

C3 | NUTRITION AND FOOD SOVEREIGNTY¹

A quarter of all children in the world are undernourished today. This increases their chance of death, undermines their potential to learn in school, and reduces their future capacity to earn a living. Simultaneously, there is a rapidly growing global epidemic of overweight and obesity, with over two billion adults expected to be overweight or obese by 2015, and therefore increasingly susceptible to the early onset of diabetes, heart disease and certain cancers.

There are structural issues that affect the availability, affordability and acceptability of food, which, along with everyday living and working conditions, ultimately affect what people eat. This erosion of food sovereignty has been linked to poorer availability, accessibility and affordability of healthy foods, more unhealthy diets, and high levels of food insecurity and chronic diseases (UNICEF 2010). ‘Food sovereignty includes the right to food – the right of peoples to healthy and culturally appropriate food produced through socially just and ecologically sensitive methods. It entails peoples’ right to participate in decision making and define their own food, agriculture, livestock and fisheries systems’ (Via Campesina 2007).

The means of, and the control over, the production of food are shifting from the farmers in the South to big agri-food businesses and transnational retail



Image C3.1 Growth monitoring in Niger; a quarter of all children in the world are undernourished today (David Sanders)



Image C3.2 'Hunger free' campaign in Burundi; control over food is shifting from farmers to agri-food businesses (Stephen Wandera/ActionAid)

companies based mainly in the North, removing power from local producers, consumers and, in many instances, policy-makers. Liberalized trade regimes, food price speculation in the global market and land grabs are contributing to this shift. The Agreements of the World Trade Organization (WTO) have moved control over the right to food and food security to the global market (Friel et al. 2013; Ghosh 2010). Human-induced climate change plus other forms of environmental degradation are also affecting the food system, contributing to the impaired quantity, quality and affordability of food in many countries (UNDP 2007).

The complex and often linked processes that erode food security and sovereignty in large parts of the globe are discussed in this chapter through two case studies. These case studies, located in India and the Pacific Islands, illustrate the (ill-) health effects of the macroeconomic and political dispensation of the past three decades that has resulted in the unprecedented creation of aggregate wealth, but has also resulted in sharp and increasing inequalities between North and South, and between rich and poor. Declining food sovereignty and poor nutritional status, the greatest contributors to the global burden of disease, are critical manifestations of this situation.

Erosion of food sovereignty and impact on nutritional status in India

India is home to a quarter of the undernourished people in the world (Food and Agriculture Organization et al. 2012). Almost half of the children under

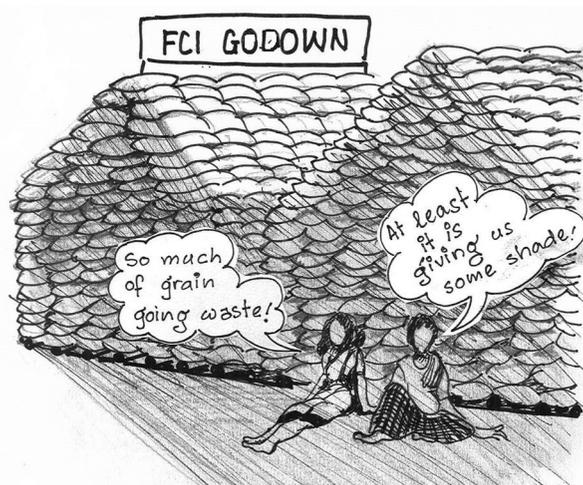


Image C3.3 Food stocks rise in India while people are hungry (Indranil Mukhopadhyay)

five are stunted (low height due to sustained under-nutrition), and wasting (associated with recent starvation or disease) affects 20 per cent of children under five (MoHFW, GOI 2007).

While a third of the adult population is underweight and suffers multiple deficiencies related to inadequate food intake, such as high levels of anaemia (*ibid.*), overweight/obesity, diabetes and cardiovascular diseases among Indians are occurring in epidemic proportions (Shatrugna 2012). Childhood under-nutrition is often linked to a higher incidence of obesity, diabetes and cardiovascular diseases, as children without adequate muscle mass put on weight faster during adulthood when exposed to calorie-rich foods, but do so through fat accumulation and not through increase in muscle mass (*ibid.*).

The proportion of the population with inadequate food intake has increased in the past two decades (Table C3.1).²

TABLE C3.1 Calorie intake based on expenditure group

	Rural			Urban
Levels of calorie intake per day	2,400	2,200	1,800	2,100
Percentage of persons below specified levels, 2004–05	87	69.5	25	64.5
Percentage of persons below specified levels, 1993–94	74.5	58.5	20	57
Percentage of persons below specified levels, 1983	70			58.5

Source: Patnaik (2007a)

Paradoxically, the per capita availability of foodgrains has decreased in a period when there has been a steep increase in food stocks (see Box C3.1). Further, precisely in the period when food availability has decreased, India has become a net exporter of foodgrains (Patnaik 2007b).

Box C3.1 Increase in food stocks and exports amid hunger

India produced 257.44 million tonnes of foodgrains during 2011/12, or close to 186 kilograms per capita. However, against a buffer norm of 21 million tonnes (that is, the minimum buffer required to be stocked to take care of emergencies), the Food Corporation of India had a stock of more than 66.5 million tonnes (as of 1 October 2012). Around the same period, 7.73 million tonnes of rice and 3.59 million tonnes of wheat were exported (PIB 2012).

The fall in per capita consumption of foodgrains can be explained only by a decline in income and purchasing power for a majority of the population, and is a symptom of general rural distress, combined with acute distress in specific regions. Rural distress is apparent from the recurrent and widespread incidence of farmers' suicides. Over 270,000 farmers are estimated to have committed suicide between 1995 and 2011 (Sainath 2012).

Factors responsible for the erosion of food sovereignty

Decline in public expenditure Public expenditure on rural development is vital for maintaining rural productivity, for ensuring employment, and for sustaining wage levels. There has been a sharp decline in this (both as a percentage of total government expenditure and as a percentage of GDP). In the period 1985–90 (just prior to the initiation of neoliberal reforms in India), rural development expenditure was 14.5 per cent of GDP, but fell precipitously to 6 per cent of GDP in 2001 (Down to Earth 2005), and has fallen further since then.

This decline is linked with the policies recommended by the World Bank and the International Monetary Fund (IMF). While these institutions do not specifically tell governments to cut particular expenditures, studies show that countries implementing structural adjustment programmes³ tend to implement similar policies, including imposing restraints on central government

TABLE C3.2 Growth rate of population and employment (per cent)

Period	Population growth	Total	Employment growth		Agriculture sector
			Urban	Rural	
1983–1993/94	2.10	2.43			1.51
1987/88–1993/94			3.39	2.03	
1993/94–1999/2000	1.93	1.51	2.27	0.58	-0.34

Source: Patnaik (2003)

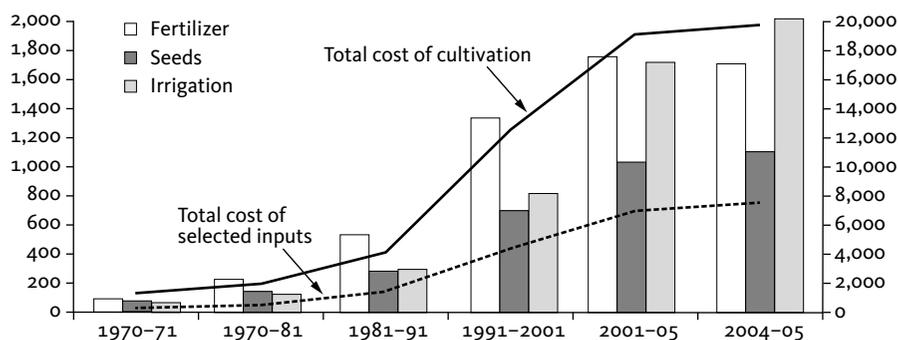
expenditure. Reforms of the financial sector in India also include curtailment of central bank credit to the government, which limits government expenditure (Chandrasekhar 2010).

The reduction in rural development expenditure has also adversely affected rural incomes and employment. The growth rate of employment in rural India was an abysmal 0.58 per cent in the period 1993/94–1999/2000 (far below the rate of growth of the rural population) (Table C3.2), thus curtailing the purchasing power of the rural poor.

Changes in trade policy As part of the 1991 reforms, wide-ranging changes were made in India's agricultural trade policy, resulting in reductions in taxes on imports and removal of restrictions on the quantum of imports. India's accession to the World Trade Organization's Agreement on Agriculture led to further cuts in import tariffs and quantitative restrictions on imports. The World Bank's Country Assistance Strategy 2005–08 for India listed reducing average import tariffs and anti-dumping duties as 'priorities' (World Bank 2004).

These reforms directly affected India's food sovereignty as its self-sufficiency in key food products was eroded. The IMF/World Bank loan had the attached conditionality that agriculture be diversified. This resulted in a shift in production from staple food crops to export-oriented cash crops. In ten years, 8 million hectares of food-growing land were converted to exportable crops. With the liberalization of agricultural trade, the switch to cash crops has exposed farmers to price volatility. In addition, the prices of these commodities tend to depreciate over time.⁴ Consequently, farmers were plunged into spiralling farm debt and insolvency as they had to borrow to shift cultivation to input-intensive cash crops while their investment did not bring in commensurate returns (Patnaik 2005).

Increase in input costs Simultaneously, several policies have reduced farmers' incomes by increasing the cost of farming. For example, the cost of cultivation of wheat has registered a spectacular increase since the 1990s and the expenses



C3.1 Cost of wheat cultivation in India (Rs/hectare) (source: Raghavan 2008)

on inputs (irrigation, fertilizers, cost of credit and seeds) have ratcheted up the average costs of cultivation (Raghavan 2008) (see Figure C3.1).

In response to the increased cost of cultivation, the demand for agricultural workers has declined, as have their wages. Thus the effects of the increased cost of cultivation affect not only the cultivating households but also the entire agriculture-dependent population, including agricultural workers (ibid.).

Electricity privatization Sixty per cent of India's irrigated land depends on private wells (NSSO 2005), and water for irrigation is pumped using electricity.⁵ Therefore, the cost of electricity has a strong influence on agricultural income.

Restructuring of the power sector was initiated in the 1990s. The World Bank provided loans for restructuring and imposed the conditionality that market-oriented reforms be introduced (Sreekumar and Dixit 2011). Cross-subsidies to vulnerable sectors were removed and electricity costs soared, affecting the rural and urban poor and small and marginal farmers disproportionately. The price of electricity to farmers (agricultural rates) rose by 97.5 per cent between 2007 and 2012, far more than the average 23.8 per cent increase for the general population (Singh 2012).

Fertilizers and seeds India's fertilizer requirement rose by 70 per cent between 1998/99 and 2008/09, but production went up by only 11 per cent, while imports rose by 236 per cent. Government-owned companies were the major producers of fertilizers up to the 1990s. However, their role has since been drastically curtailed. As a result, the fertilizer subsidy bill (i.e. support to farmers to purchase fertilizers) increased from Rs113.87 billion in 1998/99 to Rs966.03 billion in 2008/09, while the costs that farmers have to pay also increased threefold (Raghavan 2008).

Market-oriented reforms have also led to the privatization of the seed sector. There has been a steep rise in the proportion of marketed seeds as opposed to exchanged seeds, enhancing the role of private seed companies (Jafri 2010).

Rural institutional credit With increasing dependence on inputs purchased from the market, the credit requirements of farmers have increased. However, access to credit for small and marginal farmers, who comprise the majority of farming households (84 per cent), has worsened since the start of the fiscal reforms in 1991.

Earlier, public sector banks were covered by 'directed credit programmes' that mandated that 40 per cent of their lending should be in 'priority sectors', including agriculture. As a result of the reforms, the rate of growth of credit to agriculture declined drastically, and an increasing number of small and marginal farmers now meet their credit requirements through moneylenders and informal sources (75 per cent of their credit in 2006/07) (Alternative Survey Group 2008).

Food support schemes

The Public Distribution System (PDS), the Integrated Child Development Scheme (ICDS) and the Midday Meal Scheme (MDM) have been the cornerstones of the food security policies of the Indian government. In recent decades, they have all suffered from budgetary constraints.

The ICDS provides six essential services to children under six years of age: supplementary nutrition, health check-ups, immunization, non-formal pre-school education, referral services, and nutrition and health education. However, in 2011/12 the national budget allocated only 0.12 per cent of GDP to this scheme. The MDM scheme, which requires the government to provide cooked meals to children in government or government-assisted schools, also received a similar meagre allocation

Public Distribution System The PDS distributes subsidized staple foods and commodities, such as wheat, rice, sugar and kerosene, through a network of public distribution shops. It is India's most important food security instrument in terms of both coverage and public expenditure. The Public Distribution Scheme has, progressively, shifted from *universal coverage* (whereby all citizens are eligible) to *targeted coverage* (whereby only specific categories of citizens who are designated as poor are eligible). This has been accompanied by downward shifts in entitlements and an increase in prices of food supplied through the PDS. It is estimated that 50 per cent of the poor are omitted from the priority entitlement list of people designated as 'Below Poverty Line' (BPL) (Right to Food Campaign 2011). Targeting within the PDS is responsible for the decline in foodgrain outflows through the PDS (Swaminathan 2002),

TABLE C3.3 Government procurement, distribution and stocks of foodgrain (in million tonnes)

Year	Procurement (PT)	Public distribution (PD)	Net addition to stocks (PT-PD)	Stocks as of July
1991	19.6	20.8	-1.2	22.3
1992	17.9	18.8	-0.9	15.1
1993	28.0	16.4	11.6	24.2
1994	26.0	14.0	12.0	30.8
1995	22.6	15.3	7.3	35.6
1996	19.8	18.3	1.5	27.0
1997	23.6	17.8	6.1	22.4
1998	26.3	18.4	7.9	28.5
1999	30.8	17.0	13.8	33.1
2000	35.5	12.1	23.4	42.3
2001	31.8	8.7	23.1	61.7
Absolute change 1991-2001	+14.6	-10.2	—	+39.4

Source: Swaminathan (2002)

while, as discussed earlier, foodgrain stocks held by the government have increased significantly (see Table C3.3).

More recently, there has been a proposal to replace the distribution of food by transfers of cash. Evidence shows that cash transfer schemes work in situations where they supplement rather than replace programmes that offer food to poor families at subsidized rates.⁶ Cash transfers that then require people to procure food from private retail outlets place them at the mercy of market forces (Ghosh 2011). However, the Indian government appears keen to introduce cash transfer schemes as substitutes for direct provision of free or subsidized food, to reduce government expenditure on subsidies (Ghosh 2013).

Challenges to food sovereignty and the risks to human health in the Pacific Islands

The Pacific Islands now have the dubious distinction of leading the world in the already high and growing prevalence of obesity and attendant non-communicable diseases. Globalization has affected local food sovereignty in the twenty-two Pacific Island Countries and Territories (PICTs), particularly as regards participation in decision-making; prioritizing local agriculture to feed local people; and access to land, seeds and water (Plahe et al. 2012).

The economic integration that occurred across the Pacific as a result of colonization in the 1900s, and the accession to the WTO by six PICTs members (Fiji, Papua New Guinea, Samoa, Solomon Islands, Tonga and Vanuatu), has been accompanied by a steady deterioration in traditional food systems, decline in the production of traditional crops and import of less healthy staples and highly processed foods (McGregor et al. 2009). This initiated an ongoing shift in dietary patterns that is associated with a high chronic disease risk, namely reduced consumption of starchy roots and fruits (such as breadfruit and taro) as staple foods, increased consumption of refined cereals (such as white rice and flour), increased consumption of meat and oils, and increased consumption of processed and packaged foods (Hughes 2003).

Effect on farmers of changing patterns of production

Traditional agricultural practices in PICTs are strongly community- and village-based, and focused on root crop production (Denoon 1997). However, the opening of markets has undermined domestic agriculture and contributed to import dependency. The percentage of imports compared to food expenditure ranges from 36 per cent in Kiribati to 84 per cent in Palau (Parks and Abbott 2009). This in turn has led to policies to increase exports to maintain the balance of payments (Simatupang and Fleming 2005). The focus on export-oriented agriculture has both reduced production of traditional crops and increased intensive production of cash crops and other unsustainable agricultural practices (Thaman and Clarke 1983).

Policies of import liberalization and export promotion have a direct effect

on food availability (Thow et al. 2011). For example, the historical experience of Fiji and Samoa demonstrates that economic liberalization is associated with decreased availability of starchy staple foods and increased availability of non-traditional cereals during periods of liberalization (Gittelsohn et al. 2003).

Food imports are also a concern in terms of food affordability and accessibility. The Chamber of Commerce in Vanuatu expressed strong concerns about increasing dependency on imported food staples, both because of the recent surge in the prices of these products, and because of the negative impacts they have had and continue to have on the health of local people. The Chamber stressed the need for investment in training local farmers, in food storage facilities as well as food processing plants, and also emphasized the need to improve the bargaining power of local farmers through developing strong cooperatives.⁷

In the face of soaring global food prices, agriculture experts in Fiji also highlighted the need to invest in processing traditional foods for local consumption. For example, flour from locally grown breadfruit and root crops could easily be used to make food such as chapattis. This, they argued, would reduce Fiji's dependency on imported wheat. Such dependence has had a very negative effect on the landless squatter communities in the urban areas such as Suva, which have suffered from food insecurity as a result of the increase in food prices.⁸

Processes of globalization in the Pacific Island nations have also affected the access of farmers and fisherfolk to inputs, including land, seeds and water. Many countries sell their fishing rights to international corporations and other countries, owing to limited investment capacity. In Micronesia and Fiji, this has contributed to fewer opportunities for local access to fish stocks and other marine resources – and has also contributed to unhealthy diets due to reduced consumption of fresh fish (Cassels 2006).

The shift away from the traditional agriculture to export-oriented agriculture, described above, has also led to some erosion of traditional land tenure, although in most countries a significant proportion of land is still held customarily, which has helped limit extreme poverty and hunger in the region (AusAid 2006). The need to protect land rights is widely understood and recognized in the Pacific Islands.

Food prices, food accessibility and food culture

Significant changes in food culture have been externally imposed through processes of globalization in PICTs, affecting the control and power of consumers in shaping their food environment. Surveys reveal that consumers prefer traditional foods, but choose to consume imported products for reasons of perceived status, convenience (particularly with changes in working patterns) and variety (Evans et al. 2003).

Globalization has also contributed to constraining the ability of consumers

to choose healthier and, in this context, more traditional foods (Thow and Snowdon 2010). The impact of the recent food price crisis in the Pacific Island nations has revealed the vulnerability of the domestic food supply system and the limited options for consumers in achieving food security and healthy diets, owing to this sustained dependence on imports and low investment in agricultural production (ADB 2008). Many countries experience the dumping of low-quality agricultural products from Western countries, which limits the access of consumers to healthy foods (Thow et al. 2011). The Pacific trade in lamb and mutton flaps (breast of lamb interleaved with thick layers of fat) is one example of a dumped commodity. These are generally unacceptable for consumption in their countries of origin, but are integrated into the food systems in lower-income countries owing to their extremely low price (Gewertz and Errington 2009).

Trade and the cash economy have also supported urbanization, which offers a variety of non-traditional employment opportunities, and this has consequently reduced participation in agriculture (particularly subsistence agriculture) (Thaman 1990). Some of the negative aspects of transitioning to an urban environment are the reduced land area available for planting, limited space available for traditional food storage and cooking methods (such as earth ovens), and also difficulties in transporting perishable root crops to urban communities (Parkinson 1982).



Image C3.4 The WTO agreement has a deep impact on food sovereignty in the South (Benny Kuruvilla)

Erosion of policy space

Integration into the global economy and dependence on aid for development have also affected food sovereignty in the Pacific Island nations by reducing the policy space for intervention to improve the food supply and to pursue nutrition and diet-related health goals. While a return to full subsistence farming is unrealistic, policy-makers have identified a need to support local production as the core of the food system and to improve the capacity of farmers and fishermen, including by developing sustainable farming methods (Food Secure Pacific Working Group 2010). In practice, governments have found achieving these goals challenging owing to international pressure to develop extractive industries and to export crops (Plahe et al. 2012). The focus of international aid and development programmes remains firmly on export-oriented agriculture to raise national incomes, despite a demonstrated lack of effectiveness of attempts aimed at reducing income inequities within countries and growing concerns about the harmful impacts on domestic social and health outcomes (Cirikiyasawa 2007).

As part of its accession to the WTO in 2011, Vanuatu agreed to reduce agricultural tariffs and subsidies by a much bigger percentage when compared to other WTO members. Discussion with civil society groups revealed that Vanuatu's negotiating power during the WTO accession process was very weak, resulting in Vanuatu acceding to the WTO under far more onerous terms when compared to much larger countries (Plahe et al. 2012).

A further constraint on food sovereignty is the erosion of domestic policy space as a consequence of international trade and investment agreements. For example, Samoa's accession to the WTO in 2011 resulted in the removal of a four-year ban on turkey tail imports (WTO 2012). The ban had been imposed

Box C3.2 Ban on mutton flap sales in Fiji

Fiji's ban on sales of mutton and lamb flaps (a fatty meat that was imported in large quantities) was implemented through a joint initiative by the ministers of health and commerce. It was imposed in response to both rising rates of diet-related chronic disease rates (strongly associated with saturated fat intake) and concern about the dumping of these cheap meat cuts on local agricultural production. The ban was accompanied by a health promotion campaign aimed at increasing consumer awareness of the health consequences of consuming high-fat meats. This ban had a significant effect on the food supply. It was strongly supported by consumers, who perceived these cheap meat imports as very unhealthy and 'unfit for human consumption' (Gewertz and Errington 2009).

in order to remove from the market a highly fatty meat product, which was significantly cheaper than other meats. Turkey tails were being ‘dumped’ on their market, creating an incentive for consumers to consume the cheap and unhealthy product, while reducing the competitiveness of local meat producers (Thow et al. 2010).

In contrast, Fiji has been able to intervene effectively by banning mutton and lamb flap sales (see Box C3.2).

Conclusion

While they cannot claim to be representative of the whole spectrum of global nutrition and food security, these two case studies individually and together illustrate the complex and dynamic global food and nutrition crisis. They are stark reminders of the urgency of eliminating the ‘double burden of nutrition’, and of the clear and distressing explications of its national and global social, economic and political contexts. They underline the fact that this human crisis cannot be addressed without confronting and changing its social determinants.

The India case study demonstrates, *inter alia*, the paradox of national food sufficiency and simultaneous widespread hunger and under-nutrition. While food is available within the country, it is clear that access to this food is dangerously limited for a very significant proportion of the population as a result of trade policies often influenced by a global environment inimical to national food sovereignty, and international advice that promotes current economic orthodoxy. Both of these policy thrusts have resulted in large stockpiles of food, but at the same time high food prices and unaffordable agricultural input costs.

The Pacific region case study demonstrates clearly how national food sovereignty and nutrition security have been undermined by the promotion of ‘free’ trade in the region, resulting in the Pacific Islands (along with an ever-increasing number of other countries) becoming a net food importer. This has resulted in a decline in national food production and in a rapid change from a more traditional and healthier diet to one that is obesogenic, consisting largely of fatty meat and ultra-processed, packaged foods.

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of Oslo Commission on Global Governance for Health Report, www.med.uio.no/helsam/english/research/global-governance-health/background-papers/food-sovereignty.pdf.

² For more on the debates about India’s calorie intake norms and data, see Patnaik (2007b).

³ Large-scale economic reforms in India were initiated in July 1991 as a response to the external debt and foreign exchange crisis. This

Notes

¹ This chapter draws on a background paper prepared for *The Lancet – University*

represented an acceleration of a process that had started in the 1980s and which constituted a departure from the post-independence model of planned development. While not formally termed a structural adjustment programme dictated by IFIs, the neoliberal economic reforms, which continue to this day, had most or all of the characteristics of SAPs that were implemented in large parts of Latin America and Africa.

4 For more details on trends in price variations, see Patnaik (2005).

5 Rain-fed agriculture accounts for around 56 per cent of India's total cropped area, 77 per cent in the case of pulses, 66 per cent for oilseeds and 45 per cent for cereals

6 Jayati Ghosh, economist, personal interview, 29 December 2012.

7 Personal communication, August 2012.

8 Personal communication, February 2012.

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