distress.

Besides, there has to be a massive shift to sustainable agricultural technologies, less dependent on irrigation, chemical fertilizers and pesticides.

Labour Protections

Besides farming households, the other massively food insecure category of households are informal workers, who lack job security, decent wages and social protection. The workforce is becoming increasingly casual and contractualised, robbing them of the benefits of secure employment. A range of measures for labour protection are required, which go beyond the scope of this chapter. A great part of these workers and circular migrants, many semi-bonded, who require also a regime of portability of entitlements. There is also need to ensure protection of rights of women workers to equal pay and safe and dignified workplaces.

We also believe that the time has come for an urban employment guarantee program. This would help build basic public services and infrastructure for the urban poor, especially slum and pavement residents and the homeless. It should also include employment in the care economy, with focus on child-care services, and services for children and adults with disability, and older persons.

PDS

The Public Distribution System must be universalized, with provisions for exclusion of those who are

income tax payers. The PDS must distribute not just cereals but also pulses and edible oils. This would go a long way in improving nutritional security. Further, the PDS must be reimagined and must be based on a system of decentralized procurement and distribution where a variety of crops are procured and distributed locally. Further, a centralized agency can co-ordinate the shifting of foodgrains from surplus areas to deficit areas. The required storage and transportation arrangements for such a mechanism must be put in place. MSPs will need to be declared and a wide variety of cereals, pulses and oilseeds need to be procured. Such a system can also be linked up with the ICDS and MDMS for viability as well as expansion. Over time, this could also include fruits, vegetables, eggs, etc.

ICDS and MDMS

Adequate allocations for ICDS and MDM need to be made to ensure universalization with quality and equity. Numerous positions under ICDS including Anganwadi workers, CDPOs and supervisors are lying vacant and need to be filled. Infrastructural improvements such as kitchen sheds, storage facilities, waste disposal, etc. are needed. The meals that are provided under both the schemes need to be supplemented with nutrient rich foods such as dairy products, eggs and fruits.

Besides this, a well-run school health scheme could help combat malnutrition better by taking care of growth monitoring, micronutrient supplement, vaccination, immunization, deworming and conducting regular check-up of school children.

A 2007 World Bank Report revealed that children with disability are about 5 times more likely to be out of school than children belonging to the Scheduled Castes or Scheduled Tribes. This automatically excludes them from accessing education, hence employment opportunities in the future as well as nutritious food available under MDM. Special schools, catering to the requirements of differently abled students need to be opened by the State and inclusive schooling practices need to be adopted as a central pedagogic practice including use of technology such as text-to-speech devices, texts in Braille, friendly infrastructure etc.

Anganwadi workers and helpers, Mid-day Meal Cooks

Special focus also needs to be brought on improving the working conditions of Anganwadi workers and helpers. There are almost 28 lakh Anganwadi workers and helpers in India. Under the policy, roughly one Anganwadi worker is supposed to cater to a population of 800 persons. However, the workers are paid a pittance. Currently, Anganwadi workers are paid a monthly honorarium of Rs. 4500, and Rs 3,000 to Anganwadi helpers. This amount is hardly enough for the workers and helpers to feed their own families. The payments are usually delayed, sometimes by a few months. Regularisation of work, recognition of their status as government employees and a minimum wage of Rs. 18,000 are some of the long-standing demands of the Anganwadi workers. The Anganwadi workers are crucial to the question of nutrition and social awareness not only because of their role in ICDS but also because of their status as working women. Similarly, cooks in mid-day meals must be paid a decent wage.

Maternity Benefits

Maternity benefits are essential to ensuring a gender sensitive work environment and make employment opportunities equally accessible to everyone. PM-MVY, as discussed before, has severely limited reach and offers lesser maternity benefit, in terms of cash transfer than what is mandated by the NFSA. Tamil Nadu had pioneered a scheme for maternity benefit — Dr. Muthulakshmi Reddy Maternity Scheme — providing Rs. 18,000 to every pregnant and lactating woman. Telangana had a similar scheme providing Rs. 12,000. In order to make the PMMYS effective, the cash benefit needs to be increased as well as universal coverage needs to be pursued. Along with cash benefits, improvement in supplementary nutrition provided to pregnant and lactating mothers, by giving hot cooked meals must be undertaken,

Creches

Often working women find it difficult to balance child-care, a responsibility that falls solely on women owing to patriarchal division of labour. The National Creche in 2006 provided respite by opening crèches

for the children of working mothers with an income less than Rs, 12000. However, the programme suffers from delayed and denied payments. The Central government in 2016 revised the financial structure of funding for the scheme, with the revision cutting the Centre's share in funding from 90% to 60 percent, leaving the States struggling to muster the remaining 40%. This has led to surge in delayed and denied payments which has increasingly led to fears of this scheme being dismantled. The importance of the National Creche Scheme cannot be stressed enough owing to the direct impact of generating employment as well as allowing working mothers to seek employment without the worry of child-care. Better implementation of the scheme, more crèches, enough funding to make payments and arrangement of food are some of the improvements which can be made.

Community Kitchens, Hostels

Community kitchens can go a long way in reducing the burden of unpaid work on women and simultaneously making healthy, nutritious food available at low costs. Various models of community kitchens have been tried out across the world as well as in India — langars at Gurudwaras, Amma canteens, “zunka bhakar” scheme initiated by the Shiv Sena government in Maharashtra in 1995 to name a few. Community kitchens can not only provide food at subsidized rates making food accessible to the poor and the homeless but if implemented properly, could reduce the gender-based burden of cooking food on women, create employment opportunities, provide a viable alternative for the working-class who currently depend on cheaper sources which may not serve healthy food as well as create a social interaction important in the context of a deeply divided society such as India.

We have observed above how the gendered dietary patterns means women not only eat last, but eat less. Further, owing to regressive, patriarchal beliefs, a girl child has a greater barrier to education and hence employment opportunities. Although the enrollment rates for girls has gone up, more dedicated schemes like the Kasturba Gandhi Balika Vidyalaya needed to expand the coverage among girls, especially from the marginalised sections like SC, ST, OBC, minorities and BPL families. Reducing the

gender gap in secondary education, making school environment more inclusive by ensuring gender sensitivity both in conduct and education imparted as well as making gender-specific interventions such as availability of sanitary napkins, clean and functional toilets, etc. in the schools.

Pensions

The condition of widows and elderly persons, elderly women in particular, is quite poor. The National Social Assistance Programme offers pensions for elderly persons (under Indira Gandhi National Old Age Pension Scheme), widows (under Indira Gandhi National Widows Pension Scheme) and disabled persons (under Indira Gandhi National Disabled Pension Scheme). However, the programme suffers from multiple issues. The base pension for the elderly is Rs. 200 and has not been changed since 2007. Though the state government have been asked to at the very least, match the sum given by the Centre, the pension available for the elderly varies from Rs. 2000 in Goa to Rs. 400 in Gujarat and Bihar to Rs 200 in Assam and Nagaland. This sum of money is not enough to lead a dignified life. Pension should be increased to at least half the prevailing minimum wages at any time, to bring it on some parity with the formal sector in which retired employees receive a pension of half their last income.

BPL identification, used in the case of IG-NOAPS and IGNWPS, is not the best way to go about identifying eligible persons. Many among the poorest persons do not have a BPL card. Further, those marginally above the poverty line have similar circumstances as those marginally below it which makes their exclusion arbitrary. In both the widow and old age pension, there should be a dedicated focus towards vulnerable groups like Dalits, Adivasis, Particularly Vulnerable Tribal Groups, transgender persons, sex-workers and persons with disabilities.

Further, the widow pension scheme needs to be universalised by making it self-excluding. The eligibility conditions, of 18 years of age and 80% disability, for availing IGNDPS is unreasonably high and excludes children with disability. Universalising the scheme will expand the coverage and help improve the situation not only of the individuals but also of

the other family members by augmenting the family income.

Besides pension, well-equipped, hygienic and clean residential homes with healthy and nutritious food availability for the elderly can also help reduce their dependence on family while also ensuring that their needs are taken care of.

Further, work compatible with the physical requirements of elderly and disabled persons needs to be made available especially under schemes like NREGA.

Water, Sanitation and Health Care

Besides agriculture, water availability for drinking, cooking and other domestic uses has direct and indirect implications for nutrition as noted before. Although 91% urban households and 89% rural households have access to drinking water as per the NFHS-4 report, significant dependence on tube-wells or boreholes, 17% for urban areas and 51% for rural areas, is a cause of concern given the risk of contamination of groundwater. Lack of proper sewage and sanitation facilities increases the risk of contamination of water resources.

According to WHO/UNICEF (2014), India is one of the only 45 countries which have a sanitation coverage of less than 50% and is home to the largest population without sanitation. NFHS-4 report shows that 39% households in India have no toilet facilities or use open spaces for defecation; the proportion is 54% for rural households. The Swachh Bharat Abhiyaan, which aimed to make toilets available to every household, has not been implemented properly with various reports of lack of water supply, lack of proper waste disposal mechanisms and corruption in implementation. The approach towards addressing the issue of sanitation should shift from a top-down, 'one-size-fits-all' approach to a more participatory, community-centric and demand driven approach.

Besides ensuring clean water supply and sanitation, health-care — both institutional as well as in terms of hygiene practices — needs to be focused upon. Currently, most of the expenditure on health-care is an 'out-of-pocket' expenditure 2.5% of the budgetary allocation in 2019 going towards health-care. World Bank data for 2015 shows that India

lags far behind in total health-care expenditure (including public and private) as a ratio of GDP at just 3.89% compared to a world average of 9.86% and significantly lesser than USA (16.64%), Germany (11.15%) and Brazil (8.91%). Public expenditure is further lower at about 1.4% of GDP as per the Economic Survey of India 2018. Privatisation of health-care fundamentally makes health-care inaccessible to major portion of the population. There is an urgent requirement for a legally enforceable right to health care, with universal and free out-patient and hospital-based care, free diagnostics and free medicines.

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