Rethinking rural malnutrition crisis in Bangladesh: Could agriculture play a bigger role?

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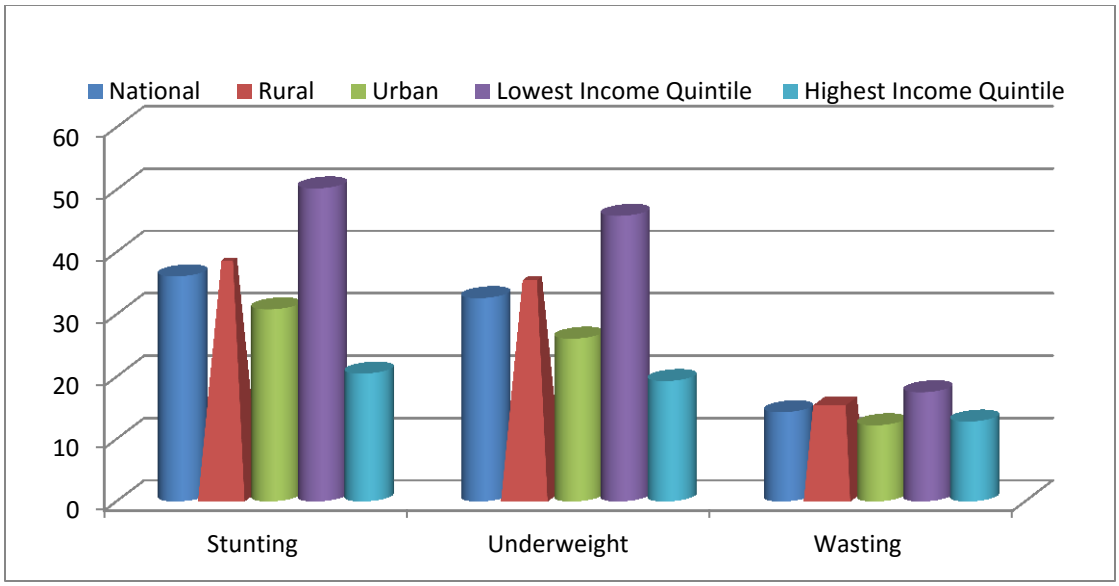
Bangladesh presents an interesting case of sustained economic growth yet persistently high levels of malnutrition. The country has maintained 6% economic growth over the past decade, and has achieved its millennial development goal (MDG) of reducing poverty by half over the 1991-92 level. Yet, it has failed to achieve the MDG target of halving the proportion of malnourished people by half. The absolute number of undernourished people has increased from 39.3 million in 1990-91 to 44 million at present, which was supposed to be reduced to 31.8 million by 2015 to meet the MDG target (FPMU 2008). In fact, Bangladesh has one of the highest rates of chronic and acute malnutrition in the world, particularly among women and children, which is above the World Health Organisation's (WHO) threshold for public health emergency (World Food Programme, 2012). The 2014 Bangladesh Demographic and Health Survey (BDHS) notes that nearly 36 percent of children under the age of five are stunted[1] and 33 percent of them are underweight[2]. The survey also indicates that the number of stunted and underweight children is respectively 23% and 33% higher in rural areas compared to urban areas. In addition, children born in lowest income quintile families are nearly 2.5 times more likely to be malnourished than the children born in top income quintile families (NIPORT 2015: 44).

Figure 1: Percentage of Malnourished Children Under Age 5, 2014

[1] Stunting indicates chronic malnutrition. 'A child who is more than two standard deviations below the median (-2 SD) of the WHO reference population in terms of height-for-age is considered short for his or her age, or stunted. Wasting or weight-for-height describes current nutritional status. A child who is more than two standard deviations below (-2 SD) the reference median for weight-for-height is considered to be too thin for his or her height, or wasted.' (NIPORT 2015: 41-2).

2 Underweight or 'weight-for-age is a composite index of weight-for-height and height-for-age. It does not distinguish between acute malnutrition (wasting) and chronic malnutrition (stunting). A child can be underweight for his age because he or she is stunted, because he or she is wasted, or both. Children whose weight-for-age is below two standard deviations (-2 SD) from the median of the reference population are classified as underweight. Children whose weight-for-age is below three standard deviations (-3 SD) from the median of the reference population are considered severely underweight. Weight-for-age is an overall indicator of a population's nutritional health.' (NIPORT 2015: 42).



Source: Bangladesh Demographic Health Survey 2014

Faced with this problem, the government has partnered with NGOs, and international donor organizations and charities to initiate a raft of measures to tackle malnutrition. Recently, it joined hands with the Geneva-based Global Alliance for Improved Nutrition (GAIN) and the Scaling Up Nutrition (SUP) to reduce malnutrition. A closer look at the policies targeted at reducing malnutrition reveals an overwhelmingly public health-centric bias in terms of addressing malnutrition. In fact, the existing umbrella plan to tackle malnutrition – the Health, Population and Nutrition Sector Development Program 2011-16 – mainstreamed all nutrition programs into the health sector (World Food Programme, 2012). As the Action Plan for Mainstreaming Nutrition Services outlines, the government plans to distribute food fortified with vitamin A and D, calcium, iodine, iron, folic acid, etc. Bangladesh is also collaborating with the International Rice Research Institute to introduce the genetically modified beta carotene rich Golden Rice. In addition, it also planned other interventions, including nutrition education, improved sanitation, greater access to safe drinking water, increased breastfeeding of infants, and promoting healthy lifestyle (Ministry of Health and Family Welfare, 2010). While these health-centric interventions may be necessary to mitigate malnutrition in the short-term, they will do little to eradicate the conditions that render certain sections of the population prone to malnutrition, especially in rural areas.

To frame malnutrition as merely a pathological health condition resulting from the deficiencies of certain nutritional elements in a population's diet – as can be deducted from the government's policy response – deliberately circumvents the question around class, inequality, the existing mode of agro-food regime and associated ecological degradations that limit people's access to healthy diets. The health-centric approach tends to depoliticize the broader question of how the agro-food regime of a country is structured that leads to a certain

section of the population being systematically denied of access to balanced diets necessary to maintain a healthy living (see Patel, Kerr, Shumba, & Dakishoni, 2015). As Scrinis (2008: 40) argues, the technocratic characterization of malnutrition in terms of 'nutri-biochemical levels' seeks to move our attention away from the indivisibility of 'food, diets and bodily processes.' This reductionist approach of valorizing the isolated 'nutri-biochemical' elements, what Scrinis calls 'nutritionism', then is used to justify the fortification of food with deficient nutritional elements in an attempt to suppress the all-important issue of restructuring the agro-food regime.

In departing from this narrow health-centric depoliticised understanding, I argue that malnutrition must be analyzed as symptomatic of a deepening agrarian crisis of the agro-food regime in which capitalistic logics trump people's democratic right to culturally appropriate good nutritious food. Malnutrition epitomizes the disjointed synergy between what the human body needs for a meaningful living and what the capitalocentric agro-food system offers. I posit that the high concentration of malnutrition in rural areas and among the poor has to be analyzed in relation to the totality of Bangladesh's agricultural modernization processes, capitalist development and the associated ecological crises. I conclude that the solution to malnutrition lies not in food fortification but in reimagining the entire agro-food regime.

Methods

While my objective in this paper is to present a broad argument about the intricate relations between agriculture, capital accumulation and malnutrition, I also draw on my five-month long ethnographic research conducted in three Bangladeshi villages in early 2012. During the fieldwork, I formally conducted 64 in-depth interviews with rural households and facilitated six focus groups with female and male participants across the three sites. I followed purposive sampling procedure and key informant interviews to recruit respondents. In addition to interviewing rural households, I conducted 18 semi-structured interviews with environmental and women's rights activists, central leadership of political organizations representing farmers and agricultural labourers, non-government organization (NGO) and local government officials, and key policymakers at the national level. I supplement this primary data with secondary data collected from government censuses, policy documents, local government offices, and personal communications with resource persons. The three research sites included in this study are located in Patuakhali, Pabna and Panchagarh districts.

Agriculture, Capitalist Development and Malnutrition

The 2008 Human Development Report of the World Bank opens with an emotion-invoking stereotypical narrative of a faceless African woman, whose identity we are not told, who seems to have transcended the spatial and temporal boundaries of African state formation, and who has been chosen to represent the imaginary 'millions' of homogeneous women who supposedly live in Africa. The narrative reads,

> An African woman bent under the sun, weeding sorghum in an arid field with a hoe, a child strapped on her back—a vivid image of rural poverty. For her large family and millions like her, the meager bounty of subsistence farming is the only chance to survive. (World Bank, 2007: 1)

The image of this apparently destitute 'African woman' is almost immediately rendered invisible in the subsequent 365 pages of the vision document that is guided by three main questions: 'What can agriculture do for development… What are effective instruments in using agriculture for development … [and] How can agriculture-for-development agendas best be implemented?' (World Bank, 2007: 2) The entire report does not find a single occasion to ask – what agriculture or the World Bank or the African states could do to help the 'African woman' feed her family. Instead, the question is completely turned on its head into what agriculture (and by extension the 'African woman') could do to promote national development. In case we are in any doubt, the World Bank instantaneously reminds us that such a development agenda would mean, 'a source of growth for the national economy, a provider of investment opportunities for the private sector, and a prime driver of agriculture-related industries and the rural nonfarm economy.' (2007: 3) Finally, in this teleological journey, the World Bank's advice for our 'African woman' is, 'shifting to high-value agriculture', taking up 'nonfarm economic activity', or moving 'out of agriculture.' (2007: 2).

As the World Bank's *Agriculture for Development* agenda clarifies, the traditional view of agriculture as a way of life for billions of smallholders, trying to secure meaningful subsistence for their families, is an antiquated vision. Contrary to this supposedly romanticised view of agriculture as an amalgam of autonomous family farms, agriculture's role in a 'transition economy' is about generating surplus food and capital to accelerate capitalist development through urbanization and industrialization. The availability of cheap and plentiful supply of food in urban areas is necessary to drive down wages in the non-farm sector. Moreover, increasing farm productivity and reducing the labour-intensity of agricultural production through technological interventions are crucial to mobilize the flow of workers in the capitalist non-farm sector. In addition to freeing up the agricultural labour force, large scale investment to fund industrialization also requires expropriation of agricultural surpluses. Together, the necessity to expropriate agricultural surpluses, the formation of a

free wage labour force, and the supply of cheap food require expediting the agricultural production process by overcoming the nature-imposed long gestational cycles (Mann & Dickinson, 1978).

Among others, this capitalist development model leads to four particular outcomes that interest us here: (1) agriculture becomes technology and capital intensive, thus generating an anti-smallholder bias (2) it leads to standardized monoculture (3) it artificially depresses the rural economy, and (4) agriculture becomes environmentally destructive.

Arguably, one of the principle moments[3] of Bangladesh's entry in this 'agriculture for development' agenda was the introduction of green revolution (GR) technologies in the 1960s and 1970s, and their massive expansion in the subsequent decades under the patronage of the state (Hossain, 1988; Naher, 1997). Green Revolution considered food insecurity and persistent hunger as a problem of inadequate production and declining food availability (Patel, 2013). Similarly, in the case of Bangladesh, the emphasis of successive governments has been to increase the production of rice as a means to ensure food security. The emphasis was therefore placed exclusively upon enhancing rice productivity using synthetic chemicals and laboratory-bred hybrid seeds, and scant attention was paid to the potential ecological and health repercussions of these often alien technologies. These new technologies facilitated the intensive cultivation of rice up to three times a year. With active government patronage and financial incentives, many farmers adopted this modern rice farming method and abandoned their traditional farming practices. As is the case with other countries that followed the same path (see H. Akram-Lodhi, 2013), GR technologies paved the way for market integration of peasants, as the adoption of these technologies forced them to sell their surpluses in the market to meet the increased cost of farming.

During my research, participants drew attention to the ever-increasing application of chemical inputs to maintain productivity – a phenomenon best known as the 'agricultural input treadmill' (Carolan, 2012). One of the most worrisome developments of modern farming in Bangladesh is the exponential growth of pesticide use in rice farming (S. Rahman, 2003). Data show that between 1995 and 2009, pesticide consumption increased from 1695 metric tons to 41,791 tons[4]. As van den Bosch (1978) argues, pesticide use creates a vicious cycle in which pests gradually develop resistance against chemical poisons, which becomes an occasion for even greater use of chemicals, thus giving rise to a pesticide treadmill. Since the neoliberalization of the agriculture

[3] While the precise moment of such a capitalist experimentation in agriculture arguably dates back to the enactment of the 1793 *Permanent Settlement Act of Bengal* by the colonial British East India Company through which agricultural land was commoditized, I eschew this detail here due to space shortage.

[4] http://www.nfpcsp.org/agridrupal/sites/default/files/Improving%20Pest%20Management.pdf

sector began in Bangladesh in the 1980s, the government has actively supported the commercialization of the upstream and downstream of farming. Apart from the financial costs and associated health hazards, pesticides' impact on local biodiversity can often limit people's access to nutritious food sources.

As the study participants highlighted, previously, their diet was relatively balanced as they had free access to fish from local water bodies and rice fields, various species of edible birds, and green vegetables that naturally grew in roadside ditches, wetlands and on fallow lands. The contamination of local water bodies from chemical runoff and the indiscriminate killing of insects have seriously hampered the growth of fish and bird populations. The availability of free greens is also disappearing due to land use changes. Moreover, the enclosure and commercial leasing of erstwhile open water bodies severely restricted people's access to aquatic food sources.

Between 1989 and 2010, nearly a third of the country's total dry season wetlands disappeared as a result of expanded rice production, conversion to residential plots, and other anthropogenic causes (Food Planning and Monitoring Unit (FPMU), 2013). Consequently, over the past 20 years, many local varieties of flora and fauna have disappeared, severely curtailing people's access to these rich nutrition sources. An IUCN report points out that among the 388 species of resident birds found in the country, 41 species are currently threatened (IUCN, 2001: 82). Same happened to many species of trees and plants, including indigenous rice varieties. From more than 12,000 varieties of rice, the number has gradually dwindled to about 5,000 over the last few decades due to the massive expansion of alien high-yielding modern rice varieties (Ministry of Environment and Forests, 2012: 37-40).

Historically, fish was the principle source of protein for Bangladeshis, accounting for 63% of the total animal protein intake (Azim et al., 2002). Not so long ago, Bangladeshis were known as *mache bhate Banglai,* meaning fish and rice make a Bengali (Van Schendel, 2009). The sprawling network of rivers, ponds and other water bodies, and submerged rice fields were a natural habitat to 266 indigenous fish species. Many of these fish species, such as *mola* (Amblypharyngodon mola), *dhela* (Ostreobrama cotio Cotio) and *darkina* (Esomus danricus) are nutrient rich, including vitamin A, iron, zinc and calcium. Moreover, as these small fish are consumed whole, they generally help increase the absorption of micronutrients from other foods as well ((Thilsted & Wahab, 2014).

Alarmingly, the excessive use of agrochemicals and withdrawal of water for irrigation from local water bodies are affecting the habitat of many indigenous fish species, leading to the extinction of one in every five indigenous fish species (IUCN, 2001: 78). In addition, unplanned construction of dams,

embankments and other flood prevention structures on rivers obstructed the natural fish migration routes contributing to their decline (M. Rahman & Minkin, 2007). Compared to a couple of decades ago, the availability of this nutrition-rich natural fish stock has depleted by 50 percent, declining at a rate of 1.24 percent per year (Ahmed, 1995).

The depletion of natural fish stock is extreme in Panchagarh compared to the other two sites. Ironically, Panchagarh was once famous for its fish stock. The ancient Hindu text, the *Mahābhārata,* allegedly described this region as *Matsya Desh* or the land of fish. The fish stock in this region has depleted so much that it has to import fish from outside to meet the local demand (Bangladesh Bureau of Statistics, 2013: 6). Locals attributed this declining fish stock to the expansion of dry season modern rice farming in this area. The sandy loam type soil, the dry microclimate, and the higher elevation of this area, which is very close to the Himalayas, made it less favourable to dry winter season rice farming.

Previously, farmers here grew foxtail millet (*Setaria italica*) as their staple diet, which was more compatible with the semi-arid local environment. In a bid to popularise winter season high yielding *Boro* rice farming in this area, locals recounted that the government distributed free fertilizers and pesticides, built expensive public irrigation infrastructure, and deputed the agriculture extension department to persuade farmers into modern rice farming. Nevertheless, the yield rate at the farm level remained consistently below par due to the inhospitable environment. Consequently, farmers kept increasing fertilizer and pesticide dosage hoping for better yields. In so doing, the excessive chemical runoff from rice fields contaminated fish and bird habitats, and the sight of dead fish and birds scattered across the area became frequent.

It must be mentioned that although natural inland open water fish stock has declined in most parts of the country, the supply of inland closed water cultured fish has steadily increased, thanks to the spread of commercial aquaculture in recent times. Country-level data show that aquaculture fish production has increased from 856,956 tons in 2003 to 1.95 million tons in 2013-14 (Food & Agriculture Organization (FAO), 2012; Government of Bangladesh, 2015). Consequently, per capita fish consumption registered slightly upward trend, meanwhile per capita rice consumption declined from 459 grams in 2000 to 416 grams in 2010 (Food Planning and Monitoring Unit (FPMU), 2012).

This dietary diversity is a welcome development. However, when income and place of residence variables are introduced to disaggregate the consumption data, it points to stubbornly high consumption of rice in rural areas at 442 grams (Food Planning and Monitoring Unit (FPMU), 2012). Further, higher fish consumption among wealthy families skewed the data as poor households showed no significant increase in fish intake (Belton et al., 2011). In addition,

nearly 85% of fish produced in commercial aquaculture are fast maturing carp varieties, which are expensive and therefore cannot be easily afforded by poor rural households. In addition, these carp varieties are not as nutrient rich as are small indigenous fish varieties. Thus, the expanded fish production through commercial aquaculture failed to address the nutritional needs of poor rural households (Roos, Islam, & Thilsted, 2003).

In the recent 2013 National Agriculture Policy (Government of Bangladesh, 2008), the Ministry of Agriculture emphasised the importance of production diversification to supposedly fight malnutrition. Previously as well, the Ministry had stated its desire to diversify production away from rice. As a result of this policy focus on and associated government incentives towards non-cereal crops, vegetable, fruit and poultry production has increased in Bangladesh.

Interestingly, instead of channelling this increased supply of non-cereal crops to diversify the dietary needs of the people, as discussed in the policy, the government is actively seeking to promote vegetable and fruit export to earn foreign currency. It may be noted that the domestic consumption of fruits and vegetables is estimated to be only half of the desired level (Food Planning and Monitoring Unit (FPMU), 2012). Yet the 2012 Sixth Five Year Plan (Government of Bangladesh, 2012b), the umbrella national policy document, declared in no uncertain terms that the export of food grains and non-cereal crops would be prioritized to boost the agriculture sector's growth potential. Accordingly, the 2012-15 Bangladesh Export Policy has earmarked vegetable and fruit export as a foreign currency earning sector, and therefore has extended various support measures, including, capital support for large vegetable and fruit farms, reduced airfare and direct air booking facilities, promoting contract farming, allotting government-owned (*khas*) land for export-oriented vegetable production, and establishing vegetable export villages (Government of Bangladesh, 2012a). As such, the export of fresh fruit and vegetables almost tripled – from 29,100 metric tons in 2004-05 to 80,660 metric tons in 2012-13 (Miah, Undated).

The contradictory premises of these policy positions[5] become further apparent when the agriculture policy is juxtaposed against the National Food Policy Plan of Action for 2008-15 (Government of Bangladesh, 2008). A close reading of the Plan of Action would reveal that crop diversification was never intended to solve the malnutrition crisis. Instead, the goal has always been to accelerate the agricultural capital accumulation process by creating greater business opportunities for agro-based industries. It reads,

[5] A joint secretary at the Ministry of Environment and Forests (on condition of anonymity) noted that there was very little coordination between government ministries in policymaking. In fact, he suggested that contradictions in policies are indicative of the turf wars between policy positions and vested interests pursued by different ministries and their officials.

> Vegetables, spices and tropical fruits currently grown in the country could more extensively supply raw materials to local agro-processing industries for both domestic and export markets. However, the development of the sector is hampered by the lack of modern agricultural practices and processing facilities, inadequate marketing techniques and networks, as well as limited finance and skills… In line with the agricultural-led growth approach to food security adopted by the NFP [National Food Policy], the PoA [Plan of Action] emphasizes an integrated approach geared towards removing the major constraints on agro-based and rural MSME [Small and Medium sized Enterprises] sector development… On the institutional side, it calls for building and strengthening rural economic organizations such as agri-business associations and cooperatives to pursue general market opportunities. (Government of Bangladesh, 2008: 39)

This export and commercial bias and the promotion of high-value cash crops are slowly diverting scarce agricultural lands from food production for the masses to commercial production for industries. For example, in Patuakhali, local businesspeople are converting vegetable fields to grow watermelons. Most of these commercial fields are set up along the river bank to directly transport watermelons from the farm gate to the urban centers via waterways where wealthy consumers can afford to consume these. Although local people work as labourers in these fields, they are rarely able to consume these comparatively expensive fruits. Likewise in Pabna, the emergence of a commercial dairy industry has encouraged many farmers to shift to hybrid grass production.

A somewhat similar trend can be seen in Panchagarh, too. In 2000, a private firm, Kazi & Kazi Tea Estate Limited (KKTEL), bought 2000 acres of land at the northern border of the district and converted it into organic tea plantations. This United States Department of Agriculture-certified (USDA) organically grown tea is mainly exported to the capital city Dhaka and the USA to cater to the tastes of urban elites. Later, the parent group of KKTEL, Kazi Farms Group, introduced commercial poultry farming in the area. This encouraged several other private businesses to set up similar farms in the area. In order to ensure cheap feed supply for the poultry sector, farm owners encouraged local agriculturalists to grow hybrid maize. In a very short period, a large tract of land was converted to maize cultivation. As opposed to only 2,428 hectares of land devoted to maize cultivation in 2010 (Bangladesh Bureau of Statistics, 2013: 6), a 2014 news report indicates that the land area has jumped to 14, 620 hectares[6] in this short period.

While the growth of these dairy, livestock and poultry industries should be celebrated for their potential to diversify diet intake, the commercial focus of these ventures mean that production will mostly be destined for relatively wealthy urban consumer classes and rural elites. The poor rural residents who suffer the most from malnutrition will rarely benefit from these initiatives.

[6] http://www.thedailystar.net/farmers-unhappy-for-too-low-prices-of-maize-32703

Moreover, because these industries are comparatively profitable, there always emerges a competition between devoting land to produce food for the poor or fodder for the industries. And often, in this competition, the poor must sacrifice so that the better-off could enjoy copious access to nutritious food.

To be sure, many farmers grow poultry birds, raise livestock, and voluntarily intersperse non-cereal crops – e.g., lentils, potato, peanut, green vegetables, onion, garlic, ginger, green chillies, sesame, and mustard – in between rice seasons. However, unlike large farmers who can afford to dedicate large tracts of land for simultaneous cultivation of multiple crops or invest in raising livestock and poultry, smallholders can only set aside a small piece of land, if at all, for specific non-cereal crops depending on their market value. The logic is generally to offset the higher costs of rice farming with the expected cash flow from non-cereal crops. Very few smallholders claimed they diversified production for self-consumption reasons[7].

As smallholders explained, modern farming is highly expensive compared to traditional agriculture. They must spend money at every step of the production process –to buy seeds; to hire wage labour for preparing seedbeds, planting seedlings, harvesting and post-production activities; to rent mechanical tractors and to buy fuel to plough the land; to irrigate the field; and to apply fertilizers and pesticides. Additionally, the privatization of agricultural input delivery system made input prices costlier and often unstable. Unlike large farmers, smallholders lack access to cheap subsidized credit. As such, borrowing money from loan shirks and microfinance institutions at exorbitantly high interest rates are the only options available to them. The constant pressure to pay back loans and to meet the increased cost of living in a high-inflation economy compels them to explore opportunities to multiply their income sources. Thus, crop diversification is often oriented towards the market and does little to address their dietary needs.

One innovative way the Ministry of Agriculture is trying to attain dietary diversity is through promoting homestead gardening. In fact, for the past two decades, Helen Keller International (HKI) has partnered with local NGOs and government agencies to promote homestead gardening to improve nutritional security in Bangladesh (Iannotti, Cunningham, & Ruel, 2009). In all three research sites, I found a few households growing vegetables and raise poultry birds on their homesteads. However, the rapid fragmentation of residential plots has left many others with no such space. Moreover, the high incidence of rural landlessness means many families have almost no access to land for homestead gardening.

[7] One might ask why smallholders must grow rice if they cannot make a profit. The answer is very simple. In a country where intermediaries firmly control the rice market and are able to artificially raise the retail price (Misra, 2012), growing rice for self-consumption is the only option to avoid hunger even if it cannot guarantee better economic outcomes.

Very few of the agricultural labourers and landless sharecroppers I interviewed reported of having access to any homestead gardens for self-consumption. Consequently, they depend extensively on the market for their food supplies. The unaffordable prices of the once abundantly available nutritious foods have turned their diet high on carbohydrates and low on protein and other necessary nutritional elements, thus keeping them chronically malnourished. As these labourers and sharecroppers informed, their daily diet consisted of leftover rice soaked in water with salt and green chillies for breakfast and dinner, and rice with lentil or *aloo bharta*[8] as a side serving for lunch. If there was a special occasion, they would add eggs to their diet. They would occasionally eat fish, and would try to afford milk to their children. However, they could not afford meat[9] more than a few times a year. Moreover, often the wife would skip her meal after serving her husband and children.

All being told, one must admit that prior to the adoption of GR technologies farmers could barely grow enough rice to afford food three times a day. They would frequently go to bed hungry. The higher productivity and cropping intensity of HYV cultivars have enabled them to grow enough rice to feed their families year-round, save for a short period before the harvest. Most participants in this study confirmed that the adoption of modern rice varieties have indeed minimized the spectre of chronic hunger. The adoption of modern farming methods did actually improve the country's aggregate rice supply which has tripled from 10 million metric tons in 1971–72 to 33.8 in 2014-15[10], while the area under cultivation increased by only 22 per cent during the same period (Government of Bangladesh, 2012b). In fact, rice production growth has outstripped the rate of population growth, thus helping Bangladesh attain self-provisioning in rice production. However, rice is but only one of the many ingredients needed for a healthy life. The narrow focus on rice production through spatial and temporal monoculture has come at a high cost: 44 million bulging bellies and skinny limbs!

Above, I sought to highlight how the roots of rural malnutrition are intricately intertwined with the current structure of the agro-food regime and the capital accumulation process in Bangladesh. Next, I draw attention to the shortcomings of the mainstream food security discourse, and cautiously advance food sovereignty as a preferable analytical framework to fight malnutrition.

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8 Aloo bharta is a popular dish in Bangladesh in which the potato is boiled and then mashed with green chilli, salt and mustard oil.

9 Chicken, duck, pigeon and other edible birds, buffalo, cow and goat meat are most common in Bangladesh.

10 http://www.moa.gov.bd/site/page/4fb627c0-d806-4a7e-a1cd-b67d4bc85159

Food sovereignty: The way forward?

For much of the past five decades, Bangladesh had to maintain a delicate balance between averting extreme hunger and famine on one hand, and advancing the capitalist development agenda, on the other. Bangladesh's past memories of famine and starvation in 1943 and 1974, leading to several million deaths (Sen, 1981), continue to haunt and shape its policy regime (Pinstrup-Andersen, 2000). To minimize the recurrence of such catastrophic events, attaining self-sufficiency in food production received tremendous attention and food security emerged as the operative word in agricultural policymaking. Two particular aspects related to food security briefly require our attention here.

First, at the time of its conception in the 1970s, food security was synonymous with increased food availability (Maxwell & Smith, 1992). Following Sen's (1981) research demonstrating that hunger could persist amid plentiful food supply, the Food and Agriculture Organization (FAO, 1996) redefined the concept to emphasize the importance of 'access to … safe and nutritious food' into the mix. However, since national self-provisioning through rice monoculture remained the favoured strategy, the later focus on nutritious food seldom found resonance in the policymaking arena. Second, the government's preference for market-driven means to achieve food security made access to food conditional upon the possession of monetary or other acceptable means for the majority of people. Nevertheless, the framing of food security in such terms provided the government a strategy to reduce the prevalence of extreme hunger in a way that is also commensurate with its broader development agenda.

By now it must be clear that malnutrition, food security, modern farming and capitalist development are all part of the same intricate mix, which makes solving the nutritional crisis within the existing framework nearly impossible. Instead of trying to address malnutrition through short-term measures like food fortification, focus must be placed upon increasing dietary diversity through restructuring the prevailing agro-food regime in Bangladesh. Such a strategy would inevitably invite questions that are political in nature. Do we want an agro-food regime in which both producers and average consumers are undernourished, while only a privileged section of the society thrives?

An integrated approach to solving malnutrition would require a coordinated emphasis on what is produced, which technologies are used, how production is organized, and the ecological sustainability of food production. It would logically demand a departure from rice monoculture toward a more people oriented diversified production regime. While a proportionate increase of productivity may be necessary to feed the growing population, distinction should be made between whether the productivity growth is for feeding the people or purely for commercial reasons. Policymakers must realize that

earning foreign currency at the expense of millions of undernourished people will only undercut the long term growth prospect of the country.

In trying to highlight modern farming's misplaced emphasis upon single crop productivity, Farhad Mazhar, a prominent environmental activist and the founder of *Naya Krishi Andolon* (New Agricultural Movement) in Bangladesh, said to me,

> The government always highlights the higher productivity of modern farming to refer to its success. This is a myopic thinking. We should rather focus on the total systemic yield of an ecosystem that encompasses both the on-farm productivity of different crops, as well as other dietary and livelihood requirements – e.g., fish, poultry, livestock, fodder and fuel – that peasants can generate from the ecosystem. If you combine these two criteria to measure the yield, modern farming lags far behind ecological farming.

As Mazhar noted, agricultural production and management has to be reorganized in a manner that allows maximum systemic yield utilizing biodiversity resources. Already significant progress has been made in agro-ecology and other alternative production methods that have demonstrated that no trade-off is necessary between productivity increase and protecting bio-diversity. In fact, in these alternative farming methods, robust biodiversity is a precondition for boosting productivity with minimal use of external inputs. Moreover, as Akram-Lodhi notes, 'agroecology, as a production system, is far more attuned to a nutrition-led farm production system than a market-led farm production system.' (2015: 572) Scaling-up of these technologies would require the financial, infrastructural and extension support from the state. As Holt-Gimenez and Altieri (2013) argue, green revolution's success depended on massive investments by the state, private sector and philanthropic organizations. Given the deepening ecological crisis plaguing agriculture, scaling-up of environment friendly alternative technologies should receive the same level of support from the state.

It is important to note that the adoption of eco-friendly agricultural technologies in itself would not guarantee equitable access to nutritious diets. As such, the corporate capture of the organic movement in the West shows that capitalism has the capacity to reorganize production in a relatively less eco-destructive manner, given that there is enough financial incentive. However, the same also shows that capitalism is unable to ensure equitable access to nutritious diets across the social strata. Technological reorganization without a corresponding democratization of the agro-food regime will only prolong the status quo.

In this respect, the international peasant movement La via Campesina advances food sovereignty to democratize the agro-food regime (McMichael, 2010). Against the narrow emphasis of food security on market based

solutions, food sovereignty is a rather holistic concept that seeks to repair the 'metabolic rift' between humans and nature in a way that positions the interests of family farmers and average consumers at the forefront (Wittman, Desmarais, & Wiebe, 2010). Articulated in the 1990s, food sovereignty is a political and 'transformative' project 'that seeks to recreate the democratic realm and regenerate a diversity of autonomous food systems based on equity, social justice and ecological sustainability.' (Pimbert, 2009: 5)

In food sovereignty, food and agriculture are inseparable in that a just and sustainable agricultural regime is seen as necessary for building a healthy food system. Unlike the industrial agriculture model, food sovereignty recognizes that access to healthy, nutritious, affordable, culturally appropriate, and locally produced food is a basic human right (Pimbert, 2009). The framing of food in human right terms is a deliberate ploy to disembed agriculture from the subjugation of the market. It thus opens up the possibility of a whole range of non-market ways of organizing agriculture that do not necessarily require monetary mediation. As this research shows, the forced integration of farmers in the market economy and the commercialization of agriculture are partly responsible for the current health predicament of rural people. The ability to organize agriculture outside the market's purview therefore promises to radically improve the rural nutrition regime.

Another advantage of food sovereignty is that it seeks to dismantle the Cartesian-type dualism between the producer and consumer, zealously guarded by the labyrinthine production, procurement and distribution networks of agro-food corporations. It reconnects producers and consumers by placing them at the heart of the decision-making process (A. H. Akram-Lodhi, 2015). Producers benefit from the protection afforded to them by way of price stability through market protection, while consumers enjoy healthy, safe, nutritious and locally grown food at reasonable prices.

That being said, there are a few limitations which needs to be carefully thought through. The obvious question is around the issues of agricultural classes. Currently, food sovereignty has little to talk about other agricultural classes. Agricultural labourers with their 'distinct class interests' (Borras Jr & Franco, 2010: 116) are often at the receiving end of exploitation by large farm owners who act as quasi-capitalists in a capitalist agricultural set up. In my research, I found the relationship between landless agricultural labourers and landowning farmers (small, medium and large) to be tense and antagonistic. Labourers often complained about 'exploitation' by farmers, while the later accused the former for demanding 'unjustly high' wages and for being 'lazy'. In general, landless labourers were worse off and more food insecure compared to farmers. In his interview, the central leader of Bangladesh *Khet Mozur Samity* (Agricultural Labourers Association), Shamsuzzaman Selim, flatly rejected the idea of reconciling with landowning farmers, accusing them of perpetuating violence on agricultural labourers.

As such, the long simmering tension between land owners, sharecroppers, landless labourers, and the in-between classes cannot simply be wished away. Moreover, the internal struggle within the landowning classes – small, medium and large farmers – needs to be analyzed as well. How food sovereignty will prevent internal differentiation and the dispossession of the lower strata of farming households – which will jeopardise their access to food – needs to be carefully analyzed. It might be very tempting to project the opposition food sovereignty camp as a homogenous collective, united by their struggles against capitalism. In doing so, it risks further marginalizing agricultural classes who are facing disproportionately acute nutritional crisis.

The gender question within the food sovereignty movement also demands attention. Most women in my research admitted of having skipped meals during times of food shortages. They also worked 'double shifts' and longer hours, and experienced various forms of violence within the household. Bina Agarwal (2014) is correct in pointing out that taking the family farm as the idealized unit glosses over the gender violence that takes place within the 'sanctity' of the household. Food sovereignty perspective has tried to address the gender paradox both practically within the La Via Campesina movement, and theoretically by incorporating gender issues within the food sovereignty discourse. However, the long history of domestic violence against women demands a departure from the family farm model.

Another question that merits attention is the rural-urban dynamics. Since nearly one-third of Bangladeshis live in urban areas and are not related to agriculture in any meaningful form, how their nutritional needs will be met? The continuing apathy of majority urbanites towards the ongoing agrarian crisis in rural areas suggests that it will be difficult to rope them in a vision of a peasant-centered world. However, the epidemical growth of food adulteration with poisonous chemicals by unscrupulous vendors in urban areas and the associated health hazards have caught people's attention towards the dangers of an unregulated food regime. One possibility may be to channel this newfound concern to initiate a national dialogue around food adulteration and agrarian crisis. Besides, McMichael's (2006; 2009; 2010) discussion of the Brazilian *Movimento Sem Terra* (MST) producing staple food for the urban working poor with the tacit support of the state suggests that other innovative solutions may be possible to circumvent the urban-rural divide.

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