

DR STEVEN SERELS



PURCHASING INSECURITY

**THE AFRICAN RED SEA REGION
AND THE GLOBAL FOOD TRADE**



Rift Valley Institute
MAKING LOCAL KNOWLEDGE WORK

XCEPT
CROSS-BORDER CONFLICT
EVIDENCE / POLICY / TRENDS

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Purchasing Insecurity:
The African Red Sea Region and the Global Food Trade

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Cover image: Sudanese woman making the traditional bread called *kisra*. Mohamed Elfatih Hamadien.

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SUMMARY

The African Red Sea Region does not produce enough food to feed its own population. Sudan, Eritrea, Ethiopia, Djibouti and Somaliland (Somalia) are each reliant on imports to make up for domestic production shortfalls. This presents unresolved challenges to the food security of the region.

The regional food system is currently in crisis because it is reliant on the international grain trade. The ongoing Russian invasion of Ukraine has disrupted normal patterns of global food production and distribution, and, in turn, contributed to a rapid rise in prices in the African Red Sea Region.

Since the start of this crisis, an estimated 30 million people in the region have adopted stress-coping strategies, such as depleting assets to purchase grain at ever higher prices. For over 8 million people, these strategies have already failed. They have already liquidated their assets and are suffering from acute malnutrition. This crisis will likely continue through at least 2023.

The region became dependent on food imports over the course of the twentieth century. This dependence developed alongside structural poverty and widespread indebtedness.

Previously, people in the region almost exclusively ate local food that they either produced themselves or acquired through social relations. The traditional food system offered robust protection against supply shortfalls and ensured the minimum equitable distribution of food.

Tragically, this traditional food system collapsed at the end of the nineteenth century owing to an unprecedented ecological disaster – the first rinderpest epizootic (1887–1889). Rinderpest is a disease that kills 90 percent of immunologically naive infected cattle, such as those that pulled the ploughs in the region.

In the wake of this humanitarian disaster, states and private enterprise worked together to develop a new market-oriented food system. Governments modernized the transportation infrastructure. Merchants used the new means of transport to ship food from centres of production, both within the African Red Sea Region and abroad, to centres of unmet demand.

While solving some supply issues, the new system incentivized unsustainable practices. Already struggling cultivators commercialized their operations with debt, which they could not repay when promising harvests turned poor. Pastoralists who had lost everything to rinderpest turned drought pasture reserves into farms, robbing others of a resource crucial to herd maintenance in lean years.

The resulting destabilization of the rural economy pushed people into growing cities. Accelerating urbanization facilitated a change in diet. People began to consume larger quantities of foods that could not be produced locally in sufficient quantities.

States repeatedly tried to reverse the direction of trade by directing investments into development projects designed to increase production of in-demand foods. However, the failure of these projects further increased dependence on food imports.

INTRODUCTION

The African Red Sea Region does not produce enough food to feed its own population. Sudan, Eritrea, Ethiopia, Djibouti and Somaliland (Somalia) are each reliant on imports to make up for domestic production shortfalls.

Though the amount imported is always significant, the domestic food deficit fluctuates by country by year. In Sudan and Ethiopia, for example, domestic production can account for between 70 and 95 per cent of total food consumed depending upon annual environmental conditions.¹ However, in largely arid Djibouti, local yields even in favourable years account for no more than 10 per cent of calories consumed.²

The ongoing Russian invasion of Ukraine has starkly revealed the vulnerabilities of a regional food system dependent on food imports. Prior to the Russian invasion, Ukraine had been forecasted to export 33.5 million tons of corn and 24 million tons of wheat during the 2021/22 agricultural year. This would have represented 17 and 12 per cent of the global export supply of corn and wheat respectively.³

Almost no grain was exported from Ukraine during the first five months of the war. By summer 2022, there were over 20 million tonnes of grain in Ukrainian silos waiting to be

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- 1 Mohamed E. A. Awaad, et al, 'Estimation of Supply and Demand Fluctuations of the Major Food Security Crops in the Sudan (1974–2004)', *Gezira Journal of Agricultural Sciences*, 5/2 (2007) <http://journals.uofg.edu.sd/index.php/gjas/article/view/45311093> [Accessed 25 June 2022]; Kindie Tesfaye, et al., 'Can Ethiopia Feed Itself by 2050? Estimating Cereal Self-Sufficiency to 2050', *CCFAS Policy Brief*, 12 (2018) <https://cgsp.space.cgiar.org/bitstream/handle/10568/99019/CCAFAS%20PB12%20for%20web.pdf?sequence=5&isAllowed=y> [Accessed 25 June 2022].
 - 2 World Food Programme, *Djibouti Annual Country Report 2019*, World Food Programme, 2019, 7 <https://docs.wfp.org/api/documents/WFP-0000113908/download/> [Accessed 26 June 2022].
 - 3 Warren Patterson, 'Russia-Ukraine Conflict: What It Means for Grain and Oilseed Markets', *ING Economic and Financial Analysis: Commodities* (7 March 2022) <https://think.ing.com/articles/russia-ukraine-conflict-what-it-means-for-grain-markets> [Accessed 27 June 2022]

shipped.⁴ A negotiated agreement allowed grain exports to resume in August 2022, though at less than half the rate of the previous year.⁵

The decrease in quantity of internationally traded grain led to a sharp rise in food prices. In the first six months of 2022, the global price of wheat and corn increased by 37 and 27 per cent respectively.⁶

In the African Red Sea Region, this increase was compounded by already rising inflation. In Sudan, the price of wheat had increased by 173 per cent by July 2022 compared to the year before.⁷ In parts of Ethiopia, the World Food Programme estimated that the minimum household food cost had increased by 59 per cent over the same period.⁸

The war in Ukraine exacerbated the negative effects of a sharp decrease in food yields throughout the African Red Sea Region. In Sudan, for example, the 2021 harvest was just 65 per cent of what it had been the year before.⁹ This decrease was partially caused by a severe multi-season drought.¹⁰ Where rain fell, it was irregular and inadequate. In addition, high inflation across the region reduced the ability of many farmers to invest in pest and weed control, further depressing yields.¹¹

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- 4 Joanna Partridge, 'How Do You Get 20m Tonnes of Grain Out of Ukraine?', *The Guardian*, 7 June 2022. <https://www.theguardian.com/world/2022/jun/07/how-do-you-get-20m-tonnes-of-grain-out-of-ukraine> [Accessed 27 June 2022]
 - 5 'How Much Grain is Being Shipped from Ukraine?', BBC News, 22 August 2022. <https://www.bbc.com/news/world-61759692> [Accessed 23 August 2022]
 - 6 The World Bank, *Food Security Update: Rising Food Insecurity in 2022*, The World Bank, 2 June 2022 <https://www.worldbank.org/en/topic/agriculture/brief/food-security-update> [accessed 27 June 2022]
 - 7 World Food Programme, *WFP Market Monitor – Sudan*, World Food Programme, July 2022 <https://reliefweb.int/report/sudan/wfp-market-monitor-sudan-july-2022#:~:text=The%20inflation%20rate%20showed%20a,to%20%2B6.8%20percent%20in%20May>. [Accessed 16 August 2022]
 - 8 World Food Programme, *Market Watch. Ethiopia: June 2022*, World Food Programme, June 2022 <https://reliefweb.int/report/ethiopia/wfp-ethiopia-market-watch-june-2022> [Accessed 16 August 2022]
 - 9 Food and Agriculture Organization of the United Nations, *Special Report: 2021 FAO Crop and Food Assessment Mission (CFASM) to the Sudan*, FAO, 21 March 2022 <https://www.fao.org/3/cb9122en/cb9122en.pdf> [Accessed 24 June 2022]
 - 10 Famine Early Warning System Network, 'Ethiopia Food Security Alert', Famine Early Warning System Network, 27 May 2022 <https://fews.net/sites/default/files/documents/reports/Ethiopia-Alert-20220527.pdf> [Accessed 24 June 2022]
 - 11 Food and Agriculture Organization of the United Nations. *Special Report: 2021 FAO Crop and Food Assessment Mission (CFASM) to the Sudan*, FAO, 21 March 2022 <https://www.fao.org/3/cb9122en/cb9122en.pdf> [Accessed 24 June 2022]

An estimated 30 million people in the African Red Sea Region have been forced since the start of this crisis to adopt stress-coping strategies, such as depleting assets to purchase grain at ever higher prices. These strategies have allowed many households to secure their minimum food needs for the time being, though at the cost of deepening poverty. For over 8 million people, these strategies have already failed. They have liquidated their assets and are beginning to suffer from acute malnutrition.¹²

The food crisis in the African Red Sea Region will likely persist through at least 2023. Even if the drought ends and local yields increase, food prices will remain high because the region will continue to be dependent on grain imports. The global market will be undersupplied next year because the next Ukrainian harvest is forecasted to be less than two-thirds of the previous one.¹³

Global food prices may likely increase in 2023 as a result of a general global increase in demand for imported grain. Harvests around the world are predicted to shrink in the coming year owing to a sharp rise in global fertilizer prices brought about by the war in Ukraine. In some areas, the cultivation of staple food crops will become uneconomical. As a result, some previously food-exporting regions will be forced to purchase imports to meet local demand.¹⁴

Structural dependence on food imports had already been shown to be a politically and economically destabilizing force before Russia invaded Ukraine.¹⁵ Early warnings by academics and members of the public policy community were proven to be well founded during the 2007/08 global food price spike. During that crisis, the combination of a decrease in exportable surpluses and an increase in the cost of fuel caused grain prices to rise sharply.

12 International Authority on Development, *2022 Global Report on Food Crises*, IAD, 22 July 2022 <https://reliefweb.int/report/somalia/igad-regional-focus-global-report-food-crises-2022> [Accessed 16 August 2022]

13 'Update 1-Analyst APK-Inform Ups Ukraine 2022 Grain Crop, Export Forecast', *Reuters*, 23 June 2022 <https://www.reuters.com/article/ukraine-crisis-harvest/update-1-analyst-apk-inform-ups-ukraine-2022-grain-crop-export-forecast-idINL1N2YA1P1> [accessed 27 June 2022]

14 Food and Agricultural Organization of the United Nations, *Food Outlook – Biannual Report on Global Food Markets*, FAO, June 2022, 77 <https://www.fao.org/3/cb9427en/cb9427en.pdf> [accessed 27 June 2022]

15 For some indicative examples, see: Derek Byerlee, 'The Political Economy of Third World Food Imports: the Case of Wheat,' *Economic Development and Cultural Change* 35/2 (1987): 307–28; Per Pinstrup-Anderson, 'Contemporary Food Policy Challenges and Opportunities,' *The Australian Journal of Agricultural Resource Economics*, 58/4 (2014): 504–18; C. Jean Arment, 'Food Dependency in Sub-Saharan Africa: Simply a Matter of 'Vulnerability,' or Missed Development Opportunity?', *Development and Change*, 51/2 (2020): 283–323.

As widespread hardship set in, communities in Africa, Asia and Latin America took to the streets demanding political action.¹⁶

Perhaps unsurprisingly, the modern, import-dependent food system of the African Red Sea Region has a relatively short history. Until the twentieth century, food production was generally sufficient to meet local demand under all but extremely unfavourable annual environmental conditions.

Traditional diets were focused on locally available foodstuffs. Most people either produced their own food or acquired it via non-market means, such as through private exchange-of-service agreements with producers or government-run taxation and redistribution mechanisms.

This traditional food system broke down following the 1887 introduction of rinderpest, an extremely infectious and highly fatal cattle disease previously unknown to the region. Cattle had been central to this system. When their herds suddenly died, local communities lost their means of producing and distributing foodstuffs.

The collapse of the traditional food system occurred as the British, French, Italian, and Ethiopian empires were dividing the African Red Sea Region amongst themselves. In the first half of the twentieth century, these empires invested heavily in railroads, ferries, camel caravans, and roads in the region to expand the import/export trade.

Enterprising merchants used this modern transportation network to develop a new, market-oriented food system. They purchased surplus yields where they were available, including within the African Red Sea Region. They then moved this food across large distances to areas with unmet demand where they sold it for cash at elevated prices.

The development of a commercial food market solved some supply problems but also, ultimately, destabilized the rural economy. Already struggling cultivators took on loans to finance their operations, which further reduced their resilience to environmental hazards. Pastoralists who had lost everything in the epizootic turned drought pasture reserves into farms, robbing others of a resource crucial to herd maintenance in lean years.

16 Steve Wiggins, et al., 'What Caused the Food Price Spike of 2007/08? Lessons for World Cereal Markets.' London: Overseas Development Institute, 2010. Assefa Admassie, 'The Political Economy of Food Price: the Case of Ethiopia,' *United Nations University World Institute for Development Economics Research Working Paper*, 2013/001 (2013): 8.

Subsequent droughts and poor harvests locked pastoralists and cultivators into structural poverty. Unable to maintain themselves on the land, impoverished cultivators and pastoralists moved to growing cities at increasing rates over the course of the twentieth century.

Urbanization facilitated a change in local tastes. Newcomers to cities became familiar with previously foreign or marginal ingredients. Wheat flour, sugar, and vegetable oils were used to make new dishes that became critical parts of transforming 'traditional' cuisines.

Despite massive government-led investment in development projects, the agricultural sector could not evolve to meet the changing demand. Two decades into the twenty first century, the region still cannot produce enough of the food that people increasingly want to eat.

THE ADVANTAGES AND DISADVANTAGES OF EATING LOCAL

Despite considerable regional variation, there were historically important commonalities in diet across the African Red Sea Region. Generally, meals consisted of a grain with a condiment. The grain was prepared as a porridge or as a flat bread. The condiment contained some combination of dairy products, harvested plants and farmed produce, either raw, cooked or fermented. Meat was occasionally consumed, though only on special occasions. In addition, people drank prepared beverages, such as beers made by fermenting grains.¹⁷

Though nearly all of the ingredients used to cook were grown, harvested, or raised within the region, local communities were part of a global food culture. They lived at the periphery of the Indian Ocean basin and the Silk Road. Since at least the eighteenth-century BC, merchants, pilgrims and travellers have brought seeds, plants, and animals with them as they travelled westward from East and Southeast Asia. The communities they encountered in Africa and elsewhere then used these biological cargos to expand the range of foodstuffs that could be locally harvested or raised.¹⁸

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- 17 Hamid A. Dirar, *The Indigenous Fermented Foods of the Sudan: A Study in African Food and Nutrition*, London: CAB International, 1993; Bikila Wedajo Lemi, 'Microbiology of Ethiopian Traditionally Fermented Beverages and Condiments', *International Journal of Microbiology*, 2020 (2020) <https://doi.org/10.1155/2020/1478536>; James C. McCann, *Stirring the Pot: A History of African Cuisine*, Athens, OH: Ohio University Press, 2009, 78–106; Hassan M. Ahmed, et al., 'Composition of Foods and Dishes Commonly Consumed in Villages of the Gezira Area of Sudan', *Ecology of Food and Nutrition*, 24/3 (1990): 157–165. <http://dx.doi.org/10.1080/03670244.1990.9991134> [Accessed 10 July 2022]; Steven Serels, *The Impoverishment of the African Red Sea Littoral, 1640–1945*, New York, Palgrave Macmillan, 2018, 2–3.
- 18 Nicole Boivin, et al., 'Indian Ocean Food Globalisation and Africa.' *African Archaeological Review*, 31 (2014): 547–581.



Injera is a flat bread traditionally eaten in Ethiopia. The liquid batter is made by combining water, flour made from teff (*Eragrostis tef*), and a bacteria – and fungi-rich starter derived from earlier batters. After fermenting for a few days, the batter is cooked on a round griddle. “Women Cooking Injera in Her House (Gheralta, Tigrai)” by CharlieFreune licensed under CC BY 4.0.

Little consumable food was actually imported into the African Red Sea Region from abroad. Before the invention of steam ships and the combustion engine in the nineteenth century, only low-bulk, high-value merchandise could economically be shipped across large distances. While expensive spices, often destined for elite kitchens, were routinely imported, the staple foods that made up the bulk of people’s diets were not.¹⁹

The only people in the region that ate imported grain lived permanently in the ports that served the Indian Ocean trade. Since it was easier to ship grain by boat than by camel, these urban communities could more readily import grain from Asia than from inland agricultural zones. These conditions also ensured that little grain was trans-shipped inland from these ports.

19 C. R. Boxer, ‘A Note on Portuguese Reactions to the Revival of the Red Sea Spice Trade and the Rise of Atjeh, 1540—1600’, *Journal of Southeast Asian History*, 10/3 (1969): 415—428.

The exclusive dependence on local food production created its own set of vulnerabilities. Much of the region is arid or semi-arid and therefore unsuitable for agriculture. Intensive farming is primarily confined to the area in and around the highlands, and to the shores and dried beds of the torrential rivers that flow down from them.²⁰

Even in these agricultural zones, the availability of sufficient water was not guaranteed. Droughts that lasted between one and two years were common, occurring at least every five years.²¹ The resulting periodic decrease in vegetation cover could and often did create the conditions for locust swarms to form.²²

Human settlement in this region has only been possible because local communities historically developed technological solutions and social strategies for dealing with environmental hazards. Cultivators responded to normal climatological variability by focusing primarily on growing suitably drought resistant crops, such as indigenous varieties of sorghum and millet.²³ Further, they used oxen-driven ploughs to cultivate large surpluses in good years that could be stored and eaten in bad ones.²⁴

To ensure the availability of suitable oxen, cultivators collaborated across ethnic, linguistic, and religious lines with neighbouring pastoralist groups. In exchange for maintaining the supply of oxen, pastoralists were given a fixed annual payment of grain. This collaboration gave pastoralists additional incentive to eat meat sparingly.²⁵

The redistribution of food stuffs also lay at the centre of political power in the region. Taxes and tribute were generally paid in grain and/or cattle, which allowed elites to amass large food reserves. In good years, elites used these reserves to feed themselves, their families and

20 Serels, *The Impoverishment of the African Red Sea Littoral*, 15–17.

21 Steven Serels, *Unequal Adaptations: A History of Environmental Change in the Sudan-Eritrea-Ethiopia Border Region*, Rift Valley Institute, 2021: 11–12.

22 E. Despland, et al. 'Small-Scale Processes in Desert Locust Swarm Formation: How Vegetation Patterns Influence Gregarization', *Oikos*, 88/3 (2000): 652–662.

23 Steven Serels, *Starvation and the State: Famine, Slavery and Power in Sudan, 1883–1956*, New York: Palgrave Macmillan, 2013: 139; A. C. D'Andrea, 'T'ef (*Eragrostis tef*) in Ancient Agricultural Systems of Highland Ethiopia', *Economic Botany*, 62/4 (2008): 547–566.

24 Serels, *Unequal Adaptations*, 11

25 Mansfield Parkyns. *Life in Abyssinia: Being Notes Collected during Three Years' Residence and Travels in that Country*, New York: D. Appleton and Co, 1854, 116; Ezio Marchi, *Studi sulla Pastorizia della Colonia Eritrea*, 2nd Edition, Florence: Istituto Agricolo Coloniale Italiano, 1929, 81.

their retinue, and, during feast days or other celebrations, their subjects and followers. In lean years, they were expected to redistribute stored reserves to the needy.²⁶

These production and distribution mechanisms collectively formed the core of the traditional food system. They allowed large, non-agricultural populations to live exclusively off of local yields. At the same time, they crowded out the development of a market in staple foods. Few non-farmers needed to pay for their food because they received enough as a result of their social relationships.

Unfortunately, this regional food system was not infallible. Lean periods sometimes stretched beyond two years and food stores ran out. Sometimes political elites shirked their responsibilities and did not provide for the needy. At such moments, periods of food insecurity intensified and became famines.²⁷ Nonetheless, this food system was robust enough to ensure that routine droughts, insect infestations and other regularly occurring environmental hazards were not deadly crises.

²⁶ Serels, *The Impoverishment of the African Red Sea Littoral*, 21–22.

²⁷ P. M. Holt. *The Sudan of the Three Niles: The Funj Chronicles 910—1288/1504—1871*, Leiden: Brill, 1999, 20, 32, 63; Richard Pankhurst, *The History of Famine and Epidemics in Ethiopia Prior to the Twentieth Century*, Addis Ababa: Relief and Rehabilitation Commission, 1985: 51–3.

THE DEVELOPMENT OF A MARKET-ORIENTED FOOD SYSTEM

The traditional food system collapsed in the late 1880s, causing what was likely the deadliest famine the African Red Sea Region has ever experienced. This famine was set off by the inadvertent introduction of rinderpest in 1887. Previously unknown to sub-Saharan Africa, rinderpest is a highly infectious viral disease that kills 90 percent of cattle in virgin populations.²⁸

Likely imported via the Eritrean port of Massawa, the disease quickly spread overland along well-established migration and trade routes. Within two years, nearly all of the cattle in the African Red Sea Region had died.

With no cattle to pull the ploughs, the extent of cultivation shrank. In 1888, large swaths of agricultural land fell out of cultivation along the Nile, in the highlands, and in the rainfed lowlands that connected them. They would remain uncultivated for a decade and, in some parts, even longer.

Following the introduction of rinderpest, harvests were insufficient to feed the local population. By 1889, food stores had run out and mass starvation had set in. During the resulting multi-year famine, up to two-thirds of the population in some areas died.

Though the acute crisis ended in 1892, widespread food insecurity persisted into the twentieth century. Survivors of the famine did not have the resources to rebuild what had been lost. They had become too poor and there were too few cattle to resume extensive

28 'Paramyxoviridae and Pneumoviridae,' in *Fenner's Veterinary Virology*, 5th edition, N. James MacLachlan, Edward J. Dubovi, eds., Cambridge, MA: Academic Press, 2017, 343.

ploughing. Many famine refugees lacked the resources to return to the countryside and stayed in the cities to which they had fled.²⁹

The collapse of the traditional food system was recognized as a business opportunity by some enterprising foreign merchants from the Eastern Mediterranean, Arabia, and India. Though foreign merchants had been trading in the region for centuries, they had previously focused on the trade in high-value, low-bulk merchandise.³⁰

At the start of the twentieth century, they recognized that healthy profits could also be made selling some low-value, high-bulk goods, such as sorghum and millet. The price for these staple foods had risen owing to reduced harvests. Merchants only had to solve the logistical challenges of sourcing food and transporting it to overcrowded urban centres.

They capitalized on the ongoing massive European investment in transportation infrastructure in the African Red Sea Region. Though some of this investment came from the private sector, most came from states looking to expand their empires.

Following the opening of the Suez Canal in 1869, Red Sea ports became important for steamship traffic between Europe and South Asia. Unable to carry enough fuel to make the journey, these modern boats had to stop in the Red Sea to take on more coal.³¹ While in port, they could also load and unload other cargo.

By the 1880s, European interest in controlling some Red Sea ports expanded into a broader interest in controlling adjacent inland territory. This led to a multi-lateral armed and diplomatic conflict. Though European powers negotiated amongst themselves, they launched wars against the Mahdist Sudanese state and the Ethiopian Empire.

The conflict ended at the turn of the twentieth century with a reorganization of state boundaries. Britain established colonial control over Sudan and Somaliland, Italy over

29 Richard Pankhurst, *The Great Ethiopian Famine of 1888–1892: A New Assessment*, Addis Ababa: Haile Sellassie I University, 1964; Steven Serels, 'Famines of War: The Red Sea Grain Market and Famine in Eastern Sudan 1889–1891', *Northeast African Studies*, 12/1 (2012): 73–94.

30 Dominique Harre, 'Exchanges and Mobility in the Western Indian Ocean: Indians between Yemen and Ethiopia, 19th–20th Centuries', *Chroniques du manuscrit au Yémen*. S1 (2018): 42–68; Daniel K. Thompson, 'Capital of the Imperial Borderlands: Urbanism, Markets, and Power on the Ethiopia-British Somaliland Boundary, ca. 1890–1935', *Journal of Eastern African Studies*, 14/3 (2020): 529–552; Robert Tignor, 'The Sudanese Private Sector: An Historical Overview', *The Journal of Modern African Studies*, 25/2 (1987): 179–212.

31 Eric Macro, 'South Arabia and the Overland Route to India', *Proceedings of the Seminar for Arabian Studies* 12 (1982): 50.

Eritrea, and France over Djibouti. The Mahdist state collapsed, and Ethiopia was largely confined to its contemporary boundaries.

The new colonial states invested heavily in transportation infrastructure in the first third of the twentieth century. They built modern port facilities at Port Sudan and Djibouti and improved existing ones at Massawa. They constructed train lines linking these ports to key inland agricultural zones and market centres. They also established a ferry network on the Nile and its tributaries and, in some areas, subsidized camel caravans. In the middle third of the century, they built roads that could accommodate growing fleets of trucks.³²



Between 1897 and 1917, Compagnie Impériale des Chemins de fer d'Éthiopie with headquarters in Paris constructed a railroad linking the newly built French colonial port of Djibouti with the newly founded Ethiopian capital city of Addis Ababa. In 2011, construction began on a new railroad along the same route financed by loans from China and built by Chinese firms. This new railroad opened on 1 January 2018. "The Map of Addis Ababa-Djibouti Railway" by Skillia1st licensed under CC BY4.0

32 Rosanna van Gelder de Pineda, *Le Chemin de Fer de Djibouti à Addis-Abeba*, Paris: l'Harmattan, 1995; Richard Hill, *Sudan Transport: a History of Railway, Marine and River Service in the Republic of the Sudan*, London: Oxford University Press, 1965; Richard Pankhurst, 'Roadbuilding during the Italian Fascist Occupation of Ethiopia, 1936—1941' *African Quarterly*, 15/3 (1976): 21—63.

To recoup their investment, colonial states opened this government-funded infrastructure to commercial traffic. Merchants quickly recognized that the transportation options that were becoming available were making long-distance trade in staple foods possible. They began importing large quantities of grain and sugar from, primarily, India and the Middle East to inland markets via Red Sea ports.³³

These merchants also sought out local suppliers. Though commercial prospects at the start of the twentieth century were limited, merchants were initially able to purchase surplus grain from cultivators along the Nile's Dongola Reach, in the Jazira plain south of Khartoum, and in al-Fashaga/Nuqara on the Ethiopian-Sudanese border.³⁴ As the transportation infrastructure came online, merchants found other local cultivators whose surplus yields could be cheaply shipped to even more centres of unmet demand.³⁵

To assist impoverished farmers in expanding their operations, merchants offered lines of credit in the form of crop futures contracts. At the start of the growing season, merchants would agree to purchase a fixed quantity of grain at a set price from an individual cultivator. Prior to the harvest, the cultivator could draw on this credit as needed. After the harvest, the two parties would use cash to settle the difference between the fixed purchase price and the credit owed.³⁶

This credit system facilitated the intensification of grain production on land that had remained fallow since the devastating late nineteenth century famine. It also ensured that locally produced yields were transported to centres of demand where they could be resold. In extending this type of credit, merchants helped create the expectation that food was to be purchased in the market instead of acquired through social relationships.

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- 33 Richard Pankhurst, 'Indian Trade with Ethiopia, the Gulf of Aden and the Horn of Africa in the Nineteenth and Early Twentieth Centuries (*Le commerce indien avec l'Éthiopie, le golfe d'Aden et la Corne de l'Afrique au XIXe siècle et au début du XXe*)', *Cahiers d'Études Africaines*, 14/55 (1974): 453–497.
- 34 James C. McCann, 'A Dura Revolution and Frontier Agriculture in Northwest Ethiopia, 1898—1920', *The Journal of African History*, 31/1 (March 1990): 121—134; Serels, *Starvation and the State*, 129.
- 35 Renato Paoli, *Le condizioni commerciali dell'Eritrea*, Novara: Istituto Geografico de Agostini, 1913, 7—9; Serels, *Starvation and the State*, 131; James McCann, *People of the Plow: An Agricultural History of Ethiopia, 1800—1990*, Madison, WI: University of Wisconsin Press, 1995, 180—183
- 36 Martin W. Wilmington, 'Aspects of Moneylending in Northern Sudan', *Middle East Journal*, 9/2 (1955): 139–146; Steven Serels, 'Poverty and The Transition to Instability: the Italian Lira in Eritrean History', In *Monetary Transitions: Currencies, Colonialism and African Societies*, edited by Karin Palaver, New York: Palgrave Macmillan, 2022, 172.

THE IMPACTS OF THE NEW FOOD SYSTEM

The development of a market-oriented food system did not bring prosperity and stability to the rural countryside. Instead, it eroded safeguards against normal environmental variability, causing structural poverty and endemic food insecurity.

As the commercial food market developed, crop futures became even more important to agricultural production. Cultivators had few other avenues for accessing the capital necessary to run their farms. By the end of the twentieth century, up to 80 per cent of farmers in some parts of the region were in debt.³⁷

Futures contracts came with a large downside risk for cultivators. Harvests were not guaranteed. Fields that looked promising at the start of the season could produce little by the end for a variety of reasons, including an early end to the rains or a sudden infestation of pests.

This form of credit locked cultivators into selling a fixed quantity of grain regardless of final yield. In promising years that turned out bad, cultivators were left without enough food to feed themselves and their families and without enough money to purchase the difference.

In extreme cases, indebtedness could lead to starvation. The 1914 famine in Northern and Eastern Sudan has been directly attributed to the widespread sale of crop futures during a period of persistent poor harvests.³⁸

More commonly, indebtedness pushed farmers off the land. Debt servicing eroded the profits from farming and, increasingly over the course of the twentieth century, forced cultivators

37 Michael Kevane, 'Is the 'Sheil' a Shill? Informal Credit in Rural Sudan', *The Journal of Developing Areas*, 27/4 (1993): 515-34.

38 Serels, *Starvation and the State*, 135-143.

to seek off-farm employment. While many sought out seasonal paid work, others chose to abandon farming and permanently resettle in growing cities.³⁹

The development of the commercial food market also undermined pastoralist land management strategies. Traditional practices required pastoralists to hold the torrential rivers that flowed down from the highlands into the arid lowlands as drought pasture reserves. When the rains failed and pastures were poor, pastoralists maintained their herds by driving them to these rivers to graze on the limited but guaranteed vegetation.⁴⁰

At the start of the twentieth century, some pastoralists settled along these rivers and took up commercial farming. Many of these settlers had lost everything during the first rinderpest epizootic and subsequent famine. Unable to restock their herds, they began intensively cultivating grain and cotton.

Early successes encouraged imitation elsewhere.⁴¹ They also encouraged government officials across the African Red Sea Region to appropriate key drought pasture reserves and turn them over to foreign investors.⁴²

Few pastoralists participated in the expansion of cultivation into their traditional drought pasture reserves. For example, only 15 per cent of the Afar in the Awash River Valley in the second half of the twentieth century engaged in cultivation.⁴³

For most pastoralists, agricultural development turned normal environmental variability into an insurmountable disaster. After they lost their drought pasture reserves, routine years

39 Aschalew Abeje, 'Causes and Effects of Rural-Urban Migration in Ethiopia: A Case Study from Amhara Region', *African Studies*, 80/1 (2021): 77–94.

40 Maknun Gamaledin, 'The Decline of Afar Pastoralism', In *Conflict and the Decline of Pastoralism in the Horn of Africa*, edited by John Markakis, 45–36, London: Macmillan Press, 1993; M. E. Abu Sin, 'Environmental Causes and Implications of Population Displacement in Sudan' In *War and Drought in Sudan; Essays on Population Displacement*, Etligani E Eltigani, 11–22, Florida: University Press of Florida, 1995; Muneera Salem-Murdock, *The Impact of Agricultural Development on a Pastoral Society: the Shukriya of the Eastern Sudan: A Report Submitted to the Agency for International Development*, New York: Institute for Development Anthropology, 1979.

41 Steven Serels, 'Small Scale Farmers, Foreign Experts, and the Dynamics of Agricultural Change in Sudan, Eritrea and Djibouti before the Second World War', *International Journal of African Historical Studies*, 52/2 (2019): 227–30.

42 Serels, *The Impoverishment of the African Red Sea Littoral*, 142–152, 168–169.

43 Alexander Gibbs, *Green Heart of a Dying Land: A Study of the New Cotton Wealth of the Old Afar Sultanate of Aussa*, Addis Ababa: Huntington Technical Service, 1973, 56.

of poor pastures became crises during which pastoralists had to choose between feeding themselves or feeding their animals.⁴⁴

During protracted droughts, animal mortality was so high that pastoralists were unable to rebuild their herds when conditions improved. Without their animal wealth, these pastoralists were forced to settle down.⁴⁵

As poverty and indebtedness became widespread, cities grew. By 2022, 46 million people in the African Red Sea Region were living in cities.⁴⁶

Increased urbanization facilitated the transformation of local diets. Expanding multi-ethnic cities were sites of cross-cultural contact between people with different food traditions, including with the European colonial agents who ruled much of the region for nearly two-thirds of the twentieth century. This contact allowed tastes to change.

Urban dwellers increasingly turned away from some traditional foods. They supplemented, if not replaced, sorghum and millet with refined wheat flour.⁴⁷ They stopped drinking traditional beers and began to consume heavily sweetened tea.⁴⁸ They developed preferences for new types of dairy products.⁴⁹ They started to cook with palm or peanut oil instead of clarified butter. In addition, they increased the amount of meat that they consumed.⁵⁰

44 Serels, *The Impoverishment of the African Red Sea Littoral*, 169–170

45 Catherine Miller, 'Power Land and Ethnicity in the Kassala-Gedaref States: An Introduction' In *Land, Ethnicity and Political Legitimacy in Eastern Sudan (Kassala and Gedaref States)*, edited by Catherine Miller, Cairo: Centre d'études et de documentation économique, juridique et sociale, 2005, 27.

46 United Nations, *World Statistics Pocketbook 2022*, New York: United Nations, 2022. Statistics for Somaliland come from World Bank, *Somaliland: Poverty Profile and Overview of Living Conditions*, World Bank, 2015, 12 <https://somalilandcsd.org/wp-content/uploads/2021/08/Somaliland-Poverty-Profile-2015.pdf> [accessed 22 August 2022]

47 Edward Thomas and Magdi El Gizouli, 'Sudan's Grain Divide: A Revolution of Bread and Sorghum', *Rift Valley Institute Briefing Paper*, February 2020, 2. <https://riftvalley.net/sites/default/files/publication-documents/Sudan%27s%20Grain%20Divide%20by%20Edward%20Thomas%20and%20Magdi%20El%20Gizouli%20-%20RVI%20X-Border%20Project%20%282020%29.pdf> [accessed 20 July 2022]

48 Hamid A. Dirar, 'The Art and Science of Merissa Fermentation', *Sudan Notes and Records*, 57 (1976): 115.

49 Warda Abdelgadir, 'The Traditional Fermented Milk Products of the Sudan', *International Journal of Food Microbiology*, 44/1–2 (1998): 1–13.

50 Ibrahim Hassen Worku, et al., 'Diet Transformation in Africa: The Case of Ethiopia', *Agricultural Economics*, 48/S1 (2017): 73–86.



The triplet cities of Khartoum, Khartoum North and Omdurman grew rapidly in the decades following Sudanese independence. Between 1956 and 2022, this metropolitan area grew from an estimated 300,000 to over 6 million inhabitants. “ISS010-E-23451” by Nasa

While some new food practices remained confined to the cities, others became more universal. As more people began traveling into, out of, and between urban areas, the taste for certain dishes, ingredients, and food preparations spread within countries and across international borders.⁵¹

Local production was able to keep up with some of the increased demand for key ingredients. Pastoralists were able to increase their herds in line with the growing taste for meat. Between 1987 and 2003, Sudanese pastoralists alone increased the size of their cattle herds by 20 million head, and of sheep and goats by 30 million head each.⁵²

51 McCann, *Stirring the Pot*, 94–100.

52 Dan Fahey, ‘The Political Economy of Livestock and Pastoralism in Sudan’, *Intergovernmental Authority on Development, Livestock Policy Institute Working Paper No 60—08*, 2007, 36.

On the other hand, the region was unable to increase production of wheat, sugar, and vegetable oils in step with growing demand. To overcome this deficit, the region began importing ever larger quantities of food. By 2018, the region was importing over USD4.5 billion of food each year.⁵³



Until the twentieth century, sugar was a luxury food in Sudan. Since it was not locally cultivated, it had to be imported by camel caravan at great expense. The construction of the railroad brought down prices and made sugar generally affordable. The drinking of sugary tea became a near universal practice. In cities, this beverage is often purchased from female street vendors. “Selling Tea in Sudan” by www.j-pics.info licensed under CC BY-NC-SA 2.0

53 This figure leaves out Somaliland as the FAO does not disaggregate the statistics of that country from those of Somalia. Food and Agriculture Organization of the United Nations, *Statistical Yearbook: World Food and Agriculture 2020*, Rome: FAO, 2020, 216—18.

THE FAILED SEARCH FOR FOOD SECURITY

Though the African Red Sea Region's transportation infrastructure currently allows for the largescale importation of food stuffs, the colonial officials who designed it had hoped that the traffic would flow in the other direction. At the beginning of the twentieth century, these officials had good reason to believe that the region would become a net exporter of food. Despite prevailing high prices and decreased overall supply, private enterprise was able to profitably export small quantities of grain from the region in favourable years.⁵⁴

This belief was central to colonial development planning. The various agricultural improvement programs initiated under colonial rule shared a similar logic. Increasing food production was to bring down local prices and produce a surplus that could be competitively exported. Unfortunately, these plans generally failed.

Some of these plans failed from lack of commitment. For example, British officials in Sudan at the start of the twentieth century sought to attract foreign investment in intensive grain cultivation. When funding was not forthcoming, they partnered with a private organization to develop cotton farming instead.⁵⁵

Others failed by design. Many small-scale projects were set up as experiments, supervised by agronomic experts. Their goals were to gather more information about market conditions, cultivation techniques, species suitability, etc. For the planners of these pilot projects, failure was an acceptable outcome because it provided more actionable data.⁵⁶

Still others failed because they were unsuitable to local conditions. For example, Italian Fascist planners believed that they could rapidly conquer Ethiopia in 1935 and immediately compel the local population to produce large quantities of wheat for export. However, the invading Italian force encountered fierce resistance. The drawn-out military campaign

54 *L'Economia Eritrea nel Cinquantennio dell'Occupazione di Assab (1882—1932)*, Florence: Istituto Agricolo Coloniale Italiano, 1932, 42; Serels, *Starvation and the State*, 131

55 Serels, *Starvation and the State*, 143—148

56 Serels, 'Small Scale Farmers, Foreign Experts, and the Dynamics of Agricultural Change', 220—227.

decreased local yields and the Italian military was forced at great expense to import provisions from abroad.⁵⁷

Independence came to the region slowly. Full sovereignty was returned to Ethiopia with the end of the Second World War. Sudan became independent in 1956, Djibouti in 1977 and Eritrea in 1991. Somaliland's status as a distinct state is still not recognized by the United Nations.

Since independence, the governments of Sudan, Eritrea and Ethiopia have each committed themselves at one time or another to developing their countries into major food exporters. Each one has also failed to meet this goal.

Failure has had serious negative consequences. In Ethiopia and Eritrea, failed development programs have led to further dispossession and displacement in the rural countryside.⁵⁸ In Sudan, they have increased government debts to unsustainable levels, destabilized the local currency and left the country more food insecure.⁵⁹

The governments of Somaliland and Djibouti currently recognize that their countries lack the natural resources necessary to become food self-sufficient. As a result, their development plans focus on increasing incomes to ensure households can purchase imported food.⁶⁰

The logic of colonial planning persists. States across the region continue to prioritize the expansion of foreign trade over other social goals. They hope that market forces, if properly guided, stimulated, or corrected, will ensure both an adequate national supply of food and its equitable distribution. Since the start of the twentieth century, states have worked with private enterprise towards these twin goals.

57 Alberto Sbacchi, *Ethiopia under Mussolini: Fascism and the Colonial Experience*, New Jersey, Zed Books, 1985, 95.

58 Wassihun Gebreegizaber Woldesenbet, 'The Tragedies of a State Dominated Political Economy: Shared Vices among the Imperial, Derg, and EPRDF Regimes of Ethiopia', *Development Studies Research*, 7/1 (2020): 72–82.

59 Mohammed Nureldin Hussein. 'The IMF and Sudanese Economic Policy', In *Sudan: State, Capital and Transformation*, edited by Tony Barnett and Abbas Abdelkarim, 55–72, London: Croom Helm, 1988; Lennart Olsson, 'On the Causes of Famine: Drought, Desertification and Market Failure in the Sudan', *Ambio*, 22/6 (1993): 395–403.

60 Republic of Djibouti. *SCAPE: Strategy of Accelerated Growth and Promotion of Employment*, Djibouti, 2014 https://planipolis.iiep.unesco.org/sites/default/files/ressources/djibouti_scape_-_anglais.pdf [Accessed 5 August 2022]; Ministry of National Planning and Development, Republic of Somaliland. *Somaliland National Vision 2030*. December 2011 <https://www.refworld.org/pdfid/5b4312194.pdf> [Accessed 5 August 2022]

The efforts of merchants and government officials created a market-oriented food system to replace an older, non-commercial one that had collapsed. This new system increased the overall food supply by facilitating the commercialization of agriculture throughout the African Red Sea Region and by supplementing local yields with imports.

The development of a globally connected, regional food market came with new systemic risks. The commercialization of agriculture eroded safeguards against normal environmental variability. The reliance on food imports exposed individuals and households to global price spikes and supply shortfalls.

The African Red Sea Region's market-oriented food system cannot guarantee food security. Despite the efforts of merchants and government officials, parts of the region experienced devastating famines in 1918—19, 1925—27, 1942—43, 1947—9, 1972—74, 1974—75, 1984—85, 1990—91, 1993, 1999—2000, and 2002—03. Tragically, another one has recently begun.

The disruption to the global supply and distribution of food caused by the war in Ukraine has yet again revealed the need for change. The African Red Sea Region's food system is insufficiently robust to meet contemporary challenges. Systemic change is necessary to ensure that everyone always will have enough to eat.

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PURCHASING INSECURITY:

THE AFRICAN RED SEA REGION AND THE GLOBAL FOOD TRADE

The African Red Sea Region does not produce enough food to feed its own population. Sudan, Eritrea, Ethiopia, Djibouti and Somaliland (Somalia) are each reliant on imports to make up for domestic production shortfalls. This presents unresolved challenges to the food security of the region. The regional food system is currently in crisis because it is reliant on the international grain trade. The ongoing Russian invasion of Ukraine has disrupted normal patterns of global food production and distribution, and, in turn, contributed to a rapid rise in prices in the African Red Sea Region. This crisis will likely continue through at least 2023. Focusing on the late nineteenth and twentieth centuries, *Purchasing Insecurity* examines the historical origins of the region's structural food insecurity, linking the current crisis to the rinderpest epizootic (1887 – 1889); destabilization of the rural economy; and accelerating process of urbanization that subsequently transformed the lives of people living in the African Red Sea Region.

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