



# Defining Food Waste in Kenya and Beyond: A Comparative Perspective

By Paul Goldsmith



My generation grew up in a country where the government used to dump shiploads of grain into the ocean. But not finishing your broccoli, in contrast, invoked mealtime lectures about hungry children in less fortunate countries. Wasting food was a moral problem and not the outcome of global inequality and skewed access that we later learned were responsible for those starving children pictured in UNESCO funding appeals on television.

Aversion to wasting food is probably wired into our genes. Even so, competing with your friends to kill oranges by rolling them under the wheels of passing vehicles was not exactly a sin when you were surrounded by near-endless expanses of citrus groves, and where neighbours routinely left gift bags of oranges on the doorstep that only added to the surfeit accumulating inside.

This and other examples of excess and profligacy remained largely invisible to the public until research during the 1970s indicated that up to 40 per cent of the food produced worldwide was never consumed. The 1973 University of Arizona garbage study, for example, concluded that American households were wasting up to a fifth of the meat, produce, and grains they purchased. This cost the average family US\$600 a year at a time when the annual median family income was US\$12,500.

This waste was only part of a much larger complex. The industrialisation of agriculture had improved the efficiencies of production but exacerbated the problem of waste between the farm gate and the family table. We may have come of age feeling guilty about the growing mountains of garbage that had become too big to hide during the 1970s, but this was actually one aspect of a far more insidious syndrome encompassing massive waste and pollution, inhumane treatment of animals, poor conditions affecting the food chain work force, and negative impacts on consumer nutrition.

These and other related issues were brought home by Eric Schlosser in his seminal 2001 book, [\*Fast Food Nation\*](#). We came of age aware that commoditisation and convenience had created a monster. This is why many of my peers and I became strict vegetarians. We avoided processed foods and sought out organic produce wherever it was available. Food was one of the sacraments of the counterculture movement, and we believed our elevated tastes and preferences made us holy. Subsisting on bean sprouts, carrot juice, and brown rice was our ticket to heaven.

### **Famine and food in Turkana, 1974**

I eventually came to recognise that this culinary elitism was a luxury, an Aquarian age equivalent of a Roman bacchanal. The realisation contributed to my decision to travel abroad and experience life in the more organic environs of the developing world.

After nine months in Central America, I ended up in Kenya, which was still a slow food nation the time. I arrived at a time when the hunger crisis precipitated by the Great Sahel Famine was peaking, and my first venture beyond the relatively well-fed highlands saw me spend several weeks in Turkana. My real education in the anthropology of food began in November of 1974.

We left Kitale on the back of a lorry carrying sacks of famine relief flour, arriving in Lodwar under a full moon at 2.30 a.m. Our driver insisted I join him for libations in the local bar, where we sat next to a window besieged by a posse of naked boys. The driver teased them by pretending to press a coin into the skinny hands protruding through the windows. He allayed my apparent discomfort with a beaming smile, "*Sijali, wako na njaa, lakini tumewabebea chakula.*" Yes, these kids are hungry, but we are the ones bringing them food, he said. I slept under the lorry, waking up to a stark landscape of scattered acacia dotted with stick people wrapped in dirty white togas.

We explored downtown Lodwar, which consisted of two streets lined with wooden storefronts. A door opened up briefly and a Somali man motioned us inside, where he served us black tea and dry bread and refused payment. My friend the lorry driver said he was going on to Kalokol, and invited us to join him. A crowd of stick people collected around us as we waited for the lorry to depart, withered arms extended. I watched an old man squatting to the side keel over.

Impelled by a mix of compassion and discomfort, we started cutting up our travel stash — a basket of fruit — distributing strips of papaya and mango as the engine roared into life. Then, as the lorry lurched into gear, the recipients of our largesse pelted us with the fruit.

My distraught traveling companion caught a ride back to Kitale after a few hours in Kalokol on the shores of Lake Turkana. Because the owner of the only transport firm serving the area had passed away the night we were on the road, I ended up marooned at the lake where I wandered during the day, and spent the evenings listening to the BBC with my host Mr Muriuki, a quiet man who worked for the National Council of Churches of Kenya. After he went to sleep, I slipped under the wire fence surrounding the missionaries' and civil servants' houses to listen to the Turkana singing and clapping late into the night.

It was three weeks before the next lorry left for downcountry. We traveled during the day this time. The lorry briefly stopped at a laaga, where several emaciated Karamoja men petitioned us for food. The upcountry people on the lorry tossed them some biscuit boxes, then enjoyed a hearty laugh when the pastoralists found they were empty. “We work for our food,” they told me.

Making sense of my time in Turkana coalesced around two observations. The first was that how we define food is a culturally-bound concept. I will forever associate Kalokol with the pungent aroma of roasted doum palm nuts, which the Turkana spent their days converting into a course flour — on the shores of one of the world’s least exploited inland lakes.

As for the hungry Turkana who wasted our fruit, they had probably never seen a papaya or mango, much less tasted one. Several years later the same point was reinforced by my mother-in-law in Lamu, who demurred when I argued for reducing our young children’s starch-heavy diet: “*hii mboga yako si chakula*,” she objected.

The second observation notes that the universal practice of sharing food in Africa is subject to issues of identity and social relations: some people fall through the cracks. In any case, food losses, and not food waste, is the greater problem in Kenya. Food losses refer to any decrease in food mass across the edible food supply chain, which claims up to 30 per cent of the food produced across the world. Food rarely goes to waste here, but post-harvest grain losses range between 10 and 20 per cent of the harvest in this part of the world — an average of 13 per cent of Kenya’s maize harvest — and such figures would be much higher if they factored for food in the field and on the hoof that is lost to drought, disease, and other risk factors.

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Where the losses increase closer to the consumer’s plate in the developed world, in Africa most of the losses occur close to the farm-end of the chain. Halving these losses in Africa alone would significantly impact food availability, affordability, and malnutrition among the poor.

### **The political ecology of food in Kenya**

The European push into the Kenya highlands coincided with conditions more severe than those that I witnessed in Turkana. Disease and famine ravaged the region during the 1890s. The Maasai lost 90 per cent of their cattle to rinderpest, and drought forced many communities to seek refuge among less affected neighbours. Long-term impacts included the increased population of highland agricultural communities and the net loss of land to colonial settlement.

The structural and legal institutional framework of Kenya’s commercial agriculture that followed replaced the indigenous political ecology of food with a monoculture mindset geared to supporting commodity production for export. Native producers were confined to tribal reserves and much of their production was quarantined by colonial statutes limiting the free movement of local crops and livestock. African production systems were deemed pre-scientific and inefficient, and the trade networks that were expanding during the decades preceding European intervention were curtailed.

The colonial economy experienced a succession of crises that persist up to now. Kenya’s economy is nevertheless a complex system, and the dynamism of the indigenous order has helped offset the entropy undermining the monoculture model. Fifteen years after my Turkana awakening, I set off for the Meru highland fringe, where one of the indigenous production systems least affected by the rules of colonial agriculture was flourishing.

When the women in the lower Nyambenes winnowed their *njavi*, one Samburu elder told us, the papery skin of the beans was carried away by the wind. After a day or so, our eagle-eyed warriors would see the tiny flakes floating in air, and we would know it is time to collect some animals for trade and travel there.

Food storage did not feature prominently in most precolonial production systems. Cassava and other low protein-high starch root crops were important because they could be stored in the ground. Unused food was fed to the livestock that played a critical interstitial role in food systems as currency and as a protein bank. In some societies, force-feeding young women to make them plump was an indicator of wealth that conferred prestige. The merits of voluptuous bodies for marriageability and childbearing in areas of West Africa is a tradition that still conditions African concepts of feminine beauty.

Storage was difficult in the African environment for reasons that still make it problematic today, and this is why reinvesting surplus food in social relations through trade and reciprocal arrangements was universal practice. The importance of the circulation of food resources was underscored by the protocols enabling women to trade during episodes of group conflict.

The variability intrinsic in regional environments gave rise to multiple variations on non-hierarchical organisation that contrasted with the centralised states that emerged in areas of sustained surplus food production like Buganda and Bunyoro in the intra-lacustrine region.

The Lozi system of the Barotse plateau encompassed irrigated fields complemented by cultivation on the drier margins, followed by seasonal migration into the riverine plain where receding floodwater watered another crop. The King in the Lozi system coordinated production across the annual cycle, conscripted labour for maintenance of the dikes funneling water into the irrigation zone, and organised the mass migration into the floodplain. He also presided over the distribution of food held in communal granaries. This included assisting other communities dependent on rainfed agriculture during times of shortfall, a practice that at times emptied the royal stores.

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Kjekjus detailed the intricate workings of social ecologies in Tanganyika, where diverse small-scale communities operating in synch achieved an impressive level of disease control and resilience in conditions of periodic zoonotics and climatic uncertainty. The invisible hand guiding these economies highlights the role of econiche-conditioned comparative advantage enhanced by a continuous process of experimentation and adaptation.

I found these dynamics still functioning in the Nyambene region, an area relatively undisturbed by the rigid hierarchical order imposed by colonial rule. My surveys included a question on sources of agricultural information, listing four responses: extension services; the educational curriculum; radio and other media; and non-governmental organisations. Over 70 per cent of the informants replied by adding a new category: personal on-farm experimentation and observation of the same by neighbours. I collected a 50-page list of trees and plants incorporated into their on-farm production that provide a diverse range of benefits from soil fertility maintenance to herbal concoctions for treating human, livestock, and crop diseases.

Where tens of thousands of households in the coffee, tea, and maize zones of Meru received famine relief food during the 1984 drought, only several hundred non-Igembe Meru families required government food support. The disparity highlighted the stability of the Nyambene miraa-powered

permaculture, which continued to generate income even during the height of the drought, and the internally mobilised assistance for food-poor households. The unending criticism of miraa production, which supports an indigenous social institution with its own multi-directional information flows, is a telling reflection of the monoculture brainwashing that holds sway among Kenya's educated elite.

The colonial government used a range of legal acts to centralise and control the agricultural sector, and this came with strict rules regulating the production and movement of food. The systems described above, in contrast, operated as free-scale networks featuring multiple lateral linkages interspersed with nodes created by a high concentration of connections.

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Hunger was not uncommon, and even had a season named after it, but it is difficult to find accounts of large-scale starvation in pre-colonial Africa. The more serious problem was, and still is, malnutrition, the incidence of which was episodic and location-specific in the accounts of European explorers. According to doctors who came after them, malnutrition was often aggravated by infections and parasites, which explains why disease is the main cause of death in famine-struck areas. The emergence of structural food shortfalls and endemic malnutrition was a colonial era development.

The indigenous systems referred to above sat on top of food webs, where human populations participated in the larger energy-generating ecology. Unlike the supply chains we now depend on, food webs are anchored by the 99 per cent conversion efficiency of plant photosynthesis. These webs subsume complex multi-species relationships and overlapping food chains. The indigenous political ecology of food in this region came to reflect a mosaic of coevolutionary adaptations, including cultural protocols facilitating internal and external social relations.

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The rise of the industrial nation-state subjected these webs to top-down control, simplifying and making them more fragile in the process. The energy-to-food conversion rate has declined precipitously under the regime of mechanisation and industrial inputs, while consumption of empty calories has skyrocketed apace. Human obesity has paralleled the three-fold increase of sugar over the past fifty years, and the number of people living with diabetes across the world has quadrupled since 1980. Eighty per cent of the deaths it causes occur in low and middle income countries.

Viewed from a holistic perspective, the rising incidence of diabetes and other lifestyle diseases in Kenya reflecting these trends is another form of food waste.

### **The political economy of eating in Kenya**

A week before I travelled to Kenya, a fracas erupted over food that had gone missing from the communal refrigerator in our dormitory. An angry young lady was ranting about other students eating her food when a Kenya student named Saleh Karanja interrupted: "People do not steal food," he told her, "they eat it." The observation piqued my attention, and the full implications are still sinking in.

It did not take long to understand that *eating* is a very context-dependent verb in this part of the world. On the positive side, I learned from my early interactions with Kenyans that sharing food was near practice. This was offset by the frequent “help me with something to eat” petitions, which I soon found out rarely referred to real food.

My survey of food waste issues for this article led me to a similar contradiction. Food waste occurs in Kenya, but it not among the poor who are not sure where their next meal will come from. Rather, the problem is limited to specific sectors. Most food waste occurs in the export horticulture industry where broken contracts, late deliveries, and other logistic glitches lead to produce not reaching its destination, or farmers not receiving full payment. Milk is the other industry prone to waste and spoilage. These findings prompted me to do my own neighbourhood spot survey to test the hypothesis. My statistically insignificant sample yielded the following results:

The restaurants recycle their leftovers, as do the produce sellers. Unsold fruit and vegetables also account for most of the supermarket waste; wholesale milk buyers are the only business that actually dumps their spoilage, which is placed in septic tanks. But this is not to say that Kenya’s food sector is waste-free.

Kenyan parastatals are known for the mismanagement and inefficiencies that have cost small-scale coffee, tea, maize, pyrethrum, sugar, and milk producers high losses over the years. Leakages, poor management of grain stores, and corruption at buying centres are responsible for many of the problems. The procurement of maize, sugar, and imports of agricultural chemicals are the source of most of the national scandals affecting the availability and prices of staple commodities, which in turn lowers the quality of life and nutritional status of poor Kenyan households.

The delivery of famine relief supplies during periods of extended drought has earned high marks in contrast, the incidence of District Officers and private sector transporters diverting supplies notwithstanding. All of this qualifies Saleh Karanja’s observation: taking food and not eating it is stealing. The same applies for diverting resources and prejudicial policies that benefit state-based actors and the private sector cartels they cultivate.

Footage of hungry Kenyans collecting the condemned maize some lazy civil servant decided to deposit at Nairobi’s Dandora landfill summed up Kenya’s food waste conundrum: happy scavengers interviewed by the press thanked the KANU government for the gift of free food.

### **Resistance and escape on fast food planet**

The waste problem runs much deeper than the high levels of global food losses and the exploitation of land and agricultural resources by elites at the top of the food chain pyramid. Agronomists define weeds as plants in the wrong place. The issue of food waste, by the same logic, is often a function of food in the wrong place, Food policy analysts have weighed in on the problem by stressing the tradeoffs between investing in curtailing losses instead of improving production. The gains to be realised through the former option, they note, are finite; investing the same resources in agricultural research can generate production gains that far exceed production lost to waste.

This recommendation, however, runs up against the yet larger dilemma highlighted by the declining state of the planet’s environmental commons and the precarity overtaking the world’s small-scale producers. The quest for national food security, for example, is directly responsible for the ongoing African land grab. Ceding ownership of large tracts of communal land to increase the supply for food insecure nations in the Middle East and Asia means more carbon intensive production and negative

impacts on the livelihoods of the displaced communities forced to labour on the new estates and commercial farms.

Monoculture cultivation of grains and pulses plays an important role in the provision of global food supplies. But increasing industrial agriculture at the expense of peasant producers entails, among other things, more energy-intensive transport, increased losses across supply chains, and more consumer-attractive packaging generating the plastic waste that ends up polluting our dying oceans. The policies promoting these outcomes are ironically presented as smallholder-empowering reforms.

The World Bank policy matrix adopted by the Narendra Modi government is a case in point. The new laws passed in 2020 are designed to transform locally managed rural economies into a national industry. But incorporating India's small-scale producers into the system of global food supply chains highlights a complex of negative consequences for the country's 100 million farmers that include the expansion of private agribusiness, mandatory use of corporate-owned hybrid seeds, centralised state management of the agriculture sector in place of the local *mandi* marketing system, and a ban on the private storage of key foods.

We are all caught in the new webs spun by the world's capitalist high roaders. Like the intense protests provoked by Modi's reforms, the conversion of the world into a fast food planet is feeding a gathering fightback in the West. The movement is based on the formation of intentional communities predicated on sustainable production and lifestyle, the adoption of permaculture, practices promoting environment regeneration, and the rejection in general of the maladaptive social operating system driving the earth to the point of collapse. Regional cultural ecologies in this part of the world and elsewhere embody many of the holistic sensibilities driving this movement, as advocates of indigenous knowledge systems have long pointed out.

Research on the anthropology of food has detailed the role of local foodways as a repository of historical memory and meaning, and ethnographic studies demonstrating how eating and drinking are intrinsic to their informants' domestic, economic, political, and spiritual lives. Producing more high quality food in the right places is one antidote to eating at the top.

Treating food as a sacrament, as it turns out, was not such a bad idea after all.

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*This article is part of [The Elephant Food Edition Series](#) done in collaboration with [Route to Food Initiative \(RTFI\)](#). Views expressed in the article are not necessarily those of the RTFI.*

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