Chapter 8

Climate Change and East Africa's Past

Three Cautionary Tales

A. Peter Castro

According to the most recent assessment by the Intergovernmental Panel on Climate Change (IPCC), Africa is one of the most vulnerable continents to the environmental and social processes unleashed by global warming. Human-driven climate change already affects African ecosystems, "and future impacts are expected to be substantial" (Niang et al. 2014: 1202). The impacts of global warming on the African continent are by no means uniform. The IPCC predicts reduced rainfall for parts of northern and southern Africa, but other areas, such as the Ethiopian highlands, may experience increased precipitation. Vulnerability arises from a high dependence on rainfed farming and herding, which represents 98 percent of agricultural production in sub-Saharan Africa (Niang et al. 2014: 1212). Even with rapid urbanization in recent years, economies and livelihoods still mainly rely on natural resources. Although they are among the people least responsible for anthropogenic climate change, Africans are disproportionately at risk from it (Castro, Taylor, and Brokensha 2012). Their governments and societies are responding to the challenge, though they possess what the IPCC diplomatically calls a low capacity for action. Nevertheless, much is known about the way forward for climate change adaptation. The IPCC wisely observes that "no single adaptation strategy exists to meet the needs of all communities and contexts in Africa" (Niang et al. 2014: 1226). All strategies will need to integrate equity and social justice concerns to achieve widespread and effective action. Some success stories already exist in this regard (Niang et al. 2014).

Notes for this chapter begin on page 220.

The IPCC's Africa report also warns about "maladaptation risks," policies and actions that may undermine social and environmental conditions. These risks can occur at various levels, whether in the form of national policies promoting economic growth at the expense of agro-environmental stability or communities cutting trees on steep slopes. In my experience in East Africa, international- and national-level actions do the greatest harm, but locally based deeds usually receive the most attention. In Darfur, Sudan, media attention often emphasized ethnic animosity and local inability to cope with drought, for example, in overlooking how colonial, postcolonial, and international actions marginalized and polarized the region (Castro 2018). Understanding the articulation of national- and global-level processes with rural communities is indispensable for adapting to climate change in socially and environmentally sustainable ways. East Africa contains an unappreciated, even sometimes unknown, history of state interventions related to claims about climate change.

This chapter presents three cautionary tales from East Africa's past related to climate change, state interventions, and rural communities. These tales of conflict and displacement take place in Kenya, Somalia, and Ethiopia, respectively, drawn from my academic and applied research in those countries. I see the three cases as relevant for gaining perspective on present-day climate change maladaptation risks. The first tale is inspired by recent evictions occurring in Kenya and other places for nominally green goals such as carbon sequestrating (REDD Monitor 2019). Environmental ends are seen as justifying unjust means, as customary forest dwellers and users are deemed squatters and forced to uproot. As will be shown, these actions are similar to ones taken in the early days of colonial Kenya, when British officials seized large tracts of occupied forests using an environmental crisis narrative as justification. The second case is prompted by concern about media and political discourse regarding climate refugees. Instead of illuminating the predicament of displaced peoples, the term climate refugee gets used to convey dystopian narratives, or ones in which refugees get reduced to abstractions, whether as victims or threats (Høeg and Tulloch 2019). I saw refugees and pastoralists portrayed in similar ways in Somalia during the early 1980s, to their detriment. The third tale deals with the repeated use of resettlement in Ethiopia, which has been driven by fears about relentless environmental decline in the highlands. Although the practice has waned in recent years, awareness is needed of the challenges and difficulties posed by resettlement. This tale comes out of my involvement with the BASIS Collaborative Research Support Program from 1999 to 2007. In all three cases I show how people attempted to be more than pawns in power games, resisting oppression or pursuing opportunities. Much of the pain and trouble encountered in the three tales

could have been prevented by treating people with greater respect and by including them in public decision-making. This message is a vital one for climate change adaptations.

Climate Change and Crisis Narratives in Kenyan Forests

My first case begins with the British entry into Kenya during the Scramble for Africa in the late 1800s. European explorers and representatives from the Imperial British East Africa Company (IBEAC) followed trails into its interior first forged by Swahili and Arab traders from the coast. Their caravans had long relied on the Kikuyu highlands to replenish food supplies. Early Europeans were often astounded by the bountifulness of Kikuyu agriculture. For example, Ernest Gedge (1892: 526), who accompanied an 1891 expedition to the southern slopes of Mount Kenya, wrote: "Crossing the stream and entering the Kikuyu country, the caravan found itself in a densely populated district; the villages lying on the slopes of the hills, which were a mass of luxuriant crops, beautiful trees, and sparkling streams." The highlands benefited from orographic rainfall and fertile soils. The frequent difficulty caravans had in obtaining supplies after leaving the highlands underscored the area's value. Yet the Kikuyu were sometimes unwilling to provide food to the outsiders, so IBEAC officials, whose royal charter bestowed on them administrative authority, used "high-handed methods" such as violence to obtain it (Sorrenson 1968). In 1895, Great Britain declared Kenya a protectorate, and soon the railroad reached into its interior on the southern edge of Kikuyu country. As the British became more familiar with the highlands, they coveted the area. Sir Charles Eliot (1905), protectorate commissioner from 1901 to 1904, was a proponent of making Kenya a self-supporting colony based on exports by European enterprises. It would become "a white man's country." To fulfill this goal, the British extended their rule northward into lands held by the Kikuyu and other Africans along the ridges of the Nyandarua Range and Mount Kenya.

W. Scoresby Routledge, an anthropologist, was among the early European trekkers into central Kenya in 1902. He later recalled that "the province was . . . practically unknown and its people unsubdued" (Routledge and Routledge 1910: ix). After initial research among the Kikuyu, Routledge left, later returning with his wife Katherine for additional ethnographic fieldwork. In 1910, they published the first extensive study of the Kikuyu. In line with previous accounts, the Routledges (1910: 6) emphasized the Kikuyu's agricultural prowess, though they identified a downside to it: deforestation: "In the heart of Kikuyu . . . scarcely a tree remains. As far as the eye can reach, in all directions, spread one huge

garden." They claimed that British rule, with its supposed peace and stability, served to accelerate clearing. Kikuyu elders were quoted about the environmental impact of this situation: "'In old days,' we were told, 'there were many big trees and few people and much rain. Now the big trees are all dead and like earth, so there is little rain'" (Routledge and Routledge 1910: 7). The situation was alarming, the Routledges felt, as deforestation threatened the watershed, timber supply, and soil quality for future white settlement. They chided officials for not intervening, especially since land clearing occurred near a government outpost, but noted that foresters recently seemed to be taking action.

From the time of W. Scoresby Routledge's first entry into the Kikuyu highlands to his book's publication, much had changed in the region (Castro 1995). Small but well-armed colonial forces had repeatedly hammered the Kikuyu and Embu peoples, killing many and confiscating large numbers of livestock. The British conquest was fought almost ridge to ridge in some places, and harsh punitive expeditions ensured no future armed resistance would occur (Sorrenson 1968). Officials increasingly received applications for large tracts of farmland and forests. Everything seemed up for grabs, yet the European presence was still light on the ground. The memoir of Richard St. Barbe Baker (1931), who rose to become Kenya colony's assistant chief conservator of forests, indicated that foresters took seriously the claim that Kikuyu land clearing diminished rainfall. Many officials also believed that the Kikuyu practiced a very destructive form of shifting cultivation, destroying forests and soils. These views were rooted in ignorance and prejudice. The Kikuyu were sophisticated resource users whose techniques such as intercropping, agroforestry, incomplete clearing, and limited tilling allowed some plots to remain under almost continuous cultivation. They also utilized numerous communal and farm-level strategies to retain woodland and trees as part of their economic and social lives (Castro 1995). Their resource management practices were not easily detected by officials who assumed them to be "childlike, simple and impetuous" (Baker 1931: 23).

I have found the claim that cutting trees results in drier conditions to be widespread, though not always widely accepted, in East Africa. One often hears it repeated as part of conservation crusades. Mesfin (1991: 38) recorded that Ethiopia's officially atheistic Marxist regime subjected rural people to "a rather heavy campaign" to make them believe in such a link instead of viewing drought as God's will.[1] In the midst of one of the worst droughts to hit East Africa, Lester Brown and Edward Wolf (1985) tried to highlight the link between deforestation and drought as part of a broader model of population-induced climate change. They argued that Africa's apparent drying trend in the mid-1980s, which resulted in famines in Ethi-

opia and Sudan (though not in Kenya, where the government responded quickly), came from human pressures on the land. This approach differs from contemporary concerns about anthropogenic greenhouse gas emissions and the role of forests as sinks or sources of their emissions. Brown and Wolf's idea never gained much traction; in many ways it suggested that drought-stricken poor people were responsible for their own lack of rain. But their calls for more commitment of international aid to Africa offered a gentler neo-Malthusianism than Garrett Hardin's (1985) contention at the time that Ethiopia's "overpopulated" poor be allowed to starve to death to restore carrying capacity balance.

Nowadays, human-induced climate change is understood as largely driven by industrial and high consumption lifestyles associated with the world's prosperous populations, not its poor (Castro et al. 2012). What is today called the AFOLU sector—agriculture, forestry, and other land use—contributes less than one-fourth of anthropogenic greenhouse gas emissions, much of it tied to large-scale land clearing rather than the action of smallholders (Smith et al. 2014). Researchers recognize that land use affects weather by altering biophysical processes such as evapotranspiration and albedo, but outcomes are complex due to the multiple variables involved. Lawrence Kiage's (2013) review of human impacts on African land degradation questions the received knowledge on the topic, concluding that many of the processes affecting agro-ecological conditions are still not well understood.

The Kikuyu elders quoted by the Routledges may have been influenced by a series of unusual calamities that struck parts of central Kenya in the late 1800s. These events included drought in 1897/98, locust infestations, smallpox outbreaks, and localized famine in 1898/99 (Muriuki 1974). The latter, affecting the southern Kikuyu highlands, was attributed to trading too much food to caravans and colonial outposts, leaving families unprepared to deal with poor harvests. Many places depopulated by famine and disease were soon occupied by Europeans. Ironically, the land clearing witnessed by the Routledges was largely driven by the increased trade in food. Not surprisingly, British officials decided that large tracts of forest could not be left in the hands of these "ignorant, reckless tribesmen." Due to lobbying by foresters, colonial authorities proved reluctant to privatize large tracts of central Kenyan forests as well, fearing land speculation (Castro 1995). Ultimately, the crisis narrative about the forests resulted in their being placed under state control, utilizing the system of management pioneered in colonial India.

The creation of state forest reserves around Mount Kenya starting in 1910 displaced thousands of Africans (Castro 1995). The British misinterpreted Kikuyu settlements in the forest as encroachment. The reserve

boundaries were also essentially lines of convenience, placing large numbers of homes, farms, and grazing grounds within them. Evicted people received no compensation, only warnings not to return. No protests occurred—the punitive expeditions were fresh memories. The injustice was not forgotten, and by the early 1930s unrest over land appropriation compelled the British to convene a commission to adjudicate African claims against settlers and the government. With regards to Mount Kenya, Chief Njega of Ndia, a stalwart of African rights but also a public servant of the colonial state, testified about evictions he carried out two decades earlier: "The huts were uncountable, very, very many" (quoted in Castro 1995: 56). Some British officials sided with the African claims about Mount Kenya and other areas, yet little compensation was forthcoming. The lost forests and other lands remained a source of tension for the rest of the colonial era.

Once the Kenya Land Commission ended in the mid-1930s, colonial authorities sought to intensify land use in the African areas, since the boundaries of the White Highlands were now regarded as sacrosanct. Concerns about climate change again influenced events. A series of East African droughts in the late 1920s and early 1930s generated fears that Kenya was becoming drier. America's soil conservation campaign against the Dust Bowl proved inspirational (Anderson 1984). Officials cajoled and coerced African farmers to terrace, plant fodder grasses, enclose their herds, and other measures that became highly unpopular. Both the simmering land grievances and the anti–soil conservation sentiment helped fuel the anticolonial Mau Mau uprising during the 1950s (Castro and Ettenger 1994). The high cost of defeating it convinced Great Britain to grant Kenya its independence in 1963.

Concerns about climate change and forest evictions have emerged again in Kenya. Many of today's issues reflect its colonial heritage. For decades Kenya retained the old system of state forestry in which local communities possessed no formal role in forest management. Significant reforms took place in 2005, with the creation of a new forest service and legislation allowing for local co-management of state forests. By this time, however, several serious issues afflicted the forestry sector, including corruption, mismanagement, lack of control over forest areas (which had become farms or were converted to other uses), and related issues (Kamau et al. 2018). Recognition of the troubled state of Kenya's forests coincided with a surge in global appreciation of the environmental services provided by trees, especially watershed protection and carbon sequestration. Kenyan officials and international donors sought to address forest sustainability through a number of conservation projects.

One of the targeted sites is Embobut Forest in Kenya's western highlands. This forest is regarded by the Sengwer people as their homeland.

Before colonization, the Sengwer moved seasonally between the wooded Cherangany Hills, where Embobut is located, and the Trans Nzoia plains. White settlers disrupted the pattern during the colonial era when they seized the plains. Officials also sought to impose regulatory measures over the Cherangany forests but permitted the Sengwer to continue their occupancy (KNCHR 2018). The government's toleration of the forest dwellers ended during the 1980s, with evictions initiated. The Sengwer opposed them, seeking to retain their homes and farms. An inconclusive struggle lasted for two decades when evictions escalated and turned increasingly violent. This shift was triggered by a World Bank–financed conservation project in 2007, followed by the European Union's (EU) supported Water Tower Protection and Climate Change Mitigation and Adaptation Project beginning in 2016. Both projects encountered criticism globally due to the evictions, and the EU suspended its project following the killing of a Sengwer man (KNCHR 2018).

Attempts to address Sengwer claims have been mired in numerous issues, including whether they are indigenous inhabitants and questions about compensation (Lynch 2016). The recent report by the Kenya National Commission on Human Rights calls for the respecting of the Sengwer's human rights and the ending of evicting, with indigenous communities treated as integral partners in forest conservation (KNCHR 2018). Yet a recent Kenyan government forest task force acknowledged the Sengwer as indigenous status but claimed their current agricultural practices are at odds with sustainable forestry management. Their report called for relocating the traditional forest dwellers adjacent to the reserves (Kamau et al. 2018). The Sengwer's travails are by no means unique. Instead, forest-dwelling populations worldwide face such challenges, as their holdings are increasingly valued for carbon sinks and other conservation purposes (see REDD Monitor 2019). Although agencies nowadays often possess procedures for local participation, compliance can be spotty, as the initiative for doing so usually rests with the parties promoting the intervention. They often get to decide who gets deemed a "primary stakeholder." Too many times, however, agencies learned the hard way that anyone who can interfere with what you are trying to accomplish is indeed a primary stakeholder.

"Environmental Refugees" and Pastoralists in Somalia: Implications for Representations of Climate Refugees

Somalia, situated along the northeastern Horn of Africa, serves as the setting for the second tale. From August to December 1983, I served as a con-

sultant for CARE-Somalia on its Hiran Refugee-Reforestation Project, a $4 million endeavor financed by the United States Agency for International Development (USAID). The project reflected the outcome of Somalia's disastrous Ogaden War and a realignment of Cold War allegiances in East Africa. The Ogaden region, with its mainly Somali pastoral population, was conquered by Imperial Ethiopia in the late 1800s. Separatism long simmered, and political instability following the overthrow of Emperor Haile Selassie by the Marxist Derg government in 1974 offered opportunity for action. The Western Somali Liberation Front, aided by Somalia's Marxist ruler Mohamed Siad Barre, launched an uprising in 1977. Once a staunch American ally, Ethiopia now turned to the Soviet Union, Cuba, and other communist countries, who supported it against their former Somali comrades. After some initial success, Somali forces suffered defeat by April 1978 (Cooper 2015). Ethiopia's retaking of the Ogaden sparked a huge refugee flow, creating a humanitarian crisis. In the days before compassion fatigue engulfed the public (see Moeller 1999), *National Geographic* readers were startled to see a thin, bareheaded child on the July 1981 cover, with lead articles titled "Somalia's Hour of Need" and "The Dispossessed."

The Barre regime initially devoted considerable attention to the unfolding refugee crisis, but its capacity for action was soon overwhelmed (Lewis 2002). Somalia ranked among the world's poorest nations. A generally hot, dry, and drought-prone land, its economy centered on a nomadic pastoralism generally well adapted to low rainfall and high climatic variability (Thurow et al. 1989). Only limited climatic data existed, and it suggested that a decline in rainfall in recent decades, affecting pastures (Nelson 1981; Krokfors 1983). Moreover, the country had endured a severe shock in the mid-1970s: a prolonged and harsh drought, regarded among the worst ever. Famine emerged in the hardest-hit areas. About twenty thousand people and five million herd animals died (Simons 1995). Another two hundred thousand pastoralists became destitute, and officials tried to resettle many of them on state farms and in fishing communities. The massive arrival of Ogaden refugees further strained government resources. Reliable statistics are unavailable, but perhaps more than a million people entered Somalia, a nation of perhaps four million inhabitants in 1980 (Jordan 1981; Lewis 2002). International relief soon arrived, exceeding $100 million, spawning a refugee industry that had lasting consequences, many of them negative, for the country.

CARE was a nongovernmental organization that received financing from the United States and Europe to carry out development rather than relief activities. American aid, which halted when Barre's socialist regime came to power in 1969, resumed after he broke with the Soviet Union. In

the Hiran project, USAID planners wanted to address deforestation and denuded conditions around refugee camps. Provisioning building poles, fencing, and fuelwood for refugees took a heavy toll on vegetation, which was also impacted by livestock from the camps. Fear existed that the refugees were causing desertification. As noted in the Kenyan case, many experts believed that land use practices induced localized climate change. For example, the Independent Commission on International Humanitarian Issues (1985: 82) observed: "What is certain is that environmental deterioration, once set in motion, can become self-reinforcing. . . . The loss of vegetation cover adversely affects the amount of rainfall, and as the former depends on rain its own decline is also then speeded up." Land clearing was usually associated with agriculture, but rapid urbanization resulting from refugees flows now posed an ecological threat. CARE-Somalia received funding to establish tree plantations adjacent to refugee camps near Beledweyne. Organized as a food-for-work scheme, refugees hired by CARE were supposed to receive the equivalent two dollars in sugar per day as payment. My scope of work included examining local willingness to work on the project, since camp residents already received food aid by virtue of their refugee status. Some planners felt that the refugees would be uninterested. They also worried that refugees from pastoralist backgrounds might be unwilling to plant trees or engage in other cultivation-related tasks such as weeding. Labor recruitment and retention were seen as major obstacles to project success.

Journalist Mary Harper (2012: 12) has observed that outsiders often find Somalia "a hard place to understand." The refugee camps of the early 1980s offered a prime example. The Barre regime, which included Ogaden refugees integrated into its administration, deliberately fostered confusion (Maren 1997). Officials tried to maintain high levels of foreign aid by limiting basic information about refugees, including their numbers, composition, and whereabouts. They were successful for a long time. Attempts to conduct camp censuses in 1981 by international agencies were thwarted. The United Nations High Commission for Refugees and other entities eventually accepted a planning figure of seven hundred thousand refugees, with specific numbers set for each camp, which never changed (Lewis 2002). Michael Maren (1997), involved in early relief efforts, believed the actual numbers were as low as four hundred thousand at that time. My fieldwork in three Hiran camps indicated that the planning figures were unrealistically high. Other key aspects about the refugees, such as their ethnic or clan identities, or even why they left the Ogaden, were unknown (Holcomb 1981). Answers were not easily obtained, in part because officials restricted access to the camps. I met aid officers in Mogadishu who were denied permission to travel outside of the capital. Even

those outsiders who regularly worked in the refugee camps, such as food distribution monitors, were not granted unrestricted movement. International officials sometimes displayed open disregard for camp residents. On one occasion I saw a caravan of fourteen vehicles drive into a camp, slow down, and then turn around without stopping, to the astonishment and anger of its inhabitants.

My field research, carried out with Hussein Ma'ow, faced strong scrutiny, constant interference, and, occasionally, intimidation. Questions about kin affiliation, for example, were forbidden by officials, as they might "encourage tribal thought." We completed our surveys through persistence and diplomacy. The refugees themselves often pushed back against attempts to silence them, though the oppressive apparatus of the Barre regime extended even into the most forlorn corners of the camps. Our studies revealed that the issue was not whether refugees would work, as they were very willing, but who got the jobs. The patronage networks that permeated the country extended into the camps, including determining who received excess food aid. The project planted many trees and provided income but also generated resentment, as favored groups received more favors. The project's efforts to promote environmental sustainability actually helped fray the social fabric. In presenting my first detailed ethnographic report to an American aid official in Mogadishu, I received a sobering response. Although appreciative of the work and sympathetic to the findings, she said that probably little could be done to alter the situation in the camps. The main concern of US policy was having access to the former Soviet port and military facilities at Berbera. In fact, her observation explained much about the indifference often shown by international agencies (Maren 1997). This is not to say that the Hiran project was unalterable. Recommendations such as paying refugees in cash rather than sugar were accepted. But the condition and fate of refugees as a whole were not a priority for aid policymakers.

During my stay in Somalia, I had several informal conversations with fellow expatriates who worked in varying aspects of the international aid industry about the nature of the refugee crisis. These were individuals drawn from Asia, Europe, and North America, with different professional backgrounds. As Harper (2012) would say, we found much around us difficult to grasp. The politics of food distribution, marked by inflated camp figures and other irregularities, made for a complicated analysis. Unlike Somalia in later years, almost all the food sent into the country reached inside the camps, but from there diversion to the military and others took place. For some, food aid seemed necessary for both relief and long-term national survival, Reliable figures seemed unavailable at the time, though one study later claimed that Somalia only produced 60 percent of the food

per capita in the period 1980 to 1982 than it had a decade earlier (ICIHI 1985: 67). Some colleagues regarded Somalia's chronic food insecurity, the large and prolonged refugee crisis, and the overflow of food it provided as evidence of pastoralism's decline as a viable livelihood. Anecdotal evidence pointed to Somali nationals receiving refugee rations. Instead of living off the land, the Somalis were seen as choosing a cozy state of dependence, reliant on international relief. My surveys for CARE disputed this perspective as a caricature, missing the dynamism of household strategies.

Many people regarded the pastoralists, with their nomadic, traditional ways, as incapable of meeting the needs of a modern economy. The pastoralists, with their nomadic, traditional ways, appeared incapable of meeting the needs of a modern economy. The troubles with pastoralism supposedly went beyond food aid creating a disincentive to work. Those influenced by Garrett Hardin's (1968) notion of the tragedy of the commons viewed the herders as inherent threats to sustainable rangeland management. Rangeland deterioration and desertification were assumed to be widespread and expanding. Although Hiran region experienced widespread flooding in late 1983, the country was generally perceived as undergoing a drying trend, adding to pastoralism's woes (Nelson 1981; Krokfors 1983). Thus, the Ogaden conflict served as both a signal of distress and a trigger for movement prompted by a drying land and a dying way of life. The Barre regime regarded pastoralists as economic and environmental liabilities, promoting sedentarization and carrying out other interventions with limited success (Shepherd 1988; Lewis 2002).

My anthropological training inclined me to see nomadic herders as a misunderstood and underappreciated group. The few encounters I had with pastoralists supported the view of them as knowledgeable and sophisticated resource managers. I once attended a meeting in Hiran region to witness the introduction of an internationally funded livestock and agricultural development project to a group of elders. The project, which was ready to start, intended to use aerial spraying to eradicate tsetse flies, which transmit trypanosomiasis to both humans and cattle. The fly-infested areas, which included large tracts near the Shebelle River, were only lightly used by the local population and nomads. As the project staff explained to the elders, spraying would permanently open these tracts to both herding and farming under the project's guidance. The elders were being hired by the project to facilitate its acceptance and to spread the word about its virtues. Most of the elders seemed pleased, rising one by one to thank the project staff for its initiative. One man stood, and after offering his gratitude for the project, then surprised everyone by saying that he was troubled by it. He agreed that most of the time the tsetse fly prevented use of the land by people and livestock. In times of severe drought,

however, the tsetse fly receded, allowing herds to move in and take advantage of the fresh grazing grounds. If these places were open permanently, he asked, where would the people and animals go when drought came? The room erupted in argument among the elders. Meanwhile, the stunned project staff had no response. They had not anticipated this possibility. Unfortunately, the elder's statement was not unique, as people elsewhere also complained, usually to no avail, about similar projects that set up permanent water points in customary wet season grazing areas, upsetting local rotational grazing systems by keeping livestock around in dry seasons (Miskell, personal communication, 8 August 2019).

On another occasion, Hussein Ma'ow and I talked with a local man about environmental issues. He described the mid-1970s drought as a horrible time. Even the Shebelle River stopped flowing for a while. The Shebelle is one of only two permanent streams in the country, and its drying up seemed incredible given recent flooding. People relied on the moisture from its floods to plant crops, a practice known as recessional agriculture. I queried the man about weather lore and was surprised to hear about the nighttime sky and stars. Despite Hussein's explanations, I could not grasp the connection between weather prediction and astrological phenomenon. Only years later, when John Miskell directed me to Muusa H. I. Galaal's (1970) brilliant "Stars, Seasons and Weather in Somali Pastoral Traditions," I obtained a clearer sense of the man's ideas. Galaal highlighted the multifaceted importance of weather knowledge, including the role of the stars and moon in Somali pastoralist interpretations and predictions of meteorological events. Herders and cultivators sought to integrate this information into decisions about their movements to avoid as much disaster and ruin as possible.

Barre's increasingly corrupt and brutal dictatorship fell in 1991 after a bloody civil war. The breakaway Republic of Somaliland emerged in the north, a peaceful, democratic nation, lacking recognition (Lewis 2008). An internationally supported federal government operates in Mogadishu, but it competes with Islamist extremists for control. Despite the lack of centralized authority, some economic sectors thrived, including, at times, herding (Little 2003; Harper 2012). But conflict, insecurity, and limited infrastructure, especially in the context of climate change, have undermined lives and livelihoods. The country's capacity for climate change adaptation also suffered. Somalia appears to be experiencing increased "frequent episodes of both excessive and deficient rainfall" (Ogallo, Ouma, and Omondi 2017: 47). In other words, both droughts and floods occur more frequently. Humanitarian and media accounts in recent years documented the toll of this pattern. More than 250,000 people died during the 2010–12 drought (UN News 2013). In 2019, Somalia had 2.6 million displaced peo-

ple, many of them facing acute hunger due to a series of poor rains and a general lack of productive assets (UNOCHA 2019). Yet flooding along the Shebelle River in late 2019 affected more than a half million people, with Beledweyne among the hardest-hit places (Mumin and Burke 2019).

In recent years, media reports highlighting Somalia's "climate refugees" have appeared. Some of these have been exemplary, offering cogent analyses of the complex predicament of displaced Somalis (for example, see Goldbaum 2018). Others have been less convincing in their portrayals. As the earth experiences increasingly intemperate weather, rising sea levels, and similar manifestations of climate change, more and more people will be compelled to seek refuge. The legal status of being a refugee has yet to be defined, though a recent ruling by the United Nations Human Rights Committee suggests that recognition may be coming (UNHCR 2020). Media report will be vital in shaping public perceptions about what will likely become a highly contentious issue. Several analysts warn about accounts that foster dystopian and apocalyptic narratives (Bettini 2013) of climate refugees, or otherwise frame them in ways furthering their marginalization (Høeg and Tulloch 2019). My Somalia experience made me cautious about such representations. In these times of bullying nationalism, when opportunistic leaders and fearful citizens look for foreign scapegoats, misperception and mistreatment of refugees and displaced people will go hand in hand. Social scientists, journalists, and activists need to contribute more forcefully and effectively to such debates.

A "Climate So Unpredictable That It Cannot Now or in the Future Support the Present Population": Drought, Famine, and Resettlement in Ethiopia

The above quoted passage comes from Sandra Steingraber's (1988: 18) study of the Derg regime's 1984 plan to resettle 1.5 million people from drought-stricken northern highlands to Ethiopia's southwest. At the time, its leadership under Mengistu Haile Mariam was celebrating ten years of Marxist revolution. They had deposed a long-serving emperor discredited by a slow response to famine in the highlands. Now Chairman Mengistu faced a similar situation in some of the same provinces. His government's sluggish response to starving villagers was matched by the global community's lethargy regarding Ethiopia's predicament (Gill 1986). Once the Derg recognized the need for drastic action, they viewed resettlement as a means of offering famine relief while also advancing revolutionary transformation. Their plan was, according to Alula Pankhurst (1992: 50), "the most complex and ambitious operation in the history of the Ethiopian

state." The government had been shamed by the need to rely on massive international relief. Resettlement was portrayed by officials as an act of national self-determination, a means to diminish dependence on foreign aid. By the end of 1984, with the famine now a global news story, authorities designated it as their highest priority (Pankhurst 1992).

A key assumption underlying resettlement was that the highlands faced a permanent environmental and social crisis (Steingraber 1988). The land was perceived as becoming so unproductive, its climate so capricious, that farming was increasingly untenable. The magnitude of the 1984–85 famine appeared to offer confirmation: eight million rural Ethiopians on the verge of starvation, with perhaps more than six hundred thousand dying (Gill 2010). Officials worried that this was only the start of things to come. The Derg asked the UN Food and Agriculture Organization (FAO), a technical assistance agency, to carry out a large-scale study of land degradation in the highlands. Its final report issued in 1986 emphasized that a truly grave situation existed: "Too much land has already been irreversibly lost from productive use" (FAO 1986: xvii). Other areas were in an advanced stage of land degradation. Population growth ensured further pressure on resources. According to the FAO (1986: 232), "If present trends continue unchecked, today's children may be likely to see over a third of the Highlands become incapable of supporting cropping in their lifetime." The likely and appalling outcome would be "increasingly frequent and severe famine" (FAO 1986: 232). From this crisis narrative, resettlement was regarded as both necessary and urgent. Officials saw it as an opportunity to fulfill a range of major goals: modernizing agriculture, promoting collectivization, and eliminating unemployment (Pankhurst 1992). Critics noted that resettlement also further enhanced the state's power over the peasantry, as uprooted villagers depended on its agencies for their livelihoods (Clay, Steingraber, and Niggli 1988).

Organized resettlement, whether in development or disaster settings, is exceptionally challenging, requiring careful planning, substantial investment for preparation and services, active settler involvement in decision-making, and overall appreciation of the substantial multidimensional risks (Scudder 2018). Most schemes have been disappointments, sometimes significantly so. Prior attempts at state-sponsored resettlement in Ethiopia had failed (Pankhurst 1992). Nevertheless, the Derg launched its plan, conducting a massive propaganda campaign to entice volunteers. Officials used coercion as well. More than half a million people, most of them from Wollo Province, had been moved by January 1986, when the government suspended the program. Kurt Jansson (1987), head of the UN's relief operation in Ethiopia, saw many problems with it, including rushed planning, inadequate logistical support and infrastructure, and use of force in

the selection and treatment of settlers. Others reported hunger, disease, the splitting apart of families, refusal to allow settlers to return to their home areas, and human rights abuses (Clay et al. 1988). Tensions arose in the resettlement areas from host populations, who were seldom consulted about the moves and sometimes envious of the resources devoted to them. Pankhurst's (1992) ethnography documented resettlement's complexities, conveying the interplay between villager agency and state attempts to dominate their affairs. The program resumed in late 1987, on a smaller scale, but soon ended. The Derg's attention had turned to a more ambitious national policy of villagization, compelling more than twelve million people to move from dispersed rural homes to centralized, collectivized settlements (Gill 2010). These efforts at social engineering, which ended with the Derg's ouster in 1991, received widespread criticism. James Scott (1998: 250), for example, stated: "The new settlements nearly always failed their inhabitants as human communities and as units of food production." The coming to power of the Ethiopian People's Revolutionary Democratic Front (EPRDF) did not necessarily mean the end of resettlement as a solution to the highlands' environmental and development issues.

Between 1999 and 2007, I carried out research in Ethiopia as part of the BASIS Collaborative Research Support Program. The project, led by Peter Little and the late Workneh Negatu, brought together a multidisciplinary team of American and Ethiopian scholars. We focused on food security issues, including recovery from drought, in the eastern highlands of Amhara State. Some of the research sites in South Wollo and Oromiya Zones experienced the famines of the early 1970s and 1984–85. Many painful memories endured in those communities. Resettlement also occurred. Despite increases in population and limited application of the land use measures recommended by FAO's 1986 study, the apocalyptic collapse of agriculture had not occurred. Nevertheless, these communities were among the poorest in the nation. As in the past, rural Wollo attracted little investment for infrastructure due to the lack of cash crops, minerals, or other valuable resources. Its economy relied on rainfed agriculture. Most rural households had few productive assets and extremely low incomes: farm plots were very small, as were herds, and off-farm opportunities were scarce. A survey conducted by the BASIS team in 2001 revealed that more than four-fifths of the South Wollo and Oromiya households earned less than fifty dollars per capita, far below the national average (Little et al. 2006). A major food crisis in 1999–2000, triggered by prolonged drought, repeated poor harvests, and a sluggish response by international agencies, revealed Ethiopia's considerable vulnerability to weather shocks (Hammond and Maxwell 2002). Relief arrived in time to prevent starvation, with large-scale food aid distribution lasting into 2001. Households lost

a lot of livestock through distress sales and death. A main finding of the study was that people heavily relied on their own self-help networks of family and friends to recover from shocks such as the 1999–2000 drought (Little et al. 2006).

Livelihoods depended on the weather, and the region had always known a substantial degree of climatic variability. As a woman from one of the higher, colder communities put it: "Sometimes there is too much rain, or frost, or too much sun." Intemperate times were followed by periods of comfort and abundance. But long-standing weather patterns that served as the basis for crop choices and the labor calendars from the highest mountains to the lowest valleys were changing, Worry existed as the onset and duration of the wet seasons became less predictable. A man from the warm lowlands in Oromiya Zone, for example, said that local elders regularly foretold the coming of the rains by the winds, but this practice no longer proved reliable. Once the wet seasons arrived, the rains were erratic, with significant dry gaps occurring that affected crops. Several people used phrases such as "lacking confidence in" or "being suspicious about" the continuation of the wet season. The temperatures, including in the usually cool higher areas, were hotter. Meteorological data supported these local perceptions regarding shifting weather patterns (Rosell and Holmer 2015). As I have documented elsewhere (Castro 2012), households responded by altering what and when they planted, with varying and generally limited success. They also increasingly engaged in selling firewood, trade, local wage work, and migration, with job seekers moving as far as Djibouti and Saudi Arabia.

The EPRDF government under Meles Zenawi responded to the threat of food insecurity in several ways, including improving the famine early warning system, implementing a safety net program for food aid, issuing land titles to rural households, encouraging use of green revolution technology, expanding rural infrastructure, and promoting national economic growth. Facing another drought in 2003, officials also revived another initiative: resettlement. Officials intended to move two million volunteers from the highlands to the western lowlands. The national government announced in 2009 that more than a million people had been transferred, with over 90 percent of them attaining self-sufficiency. Journalist Peter Gill (2010) was told by local authorities in a resettlement site that 20 percent of the volunteers had returned home since the program began. He also reported that many settlers still required food aid since they had been allocated poor quality land. Shumete Gizaw (2013) found that many of the resettled households felt that their lives were better than before. At the same time, their lives were dogged by many of the same problems that previously marred the program, including inadequate planning, logistical

arrangements, and delivery of services. The new wave of resettlement also encountered a new problem largely created by the EPRDF's own policies: ethnic tensions. The EPRDF, seeking to eliminate what it felt to be Amhara cultural hegemony disguised as Ethiopian civic nationalism, reorganized the country into ethnically defined states. This action heightened identity politics. Resettlement now involved not the transfer of Ethiopians from one place to another but highland Oromos and Amharas into the homeland of other ethnic groups, generating hostility among the host population.

Resettlement's unpopularity among many highland households was evident during the BASIS research project. Several people were initially reluctant to be interviewed, as they feared that we were connected to the resettlement program. Their accounts about experiencing or resisting resettlement in the mid-1980s left no doubts about why the program was often disliked, if not detested. During an interview in 2002, a woman who lived in a village in Oromiya Zone, for example, recalled fleeing with her family to a food camp during the 1984 famine. Her husband and two of their children died there. She and her two remaining children were recruited for resettlement in Illubabor Province. Despite receiving food aid as part of the resettlement process, she disliked her new setting. Officials would not issue identity cards to the settlers, thus preventing them from leaving. This woman was determined to "escape," however, and food aid offered the means. She saved food, including cooking oil, which she sold to some of the Illubabor people. After four months, the woman had collected sufficient money for her and the children to use for transport and survival. They slipped past the measures designed to keep them in the resettlement site. Arriving back in her home community, the woman discovered that someone else now occupied the land. Fortunately, it was her late husband's brother, who returned the farmland. As is typical in Ethiopia, women do not plow land in their community, so she sharecropped out her land while also earning by collecting and selling firewood. The woman remarried but again became widowed, without having established close ties to her in-laws. Her eldest son left for Djibouti, where other villagers had gone, hoping to send remittances. She never heard from him again. The woman was among the poorest households in her community.

The strong local attachment to land was revealed by a woman from Gerado, a rural area adjacent to the city of Dessie in South Wollo Zone. She was also interviewed in 2002. When the famine of 1984 began, the woman was nursing an infant. Her husband was away, near Jimma in southwestern Ethiopia, pursuing trade. As she and the livestock grew thinner, their food supplies dwindling, the woman sent him a request for money, but nothing was forthcoming except a message "to struggle in any way that

you can." The woman said wryly, "He was not much help." Local officials told her and others to report for resettlement. The woman had no desire to leave. Instead, she relied on a common drought-response strategy: selling wood. Rural Ethiopians often bring poles and firewood to market or offer bundles along roadsides. In an act of desperation, she dismantled her house, selling its poles and timber to the Gerado food relief camp. The woman described carrying her infant on her back as she sold wood to buy wheat. To preserve her land claim, she erected a small shelter covered by a thatch roof. The woman said with pride that she "would not be pushed from the area."

Other interviewees recalled deaths of people and livestock due to the drought. Many people had left Gerado to seek relief or resettlement. The peasant association organized by the government allocated their land to others. Not long before the drought had started, the Derg had established a producer's cooperative to farm some of the area's best land, including irrigated fields. The cooperative was not fondly recalled locally, as it took a sizable share of their harvests on behalf of the government. Yet, households, including the woman's, gained access to irrigated plots through membership. Despite the rhetoric of revolution, the peasant association and producer cooperatives were run entirely by men. The woman reported struggling to maintain her presence, and her land. She insisted on taking part in the cooperative, but some men pushed back. The woman remembered them saying, "She is a woman, she should not be allowed to participate." They refused to accept her. Others "begged" on her behalf, including her brother. "It was not easy." Ironically, women were an integral if essentially invisible part of the cooperative's farming activities, fulfilling tasks such as weeding, tending to oxen, and transporting harvested products. Even as she maintained the plot, the woman encountered difficulties getting her land plowed. She missed one wet season due to the unavailability of oxen before finally securing help. With the resumption of the rains, it took three years to rebuild her house. She stayed married despite her husband's limited material support.

In recent years, the Ethiopian government's focus on attaining rapid economic growth resulted in the shifting of resettlement priorities to megaprojects, such as dam building in the Lower Omo Valley, or agribusiness investments in Western Gambella. Urban expansion, especially in Addis Ababa, also resulted in displacement and resettlement as well. These cases are beyond the scope of this study, but it bears noting that controversy has occurred in these various settings. Resettlement continued to be a highly challenging social process, one often mired in top-down planning and undermined by insufficient commitment of resources. In recent

years, the national leadership has undergone significant change. Hope exists for more inclusive public decision-making. In addition, while still committed to rapid economic growth, the national government's climate change adaption plan aims for attaining carbon neutrality by 2030. If Ethiopia can achieve both human uplift and environmental sustainability in the coming decade, it will emerge as a leader among nations. This would be a fitting situation for a nation whose people have, to paraphrase Mesfin (1991), "suffered under God's environment."

Conclusion

Human-induced climate change offers one of the greatest social and environmental challenges of our times. In global dialogue about what to do, the voices of rural Africans have been seldom heard. They are often portrayed as hapless victims of, or localized contributors to, changing climates, too poor or uneducated to offer insights into mitigation and adaptation strategies. The three cautionary tales presented here from Kenya, Somalia, and Ethiopia illustrate the dangers of poorly conceived and nonparticipatory responses to climate change and other environmental processes. Not only have these resulted in ineffective actions, they have often served to harm people, violating their human rights and undermining their livelihoods. Hopefully we can learn from these errors rather than repeat them, promoting an effective vision of inclusive climate change adaptation as suggested by the IPCC in its report on Africa (Niang et al. 2014).

Acknowledgments

I thank John Miskell, Andy Korn, and the editors for their comments. I am also grateful to the institutions that supported the original research that served as the basis for this chapter: in Kenya, the National Science Foundation, the Intercultural Studies Foundation, the University of California, and the Appleby-Mosher Fund at Syracuse University; in Somalia, CARE and the National Endowment for the Humanities; and in Ethiopia, the BASIS Collaborative Support Program's Horn of Africa Program. I wish to acknowledge colleagues and field assistants who contributed to the original fieldwork covered here: Cyrus Kibingo, George Muriithi, and John Githuri Gichobi in Kenya, Hussein Ma'ow in Somalia, and Mengistu Dessalegn Debela, Kassahun Kebede, and Dilu Shaleka in Ethiopia. I alone am responsible for the content, including errors, in this chapter.

A. Peter Castro is a professor of anthropology and a Robert D. McClure Professor of Teaching Excellence in the Maxwell School of Citizenship and Public Affairs at Syracuse University. He is an environmental and economic anthropologist, focusing on community resource management, climate change, livelihoods, and natural resource conflict management. His publications include coediting *Climate Change and Threatened Communities: Vulnerability, Capacity, and Action* (2012), which featured his case studies of eastern Amhara, Ethiopia, and central Darfur in Sudan. He wrote *Facing Kirinyaga: A Social History of Forest Commons in Southern Mount Kenya* (1995), and also coedited *Negotiation and Mediation Techniques for Natural Resource Management: Case Studies and Lessons Learned* (2007) and *Natural Resource Conflict Management Case Studies: An Analysis of Power, Participation and Protected Areas* (2003).

Note

1. He noted that the government campaign was largely unsuccessful. In the early 2000s, many rural Ethiopians in the highlands still interpreted drought as God's will (Castro 2012).

References

Anderson, D. 1984. "Depression, Dust Bowl, Demography, and Drought: The Colonial State and Soil Conservation in East Africa during the 1930s." *African Affairs* 83(332): 321–43.

Baker, R. St. B. 1931. *Men of Trees*. New York: The Dial Press.

Bettini, G. 2013. "Climate Barbarians at the Gate? A Critique of Apocalyptic Narratives on 'Climate Refugees.'" *Geoforum* 45: 63–72.

Brown, L., and E. Wolf. 1985. "Reversing Africa's Decline." Worldwatch Paper 65.

Castro, A. P. 1995. *Facing Kirinyaga*. London: Intermediate Technology Publications.

———. 2012. "Social Vulnerability, Climate Variability, and Uncertainty in Rural Ethiopia: A Study of South Wollo and Oromiya Zones of Eastern Amhara Region." In *Climate Change and Threatened Communities*, edited by A. P. Castro, D. Taylor, and D. W. Brokensha, 29–40. Rugby: Practical Action Publishing.

———. 2018. "Promoting Natural Resource Conflict Management in an Illiberal Setting: Experiences from Central Darfur, Sudan." *World Development* 109(9): 163–71.

Castro, A. P., and K. Ettenger. 1994. "Counterinsurgency and Socioeconomic Change: the Mau Mau War in Kirinyaga, Kenya." *Research in Economic Anthropology*, 15: 63–101.

Castro, A. P., D. Taylor, and D. W. Brokensha, eds. 2012. *Climate Change and Threatened Communities*. Rugby: Practical Action Publishers.

Clay, J. W., S. Steingraber, and P. Niggli, eds. 1988. *The Spoils of Famine*. Cambridge: Cultural Survival.

Cooper, T. 2015. *Wings over Ogaden*. Solihull: Helion.
Eliot, C. 1905. *The East Africa Protectorate*. London: Arnold.
FAO (Food and Agriculture Organization). 1986. *Ethiopia Highland Reclamation Study Final Report*. Vol. 1. Rome: Food and Agriculture Organization of the United Nations.
Galaal, M. H. I. 1970. *Stars, Seasons and Weather in Somali Pastoral Tradition*. Mogadishu: Ministry of Education.
Gedge, E. 1892. "A Recent Exploration of the River Tana to Mount Kenya." *Geographical Society Proceedings* 14: 513–33.
Gill, P. 1986. *A Year in the Death of Africa*. London: Paladin.
———. 2010. *Famine and Foreigners*. Oxford: Oxford University Press.
Goldbaum, C. 2018. "Somalia's Climate Refugees: The New Humanitarian." 21 February. Retrieved 4 August 2019 from https://www.thenewhumanitarian.org/feature/2018/02/21/somalia-s-climate-change-refugees.
Hammond, L., and D. Maxwell. 2002. "The Ethiopian Crisis of 1999–2000: Lessons Learned, Questions Unanswered." *Disasters* 26: 262–79.
Hardin, G. 1968. "The Tragedy of the Commons." *Science* 162(3859): 1243–48.
———. 1985. "Overpopulation Begets Hunger: Food Gifts Don't Help Poor." *Hackensack Record*, 8 November, A-29.
Harper, M. 2012. *Getting Somalia Wrong?* London: Zed Books.
Høeg, E. and C. D. Tulloch. 2019. "Sinking Strangers: Media Representations of Climate Refugees on the BBC and Al Jazeera." *Journal of Communication Inquiry* 43(3) 225–48.
Holcomb, B. 1981. "Somali Refugees or Refugees in Somalia? The Oromo Flight from Ethiopia." *Cultural Survival Quarterly Magazine* 5(2).
ICIHI (Independent Commission on International Humanitarian Issues). 1985. *Famine*. New York: Vintage Books.
Kiage, L. M. 2013. "Perspectives on the Assumed Causes of Land Degradation in the Rangelands of Sub-Saharan Africa." *Progress in Physical Geography* 37(5): 664–84.
KNCHR (Kenya National Commission on Human Rights). 2018. *An Interim Report of the High-Level Independent Fact-Finding Mission to Embobut Forest in Elgeyo Marakwet County*. Nairobi: Kenya National Commission on Human Rights.
Jansson, K. 1987. "Section 1: The Emergency Relief Operation—An Inside View." In *The Ethiopian Famine*, edited by K. Jansson, M. Harris, and A. Penrose, 1–77. London: Zed Books.
Jordan, R. P. 1981. "Somalia's Hour of Need." *National Geographic* 159(6): 748–55, 765–75.
Kamau, M. W. et al. 2018. *A Report on Forest Resources Management and Logging Activities in Kenya*. Nairobi: Republic of Kenya, Ministry of Environment and Forestry.
Krokfors, C. 1983. "Environmental Considerations and Planning in Somalia." In *Proceedings of the Second International Congress of Somali Studies*, edited by T. Labahn, 3:293–312. Hamburg: Helmut Buske.
Lewis, I. M. 2002. *A Modern History of Somalia*. 4th ed. Oxford: James Currey.
Lewis, I. 2008. *Understanding Somalia and Somaliland*. New York: Columbia University Press.
Little, P. D. 2003. *Somalia*. Oxford: James Currey.
Little, P. D., M. P. Stone, Tewodaj Mogues, A. P. Castro, and Workneh Negatu. 2006. "'Moving in Place': Drought and Poverty Dynamics in South Wollo, Ethiopia." *Journal of Development Studies* 42: 200–25.
Lynch, G. 2016. "What's in a Name? The Politics of Naming Ethnic Groups in Kenya's Cherangany Hills." *Journal of Eastern African Studies* 10(1): 208–27.
Maren, M. 1997. *The Road to Hell*. New York: The Free Press.
Mesfin Wolde Mariam. 1991. *Suffering Under God's Environment*. Berne: African Mountains Association and Geographica Bernensia.

Moeller, S. D. 1999. *Compassion Fatigue*. New York: Routledge.
Mumin, A. A., and J. Burke. 2019. "'We Have Nothing': Somalia Floods Raise Spectre of Famine." *The Guardian*, 19 November. Retrieved 14 April 2020 from https://www.theguardian.com/world/2019/nov/19/we-have-nothing-somalia-floods-raise-spectre-of-famine.
Muriuki, G. 1974. *A History of the Kikuyu, 1500–1900*. Nairobi: Oxford University Press.
Nelson, H. D., ed. 1981. *Somalia*. 3rd ed. Washington, DC: United States Government.
Niang, I., et al. 2014. "Africa." In *Climate Change 2014, Part B: Regional Aspects, Contribution of Working Group II to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change*, edited by V. R. Barros et al., 1199–265. Cambridge: Cambridge University Press.
Ogallo, L. A., G. Ouma, and P. Omondi. 2017. "Changes in Rainfall and Surface Temperature over Lower Jubba, Somalia." *Journal of Climate Change and Sustainability* 1(2): 38–50.
Pankhurst, A. 1992. *Resettlement and Famine in Ethiopia*. Manchester: Manchester University Press.
REDD Monitor. 2019. Retrieved 4 August 2019 from https://redd-monitor.org/.
Rosell, S., and B. Holmer. 2015. "Erratic Rainfall and Its Consequences for the Cultivation of Teff in Two Adjacent Areas in South Wollo, Ethiopia." *Norsk Geografisk Tidsskrift-Norwegian Journal of Geography* 69(1): 38–46.
Routledge, W., and K. Routledge. 1910. *With a Prehistoric People*. London: Arnold.
Scott, J. 1998. *Seeing like a State*. New Haven, CT: Yale University Press.
Scudder, T. 2018. *Large Dams*. Singapore: Springer.
Shepherd, G. 1988. *The Reality of the Commons: Answering Hardin from Somalia*. ODI Social Forestry Network Paper 6d.
Simons, A. 1995. *Networks of Dissolution*. Boulder, CO: Westview.
Smith, P., et al. 2014. "Agriculture, Forestry and Other Land Use (AFOLU)." In *Climate Change 2014, Mitigation of Climate Change: Contribution of Working Group III to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change*, edited by O. Edenhofer et al., 811–922. Cambridge: Cambridge University Press.
Sorrenson, M. P. K. 1968. *Origins of European Settlement in Kenya*. Nairobi: Oxford University Press.
Steingraber, S. 1988. "Resettlement in 1985–1986: Ecological Excuses and Environmental Consequences." In *The Spoils of Famine*, edited by J. Clay et al., 16–65. Cambridge: Cultural Survival.
Shumete Gizaw. 2013. "Resettlement Revisited: The Post-resettlement Assessment in Biftu Jalala Resettlement Site." *EJBE* 3(1): 22–57.
Thurow, T. L., D. J. Herlocker, and A. A. Elmi. 1989. "Development Projects and Somali Pastoralism." *Rangelands* 11(1): 35–39.
UN News. 2013. "Somalia Famine Killed Nearly 260,000 People, Half of Them Children." Retrieved 4 August 2019 from https://news.un.org/en/story/2013/05/438682-somalia-famine-killed-nearly-260000-people-half-them-children-reports-un.
UNHCR (United Nations Human Rights Committee)/USA. 2020. "UN Human Rights Committee Decision on Climate Change Is a Wake-Up Call, According to UNHCR." 24 January. Retrieved 15 April 2020 from https://www.unhcr.org/en-us/news/briefing/2020/1/5e2ab8ae4/un-human-rights-committee-decision-climate-change-wake-up-call-according.html.
UNOCHA (United Nations Office for the Coordination of Humanitarian Affairs). 2019. "Somalia Humanitarian Dashboard, June 2019." Retrieved 4 August 2019 from https://reliefweb.int/report/somalia/somalia-humanitarian-fund-2019-dashboard-23-july-2019.