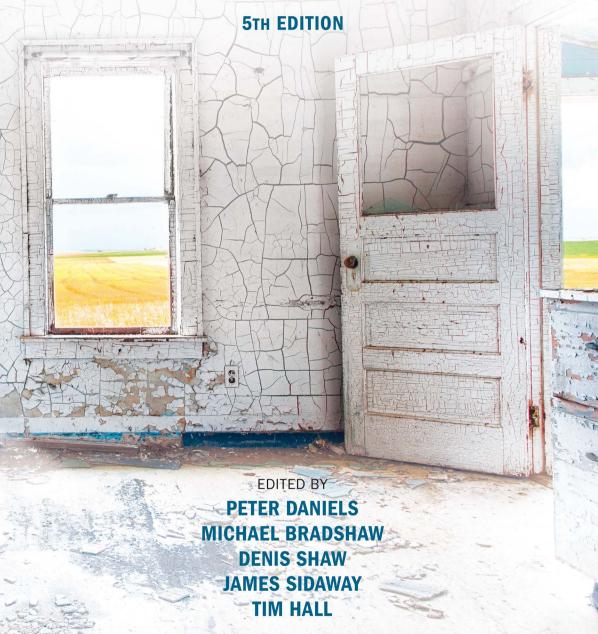
AN INTRODUCTION TO

HUMAN GEOGRAPHY





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FOOD SECURITY

Chapter 7



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Topics covered

- Famines
- Undernourishment
- Entitlements
- Green revolution
- Genetically modified foods and world hunger
- Food-aid dependency
- The Right to Food

Starvation is the characteristic of some people not having enough food to eat. It is not the characteristic of there being not enough food to eat. While the latter can be a cause of the former, it is but one of many possible causes.

(Opening words to Amartya Sen's *Poverty and Famines: An Essay on Entitlement and Deprivation*, 1981)

7.1 Introduction

Food security' is a term that is used in many different ways. The purpose of this chapter is to discuss this concept in a manner that is consistent with its usage at the international level by entities such as the UN Food and Agriculture Organization. We begin by placing contemporary debates about food security into an historical perspective.

7.2 Hunger in human history

Widespread hunger has stalked humankind perennially. Although this threat might seem far removed from the quotidian concerns of most people living in the global North during the early twenty-first century, the challenge to feed and sustain the human population has been a pre-eminent social, political and economic struggle across history, and remains central to the planet's circumstances today.

In Western Europe, battles over food and hunger were seminal to the cycles of political evolution and revolution which forged nation states. Rousseau's apocryphal description of a French princess (not Marie Antoinette, as commonly attributed) asking why the peasants would prefer bread to cake ['Qu'ils mangent de la brioche!' ('popularly translated as 'Let them eat cake!')] is a testament to the symbolic and material power of food in political and social life. Throughout the period right up until the twentieth century, periodic civil strife over food was a defining element of European life. In the British Isles, there was ongoing hunger and malnourishment for the working and agrarian classes throughout the onset of the industrial period, which erupted episodically into food riots, such as those affecting England and Wales in 1772-73. During the nineteenth century, a key element in the debate over the passage of the Corn Laws (which allowed cheaper, imported food into Britain) was the need to feed (and, thus, politically placate) the fast-growing urban working class. All the time, however, the threat of widespread hunger was ever-present. In Ireland, as is well known, the collapse in potato production because of phytophthora infestans (potato blight) instigated famine conditions over the period 1845–52. Perhaps less well known, similar conditions also afflicted the Scottish Highlands over this same period, with a level of death and out-migration which was of almost equal magnitude to the Irish famine.

As European peoples spread across the world, these challenges travelled with them. The American tradition of Thanksgiving traces its origins to the near-starvation of the Pilgrim settlers in 1620–21. Following a successful harvest that kept the settlers alive, a Thanksgiving feast was held. Comparably, in Australia, the First Fleet settlers of 1788 faced imminent starvation within two years of arrival due to the expiration of their rations and farming failures.

Amongst European peoples worldwide, the politics of hunger continued to hold important sway right up until the end of the Second World War, often associated with interruptions to seasonal harvests brought on by climate or war. Thus, in 1815 when the far-distant Tambora volcano erupted in the Dutch East Indies (now Indonesia) and sent a shower of ash into the upper atmosphere, a resultant global cooling of temperatures decimated food harvests in the northern hemisphere the following summer, creating a hunger crisis in cities on America's Atlantic seaboard. The author Simon Winchester describes this event as 'the last great subsistence crisis of the Western world' (2003: 295). Food insecurity remained a present threat in urban America through the nineteenth century, including New York's 'bread riots' in 1837, and food riots in many cities during the Civil War (1861–65). In Europe, the wars of the nineteenth and twentieth centuries were often accompanied by food shortages and hunger. Perhaps the last ever full-scale famine in Western Europe occurred in 1944-45 in the western Netherlands, when Dutch resistance to Nazi rule caused disruptions to food transports and an estimated 18,000 people died of hunger (van der Zee 1982). More recently (though perhaps less dramatically), the end of the Cold War saw heightened food insecurity in the former Soviet Union over several years as its economic system restructured to the logics of capitalism. Yet for all the importance of hunger within the record of Western civilization, non-European populations have been the overwhelming bearers of hunger across human history. An East India Company trader visiting (what is now known as) the state of Gujarat in India during the great famine of 1630-32 recorded that: 'from Suratt [sic] to this place [Agra] our noses were never free of the stinck [sic] of corpses' and 'the [roads] were so full of dead bodyes [sic] that we could hardlie [sic] pass them without treading on or going over some' (cited in Keay 1993: 115). The strengthening of British colonial rule in ensuing centuries exacerbated hunger vulnerabilities. Local politico-administrative systems were recomposed to fit within colonial logics, which had as their core the extraction of profit to service the Empire. A series of famines in India during the nineteenth century saw the deaths of an estimated 30–40 million people. The last major famine under British rule occurred in Bengal, in 1942–43, when a combination of war-induced decisions to restrict the transportation of rice and cyclonic devastation resulted in the starvation deaths of between 1.5 million and 4 million persons (see Case study 7.1).

Case study 7.1



The Bengal famine of 1942-43

Estimates of deaths from the 1942–43 Bengal famine remain disputed. The Famine Commission set up by the British authorities reported 1.5 million deaths. Amartya Sen has suggested the death toll was closer to 3 million, and some other Indian sources suggest it was higher still. Ó Gráda (2007: 19) adopts

a 'mid-range' estimate of 2.1 million deaths. For the Famine Commission estimate, see p. 68 in Weigold, A. (1999) Famine management: the Bengal famine (1942–44) revisited, *South Asia*, 22(1), 63–77. For Amartya Sen's discussion of the death toll, see p. 52 in Sen, A. (1981) *Poverty and Famines: An Essay on Entitlement and Deprivation*, Oxford University Press, Oxford.

Histories of China, other parts of Asia and Africa reap a similar story. In Ethiopia, for example, widespread crop failures and the related onset of hunger occurred with regularity once or twice a decade from recorded history many centuries ago until 1984-85, when a severe famine impelled global action. The United Nations defines a famine as occurring when three conditions are met: (1) at least 20 per cent of the population has fewer than 2,100 calories of food a day; (2) the prevalence of acute malnutrition exceeds 30 per cent of children; and (3) the death rate exceeds two deaths per 10,000 people, or four child deaths per 10,000 people per day. The arrival of these conditions in Ethiopia in 1984-85 provided the impetus for a major charitable intervention in the West through the 'Live Aid/Band Aid' initiative, and brought images of famine to many Western eyes for the first time. The economic historian Cormac Ó Gráda (2007: 5-6) observes that 'By the 1990s, famine-induced deaths were confined to poverty-stricken and often war-torn pockets of the globe'. At the time of writing, the most recent episodes of famine were in Somalia (2011-12) and West Africa (2012). In both cases, war and civil unrest were centrally implicated within the onset of famine conditions.

7.3 The present scale and geography of global hunger

Notwithstanding this receding of large-scale repeat famine cycles, chronic hunger remains at unacceptable levels across the world, and almost everywhere, exists sideby-side with a worsening incidence of overweight and obese populations. Many countries are now confronted with a double-burden of malnutrition, having to deal simultaneously with problems of hunger within some segments of their population and overweight/obesity in others. However, focusing on undernutrition and hunger, a key turning point in this recent history was 2008, when there was a confluence of rapidly rising prices for food (Figure 7.1) and energy (see Chapter 5). These trends sparked a dramatic increase in global hunger. In 2008, it was estimated (although see Spotlight box 7.1) that the number of people living in chronic undernourishment was estimated to have exceeded one billion people. Subsequent revisions to official data suggest that the spike in undernourishment was not as severe as

Spotlight box 7.1



How many hungry people are there in the world?

The FAO estimates that in 2014 there were 791 million undernourished people on the planet. In all probability, however, this is a lower bound estimate of global hunger. The methodology by which these data are collected (via national household surveys and modelling the effects of changes in incomes and food prices) tends to assume that if a household has the capability to acquire enough food to meet the daily minimum energy requirements of its members, then no-one in that household is hungry.

But, as is well known, food is not always distributed equitably within households (in many societies there is a prevalence of men being fed first and women often going hungry). Also, just because a household *can* feed itself doesn't mean it *does* feed itself; in many households across the globe, money that should be used for food is used for alcohol, drugs and gambling, for instance. Indeed, one of the world's leading food researchers, Per Pinstrup-Andersen, cites an estimate of two billion iron deficient people on the planet as evidence to suggest that global hunger is far greater than official estimates suggest (Pinstrup-Andersen 2009: 6).

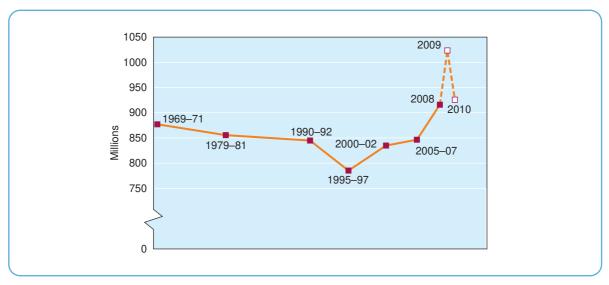


Figure 7.1 Number of undernourished people in the world, 1969–71 to 2010.

Source: adapted from FAO (2010) State of Food Insecurity, p. 9

originally thought (Pritchard and Choithani 2014) (Figure 7.1), however increased food prices triggered food riots across 60 countries, which saw at least one government (in Haiti) fall (Plate 7.1). Significantly, the events of 2008 arguably constituted the first-ever *global* food crisis. Because of the highly integrated international character of contemporary food commodity markets, ripple effects from one country to the next occurred in a rapid and coordinated fashion. With hunger a matter of global political and economic concern, international policy makers were shaken from their complacent assumptions about the world community 'winning the war' on undernutrition. Although the global number of

persons who are undernourished has fallen since 2008, it is still at an unacceptable level, and progress remains at the mercy of economic volatility and the limitations of our planetary resources.

Furthermore, global hunger is dispersed across the world in a highly uneven way, with 40 per cent of the world's undernourished people living in China and India. A further four countries (Bangladesh, Pakistan, Democratic Republic of the Congo, and Indonesia) account for a further 26 per cent (FAO 2010: 10). Moreover, with the exception of China, all of these countries failed to meet the Millennium Development Goal (MDG) for reducing hunger (see Figure 7.2 and Case study 8.1). The MDG for

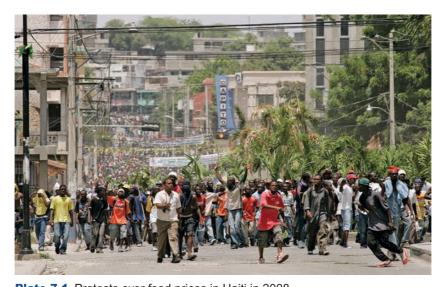


Plate 7.1 Protests over food prices in Haiti in 2008.

(Eduardo Munoz/Reuters)

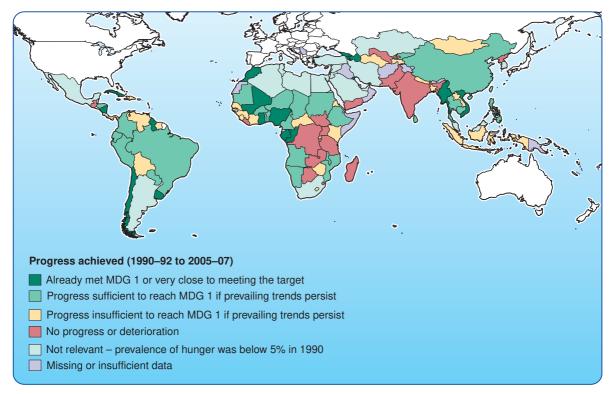


Figure 7.2 Progress towards Millennium Development Goal 1: hunger target.

Source: www.fao.org/fileadmin/templates/es/Hunger_Portal/MDG_Progress_Map.pdf

hunger aims to reduce by half (between 1990 and 2015) the proportion of people in the world suffering from hunger – measured statistically as (i) the prevalence of under-weight children under 5 years of age, and (ii) the proportion of the population below minimum dietary energy consumption. Clearly, this map paints a depressing picture of global food security; many of the world's countries with the highest rates of food insecurity are also those currently displaying worst progress in generating improvements to these situations. Moreover, it needs remembering that hunger and undernourishment also exist in the developed world. The recent global recession has exacerbated the extent of hunger: in 2008, 14.6 per cent of the US population was food insecure at some point in the year, including 5.7 per cent with 'very low food security', meaning 'that the food intake of one or more household members was reduced and their eating patterns were disrupted at times during the year because the household lacked money and other resources for food' (Nord et al. 2009: 1). Five years later, in 2013, these statistics remained unmoved, despite the considerable gains of the US economy since 2008 (Coleman-Jensen et al. 2013).

The rapid changes in the incidence of global undernourishment in recent years have triggered renewed debate amongst researchers and policy makers on the causes and manifestations of hunger. Central to these current debates is the newly articulated concept of **food security**. To a large degree, this concept has become the foundation stone for contemporary strategic interventions of international organizations (such as the FAO) and **non-governmental organizations (NGOs)** (such as Oxfam, ActionAid and Red Cross/Red Crescent). In the following section, the concept of food security is defined, and afterwards, its application to key issues relating to global hunger is discussed.

7.4 Defining food security

Until the mid-1990s, the prevailing perspective in international debates on food and hunger tended to prioritize production-centric explanations with the emphasis on maintaining food stocks in the context of an unpredictable world. Hence, in the case of the Irish famine of 1845–52, cited earlier, famine was seen to be caused by the unexpected threat of potato blight. In Ethiopia or the Indian subcontinent, famine vulnerability was tied to the unpredictability of the monsoon. Clearly, the implicit suggestion within these explanations was that such problems

were premised on catastrophic and unavoidable circumstances – 'acts of God', as an insurance policy might say. Hence, in 1974, the World Food Conference defined food security as: 'Availability at all times of adequate world food supplies of basic foodstuffs to sustain a steady expansion of food consumption and to offset fluctuations in production and prices' (cited in FAO 2006: 1).

Fundamental aspects of this perspective remain important within present thinking. Rarely, if ever, are rapid descents into widespread hunger not associated with a food production shock of some kind (climatic, environmental, biological or human-induced, e.g. war). Such cataclysms obviously impact on people's abilities to feed themselves and, from a policy perspective, require an immediate response in the form of food aid. Nevertheless, since the mid-1990s there has been an increasing recognition of the need to build more sophisticated conceptual understandings of what causes hunger. Instead of seeing particular biological, climatic or environmental contexts as catastrophic events that define these problems, the emergent approach is to understand food production shocks as triggers that reverberate (in socially uneven ways) through populations. This approach refocuses the attention of researchers and policy makers to the broader systems that connect people to the food system. This perspective goes under the banner of the food security approach.

The chief and most influential proponent of such an altered perspective has been Amartya Sen, an Indian economist and philosopher. Sen was awarded the Nobel Prize in Economics in 1998 for a body of work that included landmark analyses of the causes of famine. Sen addressed the causes of hunger and famine from a radically different set of premises from that which prevailed in mainstream thinking. He saw that famines in different circumstances worldwide each could be understood as having a common socio-politico-economic themes. Whereas dominant contemporary explanations about these episodes looked to a fall in food production as the root causes of hunger, Sen documented a more complex reality. Hence in the Irish famine, the potato crop failed but Ireland remained a large exporter of foodstuffs across to England. In Ethiopia in the famine of 1972-73, food was trucked from famine areas to the capital of Addis Ababa. The great Bengal famines of 1942-43 and 1972-73 were associated with 'moderate' falls in production being translated into severe market shortfalls due to hoarding, speculation and 'administrative chaos' (Sen 1981: 76). Extending this further, Sen's approach asked why some 'poor years' of agricultural production produced widespread hunger or famine, whilst others did not. Clearly, other factors came into play. China's disastrous 'Great Leap Forward' of 1957 caused famine not just because of crop failures, but also through ill-conceived central state planning. Famine in Cambodia during the late 1970s was instigated by the brutal maladministration of the militaristic Khmer Rouge. The 1984–85 famine in Ethiopia was associated not only with drought, but in a context where the national government diverted a massive share of scarce national resources to the military. Famine in North Korea in 1998 was associated with crop failures in the context of an autocratic regime that prioritized national security and protection of the interests of the elite class.

From this analysis, Sen proposed the concept of **entitle-ments** as a way of understanding hunger. This concept sought to explain hunger and famine by way of asking questions about the social, cultural and economic frameworks that bestowed rights to ownership within populations. As Sen contended, even the seemingly straightforward notion of possessing a loaf of bread (and thus forestalling one's hunger) assumes a chain of entitlement relations:

I own this loaf of bread. Why is this ownership accepted? Because I got it by exchange through paying some money I owned. Why is my ownership of that money accepted? Because I got it by selling a bamboo umbrella owned by me. Why is my ownership of the bamboo umbrella accepted? Because I made it with my own labour using some bamboo from my land. Why is my ownership of the land accepted? Because I inherited it from my father. Why is his ownership of that land accepted? And so on. Each link in this chain of entitlement relations 'legitimizes' one set of ownership by reference to another, or to some basic entitlement in the form of enjoying the fruits of one's own labour.

(Sen 1981: 1-2)

Thus, in Sen's writings on this subject, he asserted that the ability of a person to avoid starvation depended on her/his entitlements, which, in turn, was constructed from her/his ownership bundle (the combination of labour powers, resources and assets s/he can use to acquire food) and the exchange entitlement regime s/he faced (the rights to resources s/he can access to transfer an ownership bundle into food). Or, in slightly more simplified language: 'Entitlements are defined as the set of all commodity bundles over which a person can establish command given the legal, political, economic and social arrangements of the community in which they live (including traditional rights such as access to common resources)' (FAO 2006: 1). Applying this framework to Ireland in 1845–52, Sen contended that famine was caused because the pre-eminent asset within the ownership bundle of the rural Irish poor (their control over small plots of land on which to grow potatoes, their staple food) became suddenly worthless with the onset of potato blight, and the population had few other rights over resources that could replace this loss (piecemeal social safety net efforts, such as the