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Possibilities & Challenges for Food Sovereignty in Barbados

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Possibilities & Challenges for Food Sovereignty in Barbados

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RÉSUMÉ

À l'extrémité Est des Caraïbes, la Barbade importe quelques 90% de ses aliments. Les menaces croissantes liées aux changements climatiques, aux maladies non-transmissibles, à la réduction des mobilités due à la pandémie de COVID-19 et aux prix éternellement en hausse ont remis en évidence la vulnérabilité de ce territoire insulaire exigu et l'importance de la souveraineté alimentaire. L'autosuffisance alimentaire est toutefois un projet ambitieux à la Barbade vu la petite taille de l'île, ses sols et sa biodiversité appauvris par trois siècles de monoculture de canne à sucre, et une pression déjà lourde sur ses ressources limitées en eau douce. En plus des contraintes environnementales de l'île, des enjeux sociaux et économiques freinent également la transition vers un système alimentaire autonome. Par exemple, le travail agricole, stigmatisé par l'histoire coloniale, l'esclavage et la mondialisation, est souvent peu attractif pour de nombreux habitants. Puis, l'économie barbadienne, toujours basée sur le tourisme, les imports et une agriculture destinée aux exports, présente des barrières structurelles importantes empêchant son indépendance vis-à-vis du marché global.

Cette étude cherche à comprendre les défis socio-environnementaux qui freinent les changements positifs dans le système alimentaire de la Barbade et à stimuler la discussion dans la communauté pour identifier des pistes de solutions assurant à la fois la réalisation de la sécurité alimentaire, soit l'accès aux aliments, et de la souveraineté alimentaire, soit le droit du peuple à définir ses propres politiques agricoles et alimentaires. Cette recherche a deux buts principaux : d'abord, d'offrir une réflexion critique sur l'héritage colonial de la Barbade et ses implications en agriculture; puis, d'identifier des avenues agraires qui respectent les limites socio-environnementales de l'île, à travers l'évaluation de modèles utilisés localement et dans des environnements semblables dans le monde.

L'étude de 26 entretiens semi-dirigés et de l'observation participante effectués dans les champs, marchés et cuisines de la Barbade d'août 2021 à avril 2022 met en lumière les habitudes, perceptions et ambitions des Barbadiens et Barbadiennes en termes d'alimentation, d'agriculture et de système alimentaire. En plus d'observations plus larges sur les phénomènes sociaux et politiques barbadiens, permises par une longue immersion sur l'île débutant en 2020, ces méthodes identifient les causes sous-jacentes et les processus persistants qui maintiennent le système alimentaire barbadien dans la vulnérabilité. À travers un partenariat avec des organismes agro-alimentaires locaux et la réalisation d'un film documentaire et de contenu vidéo pour les médias sociaux, ce projet célèbre les solutions au niveau local et régional et offre l'opportunités d'amener plus loin la discussion entre les différents acteurs à la Barbade, mais aussi avec d'autres communautés confrontées à des défis similaires.

Mots-clés: Souveraineté alimentaire, Sécurité alimentaire, Extraversion économique, Société de plantation, Mondialisation, Postcolonialisme, Systèmes agraires, Systèmes socio-écologiques, Barbade, Caraïbes

ABSTRACT

It is estimated that Barbados imports nearly 90% of its food. Growing threats of climate change, non-communicable diseases, reduced mobilities due to COVID-19 and the ever-rising prices highlighted the vulnerability of the island and the importance of food sovereignty. However, aiming towards food self-sufficiency is an ambitious project in Barbados, considering the island's small size, an already heavily used limited freshwater resource, and impoverished soils and biodiversity due to three centuries of sugar cane monoculture. In addition to those environmental constraints, social and economic issues also hinder change. For example, agricultural work, stigmatized by colonial history, slavery and globalization, is often unattractive to the locals. Furthermore, the Barbadian tourism-based economy and export-oriented agriculture present significant structural barriers to building independence from the global market.

This research project seeks to build an understanding of and stimulate the discussion on the socio-environmental challenges that prevent positive changes in Barbados' food system to overcome them, to ensure that both food security, or access to food, and food sovereignty, or the right of the people to define their own agricultural and food policies, are fulfilled. The project has two main goals. First, to bring a critical perspective on the colonial heritage of Barbados and its implications in agriculture. Second, to identify agrarian avenues that respect the socio-environmental limits by evaluating the models used locally and in similar environments around the world.

A study of 26 semi-directed interviews and participant observation in the fields, markets and kitchens of Barbados from August 2021 to April 2022 provides insights into the habits, perceptions and aspirations of Barbadians in terms of food, agriculture and the food system. Together with wider observations of the Barbadian society and politics, allowed by a long-term immersion on the island starting in 2020, these methods identify some of the underlying causes and perpetuating processes at play in the unsustainable food system. Through a partnership with local agri-food organizations and the production of a documentary film and video content for social media, this research project celebrates the solutions found at the local and regional level and offers opportunities for further discussion with stakeholders in Barbados, but also in other communities facing similar challenges.

Keywords: Food Sovereignty, Food Security, Economic Extraversion, Plantation Society, Globalisation, Postcolonialism, Food Systems, Socio-ecological Systems, Barbados, Caribbean

TABLE OF CONTENT

TABLES & FIGURES

ABBREVIATIONS

BERP: Biocultural Education & Research Programme
CHF: Coco Hill Forest
IICA: Inter-American Institute for Cooperation on Agriculture
IMF: International Monetary Fund
NCD: Non-Communicable Diseases
OGCA: Organic Growers and Consumers Association
RSB: Regenerative School Bus
SAP: Structural Adjustment Policy
SFB: Slow Food Barbados
SIDS: Small Island Developing State
WTO: World Trade Organization

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INTRODUCTION

At the heart of social, economic and natural processes, our diets have changed through time with globalization, from colonial to free trade policies. From the slow but steady descent of the trendline of prevalence of undernourishment in the world, around 13% in 2005 to values oscillating around 9% in the last decade, there has been improvements to the issue of hunger (FAO, 2020). Surprisingly, attempts to alleviate world hunger also came with problems like obesity. Today, the globalized and industrialized food system has major social and environmental impacts on human and nonhuman ecosystems, translating into the estimated "hidden costs" of US$12 trillion in health costs and US$7 trillion in environmental costs annually (Hendriks et al., 2021). Yet, we struggle to implement beneficial change to address that, articulating cultural and economic excuses to justify the phenomenon.

The easternmost island of the Caribbean, Barbados imports nearly 90% of its food (Ewing-Chow, 2019; Hares, 2018). Producing sugar on the island since the 17th century, England started the model that fueled its industrial revolution in Barbados. The island's economic model, traditionally tailored to export raw materials and import everything else, remains externally propelled, now focusing on tourism, financial services and an export-oriented agriculture. This presents major structural barriers to building independence from the global market, and mostly profits to foreign firms and the local elite, to the detriment of the rural poor and small-scale farmers. Recently, the rising threats and burdens of climate change, non-communicable diseases (NCDs), COVID-19 and the Russo-Ukrainian conflict have further highlighted the precariousness of this exiguous insular territory, reviving the debate on the necessity for self-reliance through local production.

Focusing on food availability, accessibility, utilization and stability (FAO, 2020) without consideration for how and by whom food is produced, the food security discourse enacted so far is increasingly being questioned. Beyond structural hinderances, domestic production present socio-ecological challenges given the island's small size, limited freshwater resources, and impoverished soils after three centuries of sugar cane monoculture. Local agriculture also suffers from the stigmas of the colonial and plantation era, as well as the neoliberal machine of modern times. Nonetheless, it appears urgent to foster more resilient ecosystems through adequate water management and regeneration of soils and local biodiversity, the latter having been extensively

degraded by the introduction of non-indigenous species throughout history, whether voluntary or not (Alam, 1985; Dore, 2018; Everard & Everard, 1992; Fields & Horrocks, 2011; Pretty et al., 2006).

From a problem anchored in political economy, this research engages beyond a descriptive attempt, to appropriately question what kind of nature and politics the Barbadian people want to define their food system. Drawing from critical geography and political ecology, I approached the question from a self-reflexive posture towards cultural, racial, gender or class judgements to focus on the structural inequalities that shape the global food system, and through a long-term commitment to the community through volunteering in local farms and organizations and the making of a mid-length documentary film. In parallel to this thesis, the documentary film plays an important role to provide a direct means of expression to Barbadians. The release of the film, planned for February 2023 in Barbados, will also create an opportunity for discussion with an even wider audience, while assessing the progress made so far.

Identified from the onset of this study as a promising solution to tackle the multi-faceted issue Barbados faces, food sovereignty, advocating for the right of peoples to define their own agricultural and food policies (LVC, 2007), would contribute to building a resilient Barbados, and safeguard, celebrate and continue creating its culture. This research project then seeks to determine if and how Barbados can engage in a food sovereignty movement, considering the above-mentioned challenges, and will do so via two main goals. First, to provide a critical perspective on the colonial heritage of Barbados, the concepts of sovereignty, dependency, extraversion and social stratification, and their implications in the food system. Second, to celebrate agricultural models that respect and may help mitigate the socioecological constraints of the island. The next section of the introduction outlines the environmental, historical, demographic and economic context of Barbados, which has led to the proposal of this research project.

Barbados: from export crops to export beaches

Inhabited by indigenous migrant groups at various moments until the 16th century, Barbados was empty when English colonists arrived in 1627 (Barbados Museum & Historical Society, 2022). Culminating at 336 meters above sea level, Barbados looks like a pancake from the air, and from the sea, you can observe a plateau between 100-300 meters (Figure 1). Given this gentle

topography, agriculture was important in Barbados since the first human settlements, becoming a structural force when the English settlers started cultivating for exports. One result of this is visible in the road network, with its six highways branching out of the shipping center, Bridgetown, towards the production areas, with usually poorly maintained or inexistent linkages between each highway.

On this small island of 432 square kilometers, the population rose rapidly from the onset of colonization, making Barbados one of the most densely populated territory in the world in the 17th century, its population reaching 65,000 in 1684 and 87,000 in 1780 (Beckles & Watson, 1987; Winford, 2001). With a population of 287,371 in 2020, it is now the 15th most densely populated country in the world (World Bank, 2020). Originally populated by planters and servants of British origin, followed by African slaves and now various people from all over the Caribbean and the world, Barbados is home to people of various ethnicities, religions and cultures. According to the 2010 census, most Barbadians identify as black (92.4%) or mixed (3.1%). The remaining 4.5% identify as white (2.7%), South Asian (1.3%), East Asians and Middle Easterners (0.1%, respectively). Different religions are represented, with 75,6% Christians (mostly Anglicans, Pentecostals, Seventh-day Adventists, Methodists and Roman Catholics), 1% Rastafarians, 0.7% Muslims, and 0.5% Hindus. English is the official language and the Bajan (short for Barbadian) creole is spoken by most Barbadians in everyday life (Barbados Government, 2010).

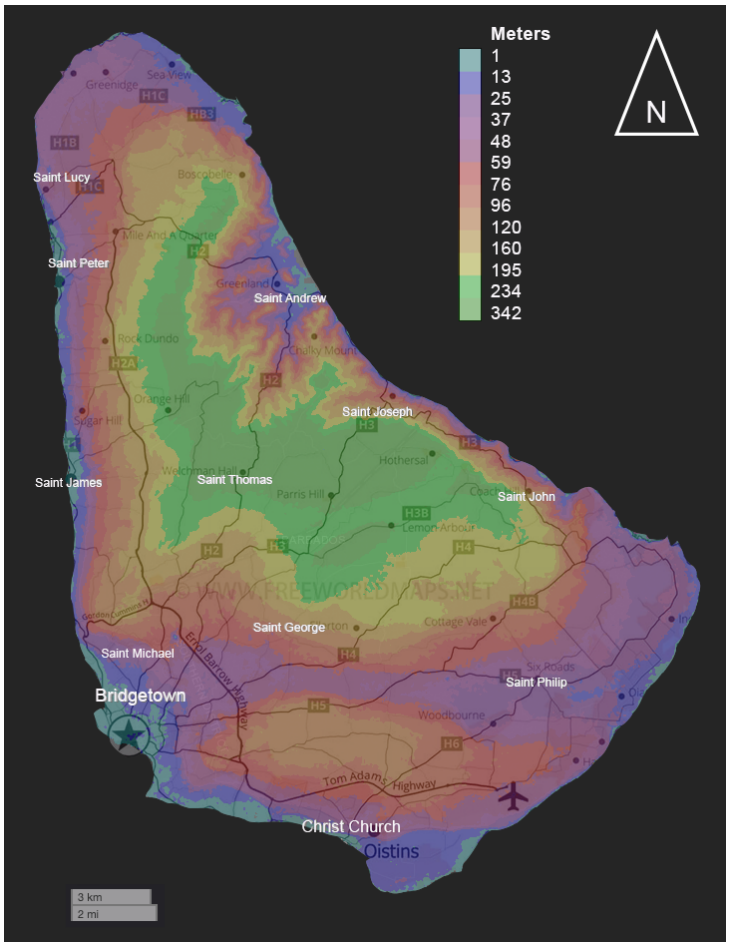

Figure 1. Elevation map of Barbados with 11 parishes and many highways (Modified from FloodMap, 2022).

After unsuccessful attempts with tobacco, cotton and indigo production, sugar cane and slavery made Barbados England's most profitable colony, more so than their mainland colonies altogether (Beckles & Watson, 1987). From about 50,000 tons per year at the beginning of the 20th century, sugar production reached its peak at 200,000 tons in 1967 (Drummond & Marsden, 1995). Since then, the sugar industry has declined steadily given a plethora of factors including soil erosion, the increasing competitivity of other producers, emancipation in 1838 and increasing labor challenges, the end of preferential tariffs in 1846, the diversification of the economy into light industries and services, including the subsidized development of tourism from 1956, and independence from England in 1966 (Ahmed & Afroz, 1996; Beckles, 1990; Drummond & Marsden, 1995; Mintz, 1986; Tomich, 2011). As shown in Figure 2, the amount of sugar cane cultivated declined steadily from 1,855,300 tons harvested in 1967 to 81,064 tons in 2020 (about 12 tons of sugar are produced from 100 tons of cane (Czarnikow, 2020)). If the production of root

crops has followed the sugar decline, meat, eggs and pulses production have increased, while vegetable, milk and cereal production have increased before decreasing again.

For the same period, food exports decreased while imports increased, as seen in figure 3, showing the value of food imports and exports in million US$. A closer look into the FAO data for Barbados indicates that an increase in imports was observed in the major categories of food commodities (meats, fruits & vegetables, roots & tubers, cereals, dairy & eggs), with some increases in exports too (cereals and fruits), but mostly temporarily. For example, roots & tubers exports increased from 1980, but had collapsed by 2000. The most obvious increase in imports is registered in the "other foods" category (in red), which illustrates the drastic flooding of the local market with processed foods, going from US$768,000 in 1992 to 17 million in 1995 – Barbados has been a member of the World Trade Organization (WTO) since 1995.

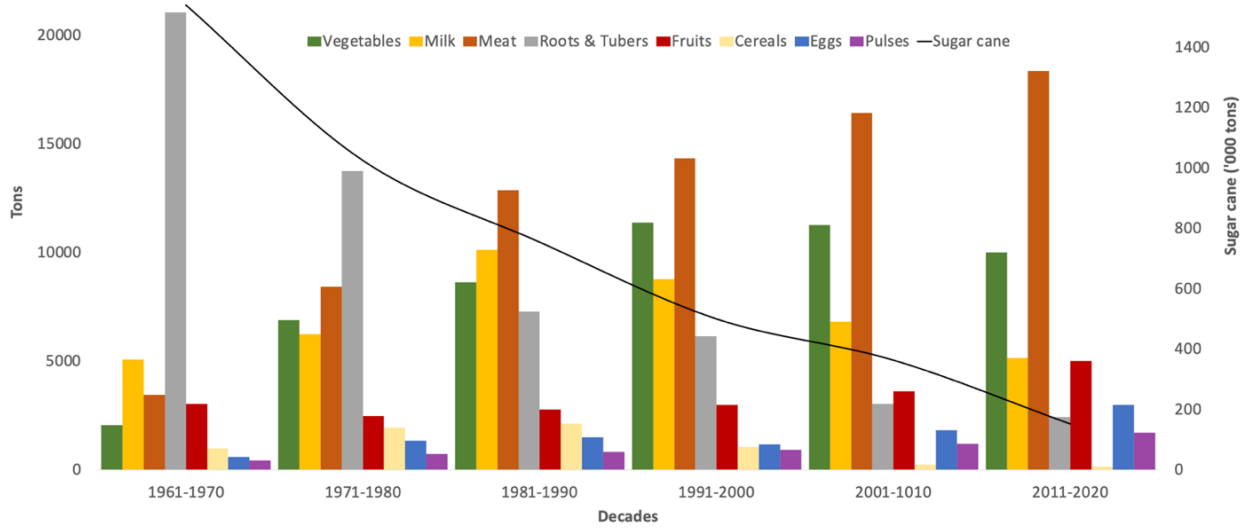

Figure 2. Agricultural production in Barbados by category of crops, in average per decade. Data retrieved from FAOSTAT.

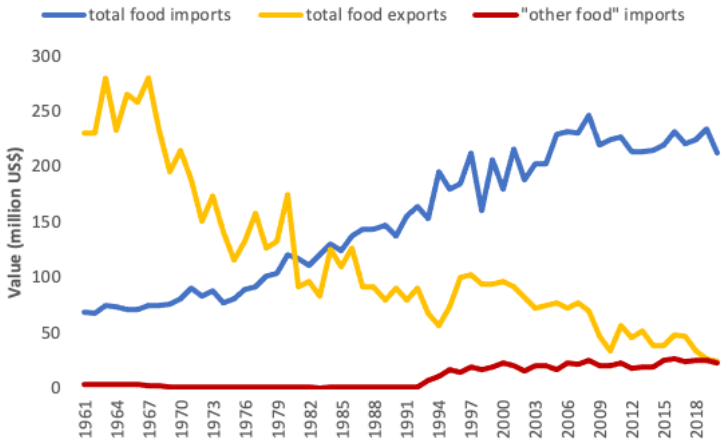

Figure 3. Barbados food trade in value base price, excluding fish. Data retrieved from FAOSTAT.

Though using about 1/3 of the land and about half of the fresh water supply, agriculture employs a mere 3% of the population (Caribbean Export, 2021; FAO, 2015). Of the 5000 registered farmers, 1,902 are farming crops, 1,261 livestock and 1,782 a mix of both. A small number of farmers are engaged in aquaculture, apiculture and orchards. The island is relatively self-sufficient in root crops, producing large amounts of cassava, sweet potatoes and yams. Fruits and vegetables such as tomatoes, cucumbers, lettuces and okras are the other major crops cultivated. Together, those root crops and fruits and vegetables accounted for about 20% of recorded crop production in 2020. A smaller but significant quantity of chives, bananas, parsley and onion are also produced. In terms of livestock, poultry (mostly chicken) represents 53% of the recorded production, at around 12,000 metric tons. Milk, egg, pork and sheep production is also significant. Compared to food crops, sugar cane is still produced in large quantities, at 90,178 tons harvested in 2020 (Caribbean Export, 2021).

In the second part of the 20th century, the economy of Barbados departed from its declining sugar industry to become a service-oriented economy, mostly through financial services and tourism. The tertiary sector now represents 88% of the GDP (Central Intelligence Agency, 2017), but GDP accounting makes it hard to distinguish tourism from other services to find a clear figure of its contribution (International Monetary Fund, 2016). Table 1 presents the division of the labour force of Barbados across different industry groups, but there too, tourism doesn't constitute an industry group of its own, being divided between the different industries it employs (Barbados Statistical Service, 2019). The contribution of tourism to GDP can only be estimated and would be anywhere between 20% and 50%. This lack of transparency is thought to be voluntarily obscuring the links between tourism, offshore banking and money laundering (Cashman et al., 2012; Cruse, 2018, p. 153). Anyhow, the tourism sector is definitely the main driver of the Barbadian economy, welcoming an average 1 million visitors and 500 cruise ships each year, although it practically dropped to zero since July 2020 (Central Bank of Barbados, 2022). Data is not yet available for 2021.

Industry Group	Labour force (%)
Wholesale & Retail Trade	15.8
Accommodation & Food Services	13.0
Construction, Mining & Quarrying	9.0
Other Groups	7.3
Public Administration & Defence	6.2
Manufacturing	5.7
Education	5.4
Administrative & Support Service	5.2
Transportation & Storage	4.5
Finance & Insurance	4.4
Professional, Scientific & Technical Services	4.4
Activities of Households as Employers	4.1
Other Services	4.0
Human Health & Social Work	4.0
Agriculture, Forestry & Fishing	3.3
Electricity, Gas, Steam, Water & Air Conditioning Supply	1.7

Table 1. Barbados Labor Force by Industry Group in 2019, data retrieved online from Barbados Statistical Service

Almost 30% of the labour force is dedicated to trade and food services, compared to the only 3.3% to agriculture, including fisheries as a subsector, even though Barbados has an important annual per capita fish consumption at 40kg, and the largest exclusive economic zone (EEZ) of the eastern Caribbean region, with 185,445 square kilometers worth of ocean to fish from, an area 429 times larger than its land mass (McConney et al., 2015; Nature Conservancy, 2018). While the local fishing industry appears underdeveloped given the geographical context, many people informally rely on the sea for food, especially during difficult economic times (Government of Barbados, 2013).

The early and rapid growth of tourism was supported by the government through the 1956 *Hotel Aids Act*. While it helped the country to reach the "high-income" category, it did not address the issues related to economic extraversion: financial, social and environmental crises can sweep away the 'main driver of economic growth' overnight (Cumberbatch et al., 2018; Desse et al., 2018; FAO, 2020; Richardson-Ngwenya & Momsen, 2011; Timms, 2006). We now have to add

sanitary crises to that list of threats: from 2019 to 2020, the COVID-19 pandemic brought the GDP per capita down 15%, from US$18,149 to US$15,374 (World Bank, 2020). From about 10% in 2018-2019, unemployment rate rose to 18% in 2020 (Barbados Statistical Service, 2022). As will be explored further in the next chapter, the economic model of Barbados did not change much from colonization to independence, now focusing on trading its beaches instead of its sugar cane.

Unlike the other islands of the Lesser Antilles forming a volcanic arc along the edge of the Caribbean Plate, Barbados is an exclusively sedimentary island formed by an accretion prism (Cruse, 2014a). With 85% of highly permeable coralline karstic limestone, rainfall is quickly lost to the groundwater, leaving no perennial rivers on the island and placing Barbados among the 20 most water-scarce countries (FAO, 2015). Aquifers are being recharged from rainfall at an estimated 74 million m^3 per year, while the 2005 total water withdrawal from groundwater, as an example, was around 70 million m^3, the rest (11 million m^3) coming from desalination (FAO, 2015). Losses through the distribution system are thought to be considerable, as the estimated non-revenue water (i.e. water that is withdrawn but not paid for, either because of leaks, metering inaccuracy, illegal connections and free distribution for fire management, street washing and at standpipes) is high, at 45% (Janson et al., 2021). Although the Barbados Water Authority is protective of its data if any is produced, direct observations and complaints about the population inform on the alarming quantity of water lost through the frequent and important leaks, given an aging infrastructure and long delays in maintenance. Wastewater management is problematic across the island, with only 3% of sewer connections, 6% of septic tanks and 90% of "latrine and other rudimentary sanitation" (Janson et al., 2021). Only 4% of the withdrawn water is treated (FAO, 2015), and none is reused (Ewing-Chow, 2018).

To protect the groundwater from contamination, a 1961 study determined five categories of protection on the island (figure 4). Covering 8% of the island, areas where abandoned absorption wells[1] posed risks of contamination receive the highest level of protection (Zone 1), where there can be no new developments and water connections, and any change to existing wastewater disposal systems has to be supervised by the water authority (Environmental Protection Department, 2009; Ministry of Energy and Water Resources & Barbados Water Authority, 2020).

While the zoning policy offers some protection, climate change also threatens the water

1. Locally called suck wells, they were built for water to rapidly infiltrate the ground through fissures in the limestone.

and are expected to bring increasing evaporation and drought events, and salinity intrusion into the groundwater (Cumberbatch et al., 2018; FAO, 2015; Richardson-Ngwenya & Momsen, 2011).

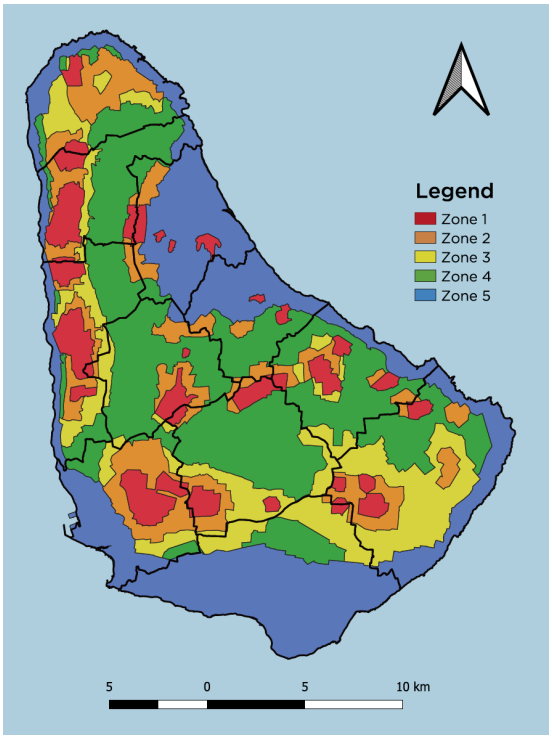

Figure 4. Zoning for groundwater protection (Source: Ministry of Energy and Water Resources & Barbados Water Authority, 2020).

Tourism, agriculture and residents compete for the island's limited freshwater resource. If agriculture was the most important user of water at about 2/3 of the total withdrawn water in 2015, it only serviced some 54 square kilometers of cultivated areas, found to be used for vegetable and fruit crops and cut-flowers (FAO, 2015). As for tourism, it was found to account for only 12% of the water demand, but per capita consumption by tourists remains three times that of domestic consumers (Cashman et al., 2012). Preventing the agricultural runoff, rich in nutrients, sediments, and chemical agricultural inputs, is also essential to protect both the aquifers and the coral reefs, those being also highly affected by domestic wastewater, the tourism industry, climate change, coastal degradation, soil erosion, and harmful fishing practices (Cumberbatch et al., 2018; Environmental Protection Department, 2009; Richardson-Ngwenya & Momsen, 2011).

In this context, the development of a Barbadian agroindustry that could feed both residents and tourists would have to be carefully planned. With an approximate annual food import bill of US$350 million in recent years, Barbados keeps relying mostly on imports to ensure food security, and local farmers generally produce for exports, with the many impacts it entails. First, the extreme

volatility of tropical agriculture products makes small-scale exporters highly vulnerable to price fluctuations. Then, the imports of subsidized, advertised, processed food from industrialized countries saturate local markets, influence consumers' choices and diets with virtual low prices, a 'legacy of taste' also rooted in the plantation society, as will be seen in chapter 1 (Edelman et al., 2014; Weis, 2007; Thompson, 2019). That goes without giving much thought to all the wrappings of this packaged foods, that end up in a local or overseas landfill, if not in the ocean, or burning behind a house. It is not uncommon for traditional, affordable and widely available local food to be devalued by the local population, with some instances of individuals invariably refusing to eat certain foods. Moreover, distributors struggle to feature local products as they are often more expensive than imports and most customers only shop according to price, especially since the pandemic gravely affected their livelihoods. Reliance on foreign foods also undermines the viability of domestic production, in turn demotivating young people to engage in it (Edelman et al., 2014). Though the attractivity of agriculture suffers from the stigma of slavery, the plantation life and sugar production, contemporary factors are also at play, with low salaries and levels on comfort on farms, generally lacking simple infrastructure like bathrooms and rest areas, and deficient public transport in rural areas, as its outside of the major tourist routes (Cruse, 2018, p.153). Most of all, local farmers are overwhelmed by praedial larceny, both by humans and monkeys, with many examples of farmers using only part of their arable land as they cannot supervise all of it, or quitting farming completely.

Why strive to farm, then? If self-sufficiency was always in the back of the mind of many farmers and intellectuals since independence, the last two years have created new incentives. Since 2020, global trade has been affected by the reduction of mobilities caused by the pandemic, for example through the limited availability of air cargos and sanitary measures affecting time and cost efficiency along the supply chains (OECD, 2020). This has been amplified by the Russo-Ukrainian conflict, as both countries are important exporters of grains and oils. Major climate events have also affected Barbados in 2021: a volcanic ashfall following the eruption of La Soufrière in St. Vincent in April, a freak storm in June and Hurricane Elsa. That adds to the pre-existing context in which long-distance commerce is increasingly threatened by decreasing fossil energy supplies and will soon – if not already, "be tied to ever-more-destructive forms of fossil energy extraction" (Edelman et al., 2014, p.915). The consumers of food produced by developed countries' agroindustry also become linked to the major source of greenhouse gas emissions they

entail, added to the 'food miles', or 'under-accounted atmospheric costs' of transportation for both imports and exports (Edelman et al., 2014).

On top of that, diet-related diseases have brought motivations for a better food system for even longer. With one in three adults being hypertensive and one in five diabetic (Springer, 2017), non-communicable diseases (NCDs) are the most important causes of morbidity and mortality in Barbados: 9 of the top 10 causes of deaths in Barbados are NCDs (GBD, 2020, in Institute for Health Metrics and Evaluation, 2015). Although diabetes is ranked as third cause of death, it is ranked first when looking at causes of death and disability combined (GBD, 2020, in Institute for Health Metrics and Evaluation, 2015). Other than giving Barbados the awful moniker of 'the amputation capital of the world' because it has one of the highest rate of diabetes-related amputations in the world (Hennis, 2004, in Hambleton et al., 2009), this has important economic impacts: while the country spends an estimated US$32 million annually treating cardiovascular diseases and diabetes, the total cost is believed to be three times that amount or about 2% of the GDP if accounting for the impacts on workforce (e.g. missed work days and low productivity) (Springer, 2017). Furthermore, treatment of hypertension and diabetes combined accounted for 58% of expenditure by the Barbados Drug Service in 2016 (Springer, 2017). Luckily (or not), Barbados spends more on healthcare that any other country in the Caribbean and Central American region (World Bank, 2005, in Labonté et al., 2017). Barbados provides universal healthcare to its citizens through public and private funds, partnering with regional and international agencies (PANCAP, PAHO/WHO, UN, USAID, UNFPA, UNICEF): healthcare represented 11% of the total government expenditure in 2014, and 36% of the health system is funded by the private sector (WHO & GHO, 2018).

Low domestic production and unhealthy consumption patterns structurally put in place by the plantation society have been reinforced by globalization, neoliberalism and an overwhelming marketing by overseas culture and multinational corporations. Barbados rarely pursued nationalist ideologies and always let the outside world penetrate it, perpetuating high inequalities within its society, which hampers collective dreams and action. Although Barbadians enjoy a high literacy rate and a functioning democracy in appearance, only in times of crises does the country look inward. At all times, those who can't afford to leave the island are the most affected. Foreseeing solutions through food, agroecology and agri-culture – not only agri-business –, this study looks at the food system of Barbados to understand the possible avenues for such a project.

Definitions of food sovereignty & food security

The hope for this research project is that it brings a fresh look of the socio-environmental challenges that prevent positive changes in Barbados' food system to stimulate the discussion about them and overcome them, to ensure that both food security, or access to food, and food sovereignty, or the right of the people to define their own agricultural and food policies, are fulfilled. Before asking questions involving these concepts, a closer look at their tenets is necessary at this step.

The origins of the food sovereignty movement are debated: it has been linked with the acceleration of the globalization in the 1970s, used in a Mexican government program in the 1980s, related to the creation of the WTO in the early 1990s, and articulated in response to the empowerment of big seed corporations (Bernstein, 2014; Burnett and Murphy, 2014; Kloppenberg, 2014; in Edelman et al., 2014). More often, it refers to the political project developed by the peasant movement La Via Campesina (LVC) and presented at the UN 1996 World Food Summit. According to its first definition, the movement originally advocated for "the right of each nation to maintain and develop its own capacity to produce its basic foods" (LVC, 1996, in Thompson, 2019, p.91), meaning that the goal was 'self-sufficiency.' The definition was later reworked to include considerations for the right to choose its food system, be it based on local production or imports. That reoriented the movement towards 'sovereignty' rather than only 'self-sufficiency'. Since the Nyéléni Conference in 2007, the movement now advocates for:

> 1) the right of individuals, peoples, communities and countries to define their own agricultural, labour, fishing, food, land and water management policies, which are ecologically, socially, economically and culturally appropriate to their unique circumstances;
> 2) the right to safe, nutritious and *culturally appropriate food* and to food-producing resources and the ability to sustain themselves and their societies;
> 3) the right to protect and regulate domestic production and trade and prevent the dumping of food products and unnecessary food aid in domestic markets;
> 4) self-reliance in food *to the extent desired*;
> 5) control over natural resources – land, waters, seeds, livestock breeds and wider agricultural biodiversity *unrestricted by intellectual property rights and without GMOs*;
> 6) based on and supportive of *ecologically sustainable* production and harvesting, *principally agroecological production and artisanal fisheries* [emphasis added] (LVC, 2007, p. 2).

As I will discuss further in section 2.2, this definition has been widely studied, reappropriated and criticized (Lang, 2009; Moragues-Faus & Marsden, 2017; Patel, 2009; M. S. Thompson, 2019), although it is also defended as being "a dynamic process rather than a set of fixed principles" (Edelman et al., 2014, p. 911).

Food security, on the other hand, focuses on availability, accessibility, utilization and stability of food for everyone (FAO, 2020). Even though it does help providing more calories for the hungry people, this project is even more widely criticized (Kendall & Petracco, 2009; Patel, 2009; M. S. Thompson, 2019; Trauger, 2014; Weis, 2007). Along with the fact that it takes roots in a discourse of economic growth and ignores considerations for who is producing – and selling – a food "produced and delivered under any conditions, including far-off, chemical-intensive industrial agriculture" (Edelman et al., 2014, p.914), providing people with cheap imported processed food that is increasingly derived from fat, sugar and salt also has many negative impacts, such as described in the previous section: rising risk of non-communicable diseases, dependency on imports and decreasing ability to produce food for local consumption (M. S. Thompson, 2019; M. S. Thompson et al., 2020).

After over ten years of research on the contemporary issues around food production and security in the CARICOM members countries, Beckford and Campbell (2013) find that both the Caribbean and other developing regions cannot solve these issues through food imports, reminding us of the eloquent notion that world hunger is still a problem even if there is technically enough food to feed everyone. Currently, 8.9% of the world population remain hungry according to the most recent estimates by the FAO, a number that grows when considering both moderate and severe food insecurity and the consequences of the COVID-19 pandemic (2020). In response to those challenges, food sovereignty is recognized as a more comprehensive project than food security (Edelman et al., 2014).

Although they are two different, partially contradictory projects, the terms 'food sovereignty' and 'food security' are often used interchangeably in the Anglo-Caribbean, many people being unaware of the distinction, even among researchers (C. Beckford & Campbell, 2013; McConney et al., 2015; Pouch, 2010; Thomas-Hope, 2017; Yawson et al., 2016). Thompson explains that food sovereignty is sometimes mobilized within the food security politics in the Anglo-Caribbean, but rarely as a political project (2019). However, if Beckford & Campbell (2013) mostly use the term 'food security' throughout their book about the contemporary issues around food production

and security in the CARICOM members countries, they still provide a critical perspective about the concept, implicitly distinguishing it from 'real food security', 'food sovereignty', and further, 'food democracy'. They understand food sovereignty as the right of local farmers and peoples to "exert *more* control over food and agriculture [emphasis added]" (C. Beckford & Campbell, 2013, p. 211). There, the desired level of control seems arbitrary, and if the authors specify the need for the people to be able to regulate their agriculture and trade, it remains "in order to achieve sustainable development goals" developed by yet another top-down institution, the UN (p. 211). However, they identify two of the key features of food sovereignty: "to determine the extent to which [the people] want to be self-reliant and to restrict dumping." (C. Beckford & Campbell, 2013, p. 211). They also mention the concept of 'agency', calling for an empowerment of the rural population "to solve their own problems" (2013, p. 211). To which extent it is indeed their own exclusive problem remains unsure, and the idea of food sovereignty as a platform for rural revitalization, through initiatives to build the capacity of farmers, might seem like another top-down articulation of power, as we will see later. Indeed, this study also demands to ponder whether there can be a bottom-up approach in a context where the issues are identified by scholars and foreigners and are largely disregarded by the local population.

This section has provided an overview of the context of Barbados and outlined the reflection around the central concepts of this research, proposing the following questions: how far is Barbados from food sovereignty, or even, in times of crises, food security?; what potential does the food sovereignty perspective hold for Barbadians and their environment?; has a shift towards resiliency been observed since the many crises that affected the island since 2020? From there, Chapter 1 takes a closer look into the historical and contemporary effects of the plantation economy model on the society and agriculture of Barbados. Positing food as the vehicle for political power, Chapter 2 explores the concepts behind our historical changes of diets and goes deeper within the potential and limits of the food movements that have emerged in the recent decades to re-empower people through food production. Chapter 3 details the approach and methods chosen for this project, and Chapter 4 presents the main actors of the Barbados food movement and celebrates their successes. The challenges they face, and the results for the population of Barbados are discussed in Chapter 5. To conclude, a synthesis highlights the gaps to cover for the future and suggests some avenues for solutions.

CHAPTER 1. THE PLANTATION SOCIETY

The plantation is not behind us but before us.
Taylor, 2014, p.17

If the history of humans – and that of many species – can be understood as a particularization process, the population growth of the original group bringing smaller groups to go and establish themselves elsewhere, building different cultures, globalization can be described as the reverse process, bringing everyone together again (Grataloup, 2015). But in this great gathering, not everyone was given the same platform to express themselves. Among the consequences of the European economic expansion motivated by Eurocentric thought, Girvan lists the globalization of the Occident experience, the 'peripheralization' of the rest of the world, and the abolition of contexts, cultures, evolutions, internal social dynamism, and histories in the knowledge systems of peripheral societies (2006). This facilitated the categorization of people in 'mutually exclusive identities' based on a European conception of race (Gilroy, 1993), and had a major influence on agriculture, for if some groups of colonial societies made their way into the elites by adopting the European thinking, peasants were generally the most oppressed everywhere, as "contemporary life on the land in much of the world suffers from the historical legacies of urban bias and industrial development" (Edelman et al., 2014, p.924). On the sugar producing islands, three whole centuries of sugar plantations have been the historical force shaping the space, social life, and economy. In the Caribbean, the terrors of slavery and the inequalities of indentured service and economic extraversion also left a heavy legacy on the contemporary institutions.

Georges L. Beckford distinguishes various types of plantation systems (1999, p.8). Often tailored for exports, they differ from feudal institutions, whose agricultural production is oriented towards self-sufficiency (G. L. Beckford, 1999). In the 'plantation economy', the dimensions of the plantation system dominate a whole country's economy, society, political structure, and international relations (G. L. Beckford, 1999, p.12). Bringing together different racial and cultural groups around a common economic activity creates a distinctive 'plantation society' marked by its cultural plurality (G. L. Beckford, 1999, p.60). In the light of these characteristics, Barbados is considered a plantation economy and society. This chapter offers a historically contextualized theoretical framework to understand the historical influences of these processes – colonization, the

plantation economy, indentured service, slavery, and decolonization – on the agricultural system of Barbados today.

1.1 Barbados in the colonial era

> *This is not a story of virgin lands or pristine cultures grappling with the recent penetration of foreign goods, ideologies, and modes of economic restructuring, but a place that has been created and developed precisely out of such mammoth processes centuries ago.*
>
> Freeman, 2014, p.10

Barbados was integrated into the global order from the 17th century, when English colonists settled on the island in 1627, attracted by an uninhabited island with a topography favorable to agriculture (Beckles, 1990). Prior to that, archaeological evidence indicates that occupation of the island by Lokono, Taìno and/or Kalinago peoples occurred in four distinct periods between 2000 B.C. and 1500 A.D., with communities of 5,000 to 10,000 individuals (Barbados Museum & Historical Society, 2022). The last indigenous settlements would have ended in the early 16th century, when their population was depleted by Spanish slave-raids and migration to the neighboring islands of St. Lucia, St. Vincent, Grenada and Dominica, the strongholds of the regional indigenous resistance to European colonization (Beckles, 1990, p.6). Other evidence suggests that environmental problems such as surface water pollution and soil erosion would have been in cause in the decline of their population (Barbados Museum & Historical Society, 2022).

As the widespread and numerous plantations and mills indicate in figure 5, Barbados has been used intensively for agriculture since the English settled: according to a 1717 map, 93.5% of the island was cultivated then (Beckles & Watson, 1987). Ligon's description of the island in the mid-16th century mentions a rich biodiversity, heavily forested lands, and plantations devoted to various crops for sustenance:

> In this plantation of 500 acres of land, there was imployed for sugar somewhat more then 200 acres, above 80 acres for pasture, 120 for wood, 20 for Tobacco, 5 for Ginger, as many for Cotton wool, and 70 acres for provisions; Corne, Potatoes, Plantines, Cassavie, and Bonavist; some few acres of which for fruite; Pines, Plantines, Milions,

> Bonanoes, Gnavers, Water Milions, Oranges, Limons, Limes, &c, most of these onely for the table (Ligon, 1657, p. 22).

It is only after some economic failures with tobacco, cotton and indigo that the English planters shifted to sugar cane, which quickly became a monoculture (Beckles, 1990, p.15). This proved a fruitful endeavor, as sugar cane plantations still occupied 80% of the arable land in 1979 (Drummond & Marsden, 1995).

Figure 5. 1756 map of Barbados, featuring all plantations and mills.

Until 1660, labor was mostly provided by white indentured servants, before the costs rose as England ran out of misfits to send away (Beckles, 1990) – it was common practice to simply kidnap undesirable European citizens to send them to work in Barbados and Martinique, so much that "to barbadoes someone" became an expression in 17th century UK and France (Mintz, 1986, p. 52). There are also some accounts of a few enslaved "Indians […] fetcht […] from neighbouring islands [or] the Maine" (Ligon, 1657).

At the same time, a more efficient African slave trade became affordable for the planters of Barbados, and somewhat more convenient – indentured service was to last for a limited period of 5 to 7 years, after which land would sometimes be granted, although the planters stopped respecting these conditions quite fast when most of the agricultural land was cultivated (Beckles, 1990). Indeed, the early plantocracy was highly hierarchized even among the white population: Anglo-Saxon Anglicans discriminated Jews, Catholic, non-conformist Protestants and Quakers away from the island or its political power (Beckles, 1990, p.26).

The black population rapidly rose in the Caribbean, facilitated by the Dutch and British slave trade in West Africa (Beckles, 1990, p.32), where African 'predatory states' generated slaves among their own people or neighboring tribes through military raids, taxation or judicial processes in exchange for weapons, tools and luxury goods (Lindsay, 2014). With a population of 46,602 slaves and 19,568 whites, Barbados had the largest black and white populations of the Caribbean islands in 1684, and probably one of the highest population densities in the world at the time, given its exiguous 432 square kilometers (Beckles & Watson, 1987; Henshall, 1966).

Harshly repressed by the largest militia of the British West Indies in the 17th century, revolts by the slaves for their freedom brought them to seek concessions from planters within production processes and socio-cultural life instead (Beckles & Watson, 1987). Where peasant agriculture often developed in the colonial era by indigenous communities or maroons (i.e. escaped slaves) hiding in remote lands, that possibility was limited by topographical features in Barbados, the West Indian colony with the fewest hiding places (Beckles & Watson, 1987; Glissant, 1981). Instead, the constant negotiation of a 'good treatment policy' allowed slaves to participate social and economic activities such as dances, burials, and the internal market, through selling foodstuffs they produced themselves on small plots of land provided by the planters at the Sunday slaves' market (Beckles & Watson, 1987, p.278).

Initially encouraged by the planters to reduce their costs in food, the rising productivity of the slaves' gardens began to compete with that of white small farmers, leading the colonial administration to seek control over the black merchants through legal reform throughout the 18th century (Beckles & Watson, 1987; Beckles, 1990, p.60). The colonists attempted to confine the black merchants to a defined marketplace where prices were controlled instead of having them selling their goods freely on the streets, a policy they resisted in order to keep setting the price themselves (Beckles & Watson, 1987).

Planter-slave relationships always brought conflicting dualities between adaptation (i.e. giving in to the European way of life) and resistance and attempts to build autonomy (Mintz, 1974 and Olwig, 1985, in Wilson, 2013, p. 109). Although the social stratification of the plantation society was firstly based on race and religion, Drummond and Marsden speak of class tensions rather than racial ones, affirming that the binary white-elite-planter vs. black-poor-slave is too simplistic. For instance, two categories were distinguished among the slaves: 'elite slaves', such as artisans and drivers, received better treatment and easier access to socio-cultural activities and low-level managerial positions in the plantations, while 'field slaves' were "treated more like beasts of burden than human creatures" (Dickson, 1789, in Beckles and Watson, 1987, p.276). For Beckles and Watson, this is one of the origins of a negative view of agricultural work persisting today in Barbados.

The abolition of the slave trade in the British Empire in 1807 was supported by the planters of Barbados as they had managed to suppress the need for slave imports through natural reproduction by the end of the 18th century – motivated by the belief that creole slaves were more docile than Africans, and the fact that they were cheaper to produce, most planters offered slave women "pro-natalist socio-material incentives" for bringing out children (Beckles, 1990, p.75). From the point of view of the slaves and abolitionists in England, the Barbadian slave owners were the most conservative in the West Indies – they were said to always be the last to extend their legislation towards more rights to their slaves, and that these ameliorations were largely motivated by economic interests rather than humanitarian motivations (Beckles, 1990, p.85). However, amidst constant tensions between slaves and planters, increasingly menacing – and in some cases, successful – rebellions in the region and pressure from the British humanitarian movement in the 1820s, emancipation took place in the 1830s, after a few years of 'apprenticeship' of freedom (Beckles, 1990).

If slaves and anti-slavery movements "won" the battle, the slave owners of Barbados ended up benefiting from their defeat, as they managed to construct a new machinery of labor domination keeping them on top of the "new" social order (Beckles, 1990, p.103). With both workers and employers unaccustomed to negotiating labor arrangements, many conflicts arose at different scales – the imperial government was trying to govern equally but had trouble enforcing in the fields, and workers were starting to hear about different wages on neighbouring islands (Beckles, 1990). Given that, and the construction of the Panama canal at the beginning of the 20th century

requiring many workers, many Barbadians started emigrating within the region, attracted by better conditions and wages, sometimes accordingly with seasons to make the most of the opportunities they were now provided with (Beckles, 1990; Dhanda, 2001, p. 236). While Trinidadian and Guianese planters had to import indentured workers from other Caribbean colonies or India, Barbados was then exporting workers (DaCosta, 2007; Dhanda, 2001).

Amidst these dynamics, it is no mystery that the productivity of the first and once most profitable sugar island was then rapidly decreasing. Given the intense cultivation of sugar cane with hardly any fallow periods or fertiliser use, the soils of the sugar islands were already infertile and heavily eroded by the 1800s (Ahmed & Afroz, 1996). Added with emancipation, the rising efficiency of sugar industries in Cuba, the Indian Ocean and Europe, and the 1846 Sugar Duties Act, which put an end to the preferential tariffs granted until then by the UK to the West Indian sugar, the profitability of the Barbadian sugar industry was on a steady decline (Beckles, 1990; Mintz, 1986; Tomich, 2011).

Paradoxically, the Barbadian planters managed to stay afloat and avoid labor shortages by using questionable methods. For example, with many men workers emigrating, the planters managed to pay even lower wages by offering women the men's traditional positions in the fields for a lower pay (p.143), and by outlawing collective bargaining (Beckles, 1990, p.164). While benefiting from compensation from England to account for the loss of their property (i.e. slaves) at emancipation, the planters were also reducing their workers' wages on the basis of the reduction of sugar prices (Beckles, 1990, p.129). Former slaves also had limited access to land ownership in Barbados – and land itself as there were no Crown lands like in Jamaica, considering that the plantation sector had the monopoly over it, that planters generally refused to sell them parcels, and that their low wages could not possibly afford the highly prohibitive prices land would be sold at anyway (Beckles, 1990, p.114). Living in small wooden 'chattel houses' they could move between plantations during slavery, former slaves had to start renting land from their employers as there was no land for them to buy to live on, so a high proportion of people did not own the land their house was on a long time after emancipation (Potter, 1986). Reluctant to implement social welfare until the fear of cholera precipitated the public health act in 1851 (p.107), the planter oligarchy of Barbados continuously mobilized the legislature in order to produce cheap labor and protect their interest over that of society (Beckles, 1990, p.121), what Cruse calls the 'white creole neocolonialism' (2018, p.162).

1.2 Collective identity and relationships to land and labor

Where is home and when does it begin?
Lamming, 2009, p.41

Bringing together different racial and cultural groups for the sole purpose of a common economic activity, the plantation economy created a plural society, generating cultural plurality, but hardly a collective identity (G. L. Beckford, 1999). Plantation life also shaped special relationships to space for the population. Many authors working on the Anglo-Caribbean explain the apparent absence of a peasantry and lack of collective sense among the populations by a somewhat inexistent intimate relationship to space during the plantation life (G. L. Beckford, 1999; Edelman et al., 2014; Scott & Lamming, 2002; M. S. Thompson, 2019). If the absence of a pre-colonial indigenous peasantry was circumstantial in Barbados, the repression of the development of an independent peasantry was clearly intentional throughout decolonization, as Weis argues the British themselves initiated the emancipation process in their Caribbean colonies to prevent a bottom-up revolution like the Haitian one. This head start allowed the transformation of slaves into a cheap labor force, what Weis calls 'agro-proletariat', through different measures like debt peonage and the limitation of access to land titles (Weis, 2007).

Studies adopting a geographical and/or sociological perspective on the agriculture of Barbados are not numerous. While the Caribbean states have distinct contexts and experiences, it is possible to draw on some similarities to get a deeper understanding of some processes. For example, a parallel with Martinique, some 175 kilometers north-west of Barbados, resonates within the Barbadian context, even though the French and English colonial systems were different in many ways. Studying links between space and identity in Martinique, Chivallon argues that three of the components supporting social relations remained out of reach for the freed slave post-abolition, thus preventing the process of spatialization: the possibility to appropriate space, exert control over the economic function, and establish a collective identity (1995). Chivallon however considers the experience of the Martinican peasants as "an original social experience in which space is strongly mobilised" (1995, p. 289). Indeed, some maronnage developed in Martinique, where a survival economy was practiced on scattered, tiny, inaccessible parcels of land, but to survive, this agriculture comprised superstitions and magical gestures that divided and dispersed, habits sometimes common but generally non-transferable between generations to create traditions

(Glissant, 1981, in Chivallon, 1995). Glissant argued that these fragmented survival practices – what Freeman calls a 'DIY culture' in Barbados (2014, p.6) – hardly lead to a collectivity, as they allow for resistance but not for this 'gathering of resistance' that gives birth to the nation (1981). For Glissant, a survival economy never leads to peasant traditions such as seasonal markets and fairs, where the common identity is reinforced (1981, in Chivallon, 1995). In Barbados, the slaves' garden was the only cultivation model that comes close to the type of agriculture practiced by maroons, and while some aspects of African culture and identity were allowed to survive through the use of the bush (i.e. wild plants) and ground provisions, it did not happen in a collective manner either as it took place on the plantations, their limits fragmenting the space in small parcels too, as seen in figure 6, which gives an overview of the fragmentation of the island into distinct plantations in 1979, before they were combined into fewer, larger estates later. However, the harvests were not only used for slaves' subsistence but sold in the Sunday market, making competitivity an important aspect of economic and social life. At emancipation, hawkers (i.e. street vendor of fresh produce bought from different producers in the countryside) kept that tradition alive, as well as the competitivity paradigm, the profession generally being perceived as a poor person's job.

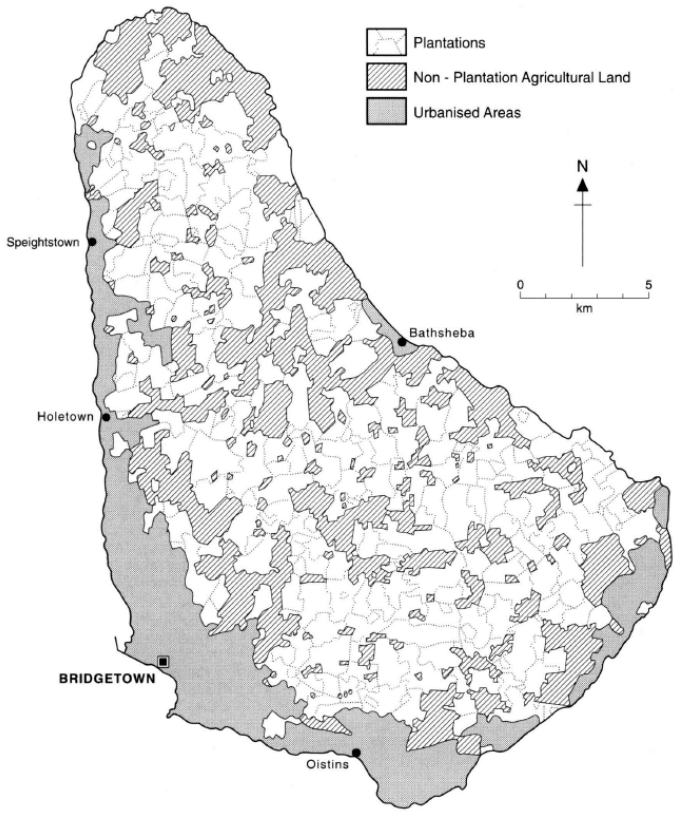

Figure 6. Barbados plantations in 1979 (McGregor et al., 1979, in Drummond & Marsden, 1995).

In Martinique, former slaves were allowed to acquire land through the legal apparatus following emancipation, however this process did not result in a major change for the black population as it did not allow them to challenge the legitimacy of property law and the fact that they still were not the dominating power over space, what in turn did not allow for the generation of a collective identity on the basis of this land (Elisabeth, 1980, in Chivallon, 1995, p. 295).

Not only did the concept of property remained in place, but the organizational structure of the plantation stayed unchanged, the title of the people constituting the workforce simply going from slave to worker. Further north-west in the Caribbean Sea, Mintz' observations in Puerto Rico provide eloquent insights on the distinction between farmers, peasants and agricultural labourers, defined by their ownership of the land and their reliance on store-bought goods to survive:

> These people were not farmers, for whom the production of agricultural commodities was a business; nor were they peasants, tillers of soil they owned or could treat as their own […]. They were agricultural labourers who owned neither land nor any productive property, and who had to sell their labour to eat. They were wage earners who lived like factory workers, who worked in factories in the field, and just about everything they needed and used they bought from stores. Nearly all of it came from somewhere else: cloth and clothing, shoes, writing pads, rice, olive oil, building materials, medicine. Almost without exception, what they consumed someone else had produced (1986, pp. xxii–xxiii).

This realization shines a light on how the division of labour not only plays a role in our socio-economic lives, but also in our relationship with nature, dividing the production from the consumption spatially, temporally, and socially.

So the abolition of slavery and later the political independence from England did little to challenge the structure of the plantation society (Chivallon, 1995). For George L. Beckford, the only change was the emergence of the corporate plantation enterprise (1999). In Barbados, that took the form of a capitalist monopoly when planters formed the Plantations Company Limited, "an instrument of planter defense and counter-aggression within the 'cut-throat' competitive market of depression years" (Beckles, 1990, p.162). Following their success, they were soon imitated by the Barbados Shipping and Trading Company Limited, regrouping the six largest merchants operating on the island in 1920 and signaling "the final stage in the successful economic domination of the colony by the merchant class" (Beckles, 1990, p.162).

As land remained hard to obtain for former slaves in the British West Indies, where different policies were implemented to support the planters through the transition to the free market economy (Mintz, 1986), that resulted in concentrating the power into a shrinking portion of the

population. As 25% of Barbados was devoted to some 100 sugar plantations in 1979 (figure 6), five companies owned 55% of the harvested area in 1990 (Drummond & Marsden, 1995). This high concentration of ownership in a small portion of the population persists; tellingly, the majority of the large companies established in Barbados are owned by five white Barbadians today (Cruse, 2018).

Exploring the problems of economic dependency, which sometimes translate into a limited entrepreneurship in developing countries, Glissant (1981) seeks to explain the origin of the prejudice deeming Martinicans "lazy" – black people in general often suffer a similar preconception. Glissant underlines that "the Martinican is not historically interested in yields or technical improvements [...] for the reason that he does not have any control on the collective production (which is now dying anyway) in his country." (Glissant, 1981, p. 37, my translation from the French edition). Further, creation becomes impossible, as it stems from the concept of work and how it is valorized (Glissant, 1981). By marginalizing survival practices and traditional trade, Glissant believes Martinicans are convinced that they have nothing to invent in their country, as it used to be impossible to create, "write, paint, make music, to produce objects or ideas." To compensate, policy ensures that "we import what we do not produce, we stop making in order to import and we replace the notion of production by the notion of services" (1981, p. 42, my translation from the French edition).

Although that can be debated as slavery has built tremendous resourcefulness in many cases, Glissant claims that the concept of self-sufficiency was not truly experienced before WWII, when colonies were left in peace for the first time as the world's focus was on Europe: "we have never been as free as we were under the Occupation", he says ironically (Glissant, 1981, p. 39, my translation from the French edition). He also gives an alarming call that especially resonates today, in the context of the pandemic: "Imagine this country, in a global crisis. We could not produce rice, tobacco, oil or leather […]. Before we learn the gesture again – and also how to order, plan, distribute – what a mess." (Glissant, 1981, p. 39, my translation from the French edition).

Through slavery, colonialism, public assistance and then international aid, labor and resources were often exchanged for support from or compromises with the master, the colonial power, or other powerful countries, positioning the slave, the colonized, or the inhabitant of the Global South as dependent, hampering any "responsible autonomous action" (Glissant, 1981). The economic dimension of labor would then be rather recent in the colonies. It should not come as a surprise to

the first-world liberalists that not everyone has the inherent desire to embark in their race for capital, in which they always start from a privileged position.

That privileged position was not magically created but often achieved through the appropriation of resources other peoples or species relied on. After siphoning the profits, imperial powers left a major mess behind, for which they were never fully held accountable for, and they remained surprised to see that former colonies struggled to adapt to their new situation. Economic, social and political crises persisted across the Caribbean region, with no resolution of conflicts between social classes, a pattern of revolt-stagnation cycles without progress, and the artificialization of social classes, given an overdeveloped services economy, no production and elitism without function (Glissant, 1981; Tomich, 2011). For Glissant, this “artificial” social strata contributed to the destruction of all productive capacity and reinforced the drive towards imitation of the European model, thus unleashing “an irrational reluctance to question this model, whose "transmission" appears as the only guarantee of "social status.” (Glissant & Dash, 1989, p. 45).

Witnessing the so-called autonomous elites of Martinique struggling with their decisions and realizing the impossibility of a socialist production model in a deeply fragmented working class, a national project for the Caribbean islands appeared essential to Glissant, as well as regional and international cooperation between countries. He was writing from the dawn of the Caribbean Community and Common Market (CARICOM), founded in 1973, which was to allow free trade between the member states, double taxation, common external tariff and fiscal incentives for industrialization, and the creation of a corporation to manage investments on the regional scale (Beckles, 1990). According to Beckles, in Barbados the CARICOM, along with the growth of the white controlled and owned corporate sector and the multiplication of multinational companies in tourism and finance led to the development of a black professional middle-class (1990). If it filled the “socio-economic gulf which hitherto separated the white elite from the black laboring masses” (Beckles, 1990, p.207), it did not necessarily result in more unity or collaboration, as some profound socio-cultural issues created by the colonial and the plantation models are still wrapped in unease (Freeman, 2014).

1.3 “Independence” in Little England

Barbados became an independent state in 1966, but for most colonies, independence remained strictly constitutional and came with a legacy of economic, social, psychological and political dependency (G. L. Beckford, 1999). Indeed, the fact that the Anglo-Caribbean were *granted* their sovereignty *by* the British (Thompson, 2019; Weis, 2007) entailed consequences that still characterize the region today: a persistent ‘colonial mentality’ (Fanon, 2004, in Thompson, 2019) and a ‘Westminster-style two-party political system’ in most ex-British colonies leave limited room for an authentic political independence (Bishop, 2011; Girvan, 2015, in Thompson, 2019). For Barbados-born George Lamming, “the impulse to break out of colonial rule did not guarantee the necessary break away from colonial tutelage” (2009, p.13). As Girvan specifies, the Independence Pact in the British Caribbean was more about preservation of the *status quo* than it was about independence, and it came with a set of features such as the entrenchment of property rights in the Constitution (entailing landlessness for many newly ‘independent’ subjects), the preservation of laws, institutions, economic arrangements and symbols of the colonial state (e.g. the Queen), and the alliance with the Western powers in the Cold War, especially given the threatening impacts of the Cuban revolution on the Caribbean region (Girvan, 2015). As a result, the “formal granting of the right of self-determination to traditionally devalued peoples of the Afro-Asian and Caribbean world” came with a devaluation of the significance of independence itself (Lindsay, 1975, p. 94, in Girvan, 2015).

In order to truly break free from colonialism, colonized people needed to go through a ‘psychological self-emancipation’ (Girvan, 2015), what Lamming calls the ‘sovereignty of the imagination’ (2009). This would prove a hard project in Barbados, the only Caribbean territory to have remained in the hands of the British for the whole colonial period, so much that it is nicknamed “Little England,” inspiring both pride and mockery (Freeman, 2014). For Girvan, the constitutional form of independence, in contradiction with a persistent imperial domination of the culture and economy in reality, resulted in an acceptance of dependency among the Caribbean elites, leaving the rest of the population behind (2006, p. 346). Where there was hope that if “the politics of colonialism was the politics of exclusion, the politics of Independence would be the politics of participation” (Girvan, 2015, p. 95), this hope was crushed by the realization that “the colonial system, in its essence, is intact; and democracy has been degraded” (p.106). This helped

perpetuate a British conception of sovereignty as possessed by the state rather than the people (Thompson, 2019).

The post-independence 'colonial tutelage' goes further than the preservation of British institutions and the previously discussed social hierarchy established throughout the history of the plantation society. Retracing the political trends in Barbados leading up to independence, Beckles finds that any radical view opposing the white planter and merchant elite to the black working-class would never last long given the importance of the economic power of the former group (1990). That explains why a leader like Grantley Adams, a "gradualist liberal reformer, the colonial moderate," managed to assume a long-term presence on the political scene of the region, and in turn also why changes were slow and revolts modest (Beckles, 1990, p.171). Furthermore, Adams "believed that the workers' main grievances were economic in nature," a mistake that delayed the much-needed questioning of the socio-cultural order in the colonial and plantation models (Beckles, 1990, p.171).

Not only did the institutions of the Caribbean states were derived from the British ones, but the most promising youth of the 1950s have in common that they all received grants to go study in England, where the most articulate minds of a whole generation were influenced to perpetuate an ideology the empire could accept (Cruse, 2018). This generation became the political leaders of the newly or soon-to-be independent Caribbean states: Grantley Adams and Errol Barrow in Barbados, Forbes Burnham in Guyana, Michael and Norman Manley in Jamaica and Eric Williams in Trinidad (Cruse, 2018, p.149 & p.161). Although Lamming unequivocally praises the many advances made by these articulate leaders, he deplores that their "cultural displacement" made them "products of an epistemological formation which was in profound discord with the concrete and novel realities that now challenged the imagination" (Lamming, 2009, p.32). To defend his thesis, he retraced the paths of these leaders to explain the circumstances and reasons which, sometimes against their will, led them to moderate greatly the socialist and nationalist projects they were aiming to set in motion. Beckles too, though more positive than Lamming about post-independence Barbados, depicted Adams' political strategies as a series of wily compromises, negotiating votes away from other opposed parties to bring power to the center, subsiding away from his originally socialist views and nationalization plans, resulting in limited betterment of the problematic work relations (1990). Unsurprisingly, the planters and merchant elite would find ways to rearticulate their power even if they were removed from the political scene in appearance,

with the demise, in 1966, of the Barbados National Party, which they had created to defend their interests: that is how the "white corporate power and black political administrations emerged as the dominant political thrust" (Beckles, 1990, p.203; Cruse, 2018, p.149).

1.4 The global era: sovereignty in a Small Island Developing State

What is the meaning of sovereignty to countries like ours in the new global order?

Girvan, 2015, p.104

From a society and economy entirely built on agriculture, Barbados' production declined dramatically since independence in 1966, even though the Barbadian Ministry of Agriculture tried to support crop production for a time, introducing mechanized harvest of sweet potatoes and yams as early as the 1970s and offering a considerable level of extension services and training (Holder, 2022, personal communication). If that helped reassigning a small portion of the sugar land to food production, the aim remained to develop an agroindustry and not a domestic market. Providing free education since independence, Barbados 'pride and industry,' – their motto since independence – "was seen as achievable instead of working in the hot sun like a slave" (Hunte, 2022, personal communication).

Although generating some autonomy through food production was motivated by WWII and some dreams of self-determination at independence, the post-plantation Caribbean agriculture was slow to develop a domestic market through competitive import replacement, supposedly because of consumer tastes and resource constraints (Kendall & Petracco, 2009). These constraints appear to be more of an economic nature than an ecological one in Barbados, as exports have continued while the domestic food production failed to replace a portion of the imports. In fact, competition for credit, research, marketing, and distribution have all been found to favor the export sector over the domestic production even after the decline of the sugar industry (C. Beckford & Campbell, 2013). Multiple reasons were given to justify the sustained governmental support to the declining sugar industry in Barbados, even though it was agreed that it would prove useful during a transition to new forms of agriculture: trade agreements still providing a preferential market if a certain production quota was fulfilled, the desire to maintain a seemingly productive and green landscape

for the visitors after the growth of tourism, and a belief that alternative forms of agriculture would not be viable on the island (Drummond & Marsden, 1995). Indeed, it seemed like a good option to hang onto export crops to make the most of the structures that were already in place and had proven effective for centuries (Weis, 2007). The planter elite instrumentalized neoliberal policies and the newly "independent" government in continuation of their efforts to sustain their economic interest over social and environmental issues (Drummond & Marsden, 1995).

This also took place in a context where the American dream was vigorously sold to all the "newly free" peoples and states. Since the 20th century, the US foreign policy aided this propaganda, especially after WWII, of which the US got out as victors. In the Caribbean, the 1940 Destroyer-base deal represents a major shift of power. In need of military help at the onset of WWII, the British administration turned to the US, who, looking to secure their hegemony in the New World, accepted to trade old destroyers against military outposts in the West Indies (Ahmed & Afroz, 1996). Although they did not get a site in Barbados, the American presence on the physically and/or culturally neighbouring colonies of Trinidad, Guyana, St. Lucia, Antigua and Jamaica had deep impacts on the Caribbean culture and economy. Opening trade routes for American foodstuffs and offering high wages on the construction sites of the military bases, the US affected local mindsets through the "Rum and Coca-Cola" and "easy money" syndromes, attracting immigrants from other islands and accelerating urbanization and the agricultural decline in the region (Ahmed & Afroz, 1996, p. 51). With its most important sources of imports being the US and, in the Caribbean, Trinidad, we can still observe a legacy of this influence in Barbados today (Barbados Statistical Service, 2022).

After the war, Truman's 1949 Four Point Speech is another a key moment for the economies of the Global South. In this inaugural address, it is made clear that the developed countries have found the recipe to happiness, that it is based on accumulating wealth, and that the now-called 'developing countries' should follow the same recipe: with their huge agricultural surpluses now that the war is over, the US, engaging other developed countries to do the same, would now provide affordable food to help feed the developing countries while they embark on their industrialization process (Rist, 2007). That project meant selling the 'American dream' across the whole world, through the Marshall Plan in Europe, and Public Law 480 in the Global South. There, a generation of local thinkers had become the flagships of developmentalism, marketed to them as the key to their independence.

Among the promising youth emerging from the Caribbean was a well-educated – in London – St. Lucian who later became the 1979 Nobel Prize in Economics, Sir Arthur Lewis, who contributed – with the prize's co-recipient Theodore Schultz, from the Chicago School – to the creation of the economic model called 'industrialization by invitation': to free themselves from the white planters oligarchy, the Caribbean governments needed to attract foreign direct investments and multinationals corporations to kick start their industrialization (Cruse, 2018, p.155). It was then hard for young Caribbean states to formulate an independent definition of success for themselves given their entrenchment in the colonial and plantation economy legacies, and for a time, it seemed to work for Barbados, who registered an increase of the annual growth rate of its GDP after turning to light industries, retail, and tourism (Beckles, 1990, p.199).

One problem is that Lewis' model did not plan for linkage to the rest of the economy (McIntosh and Manchew, 1985, in Timms, 2006), as neoliberalism expects these linkages and the transfer of knowledge, technology and money to develop spontaneously (Cruse, 2018, p.156; Timms, 2006). But without a welfare state with strong ethics, the magical trickling down of the money and redistribution of power doesn't happen, and in agriculture, the 'exporter of raw material, importer of food' model keeps profiting only to a small number of landowners and retailers (Timms, 2008, in C. Beckford & Campbell, 2013, p. 17).

Moreover, Small Island Developing States (SIDS), an inherent condition of plantation economies (Nurse & Crichlow, 2011), face specific disadvantages given their size, isolation, exposition to natural disasters and environmental fragility, leading them to higher dependence on international trade and aid (Briguglio, 1995; UNCED, 1992). Indeed, if industrialization was widely recommended to the developing countries, there was serious doubt that SIDS would benefit from it as the lack of space, capital, workers and buyers considerably limit the possibility for economies of scale (Briguglio, 1995). SIDS also know high rates of emigration, which brings the difficult context of 'brain and skill drain' (Briguglio, 1995; Girvan, 2015). Indeed, the Caribbean has one of the highest emigration rates worldwide of skilled and tertiary-educated individuals (Aragón & El-Assar, 2018). Multiple waves of migration were observed in Barbados, one of them in the late 1950s, when a generation of young people left to go help rebuild England after the war. If this hampered development plans, it also contributed to the shift away from agriculture, where there were previously some family traditions of small-scale farming and animal husbandry (Hunte, 2022, personal communication).

Along with lower demand for exports, quadrupling oil prices in the 1970s, and an international recession slowing down investments and tourism, agriculture was increasingly abandoned to focus on more profitable activities (Ahmed & Afroz, 1996). That resulted in a growing preference for retail, as indicated by the composition of Barbados' GDP between 1955 and 1980 at a 1990 factor cost, showing a decrease in manufacture (19% to 10%) and agriculture, both in sugar (23% to 10%) and non-sugar sectors (12% to 5%), and an increase in wholesale retail trade (11% to 26%) and government (9% to 16%) (Beckles, 1990, p.201). As seen in figures 2 and 3, food imports rose and exports and local production fell, especially since the WTO membership in 1995.

For Cruse, the national projects encouraged by Lewis' model were in fact schemes purposely shaped to indebt developing countries – first marketed as generating jobs and modernizing the infrastructures, the projects were designed to be unprofitable in the long term, begetting an ever-growing debt (2018, p.168). The International Monetary Fund (IMF), in which the US has the most power (Ahmed & Afroz, 1996), would then come into play to loan the necessary funds for the reimbursement of the country's debt, in exchange for 'structural adjustment policies' (SAPs) generally devaluing currencies, suppressing tariffs on imports and flooding domestic markets with the highly subsidized products of American agroindustry (Cruse, 2018, p.168). And where local agriculture was previously subsidized to sustain rural communities, the IMF decided that helping farmers was a waste of public money (Patel, 2007). For Conway and Timms, SAPs were solutions to problems of a national/global scale, forcefully paid by the public at the local scale (2003, in Timms, 2006), as their domestic agriculture had no chance to compete with the prices of the imported food.

While agriculture had been protected from economic liberalization given its particularity compared to industrial production from the 20th century through the Keynesian thought, growing food was gradually considered as a business like any other after WWII with Hayek's critique of interventionism and defense of "free trade" (Kroll & Pouch, 2012). From the 1980s, any kind of common agricultural policy was highly criticized in a renewal of the application of Ricardo's 19th century law of comparative advantage, according to which a territory necessarily benefits from opening up to international trade if it specializes in a production for which it has an advantage over another territory (Cruse, 2011, p. 29). Indeed, "there is no such thing as low cost food production" (Ahmed & Afroz, 1996, p. 118) – just unfair competition, as major commodities prices are determined by monopolies and oligopolies aided by states and international corporations, and not,

as it is supposed, by the free interplay of private market forces (Ahmed & Afroz, 1996, pp. 119–120). Of course, from the elite's point of view, free trade makes economic sense. That perspective triggered the birth of the food security discourse (to be defined in next chapter), seeking to provide access to imported food for countries that had, according to them, no comparative advantage in producing their food. But a strictly economic perspective ignores the deep social and environmental consequences of such modes of production.

From a focus on 'agriculture' to one on 'food', this neoliberal turn at the end of the 20th century was a major global policy shift, and one that would be taken even further with the 2007-2008 economic crisis, when inequalities increased everywhere given the austerity measures and high levels of unemployment that diminished redistribution policies, to the point where food was further detached from its political and ecological aspects to become merely a technical issue (Thompson, 2019; OECD, 2015, in Moragues-Faus & Marsden, 2017).

If development was achieved, it cost states their power, and sovereignty its meaning (Pouch, 2010), turning the three entities of nation-states – people, territory and state – into consumers, commodities, and market regulators. While governments act like they serve their citizens, the possibility of a welfare state is limited as the sovereign power lies increasingly in the global market and its stateless corporations, where business owners are free to move their fortune wherever they want. If there is sovereignty for the corporations, is there really a possibility for a sovereignty of the people?

With the best GDP of the region, Barbados is considered an "economic success", although it is the 5th most indebted country in the world at 144% of its GDP (Central Bank of Barbados, 2021; Cruse, 2018, p. p.151). The national minimum wage, before being raised to US$4.25 per hour on April 1st, 2021, dated from 1982 and prescribed a mere US$0.75 (Cruse, 2018, p. 151; Ministry of Labour, 2021). Then why is it that with a black "socialist" government in place since the 1950s in Barbados to "represent" the black majority of the population (92%), the whole economy remains controlled by five 70-year-old white males, while black business ownership is stuck below 2,5% (Cruse, 2018, p. 150)? While the Barbadian government does not provide data on poverty, the IDB finds 20% of the population lives below poverty line, often without running water and electricity (Cruse, 2018, p.154). It seems like the lack of support from the state leads many to turn to informal activities, thought to represent 40% of the GDP (Cruse, 2014b, p. 420, 2018, p. 153). This could

be explained by the fact that the neoliberal ideology has impregnated most political spaces, be it originally right, center or left (Cruse, 2018, p.173).

The New World Group, a 1960s school of thought influenced by Trinidadian writer C.L.R. James, had hoped for a different route, advocating for a post-independence socialism and self-sufficiency for the Caribbean as a critique of Lewis' model (Nurse & Crichlow, 2011). The group argued that the post-colonial context had maintained the Caribbean states as peripheries of the metropolitan power, as the succession from the plantation economy (~1600-1838) to a *modified* plantation economy (1839-1938), to a *further modified* plantation economy (1939-) failed to challenge the 'externally propelled' condition of the Caribbean states (Cruse, 2018, p.255; Nurse & Crichlow, 2011). For a whole generation who had believed in independence, the neoliberal failures resulted in a great disappointment when what was sold as "a model for the free, creative realization of the human spirit" in a newly independent state for self-determined, engaged citizens to build ended up favoring private property, or "the freedom of corporate capitalism to encircle and consume the globe" (Lamming, 2009, p.40).

As privatization of property is fundamental to liberal democracies, and therefore directly opposed to collective rights to access, use or share land, states mostly enact their right to govern trade in the interest of capital, forfeiting their citizens' right to food and land (Trauger, 2014). The possibility for the people's autonomy and subsistence is then highly doubted. That is why, for many activists and researchers of the food studies, empowerment comes from being able to grow your own food in a socially, economically and environmentally sustainable manner, and above all it is a way to challenge and shape the dominant political narratives (Alkon & Agyeman, 2011; Altieri & Toledo, 2011; Moragues-Faus & Marsden, 2017; Pouch, 2010; M. S. Thompson et al., 2020; Trauger, 2014; Weis, 2007; Wilson, 2016).

Interestingly, the 2008 World Development Report suggested (re)linking agriculture to development in response to the 2007-2008 crisis, asserting that "the anti-agriculture bias in macroeconomic policies ha[d] been reduced thanks to broader economic reforms" and that there was "evidence that the political economy ha[d] been changing in favor of agriculture and rural development," with decentralization, democratization and participatory policy-making now increasing "the possibilities for smallholder farmers and the rural poor to raise their political voice" (World Bank, 2007, p.22). Although the model they suggest is sometimes contradictory as it remains based on the idea of development and it tries to satisfy both small-scale farmers and larger

units of production, it comes close to many principles of food sovereignty. Integrating agriculture to development however means full trade liberalization and rising food price as the World Bank claims a 5% increase would create incentives for producers (2007, p.117). To help the net buyers of food cope with the price increase, the report advises this liberal measure to come with economy-wide reforms to redistribute the gains (World Bank, 2007, p.117). We have come full circle. It appears they ignored the fact that the global food system has been integrated in the geoeconomic power games the nation-states and corporations are playing (Pouch, 2010, p.134).

According to Girvan, the CARICOM states led themselves into an economic, political and social dead-end:

> A lot of money will be needed to adapt to global climate change [and deal with] transnational organised crime. You are not going to find the money domestically when the state is already heavily indebted. Neither can you borrow abroad commercially, for you are no longer creditworthy. The growth of the debt is due, at least partially, to stagnant or shrinking export revenues. And this comes about because trade preferences have been removed under World Trade Organisation rules. At the same time, concessional funding is hard to secure because most Caribbean countries are not among the world's poorest. […] you have no recourse but to the IMF. That means budget cuts; further depletion of resources to fight crime, to adapt to climate change, build up your human and physical capital, and pay your teachers and policemen adequately. More professionals leave. […] When I speak of 'existential threats', I mean to the survival of territories as viable economies, functional polities, and cohesive societies (2015, p. 103).

Barbados has been a republic since November 30th, 2021, when Queen Elizabeth II was replaced as head of state by its governor general (Landale, 2020), and Barbados-born international popstar Rihanna was named national hero. But the situation has not gotten any better. Debt and crime are rising, and Barbados keeps entrenching itself even further in foreign investment. For instance, the EU, IDB, UNDP and private sector are involved in many legislative projects in collaboration with local organizations, and like in many places, China is a major investor in Barbados' infrastructures. The goal is apparently still to try reimbursing the debt via high-end tourism and financial services offered to the rulers and delegates of the many countries who parade one after the other on a red carpet at Grantley Adams International Airport (Austin, 2021; Bennett, 2022; Forde-Craigg, 2022; Joseph, 2022).

As the Barbados economy remains extraverted and keeps focusing on export-oriented agriculture and services rather than stimulating its domestic production and building local capacity, I am afraid that the ideology of the patronage-oriented "free market economy" has been quite

successful in tricking the people of Barbados, as of many peoples in the neoliberal era, into believing they get more freedom from “free” trade, instead of the controlled markets of domestic agriculture, when in fact they are enslaved to yet another form of colonial power. Looking to suggest alternatives, the following chapter explores the concepts behind our historical changes of diets and considers the potential and limits of the tools provided by food movements that have emerged in the recent decades to re-empower people through food production.

CHAPTER 2. FOOD, A VEHICLE FOR POLITICAL POWER

Central to both biological and social life, food – or its absence – is a way to express, define, and distinguish ourselves from others in the everyday life (Counihan, 1999). Beyond shaping the relationships between humans, food also mediates our relationships to other species, or what structuralists such as Claude Lévi-Strauss call "nature" (in Counihan, 1999, p. 20). Within that point of view, food stands at the boundary between nature and culture and "the process of naming a wild product as food and transforming it into something edible involves the 'culturizing' of nature" (Counihan, 1999, p. 20). In this traditional perspective, children learn to socialize their primitive desires through food, and a mother's love is expressed through the meals she gives her children (Counihan, 1999). For Robin Wall Kimmerer, Mother Nature also shows her love through food: "The land loves us back. She loves us with beans and tomatoes, with roasting ears and blackberries" (2013, p. 122).

From such a jovial notion of food, how is it that our diets have such contrasted results, from hunger and obesity? At the basis of these issues, the human fight for survival and longevity, dictated by Western science and the Judeo-Christian thought, pushed humans to distinguish themselves from nature. In opposition to that trend, the word 'ecological' was coined by Ernst Haeckel in 1866 to remind us of "the interconnections of everything in the natural world, including humans, to show how life forms provide the context for each other" (Lang & Heasman, 2016b, p. 100). As there can be various types of relationships between species through food, whether benign, mutually beneficial, cooperative, competitive, exploitative or destructive (Lang & Heasman, 2016b), which one(s) are we choosing? Departing from Marx's 'metabolic rift', Beck's 'risk society' and Sen's political economic analysis of famine, Colás et al. find the modern food system is built on growing tensions between culture and ecology, its impacts on human and environmental health being consciously manufactured and distributed unevenly (2018). Of course, free trade brings social and geographical inequalities – Mother Nature did not exactly provide every territory with the same resources. But for Colás et al., the creation of a world market and commodification of agriculture derive from violent unequal processes – war, revolution, slavery, State policy, social stratification (2018).

The following chapter first outlines how food has been increasingly detached from its geographical, ecological and cultural context through science and technology, policies and

marketing, globalization and liberalization, to become but a mere commodity. As food is closely linked to health and identity, then, how can we ensure that everyone can freely but safely choose their food? And if provided with that choice, will we choose a healthy, sustainable option, both for ourselves, other species, and future generations?

Seeing that the human psyche often forgets its very material dependencies, one posit of this study is the primacy of food over other human needs. Hence, food cannot be treated as any other political, economic or social matter. In different ways, food movements have aimed at resituating food at the center of our focus. To retrace the political-economic origins of food movements, geographer Amy Trauger identified the key results of modernity and the post-WWII context, which explain many global problematics we encounter today (2014). They can be synthesized briefly as: 1) a new allegiance to the state through the separation of nature and society (Harvey, 1990; Foucault, 1978; Russell, 1966); 2) unequal social relations through racial categories and gendered division of labor (Gilroy, 1993; Landes, 1988); 3) an urban-rural divide; 4) the discursive power of modernity, creating a desire for autonomy within subjects (Habermas, 1987), therefore allowing modernity to be reproduced through them, who become "autonomous" but remain fixed between dualities like nature/culture and urban/rural (Latour 1993); 5) the commodification of food (Friedmann & McMichael, 1989); 6) a devaluation of subsistence economy through the modernist agricultural system in a vertically integrated market (Friedmann 1993); and 7) the concentration of power in the hands of states, supranational organizations and few very large transnational corporations influencing food regulation to their advantage (Goodman & Watts, 1997, in Trauger, 2014, pp.1132-33). As was explored in the precedent chapter, these aspects were all observed in Barbados, starting during colonization and growing since independence.

For its potential to challenge dominant economic discourses that dictate our relationships to other beings, both from the bottom and the top, as will be discussed in this chapter, food sovereignty appeared as a promising starting point to redistribute political power – or even just raise awareness of its existence – to all actors of the food system, rather than the actual few who we think possess it. Added with other propositions from other food movements, a critical perspective of food sovereignty could help bring balance into our relationships to food, other species and humans, and ourselves.

2.1 The geography of food (in)security

Agriculture and diets have evolved under the influence of a variety of processes, from aspirations of longer, safer, easier lives, to colonial, then free trade policies, sometimes in illogical ways. In our pursuit of a wider access to food for all (i.e. food security), it seems like we have put aside our considerations for *what* and *how* our food was produced. Although sold as convenient, some aspects of the global food system today are actually quite inconvenient and even detrimental to human and environmental health (which go hand in hand, if a reminder is needed). Taking the example of tea and sugar, it seems rather strange that, by the end of the 18th century, Europeans were already "obliged to use, as part of their daily diet, two articles imported from opposite sides of the earth" (Davies, 1795, in Mintz, 1986, p.116). Was that a conscious choice born out of preference, or the result of marketing and legislation? Davies points to the State: "if high taxes […] have debarred the poorer inhabitants of this kingdom the use of such things as are the natural products of the soil and forced them to recur to those of foreign growth; surely this is not *their* fault" (Davies, 1795, in Mintz, 1986, p.116). While we can blame economy and politics for many of our food issues, historical and contemporary social processes are also at play, and are often interwoven.

Social stratification through food has been observed since the dawn of urbanization, where urban populations, with their diverse diet given an access to a variety of imported commodities, shaped their identity through distinctions from the peasantry who, even though they lived closer to the food producing spaces, had more monotonous and precarious diets, as most of the food they produced was appropriated by landlords and urban populations (Colás et al., 2018). Since the 'civilizing of the appetite' in 17th century France, social status was also determined upon the behavior around food: the one eating without reserve would be considered a hungry peasant, while a careful picky eater would be an aristocrat, table manners and 'etiquette' being taught to upper classes first (Elias, 1994, in Colás et al., 2018, p.160). Why, educating the elites to a higher food culture would allow them to absorb the products of imperial trade (Colás et al., 2018).

Studying the history of sugar, Mintz finds it to be one of the first agents of social stratification (1986). From a luxury spice used by kings before the 12th century, to its use as medicine for the poor to replace the crushed gemstones the rich would ingest in the Middle Ages, sugar was decreasingly used as medicine until the 19th century, when it became used for caloric intake by all

of society, even the poorest peasants (Mintz, 1986). A nation nearly self-sufficient in food, England became hooked on goods added with imported sugar within two centuries (Mintz, 1986, p.151). Why this addiction? Part of the answer would be biological, the human love of sugar working independently of experience, as studies show that babies and colonized peoples appreciate sweetness from the first exposition (Maller and Desor, 1973 and Jerome, 1977, in Mintz, 1986, p.15). There is an evolutionary explanation, as sweetness has indicated edibility of fruits to mammals for millions of years (Mintz, 1986). But beyond that, sugar played a special role in England, where the consumption of sugar increased dramatically between the 17th and 18th centuries, to levels that were never anywhere near those of France, Spain and Italy, for sugar proved essential to the industrial revolution, providing English workers convenient and cheap foods to accommodate their early urban, labor-oriented lifestyle (Mintz, 1986). Sugar made meals easy to cook and preserve and helped reduced the bitterness of tea, coffee and chocolate while increasing their calorie content, and allowed the development of industrial foods: for the English, buying food rather than cooking it meant no need for neither time nor expensive fuel to cook (Mintz, 1986). Mintz also points to cultural attitudes towards certain foods, such as the English 'fear of fruit,' which was solved by adding sugar to consume jam rather than pure fruit (1986, p.126).

But the popularity of imported food items did not only result from consumers desires and scarcity of the product: marketing, policies, strategic distribution and gifting of those products to specific groups was also at play (Schneider, 1977, in Mintz, 1986, p. 18). Interested in maintaining low prices for its proletariat to buy the sugar produced in its colonies *and* cook quick, calorie-dense meals, the British government also wanted sugary tea and coffee to replace some of the then heavily consumed alcoholic beverages, orienting the social and political life towards more productivity (Mintz, 1986). Between social forces and cultural preferences on the one hand and the powers of marketing and food policies motivated by capitalism on the other hand, the latter had a bigger impact on the world's diet according to Mintz (1986).

Western science also played an important role. The 'discovery of the calorie' and the ranking of 8,000 foods items by calorie content by Wilbur O. Atwater's calorimeter at the end of the 19th century gave way to a quantitative perspective of food, obscuring the importance of its geographical, socio-ecological and cultural aspects (Carolan, 2018, p. 65). That led policymakers to focus on foods high in calories for the diets of soldiers, inmates, schoolchildren, and the many

countries receiving food aid from the US (Carolan, 2018). While 'nutritionism,' born out of the scientific progress on vitamins and minerals in the first half of the 20th century, contributed to repopularize fruits and vegetables, it did not question our quantitative point of view (Semba, 2012). By replacing culturally important, micronutrients-rich and more stress tolerant crops like millets and sorghum by calorie-dense, macronutrients-rich foods like soybeans, rice and wheat (Carolan, 2018, p. 74), around 75% of the world's agricultural diversity was lost in the 20th century (FAO, 1996, in Lang & Heasman, 2016b, p. 108). While this has a considerable impact on the global biodiversity and is ill-advised in the context of climate change, it has been effective in cutting down costs, partly by realizing economies of scale (Patel, 2007). But not if we take the social, health and environmental costs into account.

Where US food aid and the green revolution did not fully turn people away from their local diets, growing investments by global retailing chains in foreign countries and marketing also had major impacts on dietary patterns worldwide (Carolan, 2018, p. 76). For Galbraith, this is explained by food firms switching their mentality from supplying customers what they need to instead convincing customers to buy what they have to sell (1967, in Carolan, 2018, p.77) – the colossal marketing budgets of the food industry testify (Carolan, 2018; Winson, 2014). In the retail industry, that is observed through the transition from the general store, where customers had to ask a clerk what they needed, to the 'self-serving store,' in which customers had direct access to all available products, in a maze of aisles where they were left alone to find what they was looking for – and much more (Patel, 2007).

Winson also retraces the adulteration of food by macro-adulterants such as sugar, salt and fat, saying that while they have some benefits – to consumers, but mostly to retailers –, they have major impacts on consumers health (2014, p. 168). From Latin *adulterare*; to pollute or corrupt, adulteration of food goes back to antiquity and if it has changed through time as regulation prevents the most dangerous additives to end up in our food, Winson argues that altogether, the quantities of sweeteners, salt and fats added to our diets today remain far from harmless, suggesting the term of 'pseudo foods' to designate these highly processed, carbohydrates-rich, low-fibers, -nutrients, -proteins and -minerals "edible commodities" (2014, p.177).

But why do we even need macro-adulterants (Winson, 2014, p.174), if not to only sell more? It may be that the modern modes of production and distribution of food influence the quality of the food itself. Indeed, the focus on yield, size, conservation and appearance of the vegetables

produced by the food industry today is detrimental to their flavor and mineral content, which has been found to be 5 to 40 percent lower than the produce harvested half a century ago (Carolan, 2018, p.81). So, the modern food system has succeeded in providing cute-looking and affordable calories to a greater and spreading number, so much so that we need violent marketing to convince us to eat it. But to what costs, if not by the price paid by the consumer at checkout?

The integration of agriculture into free trade agreements around the 1990s was the last step to create a globalized food system. Today, the cheap food and 'permanent global summertime' supermarkets often bear major uneven social impacts: at the production level, the competitiveness of conventional agriculture comes from externalization of social costs, as the high and unnatural standards of production to keep prices low degrade both the environmental and the human health of low-paid workers, while the impacts of a car-dependent, carbon-emitting distribution and of consuming a nutritionally-poor diet and are also distributed unevenly, mostly affecting low-income communities (Kendall & Petracco, 2009, p.15; Carolan, 2018, p.183).

And while we depend on healthy environments for the production of our food and survival, the global food system has extreme environmental impacts, contributing to climate change and biodiversity loss, affecting the nitrogen and phosphorus cycle, and increasing chemical pollution and land use, with climate change, biodiversity loss and the nitrogen cycle already way past the boundaries ensuring their natural resilience (Rockström et al., 2009, in Lang & Heasman, 2016b, p.102). We have managed to increase the food production artificially through technology even as the ecosystems should have become less productive, but we have yet to pay the price of those externalities.

From the symbiotic or predatory relationships organisms can have between themselves and the land, we apparently opted for the latter, with the dangers it entails. Indeed, our own health becomes at risk from these behaviors. While non-communicable diseases (NCDs) such as obesity, diabetes, cardiovascular diseases and cancers used to be more common in developed countries, they are now increasing dramatically in the developing world too (Guthman, 2011; Lang & Heasman, 2016a; Winson, 2014). In the Caribbean, one out of four adults suffered from obesity in 2016 (FAO, 2020). To the difference of communicable diseases, NCDs "are acquired by lifestyle or other mismatches between humans and their environment," and they are now having a greater impact on global health than communicable diseases (Lang & Heasman, 2016a, p. 59). Diet and lack of physical activity would be the major causes of this 'health transition', among other factors

linked to demographics and globalization (Lang & Heasman, 2016a). The rising burden of diet-related NCDs menacing the healthcare system of low- and middle-income countries (Winson, 2014) leads to question the relevance of the 'productionist' paradigm – increasing food production to provide more affordable food for all, as "a policy formula for progress" (Lang & Heasman, 2016a). More importantly, we need to reflect on the concept of cost as we realize that cheap food might only be cheap via shifting the costs "from one industry (food) to another (healthcare)" (Carolan, 2018, p.82).

And if unhealthy consumer decisions are not *overtly* forced by the food industry, they *appear* to be made by "sovereign consumers," and the negative outcomes fall on society as a whole through healthcare. If Carolan reminds that *humans* constitute the entities and make the policies we accuse, it would still be unfair to claim that "people choose Pop-Tarts, Cokes, and Big Macs over bell peppers, lettuce, and carrots when the consumption of the former has been so greatly incentivized – they cost less, are often easier to obtain, and require no skill to prepare" (2018, p.82). This is especially true when seeing the production of the latter being penalized in low-income countries (FAO, 2020, p.145). It also shows how formulating critiques on peoples' diets can be extremely delicate, especially in a "postcolonial" developed-developing country dialectical. Further, Winson stresses the risks of applying global diet critiques to local food systems, as local influences are also at play (2014, p.251).

Studying the links between food and identity in Trinidad, Marisa Wilson sheds light on how the Trinidadian people make imported foods essential to their identity as 'Trini' (2013). While there is a growing quest for farmer's markets and Community Supported Agriculture models in the developed countries (Patel, 2007), Wilson witnesses an reversed consumer hierarchy in the developing world: in terms of retailers, Trinidadians consider supermarkets and the variety of imported food they offer as clean, safe and fun – "an experience," while local markets are seen as the opposite and the back-up option (2013, p. 107). For Daniel Miller (1994, in Wilson, 2013), this oppositional value system originated in master-slave relationships, which shaped the social hierarchy of the plantation society for hundreds of years, as explained in section 1.1. Through the masters, elite slaves had access to imported commodities they grew to associate with dignity, freedom and modernity (i.e., the market economy) (Wilk, 2006 and Beckford, 1972, in Wilson, 2013, p.110). These associations of modern and/or imported commodities with higher status did not vanish at emancipation, especially as land titles, research, credits and investments, labor

legislation and infrastructures were continuously affected to sustain export agriculture, thus preventing a self-determined domestic agriculture and market (Wilson, 2013). Nor did they at independence, when national politics taking off with the 1970s oil boom focused increasingly on urban over rural development, offering road work, manufacturing and oil jobs paying up to three times higher than agricultural work (Wilson, 2013, p.114). Similar trends were observed in Barbados, to the difference that jobs were in the services sector rather than oil, and tourism exacerbated further this hierarchy of imported, processed foods as better. In both places persists a culture of 'disparagement of the powerless,' for not being able to afford the modern, imported food, and of 'emulation of the powerful,' for pride comes from being able to afford a more convenient, easy life (Miller, 1994, p.22, in Wilson, 2013, p.113). This communicates a clear desire to detach their identity from colonial oppression, not by rejecting processes born during slavery, but by embracing the market economy brought by modernity, as "modern commodities are now used to cancel out such cultural divisions" (Wilson, 2013, p.118). To avoid relativism or deeming the modern cultures as alienated by history, Wilson (2013) stresses the need to situate cultural meanings in political economy and ecology structures, but one could also call it a blatant success of colonial marketing.

Lang and Heasman also point to cultural motivations for consumers in the developing world to choose Western-style foods and drinks, hypothesizing that while attracted by symbols such as modernity and choice, customers might not be informed of the diseases that can ensue poor nutritional diets (Lang & Heasman, 2016a, p. 68). But is it that they are not aware of the risks, or they simply deny them? Indeed, Wilson mentions many attempts by both popular and officials discourses to condemn the reliance on processed, imported foods, deeming it lazy and selfish, the "young people who eat KFC use similar, though positively represented aspects of Trinidadian culture to associate the fast-food chain with Trini identity." (2013, p.113-114).

Beyond cultural judgements, critiques of people's diets and lifestyles are often perceived as an infringement of personal liberty (Tirosh, 2012, in Lang & Heasman, 2016; Balibar, 2013, in Colás et al., 2018). Indeed, the body is an essential scale in geographical analyses of food consumption: it is "a tactile space—always sensing and actively engaging with itself (the inside) and the world (the outside)", thus allowing our interaction with space and time (Valentine, 1999, p. 331). Acting as a boundary between the individual and the collective, it seems like it is hardening and complexifying as the debates and options multiply around us. Valentine actually finds that

human psychology can be rather ambivalent when it comes to unhealthy food: while it "can make us feel polluted or heavy, it can also be a very pleasurable or hedonistic experience" (1999, p. 331). According to Kessler, the 'cue-urge-reward' behaviour we experience when eating foods that contain a specific combination of sugar, fat, and salt is compared to our experience of highly addictive drugs such as heroine (2009, in Winson, 2013, p.181). Shaped by a food system based on natural cycles which controlled the availability of foods through seasons, our genetics would not know how to feel satiated when provided with ample amounts of addictive food (Kessler, 2009, in Winson, 2013).

Citing Foucault's understanding of the body as constructed through discourse, Valentine finds the 'corporeal freedom' of individuals to be constrained by the socio-cultural standards and schedules of households and workplaces (1999). Indeed, the globalizing paradigm of productivity set in motion by the industrial revolution increasingly orients us towards convenience and effectiveness when it comes to food, to the risk of eliminating the social significance of eating together (Mintz, 1986, p.201). From bodies to foodways (i.e. beliefs and practices around the production, distribution and consumption of food (Counihan, 1999, p. 6)), our corporeal freedom is also influenced by the environments we live in. According to a study in the UK, the major factors of obesity are: individual food consumption, biology, psychology, activity, societal influences, and food production environments (Foresight, 2007, in Lang & Heasman, 2016a, p. 76). Recognizing that the 'obesogenic environment' (Colás et al., 2018, p.196) we live in are not only created by individuals, but have deep socio-economic ties, and ignoring the fact that eating itself is indeed a highly social process could explain the ineffectiveness of public dietary advice about healthy eating, as it traditionally targets individual consumers instead of addressing social causes (Valentine, 1999, p. 349). Policymakers then have an important role to play to mediate all these factors and actors, a task to which they have failed so far, mostly by focusing on healthcare instead of prevention, and slowed down by commercial pressure (Carolan, 2018; Lang & Heasman, 2016a).

Anyhow, geographer Julie Guthman remains critical on dietary advice, pointing out that there is still no evidence that telling people what to eat helps preventing obesity (2011, p. 21). It has also been found that while regulations increasingly push manufacturers to label their products to inform the customers, it is often ignored or misunderstood (Colàs et al., 2018, p.198, (Peters-Texeira & Badrie, 2005). Learning from the failure of a Trinidadian campaign to buy local instead of

imported foodstuffs (Wilson, 2013, p.116), although it is often better for their health, economy and environment, there might be a need to address communication or trust issues between the public and their officials when it comes to what they put in their bodies, as exemplified by the strong anti-vaccination movement observed in Barbados in 2021. Winson specifies: the confusion among the consumers is born from nutritional science playing a political role rather than a scientific one when labelling foods, highlighting the need to go back to the basic definitions of food – nutritious substances eaten to maintain life, growth, and temperature – to evaluate if the things we feed on today are actually fulfilling our physiological needs, or harming them (2014, p. 176).

Via Foucault's idea of self-government, Colás et al. argue that governments detach themselves from the responsibility towards public health when it comes to food, pointing to the individuals as the only judges of their bad dietary habits, seemingly ignoring their part in an industrial food system shaped and supported by their neoliberal food policies (2018). But individuals have less power than governments would like them to think (Colàs et al., 2018, p.203), as it seems like the discourse privileging consumer sovereignty over social pressure has simply been instrumentalized by those neoliberal policies (p.199). As Foucault points out, the success of power "is proportional to its ability to hide its own mechanisms." (1978, p. 86). Today, cultural distinction through food continues through food trends that "elevate the 'foodie' above the mass of consumers," yet this is still entangled in controls similar to the those of past centuries: the level of wealth determines the access to rare, exotic, organic, creative foods, and marketing determines their desirability (Colás et al., 2018, p. 167). In an extension of the reproductive power of modernity, foodies themselves become marketers, selling trends through their social media, whether they are aware of it or not.

Without minimizing the individual and collective meanings of food, as well as the structural forces at play in the food system, can we ask to what extent we should allow pleasure and identity to be detrimental to our health? Cannot they be found in healthy practices too? We also need to question our concept of productivity, for how is it that "productive technologies result in individuals having (or feeling like they have) less time, rather than more" (1986, p.202)? While it feels like we have bought into values such as convenience, choice, individuality and productivity in our strive for freedom and rising standard of living, in reality we may have unconsciously surrendered our autonomy over food. While Patel advocates for a reform of the school curricula to reinstate that autonomy (2009), I think this issue needs to be tackled by our realization that there's no real autonomy, to humble ourselves into reinstating the precedence of interdependent

relationships with other individuals, species and spaces, as we are part of the world's ecosystem and not outside of it.

2.2 Limits and potential of food movements

Beside the food sovereignty movement and the concept of food security, as distinguished in introduction, other food movements have been articulated to stress and address some of the missing parts of food sovereignty and food security. Thompson, Cochrane and Hopma provide a brief overview of those other movements (2020). Originating from the Global North with the environmental justice movement in the US, 'food justice' focuses on access to healthy food for marginalized and racialized socio-economic groups (M. S. Thompson et al., 2020). One of the major solutions considered by the food justice movement, localism, is criticized as it tends to omit the importance of structural inequalities through consideration of the role of the state, seeing people as consumers rather than citizens (M. S. Thompson et al., 2020).

'Food democracy' might bring better insights to that, as it focuses on citizen participation in decision-making to counter the increasing control of private capital over the food system (M. S. Thompson et al., 2020). Thompson, Cochrane and Hopma however find the movement to be underdeveloped, not yet defining the roles of important groups such as NGOs, corporations, and farmed animals (2020). Furthermore, they argue that a place-based focus ignores the international dimension of the food systems and therefore limits its transformative potential (M. S. Thompson et al., 2020). On the other hand, food democracy is promising, as it is thought to be less concerned with 'identity politics' than food sovereignty and food justice, more place-contingent, and generator of 'spaces where people have the capacity to act politically' to allow an openness to "heterogenous needs, interests and 'non-recognised voices', and connectivity at different scales" (Moragues-Faus, 2017, in M. S. Thompson et al., 2020, p.441). Shifting our focus towards democratic practices within nation-states, Moragues-Faus points to the need for a reflection on the concepts of democracy and sovereignty (2017, in M. S. Thompson et al., 2020). This is indeed the key aspect of food democracy, as the movement was brought forth by Lang through his critique of food sovereignty: "I am not sure more sovereignty is what is needed. Sovereigns are top-down; they imply and exude control rather than democratic accountability" (Lang, 2009, p.26).

2.2.1 Sovereignty or the possibility of standing alone

From Latin *superanus* (super, above), the term 'sovereign' implies supremacy over people or territory (Oxford English Dictionary, n.d.-b), meaning that no superior power can overcome it. There is substantial philosophical debate about that aspect (Arendt, 1973; Geenens, 2017; Habermas, 1996; Jourdain, 2020), reminding that if one has the power to make laws, it must then be subject to these laws, hence creating a superior power and issues about continuity of previous laws, thus requiring rules around law-making that must also be above the supposedly supreme power entity. To escape the absolutism of the term 'sovereignty', Jourdain simply rejects it, rather choosing 'autonomy' (2020). In a less radical manner but with a similar result, Geenens opts for a definition of sovereignty that comes closer to the concept of 'autonomy' (2017).

'Autonomy' can be defined by its "Greek roots *autos* (self) and *nomos* (law): the capacity of a community to give itself laws or practice self-government" (Blaser et al., 2010, p. 5). A distinction is made between collective and individual autonomy – if the *Oxford English Dictionary* places the appearance of the term in English at the end of the 16th century, Blaser et al. specify that it took another 200 years before individual autonomy was mentioned, upon the rejection of the European medieval institutions (2010). In modern democracy, individual autonomy is seen as complementary to collective autonomy, implying the question of agency for all citizens: "The idea of self-legislation by citizens […] requires that those subject to law […] can at the same time understand themselves as authors of law" (Habermas, 1996, p. 120 in Blaser et al., 2010, p.6). This need for agency and responsibility seems to apply to all autonomous decision-making entities, be it individual or collective. Thus, as Jourdain underlines, a true democracy requires providing the citizens and peoples with an equal education on that political culture and its mechanics (2020). Whether it is effectively done is another question.

A more important issue arises, as individual autonomy also requires the superiority of the individual over the group, creating a rupture between them, when in fact, both indigenous cosmologies and world-wide scholars have worked towards reinstating that "relationships constitute the very fabric of reality" (Blaser et al., 2010, p.8). Lamming's idea of individual sovereignty is also relational – as one cannot ignore that his identity is co-constituted through both the Self and the Other (Scott & Lamming, 2002). According to Arendt's opinion on Human Rights, not only are our differences defined by our relation to others, equality is created through the same process: "We are not born equal; we become equal as members of a group on the strength of our

decision to guarantee ourselves mutually equal rights" (1973, p. 301). Then, within the social contract drawn by the Universal Declaration of Human Rights, is there even room for individual autonomy?

To Durkheim, we act less out of individuality than under the pressure of 'social facts' (i.e. "manners of acting, thinking and feeling external to the individual, which are invested with a coercive power by virtue of which they exercise control over him" (Durkheim, 1982a, p. 52), although we might not be aware of it: "undoubtedly when I conform to them of my own free will, this coercion is not felt" (p.51). From there, Foucault's deeper studies on power go beyond the Durkheimian individual/social duality to stress that the power resides in all actors and processes:

> the sovereignty of the state, the form of the law, or the over-all unity of a domination […] are only the terminal forms power takes. […] power must be understood in the first instance as the multiplicity of force relations immanent in the sphere in which they operate and which constitute their own organization; […] as the support which these force relations find in one another, thus forming a chain or a system, or on the contrary, the disjunctions and contradictions which isolate them from one another (Foucault, 1978, p. 92).

Critical and feminist geography have furthered that thought to encourage the seemingly oppressed to enact their underutilized power: if state and capital have been complicit in "bringing death and disease to the food system" (p.1149), Trauger argues the "state is a living, mutable social construction," producer of "imaginaries of subjection, boundedness and power", and that with effort and creativity, it can be changed by citizens, as they participate in its production, to create new modes of belonging and allegiance (2014). Structural forces such as globalization would then not be the invincible machine we imagine. To that effect, Levitt provides a useful question: is globalization "a description of the increased transnationalisation of production and capital flows since the mid 1970s" or "a proactive agenda supported by a hegemonic ideology of the inevitability – and the desirability – of the liberalisation of private capital from all forms of constraint?" (2005, pp. 4–5). Indeed, any attempt to a critical thought needs to discern reality from marketing, but our descriptions of reality are but perceived through our very knowledge – we choose, though sometimes unconsciously, to put forth specific ways of knowing. Thus, it is essential to be thoughtful of the impacts of our communication choices in the shaping of the world. Justly, Glissant's *Caribbean Discourse* begins with those very words: "To describe is to transform" (Glissant & Dash, 1989). Is that an authentic individual power we can enact, or is that, as

mentioned in the opening of the present chapter, an example of Habermas and Latour's discursive power of modernity reproducing itself (Trauger, 2014)?

Even more important is that the concept of autonomy itself rests on the rupture it creates between humans and other species, aligning with the tendency of western science to hierarchize the natural world. Alternatively, Indigenous peoples, in their quest for autonomy from the colonizers, rather value processes and relationality between both individuals, groups, and the natural world, of which humans are part (Blaser et al., 2010). Indeed, recognizing that human life depends on the natural world, how can autonomy be claimed when the resources needed for survival lie outside of the '*autos*' or 'self'? A stalemate also appears with 'independence', which holds a similar meaning: "exemption from external control or support; freedom from subjection, or from the influence of others; individual liberty of thought or action" (Oxford English Dictionary, n.d.-a). Thus, whether they use the word 'independence, 'autonomy' or 'sovereignty', individualistic claims suppose that humans are superior to or free from their relationship to other beings and the environment. In a more realistic way, instead of laws created by people, Indigenous peoples like the Anishinabek rely on natural laws that are derived from the teachings of nature, gathered through generations of close dependency (McGregor, 2015). This relational notion also transcends time, as many Indigenous cosmologies consider both present, past, and future beings, respecting ancestors, descendants and non-humans through their practices (Blaser et al., 2010). Now if absolute individual sovereignty or autonomy is not possible, the goal is generally to ensure people have *more* sovereignty or autonomy, or at least know they do have ways to enact their power.

On the international scale, sovereignty is understood as either 'external' (i.e., political sovereignty of the state) or 'internal' (i.e., popular sovereignty of the people), a sovereign state being a political entity whose authority structure is autonomous or independent from external control or interference, and a sovereign people having an effective, authoritative, and legitimate decision-making structure within a political entity (Krasner, 2007, in Thompson, 2019). Similarly to the food sovereignty movement, who has not dug very deep in theoretical reflections, these definitions seem to ignore the abovementioned issues about whether there is a possibility for standing alone in this world, which, as established earlier, has become increasingly interconnected. For Sandel, there is no questioning it: "the vaunted independence of the deontological subject is a

liberal illusion. […] There is no point of exemption, no transcendental subject capable of standing outside society" (1998, p. 11).

In the Caribbean, sovereignty might be even harder to attain considering the structural issues created throughout colonization by different European countries, which places the modern Caribbean states in a relation of dependence with the rest of the world through trade and diasporas, rather than in collaboration with each other. For instance, Thompson (2019) partly attributes the weakness of a food sovereignty movement in the Anglo-Caribbean to the lack of a 'pre-capitalist', indigenous, homogenous peasantry, arguing that the violent social history of the Anglo-Caribbean resulted in a more individualistic society, an observation made by many authors (Beckford, 1972; Theodore, 2007; Bernstein, 2014; Edelman, 2014; in Thompson, 2019; Scott and Lamming, 2002; Glissant, 1981).

Thinkers of the region often adopt a relational perspective, exposing wider or more abstract notions of sovereignty. According to Jamaican Economist and Caribbean Intellectual Norman Girvan, although the definition of sovereignty is usually narrowed to "the possession of *a certain* constitutional and juridical attributes by the nation-state [emphasis added]", for him sovereignty is "the capacity of a society and its citizens to think for themselves. It begins in the mind" (2015, p.104). He also brings the idea of 'shared sovereignty' – sharing selected attributes of constitutional sovereignty between regional partners to improve each partner's sovereignty – recognizing the potential benefits of such a sovereignty to tackle issues like food, climate change, security and international relations (Girvan, 2015).

Seeing how the Barbadian political, economic and food systems have little influence over the structure of the global world, food sovereignty, criticized for focusing primarily on food (Burnett and Murphy, 2014, in Edelman et al., 2014), is sometimes thought to be insufficient to solve the deep structural problems that many Small Island Developing States (SIDS) face. Why, because food sovereignty is too often seen as "a set of demands, principles, policies, reforms and rights that together will somehow transform the neoliberal food regime, *without identifying the profound structural changes needed in the capitalist economy and the liberal state for food sovereignty to feasibly exist* [emphasis added]" (Edelman et al., 2014, p.927). The structural issue is fundamental, as will be explored in sections 4.1 and 5.1: in a neoliberal context, who invests in the educational programs, infrastructures and technologies needed to build the collective movement towards food sovereignty?

One of the main critiques of the LVC definition of food sovereignty lies in the fact that it is actually a transnational movement, underlining the danger of disregarding local contexts in the implementation of a rigid set of principles (Edelman et al., 2014). Having identified some of the downsides and tragedies of global processes (i.e., globalization, colonization, ordering and othering of nature), caution is in order to prevent any model to be imposed globally without considerations for national and local specificities, as even well-intended models often turned out to have ill effects. That is why analyzing the diverse critiques of the food sovereignty movement and striving to go beyond binary debates might help avoid its weaknesses to build a stronger, holistic political project fit to the local context and structural issues.

To pursue this essential structural and ideological change, Trauger argues that political theories against the food sovereignty practices provides useful avenues for solutions both within, against and amidst the sovereign liberal states' power: favoring non-commodified food exchanges, reframing property rights as use rights, and engage in civil disobedience to reform structures without compromises (2014). While some are not against a 'state-led food sovereignty' – some countries have even integrated food sovereignty principles into their constitutions (Giunta, 2014, McKay et al., 2014, in Edelman et al., 2014) –, some civil action might indeed be beneficial in the Caribbean, where the hopeful socialist movement has been watered down by many forced compromises. For Trauger, the solution lies in implementing the ideas of food sovereignty at multiple spatial scales (2014), something that holds much potential for the Barbadian parishes and Caribbean states, with their many distinct identities. Indeed, a homogeneous peasantry was not essential for the food sovereignty movement to spread across Latin America, its population described by Altieri & Toledo as "a highly heterogeneous group both culturally and ecologically" (2011, p. 594). In fact, they argue that despite an expected 'disappearance of the peasantry', the mobilization of food sovereignty principles in Latin America has instead brought more people to farm and be more socially, politically and culturally active in their areas (Altieri & Toledo, 2011).

2.2.2 Limits of agroecological models

Although the LVC definition of food sovereignty advocates for systems that are "ecologically, socially, economically and culturally *appropriate to their unique circumstances*", it seems strongly oriented on "based on and supportive of ecologically sustainable production and harvesting; *principally agroecological production and artisanal fisheries*." [emphasis added] (LVC, 2007,

p.2). For LVC and advocates of agroecology, small-scale, labour intensive, biodiverse, short-circuit agriculture is the way to go, for its environmental and social advantages are simply too good to miss. Nevertheless, this normative perspective brings the tricky question of deciding who, of the state, consumers or peasants, will enforce the norms of the said movement, such as the allowed farm size, trade distance and inputs (Edelman et al., 2014). Further, as food sovereignty is rights-based, what authoritative body will act if one's right to food sovereignty is violated (Walmsley & Antony, 2022)?

There is also the problem of land, which, as mentioned earlier, has historically been appropriated by elites. To address this, many countries now adopt land titling mechanisms to secure access to individuals and communities – and private businesses (Edelman et al., 2014). If this sounds like a good solution, commodifying the land as a product to be owned is in fact a slippery slope. It is also risky to assume the long-term stability of those titles, especially in cases where behaviors of the owners are not deemed productive within a neoliberal agenda – or even a food sovereignty one (Edelman et al., 2014). For example, what happens if individuals acquire land titles for the intrinsic value of an ecosystem, to grow illegal crops, or to dump waste? Furthermore, isn't land ownership but a facade measure, reversible if development objectives or government policies change? A similar issue arises with 'seed sovereignty': while open-access seed initiatives are a good weapon against corporate plant breeding, they remain exposed to changes in contract laws (Edelman et al., 2014). In response to these problems, Edelman et al. highlight the need to recognize the land as a "web of articulated relationships situated in particular places and times" and the social function of property as a "collective obligation to organize the means of production, including land, seeds and capital, in ways that benefit society and nature as a whole" (2014, p.925).

Besides, the promotion of agroecology works on the assumption that the model will be productive in all environments, omitting the situation of some food-deficit regions whose production capacity physically cannot feed the local population (Edelman et al., 2014), or, like in Barbados, where uncontrolled pests get most of the harvests. In SIDS, whose economies are currently highly extraverted and relying mostly on food imports, a transition to more self-sufficiency will need to be supported by food security measures and external agroindustries, at least in the beginning and during intense climatic events. Degraded and water-scarce environments also need significant economic and environmental investments to make agroecology productive at

all, making it hardly accessible to small-scale farmers. Further, these investments represent a crucial and tricky question in the economic and political problematic structures identified in previous sections. Nonetheless, Drummond and Marsden find a productive agriculture can be sustainable in Barbados with the appropriate techniques (1995). However, the labour-intensive techniques used since the beginning of sugar production in Barbados were allowed by an enslaved or poorly paid workforce. Environmental limits started to show when this labour force was replaced by modern technologies, followed by issues such as soil compaction and erosion (Drummond & Marsden, 1995, p.351). Now largely unionized, labour is expensive, so the costs of local production have no way to compete with imported products. In the end, Drummond and Marsden find the unsustainability of the Barbados sugar industry was due more to the tense social relations linked with the plantation system than to ecological reasons (1995). Indeed, if wages are one incentive to attract workers to the hard agricultural work, it cannot be the only solution. As a matter of fact, in 1992, the sugar plantation wages in Barbados were around 5 times higher than wages in Jamaica for the same plantation positions, but the Barbadian planters still faced labour shortages (Drummond & Marsden, 1995, p.349). Strictly economic measures then cannot solve profound problems of an historical and social nature, calling for more comprehensive solutions.

Moreover, Burnett and Murphy (2014, in Edelman et al., 2014) warn against favoring food crops over other agricultural commodities for export and call for considerations for producers of the latter in relatively equitable and sustainable ways: those might see their livelihoods crash if required to grow food crops for local markets instead. Indeed, more resilience might be found in cultivating both crops and commodities for various markets. While economist Van der Ploeg sees an alternative to market economy in the food sovereignty movement, this view is not widespread: valuing income making and a wider choice in both food and lifestyle, most commentators rather seek a better equilibrium between market, nature, society and state (Edelman et al., 2014). There is indeed much to do to build a collective will to farm in ‘an increasingly non-agrarian world’, where enhancing profitability but also perceptions of agriculture among the youth appear essential, as the contemporary rejection of agriculture is found to have more to do with the idea of farming in today’s unrewarding conditions than with the idea of farming itself (Agarwal, 2014, in Edelman et al., 2014). If one goal of the food sovereignty movement is to make sure that “young people have opportunities for self-development and employment” (LVC, 2007, p. 2), some critics find that it directs most of its strikes against the institutionalization of corporate power, for example via

the idea of taking the WTO out of agriculture, thus omitting avenues to instead reform those institutions and their heavy bureaucracy. For Edelman et al. (2014), taking from fair trade philosophies to ensure a more equitable and durable voice for the small farmers within the market structure might be more effective than solely fighting oversized corporations.

Food sovereignty also favors 'culturally appropriate food.' But where peoples have been displaced or accultured through long and sly colonial processes, or, as Wilson (2013) has uncovered, where food imports have become integrated to the local culture, it seems difficult to draw a line between what is culturally appropriate and what food sovereignty advocates for (Edelman et al., 2014). Cited by Weis, Lamming provides a clear view of that issue:

> "There is a crisis of the cultural sovereignty of a people when patterns of consumption bear no relation to basic needs and cannot be supported by the productive base of the society. It may sound very strange but a Minister of Agriculture in our region, whether he knows it or not is engaged in what is essentially a cultural problem: how do you de-colonise the eating habits of a people who have surrendered their very palates to foreign control?" (2007, p. 112)

As it is especially blatant in multicultural, extraverted, jet-set Barbados, the problem in that case does not only reside in defending food cultures, but often in the far more complex project of rebuilding one (Edelman et al., 2014). As the medias have proven an efficient vehicle of influence in the contemporary era, Kendall and Petracco think we need to use it more to inform the public and change their preferences (2009).

Rather than polarized debates between opposing perspectives, pluralism appears essential to prevent the widespread, top-down application of an exclusionary model not chosen by the peasants (Edelman et al., 2014). As Altieri and Toledo stress, the success of food sovereignty across Latin America is based on a gradient from subsistence agroecological farms to commercial farms using agrochemical inputs and exporting internationally (2011). Adding to that fact, a review of civil society initiatives like city or community food movements by Moragues-Faus and Marsden find that "separations between these alternative and conventional food networks have proven sterile since they are indeed relational to one another" (Sonnino and Marsden, 2006, in Moragues-Faus and Marsden, 2017, p.3). Then, rather than turning away from the conventional agro-industrial system, why not try changing it?

Doing a great job at popularizing notions of food sovereignty online and on social media as they believe it is the right vehicle to transform unjust food systems, the collective 'A Growing Culture' tackled some of the above-mentioned critiques of food sovereignty to dismantle them.

For them, food sovereignty is not defending "some kind of world-scale overhaul of the food system at an internationally-coordinated level (like food security tends to do)", but rather supports "diverse solutions that emerge at the local level to address the issues facing a given community and their context" (Walmsley & Antony, 2022). What they find is the most precious about the movement is that it aims at localizing food systems, rethinking land ownership and prioritizing scales of trade, therefore provides a much-needed space to reimagine and transform the power structures of our food systems for more inclusive and equitable ones (Walmsley & Antony, 2022). Nonetheless, while some flexibility is celebrated within the normative guidelines of food sovereignty, Thompson et al. warn against too much relativism, arguing it leads many to simply assume "that the way things are done in a given community should be free from critique and change" (2020, p. 439).

2.2.3 Building a sustainable and resilient agriculture

Sustainable agricultural systems are generally described as those using the goods and services provided by nature without causing damages (Pretty et al., 2003). Such systems aim to produce food by integrating the natural processes of nutrient cycling, soil regeneration and pests management instead of using non-renewable inputs that harm the health of ecosystems, farmers and consumers (Pretty et al., 2003). Side-effects of sustainable agricultural systems also benefit a broader socio-economic landscape, for example by keeping the water clean, preserving biodiversity, sequestrating carbon in soils and recharging the groundwater resources (Pretty et al., 2003). Those effects can be called ecosystem services, understood as the provisioning, regulating, cultural and supporting functions that healthy ecosystems provide for human, ensuring their survival – and that of other species (Millennium Ecosystem Assessment, 2005). Furthermore, valuing the local farmers' labour and knowledge over technologies and inputs sold by corporations replaces the power and capital locally.

Among alternatives to the agro-industrial system, three important farming systems can be identified: agroecology, organic farming, and fair-trade systems. Altieri & Toledo (2011), along with many authors, provide substantial critique to the last two systems: organic farming only substitutes the inputs required by agro-industrial processes by foreign organic-certified inputs – and expensive certifications –, while fair-trade farmers producing for export remain vulnerable to the foreign buyers' mood swings, therefore not addressing the dependence on external markets.

Other farming models have also been developed, such as permaculture, which favors a bottom-up adaptive agricultural management and design based on learning from and interacting with natural ecosystems (Holmgren, 2002, in Krebs & Bach, 2018), and biodynamics, which is set on respecting growing seasons and lunar and cosmic cycles (Fraine, 2015). While using holistic approaches that seek to respect all living beings just like agroecology, these methods are generally less discussed in modern scientific literature on the basis that these systems lack scientific foundations (Leistad, 2017). However, agroecology derives from many of the principles and ideologies brought forth by permaculture and biodynamics.

Agroecology uses ecological science to develop a sustainable agriculture: to turn away from monoculture, agroecology promotes the use of composts and green manures, along with on-farm biodiversity, which is beneficial to biological interactions that naturally maintain productivity, protect crops from diseases and pests and enhance the soil organic matter and biological activity (Altieri & Toledo, 2011). Indeed, while healthy soil is considered as the most important natural resource supporting life, it is in great need of protection: if it can regenerate over centuries, in the short term it is highly expensive to repair the damages caused by erosion, salinization, desertification, acidification, contamination and compaction (Yawson et al., 2016). To communicate this urgency, Yawson et al. suggest applying the food security dimensions, which are already known to decision-makers, to soil security: in this case, 'availability' would relate to quality and quantity of soil in a given territory, 'accessibility' to the ways in which the soil is made accessible, 'utilization' to how the soils can be used for optimal benefit, and 'stability' to the structure of governance needed to sustain the three other dimensions (2016).

Considering the 'agroecosystem' as a whole instead of a 'farm' or 'agricultural system', agroecology's principles for soil quality also help with the water scarcity issue of Barbados and other water-scarce countries. Indeed, organic matter is key to increase water retention capacity (Rawls et al., 2003). In that regard, there is promising research about the possibility of using sargassum, a brown macro-algae that washes up on the beaches of the Caribbean in increasing quantities due to climate change and eutrophication, as a fertilizer for agriculture, instead of feeding it to landfills (Thompson et al., 2020).

Agroforestry, which combines trees with agricultural crops, also shows high potential for water and nutrient availability for crops by hydraulic redistribution through tree roots, lifting the

water from deep moist soil or groundwater to prevent drought in the topsoil, helping surrounding vegetation with shallow roots, as shown in figure 7 Devi et al., 2016).

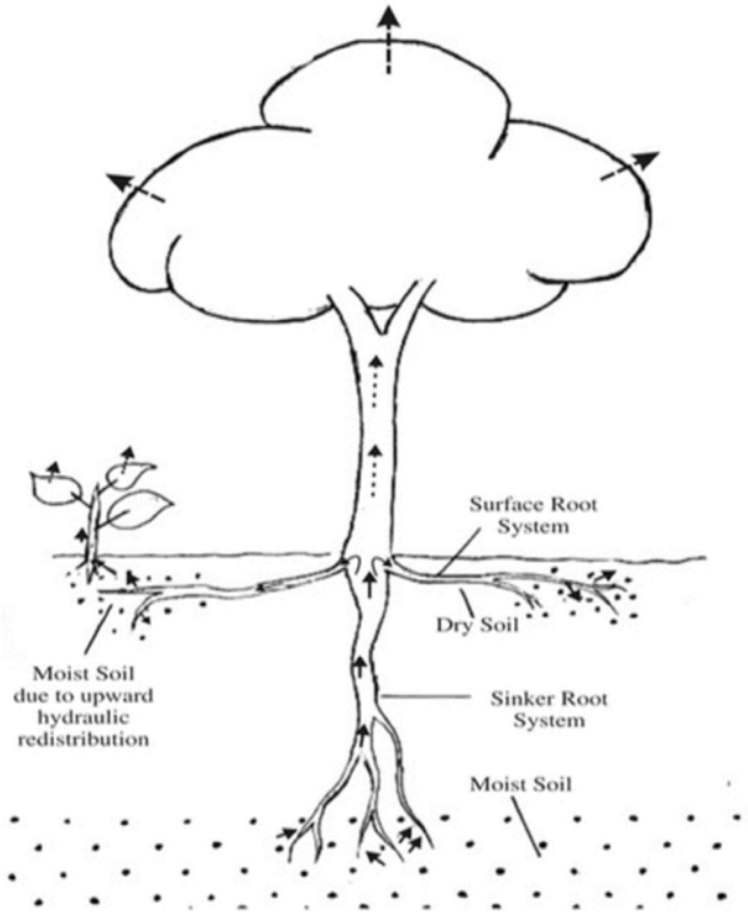

Figure 7. Diagram illustrating upward hydraulic redistribution by trees. **Dotted areas** represent moist soil, **line arrows** depict water movement due to upward hydraulic redistribution and **broken line** arrows show routine water movement via transpiration pull (Devi et al., 2016)

Aiming at keeping the soil covered by mulch from surrounding trees, agroforestry can also help preventing the agricultural runoff, rich in nutrients and sediments, which is essential in Barbados and other SIDS to protect the aquifers and the coral reefs, as these are already highly exposed to the issues of touristic activities, harmful fishing practices and coastal degradation and erosion.

Agroecology can also be helpful to adapt to the growing threats and impacts of climate change. In Latin America, Altieri and Koohafkan find that many small farmers usher in agroecology principles in response to or in preparation for climate change, such as agroforestry, water harvesting, soil conservation, mixed cropping and using drought tolerant local varieties (2008, in

Altieri & Toledo, 2011). Observations in the fields have proven that the level of on-farm biodiversity influenced greatly the resiliency to extreme climatic events (Altieri & Toledo, 2011).

Furthermore, agroecologists use holistic approaches to integrate natural and social processes, recognizing that agroenvironments are constituted of both ecological and social components (i.e. socio-ecological systems or socio-natures), aligning with multidisciplinary approaches like political ecology, ecological economics and ethnoecology (Altieri & Toledo, 2011; Moragues-Faus & Marsden, 2017). Privileging the local over the distant and seeking to make peasants independent from transnational agribusinesses, agroecology aims to go beyond alternative farming practices to develop agroecosystems relying on chemicals, energy inputs and foreign markets as less as possible by recycling nutrients, seeds and energy on the farm, and promoting short circuits from production to consumption (Altieri & Toledo, 2011). In contrast with the short-term rational scope of the conventional agricultural paradigm, agroecology adopts a self-reflexive, long term vision that also values local wisdom and traditions, seeking to co-produce knowledge with local actors through participatory research (Ruiz-Rosado 2006, Toledo 1995, in Altieri & Toledo, 2011). For Moragues-Faus & Marsden, the co-production of knowledge and change is essential to address 'place-based socio-natures' and 'the politics of scale and inequality' (2017). This new perspective goes beyond a consideration for food, seeking alternatives to the political and structural issues of globalizing capitalism that cause repetitive financial, fiscal and energy crises (Moragues-Faus & Marsden, 2017).

That aligns with most of the solutions suggested by Beckford and Campbell to increase domestic food production in the Caribbean (2013): identifying the gaps in farmers' knowledge through on-farm, evidence-based, adaptive research based on participatory and collaborative principles, and providing answers focused on agroecological knowledge and elders' wisdom. Specifically, they identify six goals to reach a 'real food security': "increasing productivity [1], diversifying crops […] with a focus on […] traditional foods [2], reducing postharvest losses [3], improving the marketing and distribution of farm produce [4], promoting urban agriculture [5], and increasing women's participation in the food security endeavour [6]" (2013, p. 211).

Considering the fourth goal, the authors suggest some avenues to improve the internal distribution infrastructures and practices, pointing out that the lack of an adequate market access discourages the producers (2013). Indeed, the distribution network is a seemingly longstanding issue (Henshall, 1966). While the growth of the peasant agriculture after emancipation contributed

to the development of road networks from rural areas to commercial centers (see figure 1), it did not affect the export-oriented economic structure of the region (Timms, 2008, in C. Beckford & Campbell, 2013, p. 17). At the local level, Beckford and Campbell insist on the importance for cooperative associations between farmers for distribution, adding that they should also receive governmental support (2013). Solutions could also be developed at the regional level, as Barbados exports are not solely destined to distant markets: regional trade plays an important role within the CARICOM countries (C. Beckford & Campbell, 2013).

As for the sixth goal identified by Beckford and Campbell, it aligns with LVC's goals for food sovereignty, which recognize the critical role of women, both as food producers and, in a stereotyped but somewhat generally true manner, head of the household nutrition. As the role of women is increasingly recognized and encouraged, we have yet to address the fact that an essential part of this labour remains unpaid (M. S. Thompson et al., 2020). Insights into economy of care and feminist political ecology can help analyzing the implications of multi-scalar gendered power structures in food systems from bodies to the globalized world (Demaria et al., 2019; Moragues-Faus & Marsden, 2017).

Absent from these goals is the need to explore the links between humans and nonhuman animals and beings in depth in order to repair our relation to food and nature (Moragues-Faus & Marsden, 2017; M. S. Thompson et al., 2020), some of which will be explored in chapter 5.

Finally, a socio-ecological approach to agriculture needs to consider the role of tourism in the food system. This will be discussed in section 5.3.

CHAPTER 3. METHODOLOGY

As established in chapter 2, food is a vehicle for the negotiation of our relationship to nonhuman nature (Colás et al., 2018; Counihan, 1999; Kimmerer, 2013; Lang & Heasman, 2016b). In its negotiation of what constitutes "nature", then, political ecology appears as a useful approach to tackle issues related to food. Furthermore, if the theoretical framework identified a problem anchored in political economy, a political ecology approach signifies a desire for a research project engaged beyond a descriptive perspective to appropriately question what kind of nature and politics the Barbadian people want. Beyond interviews, a political ecology approach influences the methodology to include a political discussion with local organizations and residents, participant observation through volunteering, and a desire for long term commitment to the community. The themes sought for the data collection should therefore revolve around the nature and politics of the local agriculture and food system.

Aligning with this approach, this research seeks to shed light on the 'politics of scale and inequality' (Moragues-Faus & Marsden, 2017) to bring a critical perspective on the food system of peripheral countries that suffer from their integration in the global capitalist economy, and eventually suggest long-term, truly sustainable solutions. Sharing Haraway's 'situated knowledges' aims (1988), this study also learns from critical and feminist geography to adopt a self-reflexive posture towards cultural, racial, gender or class judgements to focus instead on the structural inequalities that shape the global food system (Colás et al., 2018). Highlighting these inequalities, Moragues-Faus & Marsden (2017) suggest that the integration into food studies of some of the key features of political ecology – multi-scalar analysis, from the body to the global market; reflecting on the dialectical relations between human bodies and other-than-human bodies through the concept of 'socio-nature'; and being especially critical and self-reflexive about how knowledge is produced and by whom –, would provide a much-needed discussion on our food issues. Indeed, the colonial dynamics standing at the source of today's inequalities, it is crucial that the knowledge and change be co-produced by *all* actors. Beyond an essential decolonization of the knowledge and imaginaries and the much-needed awareness against elite-driven food movements that perpetuate capitalist ideologies, research on food also needs to identify actors and processes that have been missing from the discipline so far (e.g. transporters, retailers, women, nonhumans) in order to correctly question the concepts of structure and agency (Demaria et al.,

2019; Moragues-Faus & Marsden, 2017; M. S. Thompson et al., 2020). Then, to broaden the solutions for a more inclusive food system, a particular attention must be given to build a 'new procedural perspective' to make sure those missing voices are heard (M. S. Thompson et al., 2020, p. 455). Central to my research is a concern for the integration of the local people to the discussion, as their exclusion often results in them bearing a bigger blame than they should where 'conflicting environmental ethnoecologies' are debated (Dore, 2018, p. 921).

However, my background in physical geography pushes me to consider the nonhumans both as crucial for human survival, and for their intrinsic value. Drawing from Sundberg's 'posthumanist political ecology,' I build upon Hobson's perception of nonhumans as "subjects whose ecology, behavior and welfare are […] part of the uneven social and economic outcomes" (2007, in Sundberg, 2011, p. 321) and Latour's 'collective' rather than a 'society' excluding nonhumans (2007, in Sundberg, 2011, p. 333), to bring considerations for a relational ontology where humans and nonhumans are mutually constituted through social relations (Castree, 2003, in Sundberg, 2011, p.321). Acknowledging this bias, it also nourishes my research orientations as the evidence of our threatened survival as a species pushes me to try and understand the profound sociological barriers preventing us from implementing the numerous solutions we have developed theoretically. For example, I am highly interested to assess the extent of psychological and sociological phenomena such as the 'shifting baseline syndrome' (Pauly, 1995), where every new generation of humans is found to have an increased tolerance, or decreased expectations, as to "what is a desirable state of the natural environment" due to a lack of information or experience about the previous conditions (Soga & Gaston, 2018, p. 222). According to the authors, that constitutes a fundamental hurdle for environmental scientists trying to implement conservation, management or restoration initiatives to address environmental issues, as the public and policymakers tend to trust their 'cognitive baselines' more than scientific evidence (Soga & Gaston, 2018). Analyzing the presence of this phenomenon in local discourses is useful to determine if it constitutes an impediment in developing a more sustainable food system in Barbados. From a usual application in the studies of fisheries, I believe this syndrome can be applied in a wider scope, both to environmental and social issues caused by an unequal food system, as the problem I seek to tackle has been long underlying and may be, to some extent, tolerated by the local population. This is not to diminish the importance of the decolonization of

the science, but to open possibilities for the defense of both human and environmental health, as the former can't exist without the latter.

My methodology was also influenced by my participation, in February and March 2022, to the third edition of the Food Systems e-course facilitated by the Netherlands Food Partnership, the Wageningen Centre for Development Innovation and the Netherlands Ministry of Foreign Affairs. The 4-module course was offered for free to a selection of worldwide applicants working in the agri-food sector and interested in food system transformation in low- and middle-income countries and provided useful conceptual tools such as the food systems approach to implement change in communities and institutions alike. Aligning with the need for food studies to identify all the components of food systems, the food systems approach advocates for food systems analyses to locate hinderances or blind spots. This is particularly appropriate for Barbados; its food system being extremely embedded to the regional and global food systems. That inspired me to list and describe all the actors of the food system of Barbados in chapter 4, with a special focus on the independent local agri-food initiatives created in the last decade, as their limited reach can benefit from all opportunities to communicate their challenges and observations. Then, chapter 5 explores the different processes and forces at play in the food system of Barbados.

3.1 Notes on reflexivity and origin of the project

Conducting research in Barbados and volunteering in an agrotourism initiative, I had to introduce myself a lot during the project. To keep it brief and focus on Barbadian matters rather than talk about me, I usually answer that I am from Montreal to those who ask, and they assume the rest from what they know of the place. I was not often asked why I devoted nearly three years of my life to this research project – most people give me a knowing look implying they would get any degree if it could be on a beach away from the cold Canadian winter. Reality is somewhat different as I moved to Barbados for various reasons, some of which are unrelated to the research process and the Canadian winter, which I love and miss.

I grew up on a dead-end on the outskirts of Alma, a small city in the secluded region of Lac-Saint-Jean, Quebec. For what I know, my ancestry came from Côte-Nord, New Brunswick, France and Scotland. My indigenous roots were lost when my Innu great grandmother died early in her life and my grandmother unlearnt her mother tongue at the colonial orphanage before being

adopted by a family of French descent established in Lac-Saint-Jean. My parents worked hard to bring me up in what is usually called a privileged background: I received an acceptable education in the public system, read a lot and travelled a fair amount. My skin is a shade of olive and strangers always wonder where I am from. I sometimes wonder too, as I have moved many times between schools, cities and countries. I am an outsider everywhere, but I quickly felt at home in Barbados, as I found many similarities between the island and the region where I am from, both in terms of population size, seclusion and political life.

I originally came to Barbados in January 2020 for a semester abroad at the Cave Hill Campus of the University of the West Indies. At this point of my personal life, I felt like I was exactly where I needed to be and all the residents I met were welcoming. I knew close to nothing of Barbados before landing so my knowledge of the place was sewn from the many stories the locals gifted me – upon saying I was studying geography, they would tell me their whole life story and share their observations on changes in the Barbados environment and society, so I quickly felt involved. Hoping to find an internship or a job in environment after the university semester, I lent a careful ear to everyone, seizing all opportunities to develop my network. By March 2020, my network was promising but the pandemic happened and given my international student status, I was sent back to Canada as that's what's written on top of my passport.

Looking for ways to return to Barbados as I wanted to give back to this warm community, I developed a research project that might benefit its well-being. I chose a subject among the environmental issues that locals had discussed with me and for which I had some experience, interest and contacts. As I had worked in agriculture in Montreal and I consider human relationships to the land and other species to be the source of many of our contemporary issues, I thought food was the right object of analysis to understand Barbados. During my time back in Canada in 2020, I kept in touch with my contacts in Barbados to remain informed of the country's responses and struggles throughout the first year of the pandemic. This helped me orient the research project in a way that could help address some of the challenges Barbados was facing. My previous research experiences all mobilizing community-based and participatory action research approaches, I believe these types of approaches are what communities need to use science to their advantage – instead of the other way around.

I wished to avoid imposing my foreign point of view onto the community. I saw my role in this research as a conveyor of the interests of the local stakeholders, and a motivator of a critical

discussion on the inequalities caused by the food system. More than anything, I wanted to honor the fact that this research problematic had come to me from Barbadians who shared with me the issues they experienced. But given the urgency of the environmental and health crises, the advocacy of political ecology for activism and engaged research, and with many locals asking to hear my insights on the basis that an outsider's perspective sometimes brings a fresh look on a longstanding issue, I sought to suggest some avenues for solutions.

Food sovereignty came as a useful perspective to challenge the dominant narratives shaping the food system, to bridge the gap between producers, distributors, policymakers and consumers, and to provide a new space for them to discuss the agrarian models better suited to the local context, the tensions and opportunities for solutions at the local, national, and regional scales and the impacts and new needs created by the pandemic. As a political project that goes beyond food, I hope that the seeds of food sovereignty germinate into a popular reflection on the current political model to ensure that all can access democratic mechanisms, all to identify opportunities for transformation that benefit the whole community. Positionality rarely proved an issue, except with some defensive informants.

To foster an authentic implication in the community, significant time spent in the field was a key component of this study, first to build a trusting relationship with the population and offer opportunities for a qualitative methods of data collection, but also to produce, in addition to a written report, a medium-length documentary film, as will be discussed in section 3.2.4. This was made part of the methodology from the onset on the project, as its potential both as a communication method and a data collection tool, becomes increasingly valuable in modern studies. For example, the digitalization of work and research, especially since 2020, makes video content an excellent option to share information. I also found that many research participants were more likely to get involved in the data collection once they heard about the documentary film.

The timeline of the project is illustrated in figure 8. The fieldwork took place from summer 2021 to spring 2022 approximately. Such a long immersion in the field was motivated by the following reasons. Firstly, participant observation, also called ethnography, requires a long-term impregnation in the daily life of the participants (Morange et al., 2016, p.69). The consumption, production and procurement of food being a daily practice, an ethnography seeking to observe the practices surrounding food necessarily needs to be somewhat intimate and therefore established in the context of a long-term involvement. Secondly, it was important for me to keep an airy schedule

since I wanted to work on different steps of the project, both data collection and analysis, and filming and editing the documentary, in parallel rather than one step after the other. This allowed me to go back in the field for new observations or second interviews with certain participants. An open schedule also allowed me to volunteer and develop a trust relationship with the participants and members of the community. As for the documentary, I also wanted to avoid having to film the participants from the first encounter to avoid establishing an extractivist relationship.

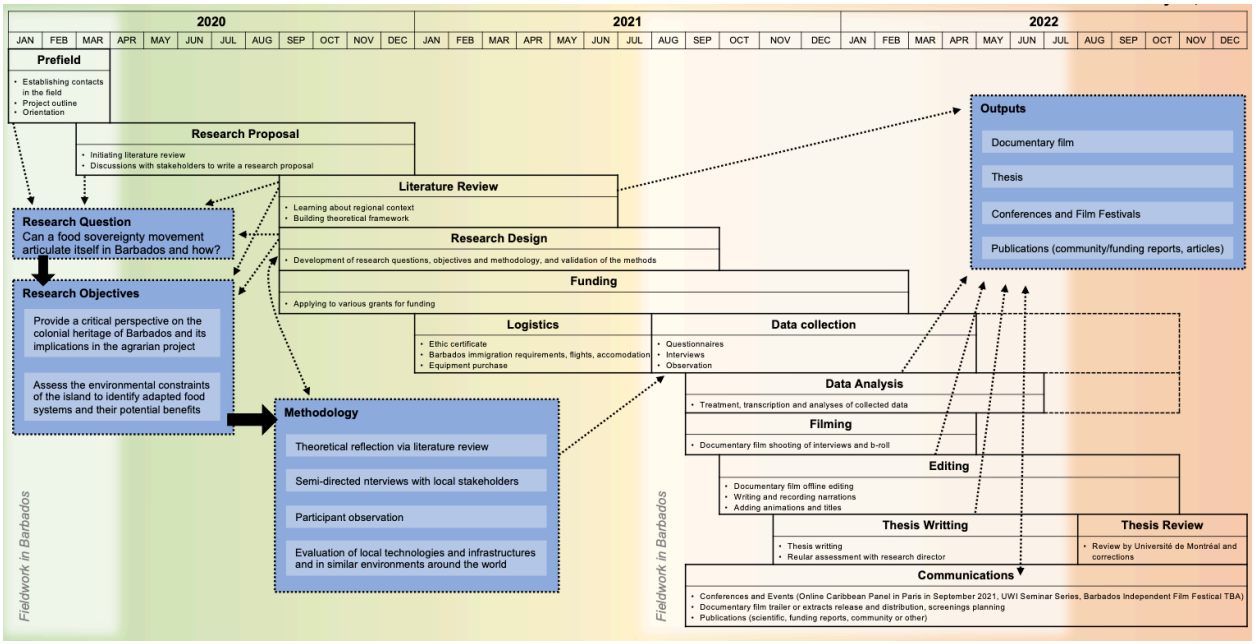

Figure 8. Research and documentary film production planner with objectives and expected outputs.

3.2 Methods

There were two main goals for that study: providing a critical perspective on the colonial heritage of Barbados and its implications in the agrarian project and identifying agricultural models that respect and may help mitigate the socioecological constraints of the island. To reach these goals, I studied Barbadian perceptions of food and agriculture mostly through qualitative methods, the aim being to bring out the specificities of the Barbadian experiences and perspectives, rather than to outline general trends, which are usually expected from a quantitative analysis.

With a general focus on crop production and relations to the land, this research also looked at livestock production. Although it is an important component of food security on an island, fisheries were not discussed in depth throughout this research as the fishing industry uses a whole other set

of concepts and scales of analysis in terms of what is local and sustainable. Challenges and limits of my specific methods of collection are discussed at the end of every following section.

Through triangulation (Morange et al., 2016, p. 54), the use of different methods – semi-directed interview, participant observation, questionnaire, audiovisual techniques and media monitoring, allowed the validation of the data collected on the field, along with the data collected from the literature. To analyze the heavy amount of qualitative data collected, I used an inductive approach to derive key themes and concepts out of the experiences and perceptions conveyed by the material. All the formal interviews being video-recorded, I used Adobe Premiere Pro to generate transcripts, which I corrected afterwards. A thorough analysis of the interviews was done both from the transcripts and the videos, the latter informing through body language and facial expression as well. To convey my observations, states of mind, informal discussions and raw analyses, I held a logbook since August 3rd, 2021. By conflating anecdotal data from interviews, informal discussions and observations, I was able to outline some common perspectives, as well as some contradicting ones.

3.2.1 Semi-directed interviews

The semi-directed interviews revolved around one central question: what would a good or sustainable food system look like in Barbados (Thompson et al., 2020, p.450)? From this common point, the interviews then oriented themselves more or less freely around the subjects related to this question. When necessary, an exhaustive wishlist of talking points was referred to to feed or reorient the discussion. From a generic list designed prior to the first interview, an updated version was created before each interview to add specific topics tailored to the area of expertise of the interviewee. For example, opinions about agricultural policies and relations to food production and the land were put forward with farmers, while I focused more on public outreach efficiency, policy analysis and regional relations with program coordinators, managers, experts and researchers. In all cases, I sought to assess the level of awareness about social and environmental issues in the food system.

The semi-directed interviews were carried out from August 2021 to April 2022 with 26 local stakeholders: 2 members of the public, 1 chef, 9 farmers, 2 agroprocessors, 4 retailers, 1 community workers, 1 ethnobotanist, 1 agronomist, 2 independent consultant of the financial sector and 3 spokespersons from regional institutions. The duration of the interviews varied from

20 to 90 minutes. The interviewees were chosen through snowball sampling, starting from the network of friends, professionals and researchers I started creating in 2020.

Informal interviews and discussions also bore a considerable amount of precious data, as many Barbadians were reluctant to formulate critiques towards any kind of authority in front of the camera, as the interviews were video recorded for analysis and eventual use in the documentary film (see section 3.2.4.). I was not expecting this kind of response on a subject like food, but as mentioned by some informants, challenging the establishment is not a popular practice in the Barbadian society. Furthermore, former employees or officials working on policies to be announced later were not at ease with participating in formal interviews. Many people of all sectors showed interest in the project when first contacted but stopped responding when asked for interviews or did not show up to scheduled interviews. At the governmental and corporative level, it was even harder to reach the targeted people, although I was in contact with key actors and approached the organizations with the delicate aim of helping rather than criticizing their mission & activities through my research communications. Some institutions I only heard of really late into the data collection, either indicating my poor research skills or the institutions' poor community outreach strategy.

One clear bias is that most participants were interested in the issues around food and agriculture in Barbados, either personally or through their profession. Getting in touch with the people that have little awareness or interest in what they eat was much harder, although it is primordial to convey and understand their perspective. The other methods allowed for some insights; however, they leave more room for interpretation than an interview.

3.2.2 Participant observation

Participant observation was led in many ways throughout my long data collection, taking place in fields, markets, supermarkets, kitchens, beaches and food-related institutions across the island, as well as on social media and at online conferences. That allowed me to observe the food and farming habits and perceptions, but also of the social, logistical, institutional and legislative environment. I volunteered in the activities of various stakeholders to get a deeper notion of the significance of their practices and discourses, but also to thank them for their contribution to the research, as no financial contribution was offered to the participants. I was particularly involved as a volunteer in two local food-related organizations; Slow Food Barbados (SFB) and Coco Hill Forest (CHF).

At SFB, I mostly participated as a filmmaker to create content for their social media and their Regenerative School Bus initiative (RSB), for which I helped produce five short videos about local initiatives involved in agriculture and environment: a closed loop farm, an apiary, a botanical garden, an organic farm and an agroforestry project. I used this opportunity to ask some of my research questions in the process and later conducted semi-directed interviews with some of the people behind these businesses.

As for my involvement in CHF, it began during my exchange semester in Barbados in early 2020, when I first visited CHF at the occasion of a guided tour with the owner, Mahmood Patel. Sharing a passion for botany and a similar career path as we had both left the film industry to get into agriculture (like many of my friends, interestingly), Mahmood and I quickly connected. As I was looking for ways to get involved outside of the university at the time, I started organizing a volunteering day at CHF with other students. But that was in March 2020, and the volunteering day never happened as the university closed shortly after our encounter. I had originally set out to stay in Barbados and volunteer at CHF during the pandemic, but in sanitary and financial uncertainties brought me back to Canada. Mahmood and I remained in contact anyway and his observations on the food system of Barbados largely contributed to the development of this research. When my project was officially structured, he gladly accepted to collaborate with me throughout my master's degree. Since my return in Barbados in July 2021, I have been volunteering at CHF about 2 days a week, assisting on various tasks to assess the viability of the project and suggest developments and solutions to the issues it encounters.

Observation of the local news, events and social media channels throughout the data collection period was an inductive, opportunistic and particularly evocative method, as the end of 2021 was rich in political events and conferences about the economy of Barbados, with a lot of them being broadcasted or taking place online due to the pandemic. While this observation method can be participative where the researcher can engage in discussions through likes and comments, the researcher can also remain purely anonymous and access the unfiltered opinions of anyone who has access to a phone and data. While this is a potential bias, 82% of the population of Barbados is thought to use Internet (World Bank, 2020). Trolls are another risk, but a careful analysis can usually see through it.

My observations were also discussed during semi-directed interviews and informal discussions when relevant, to validate results through triangulation, guide my interpretations and

bring out some aspects I might not have noted. Indeed, observations are often enhanced by an association with another method allowing to identify the importance the observed participant lends to it (Morange et al., 2016, p. 61).

The main difficulty with my highly participative observation over a continuous period is that it is very time consuming and can easily become alienating. However, to become deeply involved was always part of my methodology and it is proving useful to build strong, durable relationships with the community.

3.2.3 From questionnaire to alternative methods

I originally planned to seek the point of view of some 30 adult residents of Barbados through a short questionnaire on the eating and farming habits of the participants. This questionnaire can be found in annex 1. Sampling for this method was done arbitrarily: I distributed the questionnaire to friends and people in public areas where it was convenient to have a short discussion about food (farmer's markets, fish markets and around other markets, university campus, beaches and parks, etc.). Beside drawing trends from the data obtained by this questionnaire both in a quantitative and qualitative form, the main goal of this method was to approach members of the public to engage them in the discussion on the food system and invite some participants to take part in a semi-structured interview in a posterior moment. Although I invited the participants to this method to fill the questionnaires on the spot, most of them said they preferred doing it at home in a relaxed way. I would then let them go with the forms and ask them to send a picture of the filled form through email or WhatsApp.

I distributed around 50 questionnaires and managed to get back four: one was from a good friend who is highly interested in the food system as he is a farmer and his parents are chefs, the three others were from the only people who accepted to fill it on the spot – they were waiting during a volunteering activity with nothing else to do. Some people preferred me to ask them the questions orally, so I started using the questionnaires more as a list of questions for interviews, or I would bring those questions up in my informal discussions with the public. Once out of the formal process, people were more inclined to talk, although I felt like some of them did not clearly understand the purpose of the research.

I thought of many ways to palliate to the lack of data for that method. A vox pop at the supermarket was the best idea but was abandoned given the context of the pandemic, in which

white people are often considered as tourists and therefore perceived as more at risk of carrying the virus. Camera interviews with masks are also hard for the viewer to understand and relate to. Instead, I opted for a more casual way of chatting with customers in the supermarket: after shortly introducing myself and the research, I would ask random customers if they would mind me taking a picture of the content of their shopping cart. I would then ask one or two quick questions if they looked interested. Following advice from of the manager, I gathered this data at the Speightstown branch of the Jordan's Supermarket on two occasions to get different types of customers: on a Sunday around noon, to get the beach goers and Sunday cooks, and on a Friday around 4pm towards the end of the month, when most people get paid and go out to buy most of their groceries. I managed to take pictures of 25 shopping carts. While some customers were happy to participate and seemed to see the importance of talking about the food system, most seemed indifferent and one person was annoyed, thinking the aim of the project was to tell people what they eat is wrong.

This method provided evocative data that was relatable to many consumption patterns that were identified through interviews and observation. However, a delicate analysis must avoid deriving general trends out of a decontextualized shopping cart.

3.2.4 Documentary film & research communication

This project also includes the production of a medium-length (20-60 minutes) documentary film, which constitutes both a research method and an output (Jacobs, 2013). First, the film-making process will allow a direct involvement of the participants in the research, as they will get a chance to convey their voices directly to the public through the screen. Second, the presentation of the film will be a good way to talk about the research with a wide audience, more than a written master's thesis or a scientific article. To give access to a large public, both the trailer, extracts and full version of the film will be made available online for free. This will also allow local organizations to share the different outputs via social medias, where both locals and other communities facing similar challenges around the world might come across it. The film will also constitute a useful format of the research findings to be presented during events, such as festivals and conferences. Supported by participant observations, both the film-making process and the presentation of the film on various platforms will allow for further data collection and discussion on the topics of the research, as some room must be left for the viewer's interpretation to help

shape the discussion in a non-representational scope (Holland, 2020; H. Lorimer, 2008; J. Lorimer, 2010).

Such a rich method also has limitations, especially as filmmaking is a project in itself, so trying to do both the research and the film at the same time is prone to some mistakes. First, recording most of the formal interviews results in way too much material to analyze and choose from during the editing, although the authenticity of a live interview is of great value compared to a prepared statement. Second, aiming at filming all the interviews is not necessarily the best, as some people and opinions avoid the camera. However, it is a factor of motivation for others, who are either very at ease or proud to be on camera, and to have exposure through their participation. Finally, technical difficulties bring delays: for example, I got a microphone stolen while volunteering and had to pause the data collection for a month while I had to wait on a new one to get brought to the island.

As for the written outputs of my research, I chose to write my memoirs in English to make it accessible to local organizations and researchers.

CHAPTER 4. THE ARTICULATION OF A FOOD MOVEMENT IN BARBADOS

Many actors started promising projects for sustainable food production in Barbados, especially in the last decade. There are people involved locally in organic production, permaculture, agroforestry, biodynamic farming, Korean Natural Farming, closed loop systems, hydroponics, aquaponics and farm to table initiatives. Most of these actors are also involved in training others in those farming techniques, raising the public's awareness on the importance of farming, and encouraging sustainable agriculture through their food choices. However, many issues limit the beneficial effects of those projects on Barbadian communities. For even though the pandemic and the Russo-Ukrainian war sparked reflections on the vulnerability of the Barbadian food system, many people cannot afford to change their consumption habits, especially since the pandemic dramatically affected their livelihoods.

The following chapter presents the most active organizations, farmers and institutions working around food and agriculture in Barbados at the time of the study, the challenges they have identified and the solutions they suggest. The underlying sociological phenomena observed through the activities of these organizations and in the wider Barbadian society will be discussed in Chapter 5.

4.1 Slow Food Barbados

Created in 1989, Slow Food International (SFI) is a grassroot movement present in 160 countries "to prevent the disappearance of local food cultures and traditions, counteract the rise of fast life and combat people's dwindling interest in the food they eat, where it comes from and how our food choices […] collectively influence how food is cultivated, produced and distributed, and change the world as a result." (SFI, 2015). Considering the cultures, politics, production methods and environments by which food is produced, the movement advocates for good, clean and fair food: a quality, flavorsome and healthy food produced without harming the environment, through fair conditions and pay for producers, and offered at accessible prices for consumers (SFI, 2015).

As a chapter of SFI, Slow Food Barbados (SFB) was registered locally as a charity in 2012. Seeking to "steward a dramatic and lasting change in the food system", SFB "reconnects Barbadians with the people, traditions, plants, animals, fertile soils and waters that produce our

food," with a focus on the local farmers, chefs, artisans, youths and organic food, as SFB was co-founded by the Organic Growers & Consumers Association (SFB, 2020).

One of the first initiatives of SFB was the Educational Garden program, which aims at the integration of gardening into the school curriculum for children ages 3 to 18. To do so, SFB created edible gardens and provided practical training and resources to teachers and children of 17 schools across the island since 2015. When schools went online due to the pandemic, SFB adapted this programme into the Regenerative School Bus (RSB) a digital education initiative composed of 10 videos presenting some of the island's leading gardens and farms and a garden-based curriculum to go with each video. With that, they were able to provide teaching material to ten primary schools in 2021. When the pandemic would allow, a new school garden was to be created at Milton-Lynch Primary in Oistins, Barbados (SFB, 2021). I assisted to the first meeting for the installation of this garden in August 2021. The school's garden is still not active as of today - the pandemic continued to cause multiple delays and fallbacks to projects like this, as schools remained closed in Barbados until February 2022 and other projects were given priority or stole the momentum. Another example of sad fallbacks, the RSB was to expand to three other Caribbean countries in 2022 - Jamaica, St. Kitts & Nevis and St. Vincent & the Grenadines. I was assisting in this project as a consultant, but here again, unforeseen circumstances hampered the continuation of the project, as the local filmmaker and beekeeper in Jamaica retracted their participation to the project one week prior to the filming, arguing their pay was too low.

However, SFB does an amazing job on various other projects. Since 2020, the Slow Soup Drive made the best use of the circumstances of the pandemic, hiring chefs, cooks and drivers that had been laid off, buying produce from farmers that saw their sales to the tourism sector drop, and renting the kitchens of closed restaurants to cook and deliver soup for the vulnerable communities around the island. Slow Soup became a pillar of these communities and still feeds many families, three times a week, as of today.

SFB is also very active in its communication channels. On social media, the Slow Seven contest reaches thousands of followers every year, where hundreds of participants try to eat local for seven days while posting about it on Instagram and Facebook. Aside from boosting sales of local foods providers, the sharing of recipes and knowledge about local ingredients and discussions about the local sourcing of food and its perks and challenges, the winners in many different categories get prizes from local businesses and producers, and develop their network: in 2021, the

winner of the 1st place got hired as social media manager. SFB is also active through cinema: once a year, they partner with the Barbados Independent Film Festival to host Cinecuisine, where a film about food is presented and followed by a panel discussion with the filmmaker and local experts.

To educate consumers and help them finding local suppliers in Barbados, SFB produced the 2020-2021 Buyer's Guide, available online and distributed at various events and locations. The document provides the contacts, info and point of sale of 33 small farms growing fruits, vegetables and herbs, 28 local agroprocessors making various products from sauces and cakes to drinks and skin care products, 14 egg and meat producers, 9 dairy and cheese makers and 6 fisherfolks, along with the hours and location of the 6 farmers markets and 7 fish markets. To celebrate sustainable practices and educate the consumer, the guide suggests a list of questions for consumers to ask their local farmer, in a section titled "What to ask your local farmer/producer", (e.g. Do you use organic practices?; How do you manage pest?; Do you use agricultural chemicals and if yes how much and how often?; What type of animal feed do you use?; Is the fish caught locally?; etc.). Although this document is most useful for the already aware consumer, its reach of unaware consumers remains limited. Furthermore, it needs updating on a regular basis as small farmers and producers change their offer often based on seasonality or unforeseen challenges or opportunities (e.g., relocation, different market). While SFB wishes to update the document every six months, they lack the resources to do so. To help with that, I have been updating the farmers' info for a second edition. They would also like to create an interactive map, but again, the resources have yet to be found to invest in a platform and accompany farmers and producers in updating their info on a regular basis.

SFB also has many developing projects for the future. An example is Slow Fungi, a US$50,000 project for a first community-based mushroom farm in Barbados, fueled by solar energy, sargassum and sugarcane by-products. Indeed, mushrooms have a high potential of increasing food sovereignty where they're grown, as you can theoretically grow them forever once the mycelium is established, given a local supply of substrate. In Barbados, the constant input of sargassum of beaches and bagasse from sugarcane could feed mycelium for quite some time. However, mushrooms are not very popular among locals, and many are inflexible about food preferences. The project is now stalled by lack of funding and bureaucratic challenges.

The sister company of SFB, Walkers Reserve, is also a game-changing project featuring a regenerative agriculture project on a 400-acres sand quarry in St. Andrew, Barbados. Aside from

gradually shifting away from the sand exploitation to transform the space into a food forest with its own nursery and farmers market, the site hosts Permaculture Design and Syntropic Agriculture courses (a type of intensive agroforestry that is garnering increasing attention in the tropics), along with various other workshops around sustainable living in collaboration with the Caribbean Permaculture Research Institute of Barbados.

The owners of Walkers Reserve and founder of SFB, Ian and Julie McNeel, are inspiring models for a generation trying to repair the mistakes of those who came before. In 2021, they also opened The Local & Co., a boutique restaurant and marketplace featuring the best of the local regenerative farmers, producers, fisherfolk, artisans and chefs, a network they created through SFB & Walkers Reserve.

While this is a positive portrait that needs to be celebrated, many problems limit the beneficial effects of these projects, among which the lack of funding and adequate resources to keep these initiatives alive and bring them further. The difficult psychological and logistical context of the pandemic also had many impacts, and unfortunately nothing confirms that this will only be temporary.

4.2 Coco Hill Forest

Mahmood Patel, owner of Coco Hill Forest (CHF), used to be a filmmaker. His path to become an agriculturalist started around 2007 on a movie set in Senegal, during a discussion on creative industries in the Caribbean with Senegalese director Moussa Sene Absa, who told him:

> "you people in Barbados can't really talk about creative industries when everything you put in your mouth is imported [because] food is the first art. A white plate is like a white page […] And what you put on that plate is art […] And if you don't own it, how can you then talk about being creative and owning your own sovereignty and identity?" (Interview #12)

If these words originally upset him, they resonated and stuck with him when he came back to Barbados. Following the 2008 financial crisis, what some call "the lost decade" in Barbados, Mahmood went through a journey of personal reinvention. The owner of a small hotel and café as well, Mahmood had another trigger pushing him towards food production:

> "one day I was in the kitchen with the chef, and we looked at the storeroom, we looked at all the things there – they were all imported. Ginger, tamarind, mango, pineapples

> […] It was 10, 11 years ago. And I was like, OK, this is not sustainable." (Interview #12)

Because those four items imported either fresh, in cans or in the form of jams actually grow very well locally. According to Mahmood's research across the thin and very old literature on the subject, Barbados once had a rich flora, as both indigenous and European visitors would have brought plants on their way to other destinations (Hughes, 1750; Ligon, 1657; Schomburgk, 1848). The plants depicted on a 17th century map (figure 9) gives an idea of the diversity found on the island back then. For example, three to five varieties of pineapples still grew in Barbados in the early sugar days, brought by the Amerindians some 2000 years ago from Brazil and Venezuela to the Caribbean Island chain, with some accounts of 14 inches long "King Pine" (Ligon, 1657, p.83; Hughes, 1750). Teak, cedar, oak, fustic and mastic trees were also plentiful, with the latter being used to make the first rum barrels. But the focus on sugar cane for hundreds of years precipitated the erosion of that biodiversity and with it, the knowledge and appreciation of those treasures.

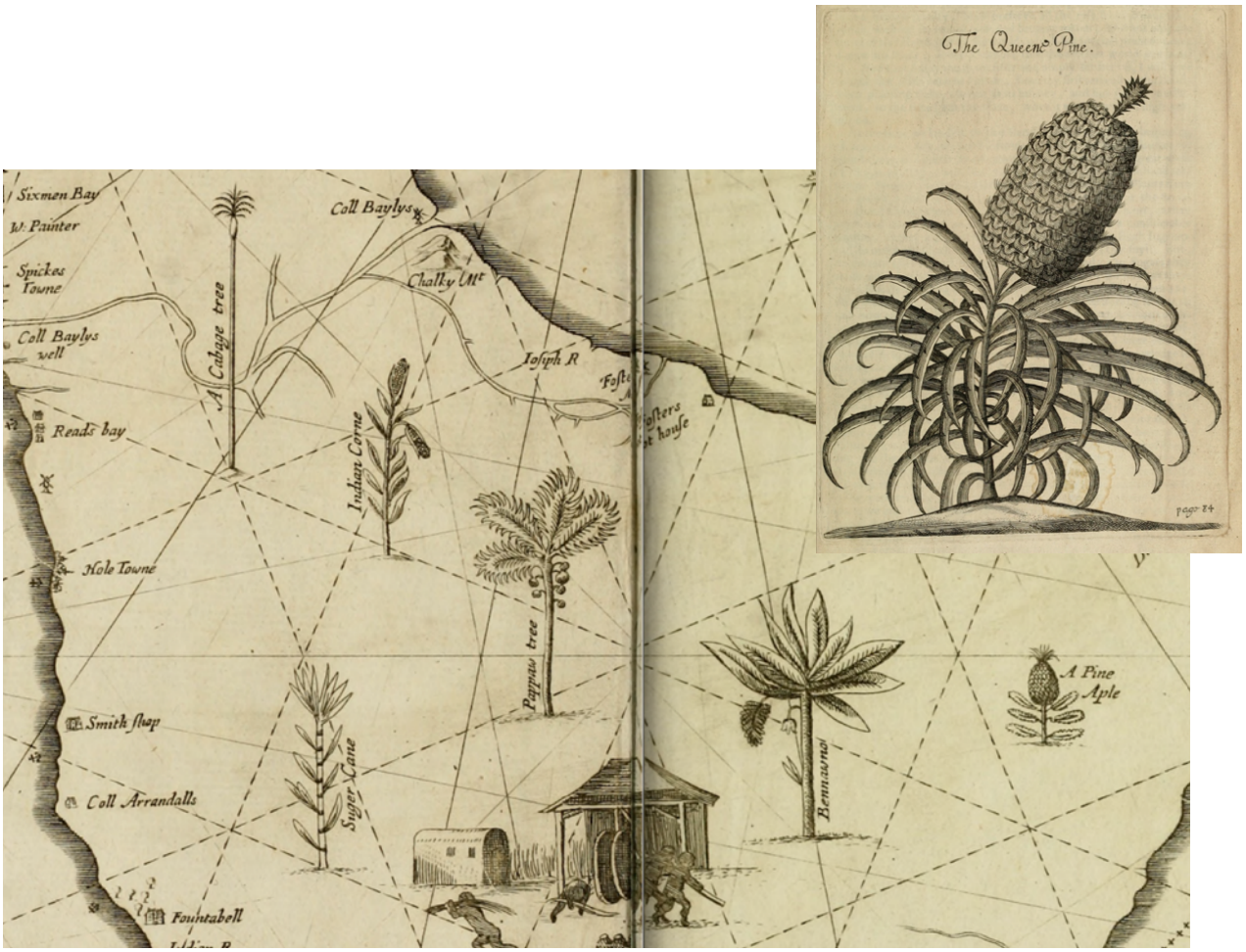

Figure 9. Illustrated map of central Barbados & illustration of The Queen Pine (Ligon, 1657).

It then became part of Mahmood's mission to retrace the knowledge on the lost biodiversity of Barbados to build it back and gradually substitute imports, starting in his hotel's café, turned into a farm-to-table project. Given the highly prohibitive cost of land in Barbados and his limited budget, Mahmood ended up buying in 2013 a very hilly, jungly 53-acre piece of land in the Scotland district, a hotspot of biodiversity on the island, but also facing important land erosion issues. A romantic farmer, he fell in love with the piece of land and convinced himself to build terraces to prevent landslides and keep the preexisting biodiversity by adopting an agroforestry approach. Planting over 70 species of various indigenous and tropical fruit trees, food crops and medicinal plants, Mahmood also started a nursery to propagate the species that would work best in his soil.

Harvests were promising for a time. One of the main problem CHF suffers from, like most crop farmers in Barbados, is monkeys. Brought from Africa by slavers in the 17th century (Dore, 2018), the uncontrolled population of Barbados green monkey (*Chlorocebus sabaeus*) does overwhelming damages to crops, especially to fruit crops in agroforestry settings.

Amidst fights with monkeys, Mahmood also discovered a few rare species (tree ferns, bajan ginger) that led him to believe that his land might host one of the last pieces of original or pre-colonial forest on the island, which has been preserved from the sugar cane invasion by its abrupt hills. Facing increasing problems with monkeys damaging his harvests and motivated by the demands of many friends who were amazed by their visit of the farm, Mahmood decided to create hiking trails and offer guided tours of the site on weekends. The agrotourism aspect of the project was born.

When the COVID-19 lockdown closed down his hotel's café and hiking activities in 2020, he also lost his crew, as most of them found other jobs before he was able to rehire some of them in 2021. Seeing the success of other local organizations working with volunteers and loving the idea of bringing more people in the forest to repair their relationship with the land, training other people in regenerative agroforestry and raising awareness on the issues of the Barbados food system – and hopefully keeping the monkeys away with more human presence –, we started a bi-monthly volunteering day in December 2021. An average of 10 people came every time. About half of the volunteers were tourists or foreigners living in Barbados, and the other half were Barbadians. Most of them were home gardeners and all age groups were represented. Some people came only once, but a little group came back frequently. Coordinating the volunteering activities and volunteering

myself, I learnt a lot from the local volunteers about Caribbean plants, traditions and backyard gardening.

In 2022, Coco Hill Forest was able to hire new staff and tour guides, do some renovations and catch up on the farming. As part of a new focus on coconuts in the project, a coconut nursery was built to ensure propagation of coconut trees on the island – a first in Barbados. This was made possible by the Alliance for Actions – Coconuts 2 Project, coordinated by the International Trade Center to create sustainable linkages between agriculture, agroprocessing and tourism in the coconut industry in Barbados. The future is mix of hope and realistic pessimism at Coco Hill, as Mahmood works hard to keep focused on his mission to help create food security on the island and build back and protect the biodiversity that was lost to sugar cane monoculture, against many heavy counteracting forces.

4.3 Organic Growers & Consumers Association

Created in 1997, the Organic Growers & Consumers Association (OGCA) has 56 registered members with approximately 22 who are organic farmers and input suppliers with combined acreage of over 500 acres. Two farms are approximately 200 acres in total, while the others average from 0.25 to 5 acres. All members are also registered as farmers at the Ministry of Agriculture. The organization applies for grants to develop the organic movement and environmental management on the island and offers training in collaboration with the Barbados Community College, the Ministry of Agriculture and the Inter-American Institute for Cooperation on Agriculture (IICA). An ally of SFB, the OGCA also aims at educating consumers and providing a stable market for its farmers. Instead of choosing to produce for supermarkets, who dictate prices with poor effects on both producers and consumers, or restaurants, which have had an especially instable demand since the pandemic, the OGCA bets on direct sales to a steady base of consumers.

At the head of the association since the beginning, John Hunte dreams of seeing Barbados completely organic. According to him, not only would it create more jobs, but it would keep the ocean pristine, attract more tourists, and offer safe work conditions for farmers, who are often exposed to dangerous chemicals in conventional agriculture.

4.4 Biocultural Education & Research Programme

Created in 2018 by Dr. Sonia Peters, a local chemist and ethnobotanist, the Biocultural Education & Research Programme (BERP) is actively working on safeguarding traditional ecological knowledge about the use of local plant medicines (i.e. bush medicine), and raising awareness on the dietary benefits of some underutilized plants and orphan crops. At the moment, four underutilized plants are under research by the organization for their nutritional value and contribution to health: Purslane (*Portulaca oleraceae*), Wild Spinach (*Amaranthus dubius*), Moringa (*Moringa oleifera*) and Turkey berry (*Solanum torvum*). As for orphan crops, they are known to constitute important resources in lesser developed nations but receive limited international trading and agricultural research. Locally growing examples comprise Cow pea, Pigeon pea, Cassava and Yam (Peters & Chase, 2022).

BERP also organizes tours and workshops for the public, now offered online to a growing number of participants since the pandemic. Creating content for various audiences, they put a particular focus on involving youth. Other than producing a podcast and distributing an alphabet chart and a colouring book featuring local plants, they also partnered with SFB to hold "Slow Cinema," a film contest where Barbadian students were invited to produce a short film about food in 2021.

Partnering with local and international researchers, BERP also produced Healing Roots, a 2021 documentary directed by Dr. Julia S. Jordan-Zachery, Chair and Professor of Women's Gender and Sexuality Studies at Wake Forest University, North Carolina. Exploring linkages between bush medicine and the Barbadian identity, Healing Roots outlines the losses of the past and future, from the body and Africa, en route towards the developed nation. Aligning with many awakenings in the Western world on what we are losing in terms of sovereignty and traditions in our pursuit on a "better quality of life," it stresses the urgency of safeguarding this knowledge, especially in these times of crises.

4.5 Other actors, from institutions to foragers

The four organizations presented above received more attention throughout this study given their potential to challenge the dominant narrative in the Barbados food system, but many other actors

are active in the local and regional agriculture, some whose voices are often ignored, muted, or long dead.

The institutional environment is quite busy in Barbados, which hosts the regional or country office of many organizations that are active in the Caribbean. Among international organizations present in Barbados, the United Nations have their regional office in Barbados, and the UNDP Global Environmental Facility Small Grants Program has many active projects on the island, many of which are related to the agri-food sector. The IICA also has a country office in Barbados and collaborates with other local organizations and the government of Barbados on various agri-food projects on the island, with a specific focus on engaging women and youth, agrotechnology, sanitary and phytosanitary measures, and water management. The Youth Farm Summer Program, reconducted every year since 2012, is their flagship project in Barbados, where a group of secondary school students are put through an intensive and rigorous eight-week training program in crop production, livestock rearing, and aquaponics (Interview #24). Finally, the Caribbean Agricultural Research & Development Institute (CARDI) is present but has grown to become more a bureaucratic jest than an actual research institute, as conveyed by some local farmers and some critiques in the literature (Ahmed & Afroz, 1996).

At the national level, governmental bodies include the Ministry of Agriculture and Food Security and its three statutory agencies: the Barbados Agricultural Development and Marketing Corporation (BADMC), the Barbados Agricultural Management Company (BAMC) and the Barbados Agricultural Credit Trust (BACT). Parallel to that, the Barbados Agricultural Society (BAS) was founded by an Act of Parliament in 1845, and represents the interests of 500 farmers, of which 30% are women, grouped into nine commodity group (Pig Farmers; Egg & Poultry Producers; Fruit & Vegetable Growers; Floral Producers & Exporters; Dairy and Beef Producers; Sheep Farmers; Cotton Growers; Rabbit Farmers; Bee Keepers) (Barbados Agricultural Society, 2018).

According to one interviewee, there are as many as 20 farmers-related organizations in Barbados, but the fact that they are volunteer-based limits their strength (Interview #24). There are official accounts of 5,000 registered farmers in Barbados, but the lack of access to the Ministry's data makes it hard to say more about them, or to estimate how many of them are still active. On the other hand, many unregistered farmers are also clearing bush around their houses or neighborhoods to start farming, and if it raises some concerns in terms of land use change, it is

inspiring to see these initiatives take form, especially as the Ministry has started to support them by offering reduced water bills for irrigation, even though they are not necessarily following the conventional procedure. Other successful farmers are leading inspiring change, like John Jones, aka the Bajan farmer, a successful St. Philip young farmer who started "Farm like a Bajan," a series of gardening courses for adults and 3- to 16-year-olds.

The civil society also has many informal, small-scale, home gardeners, especially since the vulnerability of the food system has been highlighted in recent years, as observed and reported by most interviewees. If they often go unreported, an observation of the main groups of local gardeners on social media such as Facebook (14,000 members scattered across 9 groups, from 2 posts per day to 8 posts per month) & WhatsApp (90 participants) informs on a really active subculture.

Non-human actors, both as producers and consumers, are also involved, although they are often silent, either because their pain is ignored, or because it has ended a long time ago. With very little scientific data left as a proof, one can only imagine the sufferings of the natural ecosystem of Barbados, which has been transformed into a sugarcane monocrop really early and heavily with little care for the impacts. Livestock and the land are also violently and continuously affected, followed by the increasing population of monkeys, already estimated at 14,000 individuals two decades ago (Williams, 2004). Often used as a deterrent to monkeys and thieves, countless dogs are also found to be important actors of the Barbadian foodscapes, living sad lives on very short chains in the blazing sun, eaten by ticks and diseases. In some cases they also benefit from their relationship with farmers, but otherwise the one animal refuge on the island does what it can with its very limited public support.

The changing climate also plays a major role in agriculture, but no farmers interviewed during this project mentioned it as a challenge to agriculture. Droughts and excessive rains happen in a cyclic pattern but most farmers see it as the norm (Hunte, 2021, personal communication). Interestingly, pests and diseases are identified as an important challenge, but no link is made with climate change.

All consumers of course play a major role in all food systems. In Barbados, the system is particularly influenced by the many people with special dietary needs (e.g. celiac, lactose intolerant, vegetarian, vegan, halal), a large community of expats and different diasporas established in Barbados, who keep their cultures alive through imported foods and tourists. The

Caribbean also sees an unusually high rate of single mothers, who may often have to opt for the more affordable, convenient food choices.

A lot of power resides in the distribution sector, as a merchant oligarchy controls the regional commerce, from gas stations to supermarkets to fast-food chains, composed of three conglomerates (Massy, ANSA McAL, and Goddard Ltd.) that remain in touch to avoid competition (Cruse, 2018, p.275). Among distributors, I was told importers have been on the frontline of the food system challenges since 2020, but none were available to participate in this study. One local supermarket chain was happy to participate, while the other bigger retailers did not return my calls. There are also many smaller retailers, either shop owners or roadside vendors, who mostly buy imported products from wholesalers, but feature local produce from time to time. Public markets (officially there are 8 of them but I only ever heard of Cheapside) also sell a lot of imported produce from wholesalers, and 6 smaller, weekly or monthly farmers market feature local produce, but generally more arts and crafts than food. Although the huckster is often said to be an occupation of the past now, you still get many mobile vendors today, honking as they drive by your house to see if you might have a sudden need for bread, juices, or even small appliances and tools. Foragers, as they don't technically produce the food, could be considered as distributors, however one could debate their care towards plants and their environment would play a role in production. More importantly, their knowledge of plant uses and the land also holds huge potential for safeguarding a dying culture and for survival in times of crises, if knowledge transfer remains and plant propagation occurs, as will be discussed further in the following section.

Finally, acting both as producers, consumers, marketers and distributors, agroprocessors & chefs play an important role in Barbados given the highly developed restaurant sector. In a similar way, magazines such as *Foodie* and *Ins & Outs* feature both advertisement and opinions on the local trends.

CHAPTER 5. PERSISTING CHALLENGES

Although a movement towards a better food system for Barbados is being articulated, the actors of this movement encounter a variety of challenges. If the last two years have renewed the necessity of the movement, they have also hampered many projects and amplified many pre-existing issues.

Among the challenges identified by the interviewees and informants and verified by observations and direct experience in the field, praedial larceny, both by humans and monkeys, constitutes the number one deterrent to Barbadian farmers. Then, the predominance of agribusiness over agriculture is both good for attracting people into farming and detrimental to the development of a more meaningful and sustainable model that has potential to repair broken relationships in the socio-ecosystem. More importantly, the progress of many initiatives within the Barbados food movement remains out of reach for many Barbadians. Then, socio-economic aspirations of modern work, mobility and convenience influence the attractivity of both local agriculture and its products, which are often undermined by the availability of easier, cheaper, imported options. The tourism-based economy perpetuates many longstanding issues, which the pandemic has exacerbated, more than alleviated.

Most of these challenges are fundamentally related to the dominant economic narrative, bringing interviewees to reflect on important questions such as how to work around that economic model or get out of it, a discussion that goes beyond food to consider the tenets of the dominant economic narrative and the logic pushing the Barbadian political system to adhere to it.

5.1 Inspiring models, limited impact for Barbadians

For innovative and flexible farmers of Barbados, farm-to-table initiatives, tourism and the highly developed restaurant sector bring a lot of opportunities. Some farmers have developed pre-buying systems with certain restaurants, allowing them a cash flow to invest in the inputs and technologies they need to grow the type and quality of crops the chefs want. While this sounds promising, it makes organic, high-quality food only accessible to those who can afford these restaurants. A similar scheme happens with other competitive producers growing organic produce, local seasonal fruits, or other specific crops sought by the chefs: the average consumer now has to

be lucky, fast and resourceful to acquire those products before the restaurants. Same thing with some high-end farmers market, where only a certain class of residents and tourists can afford to do their groceries there. If the Trinis perception of farmers markets as backwards contributes to the attractivity of supermarkets as mentioned in section 2.1, the Barbadian farmers markets suffers from an interplay of both these conceptions, constructing this idea of the farmers market as overly expensive for some, and backwards for others.

The pandemic forced many farmers to diversify their offer when the restaurants and markets suddenly closed, people had to stay home and supply chains were threatened. Some tried delivering boxes of produce directly to certain consumers for a time, and others are looking into developing an e-commerce platform to connect producers and consumers.

But to what extent can the products of innovative, sustainable, agroecological production be accessible to the wider public? As one interviewee explains, while sustainable and quality food might not yet be accessible to the poorer consumers, there is hardly another way to initiate the movement:

> "I think farming models in Barbados need to be top-down. That's what we recognized very early in our business, at least when I had my experience with trying to sell peppers […], I could sell them for one, two dollars a pound. Selling it to a restaurant, I can sell it for fifteen dollars a pound when it's of the quality that they're looking for […]. So in terms of trying to get investment to make a movement that's going to spread… because on the island […] food is really… Well, it's not cheap, but people will afford it because they want the quality. So being able to market your produce in a top-down process whereby the people who are already spending that money want to spend their money on this local produce. That is how you basically siphon the flow of money […], bringing it into the local economy, […] making other farmers want to get into that, knowing that that pool has become accessible. Because most farmers that grow here have to sell on the side of the road, sell in Cheapside, […] things that are usually time consuming and in fact […] restaurants and the people who have the money can't afford to rely on them, because it's not consistent and it's not the type of food that they're looking for that goes with the money they want to spend on. So I believe our top-down method has been good to garner attention […] around organic food. And as more people can get on board […] we're trying to gather information to teach other people how […] to grow in the way that we're growing and potentially allow them ways to market through our networks once they are meeting the same standards that we've set for what we think is […] worth that money. And as this movement can grow, it will eventually come down…" (Interview #5)

This can either be seen as promising or naive, yet there are few other possible pathways without public support or community-supported agriculture (CSA) initiatives, which remain absent in Barbados. However, most of the interviewees and informants mentioned procuring food

(mostly eggs and chicken but also pork, sheep, vegetables, fruits, fish and prepared meals) through producers among their family or friends, and/or producing food for them themselves. There is, then, an informal, community-based food network, and 9 of the 26 interviewees mentioned that it was reinforced during the pandemic: many farmers started home delivery services using WhatsApp, online banking and social media; one agroprocessor went and bought large supplies of staple foods to cook and fill the freezers; shopkeepers started allowing credit to their usual customers when going to the ATM was too complicated of an endeavour (Interviews #1, 4, 5, 6, 9, 10, 13, 14, 21). But obviously, this was made with varying degrees of consideration for the way these foods were produced.

While making agriculture profitable is part of the solution to bring workers back in the field and should be celebrated, the triumph of agri*business* over agri*culture* and the focus on cash crops is worrying. For instance, one farmer was diverted away from producing traditional crops to produce edible flowers for a restaurant, as it was believed it would be more profitable, even after the pandemic, which was a scary eye-opener for many residents. As another farmer puts it, "we can't eat lettuce if ships stop coming in, we can't really feed families with that" (Interview #6), highlighting the need for calorie-dense ground provisions as well for subsistence, even though edible flowers and lettuces could bring some beneficial nutrients.

> "The ability that we would - that we do have to become food sovereign lies in that. […] we need to know how to farm the calories. And that's hopefully organically and pest-free. […] People are farming sweet potatoes extensively, but not any that we know of organically. And we really would like to be in the position to prove some of our techniques on a larger scale. And we know it's not easy. […] herbicides are in use for a reason. And that's when you start talking about the forces and then hitting costs. […] when you factor in weed pressure on your economic returns, labor to weed can destroy you." (Interview #6)

Of the 2869 tons of ground provisions (sweet potatoes, cassava, yam) produced in 2019 on the island, I found no one producing them organically, although I heard of a few hundred pounds produced by members of the Organic Growers & Consumers Association (OGCA) in the last year.

Similarly, while "value-added" products convince some producers to get into agriculture or agroprocessing, they often take the focus away from foods that are consumed in larger quantities by the local population. Hot pepper sauce is a good example in Barbados. As one informant points out, more tomato sauce than pepper sauce is used in Barbados, yet no tomato sauce is produced locally. Moreover, the CARDI office in Barbados has been designated as the "hub" for hot pepper

seeds in the Caribbean. While this may help the value-added product sector, it has little chance of helping feed the population, unless they like it really spicy.

Agrotechnology is touted as the way forward by all agencies in the agri-food sector. While it might be effective on large farms, one expert on the Caribbean region says expensive technologies can hardly be profitable on small farms such as seen on small islands (Interview #22). There is also room for doubt that this will adequately address the issue of the disconnection to nature. Further, 'technological optimism' often leads governments to apathy towards the need for social change: as an example, land inequalities increased where the green revolution was fully implemented (Carolan, 2018, p.71). This is easily understood – where output per hectare increases, more land is made available for other uses, whether to generate more agricultural output or for housing or other developments. However, this extra value will often not benefit the rural poor, but the private sector, and these economic changes certainly do not ensure that the hungry are fed. One cannot treat symptoms and expect it to cure the cause.

For nine interviewees and many sources across the literature, more needs to be done to involve the youth (Interviews #2, 4, 6, 9, 12, 13, 20, 24, 26). In this discourse too, we find many advocates of agrotechnology as a way to attract the youth, following the idea that they don't want to be out in the sun and would prefer an office job (Interviews #4, 25, 26). But as one interviewee realized by working with youths in the field, it does not always align with reality, as many of them said they enjoy the manual work and being outside, in contact with the soil, the plants and the animals. Further, an interviewee points out that the "hard labor" aspect doesn't stop the many "young people planting ganja in the region, in some of the harshest conditions, in mountain tops, without water, [having] to hike up with buckets and pails…" (Interview #24). While we only have the evidence of those who get caught, this proves that given a good price for their labor, many will find the motivation to work.

But as the findings of Drummond and Marsden (1995) indicated in section 2.2.2, wages are not the only solution. For many young farmers met during this research, the work environment and work relationships are also in cause to motivate their choice of career or employer (Interview #4, 6, 7, 8, 9). They can be rewarding, for example when colleagues and employers become friends and the workplace is safe, comfortable and attractive, but the contrary is also frequent. As one farm worker experienced, many farms even lack basic sanitary installations and shaded areas to take breaks (Interview #4).

We may celebrate the fact that agribusiness sparked interest in farming among the youth, as observed by four interviewees (Interviews #4, 5, 24, 25). However, there is a high risk of reorientation as agriculture is taught in schools as a business like any other: if it is not immediately financially viable, it is not considered as a wise career choice (Hunte, 2022, personal communication). For one interviewee, the lack of continued mentorship also leads many farmers to reorient, after facing issues they were not necessarily prepared for and for which support is nowhere to be found (Interview #10).

With the important number of tourists on the island and the slowly changing modes of travelling, especially since the pandemic, agrotourism, ecotourism, voluntourism & mindful travel also bring brilliant ways of raising awareness on local issues, and putting tourists to work in innovative agricultural initiatives, an interesting turn of events in terms of cheap labor. Where this sometimes help to supplement labour force in areas in which the local population is not necessarily eager to do, volunteering also diverts jobs away from residents, making it ethically difficult to justify as the unemployment level has been plummeting since 2020. Further, is volunteering harming the attractivity of agriculture as a livelihood? Anyhow, some producers find they have little choice as agricultural workers are not always easy to find, keep or trust. For one interviewee, the lack of people willing to farm is the most important issue – if not the only one:

> "The biggest challenge is people. […] We could produce all the food we could eat in Barbados. No doubt. But the biggest issue right now is that there is not enough people farming. […] There's no shortage of money. There's no shortage of land. There's no shortage of rainfall. There's no shortage of good soil. There's no shortage of knowledge and technological advances […] there's all kinds of cool stuff that have come up in agriculture in the last few years that we could be employing here in Barbados and we're not. Our agriculture is old. And it's stuck in the sugar industry that's on thinner ice than has ever been in its existence. And like, does the world need more sugar anyway? […] the good news is that there's loads of potential. […] It just really comes down to people, obviously finally finding the money. There's always a little challenge there, but the money is there. People have money. People would invest in good farming projects." (Interview #11)

While money doesn't seem like an issue for this interviewee, it was identified as a problem for most of the other participants to this project. And if there are many funding opportunities for learning and starting projects in Barbados given the many investors and charities involved on the island, two interviewees point out that the problem is that grants are only good while they last, and projects often fail when the funding period is over (Interview #9, 21). As a solution, these participants stress the importance of internal funding mechanism for these projects to keep going

after the grant is used up. Indeed, there is room for developing more autonomy, but the economic extraversion mentality in both individuals and the government proves a structural hinderance to self-reliance. That was exemplified by many initiatives in the agri-food sector of Barbados, where philanthropic and greenwashing campaigns seeking to alleviate symptoms of certain problems get most of the media attention and funding, while the causes remain unaddressed. The "Save Soil" campaign was one example, with the movement leader Sadh Guru visiting Barbados to give a conference about the urgency of soil regeneration and take selfies with government officials that were happy to get the right social media exposure. That energy also transpired from many agricultural projects touting the benefits of regenerative agriculture – if they seek to turn back climate change and repair the land through agriculture by adopting carbon sequestrating methods, what led us there in the first place remains unchallenged, and farmers rights and access to funding to use those methods go through the same unequal processes than before (Walmsley, 2022). If these initiatives are hard to criticize as they also should be celebrated, they often instrumentalize problems to service just one aspect of the solution and keep us away from the deeper discussion we need to have. As A Growing Culture puts it,

> "relying on charity or food banks to solve food insecurity is not bad, but it's not going to shift the underlying dynamics of inequality that caused it in the first place. Similarly, there are fundamental structural issues with capitalist agriculture (and capitalism in general) that a corporation reducing their carbon footprint or developing healthier soil practices is not going to solve." (A Growing Culture, 2022)

Another major problem of Barbadian agriculture related to people, and which should also be solved by a deep societal discussion is the issue of praedial larceny (i.e. crop theft). This theme occupied a considerable time during six of the interviews (#2, 4, 12, 16, 24, 25), and complaints were often formulated in informal discussions. For some researchers, praedial larceny is a result of the poor wages, conditions and rewards of agricultural work, failing to attract the urban youth who comes stealing crops, influenced by a mediatized gangster lifestyle (Thomas-Hope, 2017; Cruse, 2018, p.153). Indeed, many accuse some aspects of American and Jamaican music and cinema, which popularizes a certain culture of theft, violence and drug dealing. But according to two participants to this study, praedial larceny in Barbados is of the order of organized crime and recurring behaviors, and the attractivity of agriculture has little to do with it: "I'm not surprised that a thief being offered an acre of land, or a quarter acre of land may not work because that's not their line of business. They're into stealing." (Interview #24). That discourages some farmers from

hiring workers, as they add previous experiences of employees stealing, even to the point where they prefer to downscale their operations rather than hiring people. Indeed, Barbadians are really proud and theft is seen as an inacceptable insult to their motto of "pride and industry", as this tale informs:

> "a lot of trees are being cut down, because persons don't see the value of that tree. It can be a mango tree, or it can be an ackee tree, that the person constantly has praedial larceny. I mean, the ackees taste good, but every year persons come and steal the ackees to go and sell. They're not getting anything, so they cut down the tree. It makes no sense to me. […] Despite the tree being productive, despite the fruit tasting good, they cut down the tree. […] If I can't get any, no one gets any. That's basically the approach and it is upsetting. I can see the landowners' point of view because you're stealing my crops every year and I'm not getting anything from it. I have to pay my tax. I have to keep around it clean." (Interview #10)

Discussed by 16 interviewees and mentioned in numerous informal discussions, monkeys are praedial larcenists too, a problem that most Caribbean states do not have (Interviews #6, 7, 10, 11, 12, 13, 15, 16, 17, 18, 21, 22, 23, 24, 25, 26). Together with human thieves, they are the number 1 issue mentioned by the participants to this study. While it has motivated some attempts at protected agriculture in greenhouses or netted structures, it was said to have discouraged many Barbadians to farm on part, or even all of their land. This is a tricky problem and can be considered as a form of resistance to some extent, as both human and monkey praedial larcenist have somewhat legitimate claims to some of these crops when looking at the history of land access and privatization on the island.

Considered an "invasive" species, the green monkey has only been introduced from Africa into Barbados, St. Martin and St. Kitts, the latter being a smaller Caribbean island with a similar past to that of Barbados and other sugar plantation economies of the Caribbean. In St. Kitts, the monkey population used to be constrained to the forests by the self-evident security on the sugar plantations and occasional feeding on the complementary protein by the rural population, but it became a problem when plantation lands were abandoned, and the tourists and conservation organizations started to mobilize a global conservationist discourse, problematizing local cosmological views about people–animal interactions (Dore, 2018). Like in Barbados, not only are small-scale farmers struggles muted, but Dore finds that "local people, the least powerful, tend to absorb most of the blame," (2018, p.921), and for her this unequal power dynamic is the reason why conservation and development projects often fail. In some cases, shutting local people out of the politics would also explain alliances between local peoples and commercial poachers, as local

peoples are “left to whatever defense they can muster” (Dore, 2018, p.921). This “conflicting environmental ethnoecologies between human groups at multiple levels, including local people, the state, and international players” is the root cause of so many “problems” between humans and nonhuman animals, “regardless of whether the animals are in need of conservation or management.” (Dore, 2018, p.935).

A plethora of diverse and imaginative solutions are suggested. The Barbadian Ministry of Agriculture has had a bounty on monkeys for decades, now sitting at US$7.50 per tail, but hunters now ask for at least US$12.50, arguing that the price of bullets now makes it unprofitable. No change is foreseen as the Ministry is stuck between lack of funds and various interests. To protect about both human and monkey thieves, the Ministry suggests farmers to put 10% of their budget in security measures. To that effect, they collaborated with the Ministry of Environment, Dr. Dore and various institutions to create a guide on the efficiency of monkey deterrents such as motion sensors, nettings and decoys, but they remain ineffective or inaccessible to many farmers, especially those trying to use methods like permaculture and agroforestry. To prevent praedial larceny by humans, one policeman simply told a farmer to get a firearm, a drastic measure another interviewee strongly disapproves considering the risk of seeing a farmer defending his crops ending up in jail (Interview #16). Left to themselves, farmers try different solutions, from tying dogs to all corners of the field 24/7, to growing more food to feed the thieves too.

If the monkey problem has remained stable since the pandemic, lockdowns have created more opportunities for human praedial larcenists, both by leaving fields unattended for longer periods and creating more markets for delivery of fresh produce, as indicated by a concerned interviewee:

> “during that period there were other people coming around, driving around asking if we want to buy different things. And I was very reluctant because you don't know… you know, there's a high level of praedial larceny in the country and you don't want to encourage that.” (Interview #21)

That is even naive, considering that it is not impossible for stolen crops to find their way into supermarkets too, given the lack of traceability of fresh produce and frequent cases of corruption (Interview #16).

5.2 An island that aspires to be first world: Modern work, mobility and convenience

Many of the interviewees and residents engaged in informal discussions throughout my data collection corroborated the fact that Barbadians have a limited interest in farming (Interviews #4, 8, 11, 23). Looking at the origin of many local farmers I encountered or heard of, it seems like the farmers of Barbados are not necessarily Barbadian farmers – a lot of farmers are originally from St. Lucia, Guiana, and outside of the Caribbean. According to Guyanese immigrant farming in Barbados, Barbadians are more interested in education and being "a professional" – as if being a professional *farmer* was not an option (Interview #8). Similarly, one Barbadian farmer (who actually stopped farming in 2022, working in tourism for a few months before leaving the island) confirms: Barbados is "an island that aspires to be first world", with all it entails in terms of modern work, mobility and convenience (Interview #5). As this person points out, this affects both the desirability of farming and cooking with local foods:

> "There still is the reliance on your breadfruit trees, your avocado trees, there still is seasonal reliance on local fish, on the plantains and things so that does still exist. I think where it's dropped is in the middle class, […] where our parents wanted us to be something more, to be doctors, lawyers, all that stuff. A lot of the middle-class sector that's making money, they want to buy food and then they end up [not cooking] for themselves mostly." (Interview #5)

Among a whole generation or two, this "something more", this "professional" job, or any office job in the A/C, has obviously been highly pedestalled over the agricultural work, as another farmer recalls his grandmother telling him: "Oh boy don't go out there, the sun too hot, you know you're not too strong, […] don't play up in the dirt. Go sit in an office. Go and get a government job" (Interview #4). While some informants and many analyses found in the literature point to the stigma of slavery to explain present-day perceptions of agriculture, they are not often directly linked. While it has been 184 years since emancipation, contemporary work on sugar plantations has continued and remains hard although it is paid, and it keeps shaping the experiences and imaginaries of Barbadians today. For 11 interviewees participating to this research, agriculture is described as hard, difficult, risky, challenging, requiring patience, a source of frustration, despair, problems and/or, in the case of livestock, disturbance for neighbors (Interviews #2, 4, 5, 6, 9, 10, 11, 12, 16, 17, 22). It is also seen as a secure job and providing a healthier lifestyle and access to food (7 interviewees; #1, 2, 3, 6, 8, 9, 10), a business (15 interviews; #2, 4, 5, 6, 7, 8, 9, 10, 11, 15, 19, 22, 23, 25, 26) and most importantly, "someone has to do it" (Interview #25). One farmer

argued the challenge was actually a source of motivation, explaining that if it was too easy, everyone would do it and it would become less satisfying (Interview #9).

For another interviewee, it is not necessarily agriculture that slavery affected, but the attitude towards work in general, giving birth to labour movements after emancipation to ensure human rights and adequate salaries (Interview #24). Still today, both political parties in Barbados are "labour" parties – the Democratic Labour Party, and the Barbados Labour Party. Possibly related to that trend, and amplified by the global phenomenon of our relations to work since the pandemic, is the attitude of many self-employed people working only when they feel like it, like these car mechanics who would only answer the phone once in a while and keep your car a whole week for a 3-hour job, and a surf repair person who would not repair your board until he judged there were waves to be surfed. Even for businesses looking to hire, keeping their employees is hard, as observed with this young man, looking for a job because he left the previous one because they made him work too long. On the other hand, there are exceptions to that trend, especially among women, with many people working 7 days a week, juggling multiple part-time jobs or having a day job while taking extra shifts and informal contracts on evenings and weekends, and helping family members in their free time. But in the end, it's island time, the sugar island always has rum, and delays are fatalistically accepted as part of the everyday life. It's raining? Try another day. Looking for a specific item and calling businesses to see if they have it? You will be lucky if they tell you no before hanging up, forget about ordering it from overseas. Lucky enough to know someone that could order something for you? Good luck getting it out of the shipping container. Celebrations also take an important part in Barbadian culture, with 14 bank holidays (some in the middle of the week), a vibrant nightlife and many festivals. Taking place at the end of the sugar harvest since the late eighteenth century, Crop Over is one extravagant example, with three events per week from the end of May until a three-day long party in August. The celebrations remain even if the sugar harvest is smaller every year, for after the tourist season, Crop Over is the Barbadians' turn to party. If the celebration lifestyle is something many are proud about, some deplore the unhealthy behaviors it encourages and link it to the high number of non-communicable diseases.

These attitudes towards work are seen by many Marxist authors as a form of resistance, for after slavery, labor itself remains as a subtler but more pervasive source of human bondage (Taylor, 2014). If Taylor and others have already dismantled the racist and shallow conception of the 'lazy

nigger,' he underlines the fact that work is not replaced by nonwork but rather that work now permeates all spheres of life and only the modalities of work have changed to allow the freedom to decide when and why we work (2014, p.14). For this resistance is not enacted for the disdain of work itself, but to express the frustrations accumulated against the capitalist forms of value production (James & Lee, 2006, in Taylor, 2014). However, if Taylor celebrates the 'self-sustaining [free blacks of Jamaica] working for their own consumption' (Marx, 1973, in Taylor, 2014), one of the problems that remains in the extraverted economies of the Caribbean is that there is very little self-sustenance left, and that Barbadians increasingly rely on the fruits of the bonded labor of someone somewhere. As one of my interviewees reminded us about food production, "someone has to do it" (Interview #25).

Economic extraversion also affects the work modalities and leads to a high emigration rate: kept uprooted for centuries, many Barbadians remain mobile today, entertaining many linkages to the outside world through a diaspora strongly established in and around Toronto, London and, for those who can get a visa, New York. Given the almost impossible process of obtaining a visitor visa to the US – the wait time to get an appointment to apply is at 641 days (US Department of State, 2022), the only reasonable way for Barbadians to enter the country is to study. Motivated by the hope for better wages, seasonal worker programs since the 1990s and school grants, Barbadians often emigrate where they can make the most of their labour. While that helps them securing an income that contributes to their food security and that of their families (through buying food), it diverts many from agricultural activities at home (Thomas-Hope, 2017).

Tourism also keeps a lot of the workforce along the coasts and beaches, where easy money can be made from a wide array of economic activities, often without a boss and with a flexible work schedule: many Barbadians will proudly tell you they are their own bosses and that they lead their own business, but this probably doesn't account for the official 2,5% of black business ownership. Compared to agricultural work, the retail of various natures to tourists, from drugs to bodily therapies to crafts (a friend once sold a painted piece of coral for US$250), appears far more lucrative.

As observed and discussed with numerous friends, informants and participants to the research, and as experienced by living on the island myself for over a year now, insularity creates a powerful longing for life overseas. That is strongly reinforced by the exposure to visitors from all over the world and the relationships created with them, which also contributes to create a seemingly

attractive image of an American or European cool, metropolitan, diverse, easy and profitable way of life. Not only have I observed this paradigm in Barbados, but also in many peripheral regions of the world, where I am from: when living in small, rural areas, I have often romanticized life in the central, urban areas – and vice-versa. But it's one thing when you can drive or take a bus to the region of your desire, and another when your only options to get out are expensive, uncomfortable flights and deterring immigration and sanitary processes, especially since 2020. Again, a mobile lifestyle is not only popular in the Caribbean – it has been touted widely since globalization, and even more so with the help of social media, where one can witness everyone else's travels directly from their toilet seat. The work reform pushing further towards remote work since 2020 has also increased the number of people having access to that lifestyle.

Of course, these mindsets and activities have deep impacts on our relationship to the land and the productivity of agriculture. One example of this is the fast pace of change in farming and agroprocessing activities. From 47 farmers and 37 agroprocessors listed in the Slow Food Barbados (SFB) 2020-2021 Buyer's Guide, I was able to confirm that nineteen farmers and six agroprocessors are still active, five farmers and one agroprocessor are temporarily closed, and five farmers and three agroprocessors are not in operation anymore (Table 2). All others (18 farmers and 27 agroprocessors) have not responded after multiple attempts to connect over 6 months.

Type of producer	Registered in 2019	Still active	Temporarily inactive	Permanently inactive	Newly registered	No response
Farmers	47	19 (40%)	5 (11%)	5 (11%)	4 (9%)	18 (38%)
Agroprocessors	37	6 (16%)	1 (3%)	3 (8%)	2 (5%)	27 (73%)

Table 2. Rate of change in producers registered the Slow Food Buyer's Guide between 2019 and 2022. Farmers include crop farmers and meat and egg producers, and agroprocessors (jams, juices, baking, etc.) include dairy and cheese producers.

While the pandemic, the volcanic ashfall killing most crops after the eruption of La Soufrière in April 2021, and hurricane Elsa in July 2021 might explain a high rate of change in farmers' occupation, the low response rate may also be attributed to the interest of farmers in being featured in the guide, as the first edition might have had limited success. It is surprising that any business would refuse free marketing, but some farmers and agroprocessors were hesitant to answer our questions and seemed skeptical of the benefits of being featured in the guide. Four new farmers

and two new agroprocessors were registered (Table 2), and a few farmers diversified their production into animal husbandry.

Other factors also come into play to explain the farmers' frequent reorientation. Among interviewees and informal participants, one farmer quit the farm he was operating with a partner to move to another country and two livestock farmers mentioned getting rid of their animals when family members passed away (Interview #7). One livestock farmer got rid of the animals at other occasions: during studies and when the farming partner left the island or had a work contract that didn't allow much free time.

To ensure more stable farming projects, many sources in the literature advocate for cooperation and coordination between farmers. While there are farmers who tried or are trying to develop collaborative agricultural initiatives on the island, their efforts are constrained by the wider trend of competitivity, defended by five interviewees (Interviews #4, 10, 13, 16, 25) and many informants. In parallel to that, the potential "flexibility" brought by neoliberal work (Freeman, 2014) makes it so that working on a farm as an employee is considered very lowly: one interviewed livestock farmer is resigned to do it as a side thing, keeping an office job in another sector although farming is the preferred activity – that farmer does not consider the option of seeking employment on a larger farm, repulsed by the idea of working for someone else (Interview #7).

Advocating for cooperation, one interviewee deplores the fact that producers refuse to market their produce together, arguing that this would attract more clients, which they lose anyway when they run out of produce (Interview #9). That farmer recognizes healthy competition to be beneficial to lower costs, but believes the Barbadian society breeds the wrong type of competition, placing it in material things rather than social, cultural or ecological values. This interviewee identifies the Barbadian school system as one source of this issue, where children learn to compare themselves by their rank in the class, which is displayed on their report, an attempt made on purpose to divide the society into different groups, according to him.

> "People in general have this mentality of "I need to be better than my neighbor […]. It drives the economy. So people say "I need to have a better car, I need to go to a better school, I need to dress better, I need to perform better, I need to have more, I need to farm and be successful and not tell my secrets to other farmers because otherwise they'll be as successful as me."" (Interview #9)

For Lamming, the roots of this competitivity were found within a 'social distance' that characterizes the Barbadian social life: "it is extremely difficult to think of a country, an island so small in which there is such enormous social distance" (2002, p. 84). This is easily observed as the sense of belonging is often expressed on the scale of the parish, the neighborhood or even the street, rather than through a national or regional identity. Whether a result of colonial history, the more recent growth of neoliberalist entrepreneurship (Freeman, 2014), or the juxtaposition of dilapidated chattel houses and some of the most luxurious villas, hotels and golf courses in the world, inequalities are blatant in Barbados.

While many food movements seek to repair the relationship between producers and consumers, it might be especially hard in Barbados, given such division and most of the food producers living half a world away. And if there is a need to address modernity's 'rural-urban' division as a growing population now live in cities and thus away from the food production issues, there is also a 'rural-rural' division, considering the growing number of net food buyers even within the rural population (Edelman et al., 2014).

The role of the state could be quite central in facilitating the discussion between these different actors, but the Barbadian government has not put efforts towards that yet. In fact, Lamming blamed both political and civil dynamics for hindering political education and the unification of social forces, and defended that "difference in cultural heritage is not an objective obstacle" to achieve a democratic future, as it only depends on the recognition and building upon of those historical facts (2009, p.45). Such thought aligns with Trauger's view of the citizen's power, considering slaves and workers as agents of change rather than vulnerable subjects, not to omit the violent structural forces at play, but to motivate action against them.

But in the neoliberal world, is it realistic to expect busy citizen and unsupported, unrewarded farmers to put time in a political project? Similarly, it would be surprising that a working-class single-mother would find the time to grow her own food or drive around in the search for healthy and affordable food before heading home to cook it. So, how easy is it to participate actively in democracy these days? Isn't it an obvious goal of neoliberalism to give the illusion of choice while clearly identifying a path of least effort possibly leading to wealth accumulation? For a farmer interviewed for this study, Barbadians have chosen the latter path, which makes it almost impossible to motivate ethical choices both in agriculture and other aspects of life:

> "the mindset is where the major challenge comes from and it's two phased in that regard because you have the conventional farmers who say "we can make money easier," and then you have the "you need to make money sustainably and ethically", which the conventional farmer and in a larger scale, the politics of the society, doesn't care about. The ethics is only because you don't want to get locked up for doing something criminal. It's not really about how do we make sure things are clean and nice and good for everybody else and generations to come. So the short term view is "let's make money." […] If they're making enough money, they can drive what they want, go on holiday when they want - why care about ethics?" (Interview #9)

For Freeman, neoliberalism offers new pathways for entrepreneurs to part with the rigid, western conception of 'respectability', traditionally based on a "secure job" in a corporate setting, formal education, regular attendance to church, and the hetero-normative family (2014, p.48). If this holds promises for the creation of new work modalities and lifestyles, the individualism demanded by more 'flexibility' is as exciting as it is threatening our ability to collectively discuss our common needs and aspirations. We should for instance be careful not to devalue essential, primary production jobs with binary debates between traditional work and modern, seemingly more desirable self-employment.

Perceptions of food are more varied than perceptions of agriculture, for everyone eats, but not everyone grows food. As an answer to the question "What is food to you?", different concepts were mobilized, from simple definitions like "anything edible" or "fuel for the day", brought quite frequently (5 interviewees; #16, 17, 18, 21, 25), all the way to the all-encompassing, inspired, excited "food is life!" (Interview #25). Respondents defined food as:

- medicine; the first arm of medicine; a vehicle for health (7 interviewees; #1, 9, 11, 13, 14, 15, 20);
- a commodity (6 interviewees; #2, 4, 5, 16, 19, 25);
- a means for autonomy (6 interviewees; #1, 6, 8, 10, 12, 20);
- a vehicle for tradition and culture (3 interviewees; #19, 20, 26);
- a human right and political act (Interview #19);
- a vehicle for love (Interview #2);
- the first art (Interview #12).

For the advocates of food as medicine and/or a vehicle for health, 4 interviewees remarked an intergenerational difference in diets (Interviews #1, 2, 15, 26). Two interviewees attributed that change to the greater variety, but lesser quality of food available nowadays (Interviews #1, 2), and

one interviewee explains that the greater quantity of processed food also affects the potential of food as a vehicle to share love, as it takes less time to prepare (Interview #2).

Other than local food being a way to decrease one's carbon footprint (Interview #21), food was never mentioned as a connection to the land or a way to apprehend the environment. Many aspects of daily life in Barbados rather inform on a widespread disconnect from nature, if not a positioning of people against it. Indeed, the "tidy" house, lawn and life is of utmost importance in the social hierarchy of Barbados. Hedges and trees must be trimmed – short, if not cut down – regularly, fences, windows, and doors have to be shut, and insecticides are commonly used in and around houses. Indeed, pests and weeds proliferate at a constant rate in the tropical world, and violent weather events can turn up unannounced. As experienced with the local clientele of Coco Hill Forest (CHF), the only official hiking trails attraction in Barbados, Barbadians do little excursions in nature, other than through the guided tours of hundred-people groups we see flocking on the side of the roads on Sundays. As for the relation to the ocean, the local idiom "the sea has no back door" and another mental heritage of slavery effectively continues to scare most Barbadians away from any kind of water activities: although they live on an island with pristine beaches, a great number of Barbadians don't know how to swim, and if there are some fishermen and people collecting shellfish on the shore, Barbadians surfers, scuba divers and sailors are surprisingly rare.

Such disconnect makes it hard to monitor and evaluate environmental change, as people spend a shrinking amount of time in natural environments and in turn have but a weak frame of reference about their ecosystem. That is one example of the 'shifting baseline syndrome' (Pauly, 1995), which contributes to suppressing opportunities of reflections on the previous choices we made that led us in the degraded environment we now accept as the norm. The environment of Barbados having been highly degraded given the early colonial development and high population density, three centuries of sugar cane monoculture, the introduction of many invasive species, a high urbanization and the lack of wastewater management, there is little hope that the collective Barbadian memory recalls a healthy ecosystem in recent times. As stressed by eleven interviewees and multiple observations, both locals and visitors have little awareness of the level of degradation this land has been through, and few value healthy, food-producing local landscapes, unless it impacts their finances directly. Indeed, the one example of environmental monitoring found in this study was based on the price of flying fish to determine the availability of stocks (Interview #2).

The absence of awareness regarding the impacts of climate change on agriculture among farmers also informs on that phenomenon – complaints only rise with the price of inputs. In that context, the costs of regenerative, sustainable, local agricultural models are a tough sell, and the expensive produce they grow too.

But it does not necessarily have to be that way: according to one interviewee, many organic growers raise their prices only because they label themselves "organic," even though their production costs might not be that much higher compared to other producers (Interview #9). For the leader of the Organic Growers & Consumers Association (OGCA), it is important to keep offering organic food at affordable prices to keep clients coming back and healthy. Because as explored in chapter 2, food is still a means of a social stratification, but often in complex, intricate ways. Organic and local foods are sometimes avoided for their price but also what they represent, which is sometimes perceived as pretentious or even racist, as one interviewee puts it:

> "farmers, those persons that are in this grassroots movement I should say, should also have a social responsibility and it should not be for profit. It should be for the wellbeing of others, not just their own pockets. And I find that to be the double standard in the movement towards organics here on the island. You want organic, you pay a premium price for it. I don't see why you should be paying a premium price for it. It's food, after all. It's like, are we trying to create racist foods? […] Organic may cost you less money to maybe grow because you're using a circular system. Nothing is wasted in your system. Whereas with the inorganic you're using chemicals, that are costly, that has an impact on your body. So why should I pay more for that than the organic, doesn't make sense." (Interview #23)

The disgust of the "dirt" seems deeply engraved in Barbadian society, where diverse observations on daily life inform on the highly esteemed conceptions of sanitation and cleanliness, often over environmental and human health concerns based on facts. For example, a good-looking, imported, packaged food product is often believed to be better than a local organic vegetable with some soil left on it, although the former might contain harmful preservatives or chemicals and its packaging and transport do more damage to the environment. One interviewee explained that some highly nutritious and easily locally grown foods like breadfruit and cassava are less desirable because they were the foods that the slaves and poor people ate (Interview #1). While this also transpired from the story of a second participant, who doesn't eat breadfruit anymore, this is not on the basis that it is a lowly food but simply because the person had too much of it during childhood. This might also explain the indifference of many locals for their local fruits, which maybe don't even bother to pick. There is this example of two of my close neighbors, who gave

me impressive quantities of delicious, perfectly ripe Barbados cherries and star fruits (locally called five fingers), two fruits that are impossible for me to find in the markets. Both refused my offer to pay for them, telling me that they were only good to make juice, and not their favorite.

In fact, the notion of 'local' food itself bears different meanings for different people, as conveyed by the puzzled expression of many vendors when asked if their ingredients are local. For many people, it is actually a novel concept (Hares, 2018), and it rarely comes into consideration in terms of food choices (Interview #16). I encountered many cases of people considering locally prepared food as local, regardless of the origin of the ingredients. As for the provenance of fish, it becomes quite tricky to determine what is local and imported, when the depletion of local stocks pushes fishing vessels further out at sea. I myself had to reflect on the concept: can we even consider local the food that is grown locally from imported seeds, fertilizers, and in some cases, soil?

The "now non gluten" traditional foods such as breadfruit, cassava and sweet potato are becoming more popular among the informed consumers and foodies, but awareness needs to be risen widely among the population to counteract some of the misconceptions around healthy food, and the heavy marketing around highly processed and imported foods. Along with Slow Food Barbados (SFB), the Biocultural Education & Research Program (BERP) also works on that. According to their 2007 study, what is left of the traditional ecological knowledge on local plants is mostly held by a few women above 60 years old (they would now be 75), and the transfer of this knowledge is hardly happening for the youth have little interest in it:

> "Our youth have become more removed from our traditions and very much, I have to say, Americanized. I don't like to say that. But I think in terms of them having a connection with, you know, our fruits and vegetables. And you'll hear them talk more about things that are not traditional to our island. And that is a problem." (Interview #20)

The link to wild foods is critical as an important component of the food security, and food sovereignty appears to grow in the "bush", gullies, backyards, and abandoned land of Barbados. There, nature and previous generations have propagated large quantities of fruit trees like coconut, breadfruit, banana, plantain, papaya, mango, soursop, Barbados cherry and sea grapes, and a vast array of highly nutritious but underappreciated or unfamiliar plants can still be found. But the highly urbanized, cosmopolitan, modern-day Barbadian spends less and less time in these areas. As one participant explained, a lot of this knowledge and the fruit trees themselves are threatened

by the lack of maintenance or use of those wild orchards becoming overgrown as people don't go there anymore. According to a local who lived a few years in the bush, relying only on wild plants, not only the knowledge and the proximity matters: the hard part is the cravings.

Indeed, the attractivity of convenient, packaged, prepared, adulterated foods is hard to beat compared to nature's food, which requires time, knowledge and skill to prepare. As it happens, of the 379 million US dollars of agricultural goods imported in Barbados in 2019 (WTO, 2019), the Chief Agricultural Officer pointed out that more than half is processed, canned or bottled produce (Hunte, 2021, personal communication). And as Barbados has few agroprocessing infrastructures, four interviewees (interviews #6, 9, 13, 26) agree that the challenge does not only reside in growing more food locally, but to actually make it appealing for the locals to eat it and for that, investments in agroprocessing are needed, as this interviewee explains:

> "I grew up eating yams, sweet potato, cassava, all of these things. But the reality is most people don't have the time to go home and necessarily peel these things and then cook them. But if we can have more of these products in supermarkets where you have them ready, peeled, vacuum sealed, ready to go for the consumer to purchase, I would really like to see our food and agricultural sector come to that point where our local foods are more readily available and ready to eat for the consumer and really meet the needs of the modern mom, the modern dad, the modern Barbadian family who is on the go and busy so that, you know, it may make it easier for people to eat local." (Interview #26)

Some local companies such as Ulu Foods and O's have developed that sector in the recent years, producing frozen fries, taco shells, pizza doughs, crackers and flours made from locally grown breadfruit, cassava, sweet potato and coconut. The demand however remains high for imported wheat flour and potatoes, and as one interviewee suggested, the local fast food chain would make a wonderful action by starting to offer locally grown and more nutritious sweet potato fries to reduce part of those imports (Interview #19). Supermarkets could also do better to promote local products according to one interviewee, who complained that the local options are often placed where it is harder for the consumers to see them (Interview #14). Another one (Interview #18) hopes their prices would be on par with that of imported foods – price is indeed the number one factor that dictates consumers' choices according to the manager of a local supermarket, especially since the pandemic and increasingly with the rising prices since the Russo-Ukrainian conflict, on top of the ever rising prices of our global capitalist economic system. Based on my observations in local supermarkets in early 2022, the cheapest and easiest protein to ingest is the most popular

choice, as exemplified by the wide section of a small supermarket devoted to cheap protein drinks and the big quantity of imported canned tuna and crackers in most shopping carts (figure 10).

Figure 10. Photos from the supermarket, March 2022. The Ensure section (left) and a typical shopping cart: canned fish, juice, lots of crackers, chicken, sugar (right).

Figure 10 (right) represents the typical Barbadian supermarket shopping cart: five to ten cans of imported canned fish (tuna and mackerel in this one), ten packs of crackers, white bread, ramen noodles, local chicken (three to five breasts, feet), two bags of local raw sugar, local lime juice and soft drinks. While a similar shopping cart content has been observed many times in various occasions, it is important to note that many people get their fresh produce from street vendors or producers they know, if they can reach them, while the supermarket is often for processed foods and household products, as it is commonly known that supermarkets add a high markup on fresh produce and ask local producers to match the prices of imported produce.

While consumers ask for lower prices and blame producers for high prices, producers ask for higher prices as their inputs are also getting more expensive, and retailers try to make a profit. These three categories of actors act in semi-closed silos with little consideration for one another, so prices stay high, and consumers keep choosing the cheapest option. For some, it has less to do with choice than obligation, as two interviewees suggest the high popularity of convenient, cheap, imported food also has to do with the high incidence of single mother households in the Caribbean (Interviews #16, 17), already high in the 1970, at 42.9% (Massiah, 1983). Moreover, Freeman has noted the importance of educational and professional achievements among Barbadian women,

legitimizing their position as head of the household regardless of their marital status (2014), but in turn also taking more of their time.

If this is a socio-economic issue, one may look for institutional responses to these food choices, especially given the alarming rate of non-communicable diseases (NCDs) among Barbadians. The only incentive I heard of by the local government to motivate consumers towards a healthier diet was a higher markup on sugary drinks (Interview #16). The fact that I have not found other measures, either in terms of education or subsidies on healthy or local products, raises questions on what is done with the profits of that sugary drinks' markup. Some measures are actually detrimental to the healthier and local options, as we will see later with the reduction of value-added taxes on many processed, imported products, and as indicated by the example of the fresh sugarcane, which, although there is a demand for local consumption and it is healthier than refined sugar and better suited for the high number of diabetic Barbadians, all sugarcane grown on the island is destined to the sugar factory (Interview #24).

But many Barbadians believe they have 'personal sovereignty' over their food choices and see little room for institutions to motivate healthier diets:

> "we can take control of our health and our wellbeing, we can do our immune systems. We are healthy naturally. For some people, it may take radical changes, there are some people who have been on this path to some degree for a time. The awareness is there, the information and the knowledge is there. It's the choices we make so we can choose an option that's going to help us to be able to have that control over your wellbeing as much as possible" (Interview #1)

As discussed in section 2.2.1, the question remains: do we truly have free will, or are we "the victims of an illusion which leads us to believe we have ourselves produced what has been imposed upon us" (Durkheim, 1982b, p. 53)? As the tales of three interviewees inform, it is only when personal health or that of loved ones is affected that awareness rises on the lack of affordable, healthy food options locally, and that actions are taken to procure or produce them (Interviews #11, 12, 14).

If not directly affected, there are little incentives for Barbadians to suddenly start questioning their food system and diets. Affecting revenues, the pandemic has however triggered some reflections in the panic, but as one interviewees points out, not as far as answering the toughest questions:

> "I'm not talking about the governments and the agencies necessarily, but the average Joe on the street […] are we willing to make the hard decisions, for instance, with the

> monkeys? Are we willing to go and eradicate the monkeys to enhance food production? Are we going to stop the guy who's stealing stuff and sell it on the side of the road, put him in jail and punish him for his actions, are we willing to enact harsh legislation to deal with praedial larceny [?] Are we willing to say we're not tolerating these things, or are we going to turn a blind eye? If you see me as a researcher or a farmer, shooting monkeys on my property, are you going to say: "Inhumane! Cruel!" […] Are you going to try to change your consumption patterns and […] eat some sweet potato […], or do you prefer to simply buy a pizza […], get excited when you see the wonderful meals on the television […]. Will you eat monkey meat?" (Interview #25)

Putting the responsibility on individuals rather than the institutions again, this perspective stresses that it will not be easy to have all Barbadians discuss and agree on these decisions. If these questions cannot be answered in a concerted manner, maybe Barbados cannot gather the energy needed to move out of its imported food scheme. That revives the realism of Girvan's advocacy for shared sovereignty (2015) or, as one interviewee suggested, regional sovereignty (Interview #9), encouraging to mark the differences between self-sufficient individuals, communities, countries or regions, and to accept a certain degree of interdependence.

5.3 Tourism: journey or destination?

> *There's got to be more energy going, to back people […] that want to develop industries here that could make this place not just a tourist dollar sucking country.*
>
> Interview #6

If Barbados was built as a plantation economy where agricultural goods were the main resource to be traded on global markets, tourism has clearly replaced sugarcane as the main "export" crop. But as the population of the island has also grown, why has tourism replaced agriculture, rather than become an extra source of employment and foreign trade? Are there tenets of tourism that prevent the coexistence of both agriculture and tourism? As Richardson-Ngwenya and Momsen (2011) find studies of tourism-agriculture linkages to lack critical theorization as they are often submerged in data and policy analysis, it appears pertinent to start by asking to whom the tourism-based economy profits. In this section, I explore the reasons behind the fact that strangers and the local elite get the biggest share of the country's resources, to the detriment of the residents, who are left to pay the social, environmental, and health costs as a result. Some solutions are then suggested

both by the literature and the participants to this study, of which many naturally brought the semi-directed interviews towards the theme of tourism.

Because Barbados' "high-income" does not apply to everyone. Many authors working on the Caribbean region denounce, whether openly or more abstractly, the clientelist politics influencing the said socialist regimes (Cruse, 2018; Drummond & Marsden, 1995; Lamming, 2009). It is not only the primary and secondary economic sectors whose profits end up in a small number of pockets: as a large part of the tertiary economy of Barbados, tourism too benefits to but a limited portion of society, and sometimes not even to the local one, as Cruse points out that it is often foreign firms who reap the revenues of tourism (Cruse, 2014b, p. 260). One local informant found that out of the US$2 billion tourism industry, as much as 80% (US$1.8 billion) leaks out of the island.

Constitutive of one of these major groups of clients, the tourists can be considered as a portion of the population of the Caribbean, for if their presence as individuals is temporary, as a perpetually renewed group they occupy the countries they visit in the long-term, becoming in relation with the local population even though they generally live in a segregated way, and impacting consumption patterns and prices as they generally demand more imported foods (Cruse, 2014). In Barbados, an overwhelming one million tourists arrive every year since 2000, compared to a local population of approximately 280,000 in the same period (World Bank, 2020).

Tourism contributes to maintain a hierarchy that is strangely similar to that of the plantation society. Between the rich (i.e. visitors and the local elite) and the poorer (generally black), the latter suffer from a lack of control over public space and services, resources and rising rents, a lack of access to valuable environments, overcrowding and increased congestion (Richardson-Ngwenya & Momsen, 2011; Young & Markham, 2020). And while visitors and rich locals can afford to leave the island, the rest is left to deal with these circumstances.

At the burst of the COVID-19 pandemic, Barbados remained the last port of the Caribbean to allow cruise ships to dock and send their international passengers back home, while the crews were welcomed on the island, where life went on as usual, with restaurants open and planes still flying in without restrictions – a humanitarian approach, according to some (Gove, 2020). As dozens of ships were lining up in the bay, given that all other Caribbean countries had closed their borders, locals self-isolated as soon as they were allowed out of work and school, horrified by the threat of the virus. As some Barbadians told me, many have no confidence in their health system nor were

they expecting their government to implement sanitary measures, the fear of many being heightened by their immunocompromised state, as many Barbadians live with HIV (UNAIDS, 2019). In April 2020, a complete lockdown with supermarket closure was announced with 36 hours' notice – without governmental support or access to credit, the poor, paying cash for daily foodstuffs when they had it or going fishing when not, were left with little options to survive – eat and risk jail time, or starve. By the end of June 2020, the government of Barbados had, like many tourism-dependent countries, created a 12-month digital nomad visa in exchange for US$2,000. While the sick, famished and poor confined into their small houses, some tourists kept coming, provided with free covid tests on arrival, until the British variants made their way onto the island, when a mandatory 5-day quarantine was finally implemented in March 2021, unless fully vaccinated. A curfew was implemented from February 2021 for a whole year, with frequent changes to the hours and conditions, mostly aligning with the number of tourists on the island rather than the number and severity of COVID-19 cases. Barbados was also the first country to soften entry requirements every time a drop in cases was recorded, but schools remained closed with online schooling for the better part of the two years following the first closures in March 2020 (Barbados Today, 2020a, 2020b, 2021). During those two years, public-private partnerships allowed to expand access to technology for students to follow online schooling, but some 4,000, identified as vulnerable, remained without access, priority being given to students having to pass official examinations that year (Blackman, 2021). As for the learning environment students had to study in, one can only imagine that it was not optimal for all.

These are only some examples of the inequalities between tourists and locals in Barbados. As tragic as the pandemic has been, it has fueled a hope for the emergence of new dynamics, for tourism started being questioned long before the global sanitary crisis. According to some authors, the relatively 'non-extractive' nature of tourism is what made it popular over export agriculture, mining and fishing (Timms, 2006). For others, tourism is a non-traditional export, as tourists bring the market where they go (Brohman, 1996, in Richardson-Ngwenya & Momsen, 2011, p. 139). The 'commodification of place' and subordination of locals as servants it entails are highly contested and deeply contradictory phenomena: producing a 'second nature', tourism is often criticized as destroying both nature and culture (Britton, 1991, in Richardson-Ngwenya & Momsen, 2011; Young & Markham, 2020). Colonialism, globalization and tourism apparently share similar process, as some impacts of tourism on the nature and culture of Barbados show.

There are no private beaches in Barbados, but the surrounding properties are completely unaffordable, and most beachfront hotels and restaurants are built right on the high-water mark and informally occupy the whole beach, filling the best spots with empty loungers they rent, starting at US$20 – quite a deterring cost for a targeted part of the population. One of the other actors at play on beaches is turtles. Ample conservation work is done in Barbados, home to the second-largest nesting population of hawksbill turtles in the Caribbean (Knowles et al., 2009). One of the main issues clashing with humans is the light pollution near beaches causing disoriented hatchings, a problem the conservation initiatives are trying to solve by convincing beachfront hotels and restaurants to reduce lighting during nesting season (i.e. 6 months of the year) (Knowles et al., 2009). This is not an easy task as the government – even while putting considerable amounts in green (washing) policies around the tourism industry (Cumberbatch et al., 2018) - is reluctant to enforce them, leaving a volunteer conservation organization to organize roundtables with hotel owners (Horrocks, 2020, personal communication). Meanwhile, the local poor building bonfires on the beaches to roast their breadfruit and freshly caught fish for a daily meal get heavily fined by the National Conservation Commission beach patrol – the local poor are apparently enforced more easily than the tourists. For Cumberbatch et al., the tourism industry uses a lot of both natural resources and public money, but not efficiently or at all to reduce its ecological impacts, and it is fated to die – along with the ecosystems – if recommendations are not implemented as multiplying environmental issues are threatening the commodity they are trying to sell (2018).

But would a mediation of these tensions not prove fruitful to transition to a more sustainable economy, where other forms of tourism such as community-based tourism, agrotourism, voluntourism and mindful tourism would also benefit the locals, and motivate a stronger domestic agriculture? As outlined in section 5.3, if tourists, with their great number and heavy impacts, can be considered a part of the Barbadian society, maybe a socio-ecological approach to agriculture needs to include them in the solutions. In fact, many researchers think that the Caribbean agriculture could find advantages in a reorientation to provide the tourist market to replace imports, as together, locals and tourists might create a market big enough to generate incentives (Timms, 2006; Beckford & Campbell, 2013). Indeed, food accounts for around half of the revenues of the tourism industry (Gomes, 1993, in Richardson-Ngwenya & Momsen, 2011), and it is estimated than from the 90% of imported food on the island, 30-40% is used by the hotel and restaurant sector .

So far, tourism has fallen short of its full potential due to weak internal linkages with other sectors such as agriculture and contributes to high food import bills and substantial overseas leakage of earnings (Brohman, 1996, in Timms, 2006). For two interviewees of my study (Interviews #12, 20), tourism must benefit local people and small farmers more to justify its presence on the island, and mindful analyses should be conducted:

> "Have we ever done a cost benefit analysis on tourism? As a small island with limited resources, limited freshwater, limited food, limited energy, have anyone ever sat down and studied the impact of tourism? Is it really bringing in money? If we had taken this same investment and put it into other areas, meaning agriculture, agrotourism and so on, energy, would we have gotten a bigger return?" (Interview #12)

Six other interviewees also highlight that tourists *do* want local rather than imported foods (Interviews #13, 15, 16, 17, 20, 22):

> "Sometimes we hear ministers talk about "oh but the tourists like this, tourists like that" […] I was a tour guide from 2002 to about 2005. […] invariably I would hear "[…] do you know a place where we can go to eat such and such? We heard about this. We heard about Coucou or flying fish. We want to have that!" […] one couple I remember they […] said: "We don't really eat in the hotels, you know, we go to Oistins, and […] we love it up there!" So they go for the fish. And the salads and so on. […] they want a different experience. I don't believe a tourist wants to come from all over where they live to Barbados to eat what they eat at home." (Interview #13)

Not only do they desire local food, they are also ready to pay for it: working on a study about community based-tourism, one interviewee found that respondents said they would pay up to $100 for a meal that is made of locally sourced products, while some of these meals are actually often available for $10 (Interview #22). Increasingly interested in experiencing and discovering where food comes, respondents were even willing to pay more for experience packages such as eating at a local cook's house or visiting the producer's farm or installation, and when they knew their money would directly benefit local communities. This suggests the problem is elsewhere, either in a supply chain that is not aware of the high value of its products, or because it simply can't or won't offer it. Indeed, another participant thinks the local agriculture could not feed 1 million visitors per year, thus explaining the high food import bill compared to other islands who welcome less visitors (Interview #9). This however contradicts the beliefs of two other interviewees (Interviews #11, 12), for whom feeding the tourists is both possible and necessary to prevent the leakage of revenue out of the island to benefit local food producers, even if it means imposing a quota on tourists allowed on the island based on the productive capacity of the island.

If many studies find tourists increasingly seek local cuisine, the distribution infrastructures, built for export rather than domestic consumption, are discouraging both farmers and consumers of producing and buying local crops (Rhiney, 2009, in Beckford & Campbell, 2013; Timms, 2006). For instance, little marketing is done for or by small, local Barbadian producers, and their fast pace of change of location, harvested crops, opening hours and payment modalities makes it difficult for the inexperienced foodie to get to the produce they want. Even with a car, interviewing farmers, and having lived on this small island for over a year, I still struggle to find certain products, so there is little chance the visitor that has a week on the island would get to procure fresh, local foods, although the demand for it is high, as observed with the requests of many visitors at Coco Hill Forest (CHF) to buy produce. If CHF could sell some produce year-long, it has not been seen as a profitable activity yet.

A frequent issue is that attractive clients (i.e. local rich and tourists), expect a stable, high-quality production – expectations the small scale agriculture cannot meet without institutional support (C. Beckford & Campbell, 2013; Drummond & Marsden, 1995). In a context similar to Barbados, in St. Lucia, the most important issues with the development of agriculture for the tourist market are explained by an insufficient long-term commitment and planning as farmers lack access to land, capital, and technical knowledge, those being limited by institutional factors, what results in an underutilized domestic agricultural sector (Timms, 2006).

Seasonality also poses a problem which many crops, whose harvest seasons do not align with the touristic season, and the storage facilities are generally poorly developed (Timms, 2006). Indeed, one Barbadian chef told me she stored local fruits, of which most are ready in the summer, in her freezer at home, to serve at the restaurant in the winter, given the lack of storage space at the restaurant. There is definitely room for incentives to local consumption or food processing to be implemented for the residents and local businesses to buy more local produce during the harvest season, especially as imported fruits, fresh or frozen, are generally expensive, less nutritious and bear a high carbon footprint.

Just like the food system, the tourism industry needs a more holistic, comprehensive planning linked to local production. For example, the tourism industry could get inspired by agrotourism, and adjust their marketing to invite tourists to visit the country during harvest seasons, or even create a working holiday visa requiring farm work to put the tourists to the task like Australia does. Moreover, as poor communication between hotel owners and the farmers and distributors

providing their food is often detrimental to the coordination of the exchanges, what is generally only regarded as an economic linkage needs to become a two-way personalized relation, which would also benefit social relations (Timms, 2006). However, as Timms suggested (2006), careful planning must ensure that the local population does not end up producing a 'high-quality production' for the tourists while continuing to be fed on cheap imports, something that has been almost entirely disregarded so far in Barbados.

With all these avenues for a better tourism, to contribute to a stronger local economy and reduce the import bill, then why did not Barbados go that way yet? To most participants in this study, this comes down to the lack of political will of the government.

5.4 Talk the walk

Like other Caribbean states, Barbados would be able to significantly increase its food production. To do so, the same components to be improved are repeated across the literature: agricultural research, farmers' support and incentives, quality of inputs, expansion of cultivated area and promotion of urban agriculture, irrigation, infrastructures, market development and waste reduction (Ahmed & Afroz, 1996; C. Beckford & Campbell, 2013). But according to Ahmed & Afroz, a lot of it obviously comes down to two factors: funding, and the willingness of the government to reform policies (1996, p.116).

While the Barbadian Government has produced a high number of wondrous talks, multisectoral committees, and elaborate reports that generally agree with those solutions and indicate a step towards them, actual action has been largely insufficient so far. For instance, the Ministry of Agriculture suggested many times that diversifying agriculture was a priority (Drummond & Marsden, 1995; Henshall, 1966), but as the declining sugar production cleared space for crop diversification, land was increasingly grabbed by the non-agricultural sectors such as real estate (Richardson-Ngwenya & Momsen, 2011). Moreover, governmental support to the sugar sector persists today; it has in fact increased between 2010 and 2013, as the government of Barbados considers a revival project focusing on ethanol and electricity production (Shik et al., 2019).

Real estate issues are easily observed around the island, where housing developments take place on prime agricultural land and communal pasture areas, while half of the properties on the

island seem vacant. Many informants complained about that, and absentee landowners are thought to be a big part of the problem. That is another manifestation of the deep inequalities on the island, as either Barbadians living overseas or foreigners owning properties in Barbados have no pressure to maintain or develop their properties, while an important part of the population remain as tenants and can't access ownership. According to one interviewee and three informants, that is explained by odd local inheritance laws, and should be remediated by putting a time limit for owners to come inhabit or develop their property (Interview #12). In the tourism industry, I can think of at least ten huge beach front hotels that have been abandoned for more than 15 years, some up to 30 years. Behind those aging walls blocking the ocean view and breeze, locals live in tiny, crowded, old houses and must walk a kilometer on a narrow road with no sidewalk to access the beach. Like holes in the social fabric, empty properties are a crying need to stitch back a community together.

Instead of putting the existing houses to use, new developments contribute to the loss of arable land, while the small size of the island is repeatedly mentioned as an excuse to the low agricultural production. As one livestock farmer complains, a new development in his neighborhood was launched without consultation and brings a plethora of problems to the neighborhood. Covered in bush before the project started, the area was home to a troop of monkeys and a good pasture for the farmer's sheep. Now the monkeys moved to the neighboring area, making the inhabitants' lives "a living hell" as they raid home gardens, run on rooftops at dawn and keep the dogs barking (Interview #7). The farmer has to go further for pasture and leave the flock out of sight, which is more stressful and time-consuming. Marketed for low to middle income persons, the two to three bedroom bungalows of the new development are listed for US$150,000 to US$205,000, probably adding to that a salty insurance premium given the location close to the water, 0 to 13 meters above sea level.

Anyhow, there are some examples of agricultural incentives for small farmers by the Barbadian government. For example, the Barbados Agricultural Development and Marketing Corporation (BADMC), a statutory agency created by the Ministry of Agriculture and Food Security (MAFS), facilitates the lease of 1,300 acres of arable land to some 215 small farmers, at an annual rent of US$150 per acre (BADMC, 2020b). One of the programs, inspiringly named the Farmers' Empowerment and Enfranchisement Drive (FEED), leases 0.5-1 acre parcels and provides services to landless farmers to kickstart their operation. Unfortunately, one look behind its policy shows plainly that the "Empowerment" will have to remain neoliberal, as the program's

first aim is to increase agricultural exports (BADMC, 2020a). The second program, Land for the Landless, has been in place since 2001 and aims at facilitating the lease of private and public lands of various acreage to farmers. Among the interviewees participating to this study, one was leasing land from the Land for the Landless program, and mostly satisfied about it (Interview #10). The other's experience with the FEED program has been arduous and stressful: after repeated calls to the organization and over a year of uncertainty about whether the farmer would get the land, the farmer finally got the land (Interview #4). After another few months of wait for the organization's tractor to come till the soil, an irrigation pipe burst close to the farmers parcel, flooding the area. Although the farmer informed the organization, the repairs were not done when the tractor came, pushing back the tilling another month to allow for the leak to be fixed and the land to dry. As I learnt after getting my camera equipment stolen there, that area is also well known for its thieves – speaking with some farmers of the land lease program, two reported having equipment and crops stolen. A third participant to the study applied to get land from the BADMC, and never heard back from them (Interview #7).

The main problem with the FEED program is that the farmer's empowerment is limited by the organization's resources: as tenants, farmers participating to this program have limited power and means to speed up any administrative delay or invest in equipment and infrastructures themselves. That is why six other interviewed farmers and agroprocessors opt for doing everything themselves, rather than waiting on governmental support, even when that means keeping their operations smaller so they can manage alone (Interviews #5, 6, 7, 8, 12, 13). Renting land from private owners and developing their own market through pre-orders with a local restaurant, one farm has chosen self-reliance (Interviews #6, 7). When their shade house broke, they climbed and stitched it back together. To feed their plants and protect them from diseases and pests, they make their own compost and, learning online from the Korean Natural Farming model, they launched their own line of ferments, using indigenous micro-organisms. They are one of most successful farms on the island, and when asked about governmental support, they simply say there is nothing available to them as their farming model is too unconventional. But wild dreams of rich foodscapes come to mind when imagining those "too unconventional," successful farmers being offered a support and a place in the discussion.

One thing they hope for in terms of governmental action is a move towards allowing long-term, communal ownership of the land to allow for integration of orchards and livestock systems,

which requires long-term investments. Because informal use of the land and leases, either from private or public owners, always carry the risk of seeing the tenants' operation dismantled by a change of heart by the owners. Some farmers know it well: an interviewee's farm has been relocated three times in less than 10 years (Interview #6). Communal ownership could also convince the younger generation to get involved in farming, as the modern lifestyle doesn't necessarily align with long term commitments to properties, fiscal obligations, jobs and modern family structures. Allowed to own land as a group for the permanent goal of food production, free of the vagaries of politics and economics, sounds like a viable solution.

Other needs for governmental support were mentioned by all participants in this study: access to credit and loans, rather than rebates, agricultural research and soil testing facilities, long term and communal ownership of land for intergenerational agriculture, solutions to control the population of monkeys, prosecution of praedial larcenists, and better public transport routes in rural areas, as they now mostly deserve the coastal touristic routes. Some of those aspects are somewhat easy to achieve for the government but when asked for help, government officials discourses remained constrained in the realm of agribusiness, at best, refusing to see farmers, and especially small-scale and subsistence farmers, as a vital part of society. Indeed, incentives are only accessible to farmers reaching annual sales of at least US$30,000.

My communications with officials from local institutions were as promising and unrewarding as any politician's discourse. The Ministry of Agriculture refused to be interviewed officially in the context of this research, the Chief Agricultural Officer offering me a quite uncomfortable, condescending, defensive informal discussion where numbers were read from a spreadsheet and lies were served as facts. In defense of the perpetual support to the sugar industry, I was told that Barbados was a natural grassland, thus sugar cane was a suitable crop for this ecosystem, and to explain the inaction on the monkey problem, she said that the species is endangered and so the responsibility lies with the Ministry of Environment (Holder, 2022, personal communication). Barbados was actually heavily forested before the land was cleared for cultivation (Hughes, 1750; Ligon, 1657; Interview #21), and the green monkey's status is of least concern (IUCN, 2020). According to the Chief Agricultural Officer, the monkey situation and Barbados agriculture in general were better off before the decline of the sugar industry: when vast tracts of land were cultivated and protected by watchmen, the monkey population was constrained to the gullies, but with the bush recolonizing abandoned sugar land, the population is spreading (Holder, personal

communication, 2022). As for crop production, it was aided by the sugar industry as it lowered the costs of inputs, brought in in bulk from which all agricultural sectors supposedly benefitted (Holder, personal communication, 2022).

I heard the Chief Agricultural Officer has an ambitious plan to reform Barbadian agriculture, but she refused to share it with me on the basis that it was not final. As per my request to consult the Ministry's data to get an idea of the age and gender of the 5,000 registered farmers and the size of their farms, it was denied because of confidentiality issues, as they only have aggregated data, and no one was available to provide me only the information I was looking for. She admitted that her Ministry was short of some 80 staff and suffered from lack of funding too, which did not help my case (Holder, 2022, personal communication). They were however inclined to disaggregate the data for a document prepared for investors in agrotechnology, where I found the data shared in introduction.

In reaction to the pandemic, the major importers of dried goods in Barbados increased their stockpiles to 4-5 months rather than the usual 2-3 months to add some protection against external shocks (Holder, 2022, personal communication). The Ministry of Agriculture also developed new agreements with Guyanese firms to grow food for Barbados, a questionable endeavor in the context of rising fuel costs and suddenly shifting border regulations. One local retailer is skeptical of the success of that plan, foreseeing that Guyana will keep the crops to feed its people should other external shocks happen, as experienced with some US distributors in recent times (Interview #16). The retailer had never heard about the stockpiling and was even more skeptical of that measure:

> "I would like to know where this "stockpiling" is. Because, OK, you say it would last 3 or 4 months – there are so many products that went off the market in the last three or four months. […] When COVID was rampant, you couldn't get those stuffs coming out from the States because they were holding them and stockpiling them for their own" (Interview #16)

Prime Minister Mia Mottley, nicknamed Auntie Mia, receives high appreciation among the population in general. On the international political scene, the circumstances and events of the last two years provided her with many opportunities to come out as a fierce leader. Held in Barbados in September and October 2021, the 15th United Nations Conference on Trade and Development (UNCTAD15) and its pre-conference, the Global Commodities Forum, were followed by the COP26 and a WTO Presidential Lecture, where Mottley produced sobering speeches. In November, Barbados officially removed Queen Elizabeth II as its head of State, becoming a

republic, and declared Rihanna as national hero. Then, the 6th IPCC report recognizing colonialism as a root cause of climate change and increasing talks of reparations for slavery in April 2022 also helped bringing Barbadians together against the greater evil. At the opening ceremony of the COP26 in November 2021, she bluntly called out on the banks to basically end the climate crisis:

> "There is a sword that can cut down this Gordian knot, and it has been wielded before. The Central Banks of the wealthiest countries engaged in 25 trillion dollars of quantitative easing in the last 13 years; of that, $9 trillion was in the last 18 months to fight the pandemic. Had we used that $25trn to purchase bonds to finance the energy transition, or the transition of how we eat or how we move ourselves in transport, we would now today be reaching that 1.5 degrees limit that is so vital to us. An annual increase in SDRs of $500bn for 20 years put in a Trust to finance the transition is the real gap we need to close, not the $50bn being proposed for adaptation. And if 500bn sounds big to you, it is just 2% of that $25trn. This is the sword we need to wield." (Mottley, 2023, 4:03)

Many issues would melt away with the wield of that sword but waiting on external funds to solve internal problems results in little help for the local population, who keeps suffering from the same old paradigm. Mottley also openly blamed the "global order" and the "concentration of economic power in so so so few hands" for the problems of smaller economies (Mottley, 2022, 27:28), while seemingly forgetting that her own country provides services and low taxes to some of the world's most powerful corporations.

The first session of the Global Commodities Forum, a pre-conference to the 15th United Nations Conference on Trade and Development (UNCTAD15), was called *Food security and smart agriculture: the role of technology and services.* If Mottley recognized in her opening remarks that "a thriving and productive agricultural sector is important to national food security and is vital to the economic and social development of our country" she omitted to talk about governmental services, encouraging private sector collaboration. As it is often the case, good intentions are in the air, but concrete plans fail to materialize. Similarly, Barbados joined other Caribbean states in the '25X25' objective of substituting 25% of the regional food imports by 2025. But like with the aim of reaching 100% renewable energy by 2030, the deadline comes faster than significant progress is observed, with only 4% of renewables in the energy mix in 2018 (International Renewable Energy Agency, 2018). More recent data is unavailable, however a few solar farms popped up in fields recently – not without the farmers' disapproval.

Another target is on the table for 2030: in 2022, the Minister of Industry, Innovation, Science and Technology Davidson Ishmael announced their desire to reach an annual US$1 billion in

exports of manufactured goods (Bennett, 2022). How he will get there within 8 years, from US$217 million in 2019, is less clear (WTO, 2019), but the Minister disclosed his government was "to establish a strong export brand by building a national export culture," to "position Barbados' industrial brands in the international market," and to "build global Barbadian household brands." "There is no doubt we can do it," he said (Bennett, 2022). That comes in the context where the President of the Barbados Manufacturers Association lamented that "the supply chain right now is a mess," suffering from the dwindling availability of raw materials and getting goods to the market, and bigger countries dominating shipping get peripheries serviced by fewer vessels (Deane, 2022). Before thinking of the far-fetched plan of building on yet more exports, he identified recycling a good avenue to reduce rising operational costs of fuel, electricity and water: "We do consume a lot of goods and materials and we need to create industries that help us to recycle, and right now we really don't have industries that recycle plastics and cargo packaging and things like that." I don't even want to think about what happens with the packaging of all this imported stuff.

In response to the continuously affected livelihoods, rising cost of living, and recent increase in crime, Prime Minister Mottley addressed the nation to announce a series of measures to help Barbadians "keep their heads above water and to wait for that day of bounty again, when they shall all share it" (PMOBarbados, 2022, 46:39). The Barbados administration started by waving off any responsibility, of anyone, historical or contemporary, for any of the present circumstances:

> "There is no doubt that many Barbadian households are facing unprecedented pressure, not of their own, not created by our government or our private sector, or our manufacturers, or indeed our shopkeepers or farmers, but by individuals and corporate entities and countries' governments over which we have little influence – in fact no influence. We certainly did not contribute in any way to the Russian invasion of Ukraine, but we are feeling the effects. We did not create the factors that have spurred the global warming that we are facing and the climate crisis, but we are definitely feeling the effects. We don't produce or consume enough oil and gas or other energy products to influence the supply and demand chains, but we suffer the effects of prices that we can hardly bear. Our requirements of grain, fodder and fertilizer are so small when juxtaposed against what the world consumes that we are considered insignificant in the eyes of suppliers. This, my friends, is the reality of our situation today. We sit as a dot on the globe with too little power to even say to the giants of this world: look, we're here." (PMOBarbados, 2022, 00:48)

While the prime minister is not wrong, and many countries probably find themselves in a similar unease these days, we need to recognize that the economic model we keep going back to has put us in this vulnerable position. Our survival cannot depend on resources and buyers that

come from the other side of the world anymore, especially on a small, remote island. Although I was far past the end of my data collection, I sat through this hour-long speech, mid-July 2022, thinking it might finally be the change of direction I was hoping to witness.

For 15 entertaining minutes, the prime minister of Barbados herself listed the exact price reduction of each of the 44 food items her administration managed to negotiate with retailers, who gallantly agreed to lower their markup to a maximum of 12 to 15% until 2023. She also announced that the list of tax-free items would be expanded from August 2022 to include hot chocolate, corn flakes, cream of wheat, sliced ham, black tea, honey, peanut butter, pears and apples. Duty would be removed on citrus fruits to "help Barbadians build their immune system and continue to help us in the fight against COVID" (PMOBarbados, 2022, 12:28). Needless to say, those are all imported foodstuffs. Vegetables were not affected by these reductions as the administration is working directly with local producers and importers from Guyana and Suriname to lower the prices in the markets where they are cheaper, although both farmers and consumers complain about the supermarkets' high markup on vegetables. As for fish, prices rise constantly and the size of catches decreases, threatening stocks, but no measures were announced to tackle those issues. The flour mill and the only two animal feed companies on the island agreed to stall their prices for the next 6 months, except in the case of "some extraordinary event way beyond all of our control", animal feed wholesalers pointing out they had already reduced their net margins by about 24% (PMOBarbados, 2022, 30:40), raising question marks on how profit margins were that high so far. With one of the lowest corporate tax rate in the world at 5.5%, Barbados might have to comply with a global minimum corporate tax in the near future, but Mottley pointed out these low taxes are what allowed her administration to negotiate the present price reduction, calling this relationship with the private sector "a social partnership" (PMOBarbados, 2022, 14:33). "This is not perfection", she said, "but this is being the best that we can be as Barbadians" (PMOBarbados, 2022, 31:33).

The government of Barbados is also offering a reduction in electricity bills of US$9/month for the next six months and school meals to students throughout the summer break. Finally, she called on households to supplement their own supply by gardening or raising livestock in their backyard. To help with that, a brand-new project was concocted by the Ministry of Agriculture in the last week: the Community Agriculture Response and Empowerment (CARE), where the BADMC and the BAMC, assisted by private sector members, were to provide support with land clearing and

cultivation and access to planting material, chicks, rabbits, and tools. If the toolkit is already specific (shovel, hoe, fork, garden hose and spray can), it is unclear when this program will be available, through what modalities, and to whom. Asking for a moderation of expectations, she concluded with a rallying cry for "Barbadians working together as one" (PMOBarbados, 2022, 48:46), hoping her "whole of country approach" would help lower the crime rate on the island (PMOBarbados, 2022, 52:25). She certainly did not forget to remind us of the renewable energy project again, the solution to every problem: "this will help us save our sugar industry, help us save our agricultural sector which does not benefit sufficiently from scale, and help us to save, my friends, the housing boom that we need so badly to invest in" (PMOBarbados, 2022, 47:13).

According to an informant working in a regional NGO, Barbados suffers from what is locally referred to as an "implementation deficit disorder": while an outstanding number of policies are written, documents are prepared and speeches being done, very little implementation happens and there is no evaluation mechanism within those policies to assess progress. The most recurrent critique, formulated by three interviewees and observed in many discourses and practices throughout this fieldwork, is that the Barbadian government is reactive rather than progressive (Interviews #4, 7, 24). For example, many project leaders who have asked for governmental support did not get any attention until they somehow made it by themselves, to then see the government coming on board to celebrate. And only when faced with multiple crises, does the government take action. Tiny actions, coated in a lot of sugar.

CONCLUSION

Many of the problems about the Caribbean agriculture mentioned in the literature have not been effectively solved, although many solutions have been suggested: regional integration, marketing and seed production, research, incentives to farmers and attraction of skilled workers back to their home country, a holistic approach and sustainable practices, appropriate technology & crops, high taxes on fallow land, adequate water management, agroprocessing industries for local products, redistribution of land, production of indigenous feed (Ahmed & Afroz, 1996, pp. 227–234). The traditional reaction to 'agricultural backwardness' in the Caribbean is indifference, as the focus remains on "more profitable" economic activities (Ahmed & Afroz, 1996, p. 119), not only in the political sphere, but in the civil society as well, which also acts in reaction to stressors rather than in a progressive way. As seen with the tales of Courtney, John and Paul, we only act when our personal health or that of our loved ones is affected. Although the human species pride itself with the superiority of its intelligence, we remain unable to err on the side of caution, even when all the alarms are blaring. There is definitely a need for a more proactive, transparent, inward movement towards self-resilience, and if there are some small clusters of action developing in that direction, they remain isolated, and short-term convenience will continue winning over the seemingly hard work of long-term health. Only forced to it will we look into our backyards, and wish our grandparents left a handbook.

Advocating for food democracy rather than food sovereignty, Lang (2009, p.27) reminds us that "one of the lessons of food history is that rights are only valuable if they are used and incorporated into demands by the people and at-risk populations themselves", stressing that "rights, on their own, do not feed people any more than food being available ensures that all are fed." Food sovereignty also demands small-scale food producers to be "actively and decisively involved in policy formulation processes" (LVC, 2007, p.2) – on top of having to produce the food. States being more likely to hand rights to proletariat than peasantry, as found in this study, where agribusiness receives support, but small-scale and subsistence farmers are left alone, food sovereignty activists also need to convince political power to democratize decision-making processes for peasants, while educating them to the political mechanisms at the same time (Edelman et al., 2014). Agents of political power also need to learn from the peasants to adapt the policies to their realities (C. Beckford & Campbell, 2013). But as established in section 5.2,

farmers might find little time and motivation to put their energy into this hard political work, as "the temptation to find the shortest route possible to wealth has increased. And so has the frustration of an idle and disenchanted youth" (Lamming, 2009, p. 12).

A somber picture may emerge of our era, now darkened by the global sanitary crisis. But these hard times, pushing us nearer to bare necessities and granting some of us more time for reflection, have brought power closer to home and motivated new initiatives. For as trying as these events might be, "it is precisely in times of crisis that we must re-examine our lives" (Carter, 1974, in Lamming, 2009, p.1). Where the pandemic has triggered the most inspiring initiatives is among the communities. Other than the innovative farmers experimenting sustainable models and sharing their knowledge, the Slow Soup project and the development of a network of farmers, gardeners and botanists through an increasing number of online talks and workshops, many Barbadians started gardening again, raising livestock or simply looking into their backyards and countryside for food, worried that the imported food would stop coming. Many changed their consumption habits, shopping and cooking differently, and especially more conscious about it. Chefs and producers too started to focus increasingly on local food, even in the rum sector, seeing the efforts of some distillers at creating a Protected Geographical Indicator (PGI) for rum (Seale, 2020). As surprising as it may be on the first sugar island, where the first written reference to the existence of rum comes from in 1647 (Maison Ferrand, 2016), some distilleries import cheaper molasses from elsewhere instead of using local sugar and send the rum to be aged and bottled overseas.

But if a strive for food sovereignty was revived by the pandemic, many people were already heading in that direction, or have been there before. Indeed, the more I learn about Barbadians and their island, the less I fear about their bouncing back should another cluster of crises hit. Between their violent colonial history, seclusion during WWII, and the 2020-2022 period of 'uncertainty', rising prices, and fear, they have seen it all. To answer whether Barbadians are food sovereign, I would argue that from prosperity to crises, food sovereignty is dynamic. If this is inspiring, deeper questions remain.

Across the literature, the debate has mostly revolved around the modalities and technicalities of *what* and *how* Barbadians and other Caribbean peoples want to or should farm. Few researchers have adopted an agricultural sociology perspective to study the underlying dynamics of agriculture itself. Rather than trying to put the blame onto a specific actor, there is an urgent need to go back

to the more basic questions. First, departing from the reaffirmation that food cannot be considered like any other commodity, as one interviewee reinstates:

> "We need to put agriculture first. I don't care what nobody says. If you don't eat, you're going to die. Simple as that. […] and any country that cannot feed its people is not worth its weight in gold. […] And when I say feed your people, feed your people what you grow. And not what you bring in." (Interview #13)

Then, a deep reflection on the economic model, based on services, tourism and international trade, needs to take place and see what benefits it really brings to the wider society. Because in all of Mottley's recent speeches, the word 'uncertainty' came up a lot to describe our era and the situation of Barbados, but it does not have to be that way. As one interviewee reminds, "My whole issue with this whole thing is [that] the only thing Barbados seems to be able to have, and constantly have, is services. We are a service driven industry. And who can eat services?" (Interview #16).

To move away from money as the sole proof of success of failure, to empower farmers and to reinstate value in healthy food and ecosystems, we could consider respecting the carrying capacity of the land we live on and using happiness levels as better indicators than GDP. For if trade is necessary, we need to widen our view of 'cost' to free ourselves from structural market forces, where cheaper always wins. Because as explained earlier, cheap food only seems cheap because it externalizes its social and environmental costs. How much does a locally produced meal cost? How much does a meal produced in your backyard and cooked in your kitchen costs? We probably agree it is "priceless," ironically meaning it's worth everything. We now need to put value back into all relationships along the food-producing chain, to ultimately remind us how food is the most important link in our relation to space and time.

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ANNEXES

1. Semi-directed interview list

#	Date(s)	Category	Duration
1	2021-09-22	Public	44 minutes
2	2021-11-16	Public	34 minutes
3	2021-11-09	Chef	26 minutes
4	2017-09-21	Farmer	23 minutes
5	2021-10-14	Farmer	51 minutes
6	2021-10-14	Farmer	51 minutes
7	2022-02-25	Farmer	46 minutes
8	2022-03-31	Farmer	18 minutes
9	2022-03-13	Farmer	53 minutes
10	2021-11-05	Farmer & Beekeeper	1 hour 13 minutes
11	2021-09-21; 2021-11-04	Farmer & Restaurateur	1 hour 35 minutes
12	2022-02-02	Farmer & Restaurateur	22 minutes
13	2021-11-12	Agroprocessor	1 hour 21 minutes
14	2021-01-31	Agroprocessor	24 minutes
15	2022-03-02	Retailer; food vendor	27 minutes
16	2022-03-25	Retailer; manager	54 minutes
17	2022-03-25	Retailer; employee	54 minutes
18	2022-03-25	Retailer; employee	54 minutes
19	2021-11-25	Community worker	36 minutes
20	2022-02-25	Ethnobotanist	55 minutes
21	2022-02-23	Agronomist	1 hour 2 minutes
22	2022-03-26	Independent consultant, financial sector	23 minutes
23	2022-04-08	Independent consultant, financial sector	1 hour 3 minutes
24	2022-04-14	Regional Institution	1 hour 25 minutes
25	2022-04-14	Regional Institution	1 hour 25 minutes
26	2022-02-01	Regional Institution	24 inutes

2. Questionnaire

Food Habits Survey

This short survey aims to understand the food habits of the people of Barbados. It should be accompanied by a two-pager consent form for you to authorize the researcher to use the data shared in this survey. When filling the survey, please note that detailed answers will help the most, but feel free to leave blanks if uncomfortable with any question. To return a completed survey or if you have a question, please contact the researcher at this email address: cloe.fortin.1@umontreal.ca

Thank you for your time!

Groceries

1. Where do you usually get your groceries from, in order of frequency (*1 being the most frequent*)?

___ Supermarket ___ Grocery Store
___ Farmer's Market ___ Fish Market
___ Home garden ___ Other garden
___ Farmer or fisher friends or relatives
___ Other (specify: _____)

2. How often do you generally do the groceries?

___ Every day ___ Once a week
___ A few times a week ___ Less than once a week

3. How many people are you usually responsible for feeding?

___ 1-2 ___ 3-5 ___ 6+

4. Which 3 aspects generally motivate your food choices, in order of importance (*1 being the most important*)?

___ Price ___ Packaging
___ Quality ___ Availability
___ Origin ___ Proximity
___ Other (specify: _____)

5. How much do you usually spend on groceries per week?

___ Less than 25 Bds ___ 100 to 150 Bds
___ 25 to 50 Bds ___ 150 to 200 Bbs
___ 50 to 100 Bds ___ More than 200 Bbs

6. On a scale of 1 to 10, how satisfied are you with the **availability of local fresh produce** in Barbados (*10 being entirely satisfied*)?

1 2 3 4 5 6 7 8 9 10

7. On a scale of 1 to 10, how satisfied are you with the **affordability of local fresh produce** in Barbados (*10 being entirely satisfied*)?

1 2 3 4 5 6 7 8 9 10

8. Did you notice any changes to the food supply in Barbados since the beginning of the COVID-19 pandemic in March 2020?

___ No, I did not notice changes
___ Yes, I lacked certain food supplies
___ Yes, prices increased
___ Other (specify: _____
_____
_____
_____)

Eating Habits

9. How many meals do you usually have per day?

___ 0-1 ___ 2 ___ 3 ___ 4 or more

10. How many snacks do you usually have per day?

___ 0-1 ___ 2-3 ___ 4-5 ___ 6 or more

11. How often do you cook your own meals?

___ Every meal ___ Once a week
___ Once a day ___ Occasionally
___ A few times a week ___ Never

12. Which 3 types of meal do you most frequently eat, in order of frequency (*1 being the most frequent*)?

___ Home cooked meal ___ Fast-food meal
___ Store-bought meal ___ Restaurant meal
___ Snacks ___ Other

13. Which 3 types of meal do you prefer eating (*1 being your favorite*)?

___ Home cooked meal ___ Fast-food meal
___ Store-bought meal ___ Restaurant meal
___ Snacks ___ Other

14. What reasons prevent you from cooking or getting your favorite meals or snacks?

___ Health ___ Time
___ Price ___ Proximity
___ Other (specify: _____)

15. How often do you eat your meals...

	Every day	A few times a week	Once a week	Occasionally	Never
15.1…at home?					
15.2…at work or school?					
15.3…at the beach or park?					
15.4…in a restaurant?					
15.5…at a friend or relative's place?					

Gardening and Food Production

16. 90% of the food is imported in Barbados. Would you like Barbados to produce more of its own food?
___ Yes ___ No

16.1 Why?
___ Access to cheaper food
___ Access to healthier food
___ Easier/more reliable access to food
___ Better for environment
___ Satisfied with imported food
___ Barbados is not a good place to grow food
___ Other (specify: _____
_____)

17. Do you think the COVID-19 pandemic affected the gardening habits of people in Barbados?
___ No, I did not notice a change
___ Yes, the number of people gardening increased
___ Yes, the number of people gardening decreased
___ Yes, I grew more food myself
___ Other (specify: _____
_____)

18. Did you ever grow your own food, work as a farmer or fish for your own consumption?
___ Yes ___ No

18.1 If yes, would you be interested in sharing your experience at the occasion of an interview with the researcher?
___ Yes ___ No

19. Would you like to grow your own food?
___ Yes ___ No

19.1 If yes, why?
___ Access to cheap food ___ Fun/relaxing
___ Access to healthy food ___ Learning
___ Access to local food ___ Exercise
___ Access to specific food you can't find elsewhere
___ Other (specify: _____
_____
_____)

19.2 If no, why?
___ No access to land/equipment ___ No interest
___ Don't know how ___ No time
___ Satisfied with available food ___ Low yield
___ Other (specify: _____
_____
_____)

Personal Identification

20. What is your present occupation?
_____

21. What is your highest level of education?
___ Elementary School
___ High School
___ University Undergraduate
___ University Graduate (Master, PhD)
___ N/A or other (specify: _____)

22. How old are you?
___ 18-29 ___ 40-49 ___ 60-69
___ 30-39 ___ 50-59 ___ 70+

23. Do you identify as:
___ Man ___ Woman ___ Other

24. Would you like to be informed of further discussions or information about this study?
___ Yes ___ No

24.1 If yes, please provide your contact information:

Name: _____

Email/phone: _____