Food Tourism as a Means of Promoting Food Sustainability: A Case Study of Street Food in Bangkok



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จุฬาลงกรณ์มหาวิทยาลัย Chill Al ANGKARN UNIVERSITY

การท่องเที่ยวเชิงอาหารในฐานะเครื่องมือส่งเสริมความยั่งยืนทางอาหาร: กรณีศึกษาอาหารริมทางในกรุงเทพฯ



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ในปี พ.ศ. 2545 รัฐบาลไทยได้ริเริ่มโครงการริเริ่มด้านอาหาร 2 โครงการเพื่อส่งเสริมความตระหนักรู้ทางวัฒนธรรม เพิ่มรายได้จากการส่งออก และส่งเสริมการท่องเที่ยวโดยการเพิ่มจำนวนและคุณภาพของร้านอาหารไทยในต่างประเทศ ความคิดริเริ่มเหล่านี้ประสบความสำเร็จอย่างล้นหลามและได้รับการเลียนแบบจากประเทศอื่นๆ นับแต่นั้นมา บทความนี้ต่อยอดความสำเร็จของโครงการริเริ่มด้านระบบทางเดินอาหารโดยการสำรวจความเป็นไปได้ของการใช้วิธีการเดียวกันนี้ในการส่งเสริมความยั่งยืนด้านอาหาร งานวิจัยนี้ตอบคำถามเกี่ยวกับปัจจัยที่เอื้ออำนวยและเสี่ยงต่อความยั่งยืนของอาหาร โครงการเพื่อ ความยั่งยืนของอาหาร โครงการเพื่อ เน็นประเทศไทย การเพื่อมโยงที่เป็นไปได้ระหว่างความยั่งยืนของอาหารและการทูตด้านอาหารที่เกี่ยวข้องกับการส่งเสริมของรัฐบาล มาตรการด้านความยั่งยืนที่กำลังดำเนินการในไชน่าทาวน์และงาน Jodd Fairs ตลาดและประเด็นทางสังคมและการเมืองที่ใหญ่กว่าของความยั่งยืนด้านอาหาร การใช้กรอบการทำงานที่มีอยู่ด้านศิลปะการทูตการท่องเที่ยวเชิงอาหาร และความยั่งยืนทางอาหาร ร่วมกับอาหารริมทางในกรุงเทพฯ เป็นกรณศึกษา งานวิจัยนี้มีวัตถุประสงค์เพื่อใช้เป็นข้อมูลอ้างอิงสำหรับงานในอนาคตเกี่ยวกับความยั่งยืนของอาหารทั่วโลก ซึ่งสามารถนำไปใช้เป็นข้อเสนอแนะเชิงนโยบายได้ การวิจัยเชิงสังเกตที่ดำเนินการในใชนำทาวน์และที่ตลาด Jodd Fairs พบว่าแม้วาตาหารที่สำคัญที่ยังต้องมีการดำเนินการเกี่ยวกับความยั่งยืน ทางเศรษฐกิจ และสังคม แต่ก็ยังมีความก้าวหน้าที่สำคัญที่ยังต้องมีการดำเนินการเกี่ยวกับความยั่งยืนด้านลิ่งแวดล้อม



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Food in Bangkok. Advisor: Assoc. Prof. MONTIRA RATO

In 2002, the Thai government lauched two gastrodiplomacy initiatives to promote cultural awareness, increase export revenue, and boost tourism by increasing the number and quality of Thai restaurants abroad. These iniatives have been vastly successful and have since been emulated by other countries. This paper builds on the gastrodiplomacy initiatives' success by exploring the possibility of the same methods being applied to promotion of food sustainability. This research addresses the questions surrounding the factors that both enable and risk food sustainability, the sustainability projects currently being pursued in Thailand, any possible link between food sustainability and gastrodiplomacy with regards to government promotion, the sustainability measures currently being taken in Chinatown and Jodd Fairs Market, and the larger socio-political issue of food sustainability. Using the existing frameworks of gastrodiplomacy, food tourism, and food sustainability in conjunction with Bangkok's street food scenes as a case study, this research aims to serve as a reference for future work on global food sustainability, which in turn can be used for policy recommendations. The observational research conducted in Chinatown and at Jodd Fairs Market found that, while street food is economically and socially sustainable, there is significant progress that still needs to be made with regards to environmental sustainability.



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List of Abbreviations

BCG Bio-Circular-Green economic model

BMA Bangkok Metropolitan Administration

B2B Business to business

B2C Business to consumer

CP Charoen Pokphand

DASTA Designated Area for Sustainable Tourism Administration

FAO Food and Agriculture Organization of the United Nations

OECD Organization for Economic Cooperation and Development

UN United Nations

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Chapter 1: Introduction

1.1. Background and Rationale

In 2002, the Thai government's Foreign Office of the Government Public Relations Department launched two official gastrodiplomacy campaigns to increase the number of Thai restaurants around the globe, in turn promoting cultural awareness while also increasing export revenue and boosting tourism (Pornpongmetta, 2019). These campaigns sought to highlight Thai food products abroad and encourage greater investment in Thai restaurants overseas; the Global Thai campaign's objectives included expanding the presence of Thai restaurants worldwide, increasing export and tourism revenues, as well as elevating its position in the world stage through cultural and food diplomacy through measures that included improving the quality of existing Thai restaurants abroad, while the Thailand: Kitchen of the World campaign sought to highlight Thai food products abroad and encourage greater investment in Thai restaurants overseas while also teaching about the history and practice of Thai cuisine (Chapple-Sokol, 2013) (Chapple-Sokol, 2013; Pornpongmetta, 2019). This was done through measures such as approving loans to Thai restaurateurs who aimed to open or expand Thai restaurants abroad and standardizing Thai dishes and the Thai restaurant experience (Chapple-Sokol, 2013; Esterik, 2018). While there is no concrete evidence of specific reasons that led to the launch of these campaigns, some authors speculate that possible reasons include attempts to mitigate the

economic impact of the Asian Financial Crisis of 1997, as well as possibly to influence overseas perception of Thailand away from its longtime reputation as a sex tourism destination and instead associate the country with delicious food and a unique culture (Pornpongmetta, 2019). These campaigns were nonetheless a great success; the number of Thai restaurants overseas increased from 5,500 in 2002 to 9,000 by 2006 and 13,000 by 2009, and the number of tourists visiting Thailand increased by 200% between 2002 and 2016, with over a third of visitors citing food as a significant factor for travel (Chapple-Sokol, 2013; Suntikul, 2019). The success of Thailand's gastrodiplomacy initiatives, one of the earliest to be launched by any national government, prompted other nations such as Japan, South Korea, Taiwan, Peru, and Malaysia to launch similar campaigns of their own (Chapple-Sokol, 2013; Zhang, 2015).

Given the success of Thailand's gastrodiplomacy campaigns with regards to influencing public perception abroad as a means of promoting Thailand as a tourism destination with delicious food and a rich culture, this paper explores the possibility of the same methods being applied to promotion of food sustainability. This paper is motivated by the premise that the shift in consumer demand for sustainable food products is powerful enough to prompt governments such as Thailand's to enable food sustainability efforts and combat the influence of the stakeholders who risk food sustainability such as large meat companies like Charoen Pokphand (CP), at least to an extent. This research will first explore the conceptual framework of

gastrodiplomacy, food tourism, and food sustainability, including how these concepts have been applied in Thailand, the variety of stakeholders involved, and how the strategies of these areas are undertaken and promoted abroad. Next, this paper will include observational research from Jodd Fairs Market and the street food market in Chinatown, two areas of Bangkok famous for street food and popular among tourists from all over the world; this observational research will be used as case studies to analyze a microcosm of food tourism in Thailand and determine how food sustainability initiatives can benefit a variety of stakeholders including local food vendors, the tourists themselves, and government policymakers. The case studies would then serve as a launching point for a greater discussion of how the relationship between food tourism and food sustainability in Bangkok's street food scenes, if any, relate to the greater socio-political themes

1.2 Objectives

For the purposes of clarification and ease of understanding, the objectives as outlined in chapter 1.1 are succinctly as follows:

- Discuss the conceptual framework of gastrodiplomacy, food tourism, and food sustainability, particularly in the context of Thailand
- 2. Observe if and how these concepts are practiced with regards to street food in Bangkok

- 3. Explore the possibilities of how food sustainability initiatives can benefit various stakeholders
- 4. Provide a reference for future research and/or policy recommendations surrounding food sustainability efforts

1.3. Hypothesis

This paper hypothesizes that the tactics used in Thailand's successful gastrodiplomacy campaigns could also be applied as a way of promoting food sustainability in addition to the initial goal of promoting Thailand as a tourist destination. It also hypothesizes that, while there are inherent sustainable elements involved in street food in Bangkok, improvements still need to be made with regards to environmental sustainability, particularly areas such as single-use packaging and prevalence of meat products.

1.4. Research Questions and Research Usefulness

In addition to proving or disproving these hypotheses, this research also aims to answer the following questions: What are the factors that enable food sustainability, and what are the main issues that risk global food sustainability? What food sustainability projects and initiatives are currently being pursued in Thailand, particularly with funding, incentives, or encouragement from the Thai government, and how do they align with the enabling factors and mitigate the risks of food sustainability? What elements, if any, of Thailand's gastrodiplomacy and food tourism

promotion initiatives highlight or include food sustainability, and is there a link between the two topics with regards to government promotion? What sustainable practices, if any, are implemented at Bangkok's street food scenes, including Jodd Fairs Market and Chinatown? How well do these practices, if any, align with those being promoted by the Thai government? How do the practices at these markets relate to the larger socio-political issue of food sustainability?

The usefulness of this research aims to serve as a reference for future work on global food sustainability, which in turn can be used for policy recommendations towards promotion of food sustainability efforts as a means of combating the effects of climate change while ensuring that an increasing population remains adequately fed.

1.5. Literature Review and Conceptual Framework: Gastrodiplomacy, Food Tourism, and Food Sustainability

Before delving into the case studies of the street food markets, it is imperative to first **CHULALONGKORN** UNIVERSITY

define the terms and outline the concepts upon which this research will be based. This research will focus mainly on the concepts of gastrodiplomacy, food tourism, and food sustainability, in a general sense as well as the specifics of these ideas as they pertain to Thailand. There is a demonstrated link between gastrodiplomacy and food tourism, with the former giving rise to the latter as an intended effect by the initiating government, as this chapter will explain. However, while food sustainability is not necessarily related to the previous two concepts, there is the

potential to combine them by using similar tactics as gastrodiplomacy initiatives and by promoting sustainable food practices as part of tourism campaigns.

1.5a. Gastrodiplomacy

One of the earliest uses of the term "gastrodiplomacy" was from a 2002 article in *The Economist* that discussed Thailand's "Global Thai" gastrodiplomacy initiative that launched that year. Since then, it has become popularized in academic literature regarding international relations, politics, and tourism studies. This paper will define gastrodiplomacy according to that of Sam Chapple-Sokol, being, "the use of food and cuisine as an instrument to create cross-cultural understanding in the hope of improving interactions and cooperation," (Chapple-Sokol, 2013).

The term "culinary diplomacy" will be used interchangeably with gastrodiplomacy and therefore use the same definition.

Gastrodiplomacy is considered by scholars to be a form of public diplomacy, with Chapple-Sokol emphasizing how gastrodiplomacy is "firmly grounded in diplomacy theory," (Chapple-Sokol, 2013). Public diplomacy will be defined using Nicholas Cull's definition, "an international actor's attempt to manage the international environment through engagement with a foreign public," (Cull, 2009). This is in contrast to the idea of traditional diplomacy, where said international actor attempts to manage the international environment through "engagement with

another international actor" (Cull, 2009). Cull also raises the idea of a *new* public diplomacy that fits the aforementioned definition but with the additional modern characteristics of a greater emphasis on non-traditional international actors such as NGOs, the use of global communications technology like the internet that results in greater overlap between domestic and international news spheres, use of marketing and ideas of "nation branding" and "soft power," the role of the international actor as a facilitator of people-to-people contact and relationship building (Cull, 2009). Soft power, a mechanism deployed through public diplomacy, is generally defined as the ability of an actor to get what it wants in the international environment because of the attractiveness of its culture rather than military or economic leverage, which would instead be hard power (Cull, 2009).

With regards to Thailand's initial gastrodiplomacy campaigns, namely the Global Thai and Thailand: Kitchen of the World campaigns, it is evident how they embody public diplomacy. The "international actor" in question being the Thai government, the "attempts to manage the international environment through engagement with a foreign public" being the campaigns themselves. Specifically, these campaigns consisted of approval of loans from the Export-Import Bank of Thailand, which reportedly has an annual budget of around 500 million THB to provide to Thai restaurateurs for the purpose of opening Thai restaurants abroad; it also includes a "Thailand Brand" certification for Thai restaurants that meet specific standardized restaurant

criteria outlined by Thailand's Ministry of Commerce through the Thai Select program launched in 2006 (Duncan, 2021; Esterik, 2018; Muangasame & Park, 2019). Additionally, these campaigns promoted export of Thai food products such as seafood, produce, rice, tapioca, and coconut milk, mainly for use in restaurants in addition to grocery sales, ultimately boosting Thai exports by 200% since 2002 (Duncan, 2021). In part due to the Thai Select program's requirement that restaurants use at least 70% imported ingredients from Thailand, this spurred demand for Thailand's export and distribution sectors while also boosting employment of Thai citizens by creating educational opportunities for Thai chefs to train to work overseas (Muangasame & Park, 2019; Zhang, 2015). The elements of Cull's new public diplomacy found in Thailand's gastrodiplomacy campaigns are mainly the use of marketing and the idea of "nation branding"; Thai restaurant menus abroad tend to promote the authenticity of the available dishes, despite modifications made to the menu that decrease authenticity, and such restaurants are often decorated with photos of tourism destinations in Thailand and Thai-style art to intentionally display as a performative demonstration of Thai culture (Molz, 2004). These marketing and branding strategies have been able to be further utilized by communications technology like the internet, with restaurants using social media platforms to advertise and promote their businesses to audiences and while also furthering people-to-people contact and relationship building.

1.5b. Food Tourism

Food tourism is a direct result of the previously discussed gastrodiplomacy efforts; not only is the initiating country aiming to curate a positive image of itself to international audiences, but this is also done by promoting itself as a destination for delicious food. For this paper, food tourism will be defined as "visitation to primary and secondary food producers, food festivals, restaurants and specific locations for which food tasting and/or experiencing the attributes of specialist food production region are the primary motivating factors for travel," (Hall & Richard, 2006). The term "gastronomic tourism" will be used interchangeably with food tourism for the purposes of this paper and will therefore use the same definition. Food as a tourism attraction and the subsequent development of culinary experiences and identity is encompassed in the idea of a "foodscape," a food landscape that is "shaped, influenced, transformed by social practices (shopping, cooking, eating), by political and legal institutions, by economic decisions, and by relations of power within food systems," (Vonthron, Perrin, & Soulard, 2020). Food tourism is arguably similarly related to creative tourism, defined as "tourism which offers visitors opportunities to develop their own creative potential through active participation in learning experiences" (Richards & Raymond, 2000). The United Nations World Tourism Organization outlined ten attributes of creative tourism, as follows: mutual engagement, cross-cultural experience, spiritual understanding, hands-on experience, transformative experience, more

participation than observation, co- creation of an experience, authentic and genuine processes, memorability, and a tailor-made approach (Srihirun & Sawant, 2018). Food activities, consisting of food events, cooking workshops, food fairs and markets, and visiting food producers, would ultimately be classified as elements of creative tourism, according to the World Food Travel Association (Srihirun & Sawant, 2018). Therefore, the concepts of food tourism and creative tourism are inextricably linked, with food tourism a subset of creative tourism.

With regards to Thailand specifically, creative tourism and food tourism are top priorities for the country's tourism promotion. Thailand's Designated Area for Sustainable Tourism Administration (DASTA), established by the Thai government as part of the office of the Prime Minister in 2003, aims to satisfy all stakeholders involved in achieving economic, social, and environmental sustainability, and includes creative tourism in addition to community-based tourism and low carbon tourism (Muangasame & Park, 2019; Srihirun & Sawant, 2018). The DASTA Master Plan is in line with the criteria of the Global Sustainable Tourism Council as well as the Thai government's Thailand 4.0 program, which emphasizes "stability, prosperity, and sustainability," (Srihirun & Sawant, 2018). The TAT has proposed inking the country's creative economy through "Thai-ness," promoting Thai experience, way of life, and culture (Srihirun & Sawant, 2018). Throughout the past decade, the TAT has launched successful initiatives to promote Thailand as a food tourism, cultural tourism, and community-based tourism destination; these include the "Discovering Thainess" campaign of 2015 that emphasized local cuisines, and "Amazing Thai Taste" in 2016 to promote food culture as an aspect of Thai identity (Muangasame & Park, 2019). As of summer 2023, the front page of the TAT website features a section titled "Experience Thainess," allowing site visitors to choose from menu options consisting of Thai foods, palaces, temples, festivals, beaches, and adventures; upon clicking the "Thai foods" option, users are taken to a web page that provides a brief overview of different dining styles found in Thailand as well as specific restaurant recommendations for local foods in different areas in Thailand ("Local Food," 2023). In addition to the business-to-consumer (B2C) aspects of promoting Thai food to tourists and prospective tourists, the TAT has also pursued business-to-business (B2B) avenues; for instance, in May 2023 the TAT launched the Amazing Thailand Culinary City" project as a way to "bring together entrepreneurs in the food tourism sector and create business matching opportunities, as well as to increase awareness of the Thai food in each region of Thailand," ("TAT Launches 'Amazing Thailand Culinary City' Project to Boost Gastronomy Tourism," 2023). This project consisted of four culinary events across different regions of Thailand where local culinary entrepreneurs led workshops, demonstrations, and exhibits promoting dishes unique to their respective regions as a way to promote food tourism ("TAT Launches 'Amazing Thailand Culinary City' Project to Boost Gastronomy Tourism," 2023).

Although food tourism spans all calibers of dining ranging from budget eats to gourmet establishments, street food will be the primary focus for this paper; street food occupies a unique position as an inexpensive, ordinary food source for locals while also serving as a presumably authentic and local experience for tourists not accustomed to this style of dining. Street food is commonplace in many regions around the world, and is often characterized by vendors selling typically cooked food using temporary stalls or mobile carts; the low barrier of entry to the street food sector due to low overhead and operating costs makes it an appealing livelihood source for low-income individuals, and such low costs result in low prices that are especially appealing to an urban, low-income market (Henderson et al., 2012). Street food vendors can operate out of officially designated market areas or unofficial locations on ordinary streets, with the former being especially attractive to tourists who enjoy observing the lively environment in addition to the food itself (Henderson et al., 2012). Street food has been described as symbols of local identity and culture that offer protection from the negative impact of globalization, adding to its appeal to tourists (Henderson et al., 2012). Street food as a tourist attraction falls under the "authentic and genuine" category of creative tourism, and with regards to Thailand, is an example of "Thainess" that foreigners want to experience. When reports surfaced that the Bangkok Metropolitan Administration (BMA) would move to ban street food in Bangkok in 2017, the TAT swiftly rebuked the idea and prompted the governor of Bangkok to

backpedal, instead implementing stricter regulations on street food without an outright ban (Basuki, 2017). Following the loss of tourism revenue from the COVID-19 pandemic, the BMA reversed its initial street food ban proposal even further by proposing design changes for the streets of Chinatown to accommodate large numbers of vendors and pedestrians with the goal of solidifying the area as a street food hub (Wancharoen, 2021). This indicates the importance of tourists to Bangkok's street food scene in addition to the local people who rely on it for food and income.

1.5c. Food Sustainability

For the purpose of this paper, food sustainability will be defined using the Food and Agriculture Organization of the United Nations' (FAO) definition of a sustainable food system, which is as follows: "a food system that delivers food security and nutrition for all in such a way that the economic, social, and environmental bases to generate food security and nutrition for future generations are not compromised. This means that: it is profitable throughout (economic sustainability); it has broad-based benefits for society (social sustainability); and it has a positive or neutral impact on the natural environment (environmental sustainability)," (Sustainable Food Systems: Concept and Framework, 2018). Specifically, economic sustainability is determined by the value added through wages for workers, tax revenue for governments, profits for businesses,

and benefits to the greater food supply; social sustainability is characterized by equitable distribution of economic value towards a society's vulnerable groups as well as positive contributions to social issues like nutrition, traditions, labor conditions, and animal welfare; environmental sustainability consists of biodiversity, water use, soil quality, animal and plant health, carbon footprint, food waste, and toxicity in quantities that have a net positive impact on the environment (*Sustainable Food Systems: Concept and Framework*, 2018). The issue of food sustainability has become especially pertinent given the larger global dialogue surrounding measures to combat the effects of climate change. Therefore, while economic and social sustainability is undoubtedly important to food systems, this paper will place a larger emphasis on environmental sustainability with regards to food.

Food supply chains are multifaceted, consisting of various stages that each utilize different resources and involve different actors. The most prominent of the links in a food supply chain are agricultural production, food processing, distribution, retail, consumption, and waste disposal, with many if not all of these steps involving multinational corporations and large retailers in some capacity (Djekic et al., 2021). Food supply chains involves many stakeholders, some more central than others; actors like farmers, food processors, food traders, and consumers would be in the center while other actors such as policymakers, inspectors and certification entities, NGOs, media outlets, and scientists would be more in the periphery, still relevant to the

supply chain but playing a secondary role (Djekic et al., 2021). With regards to general ideas concerning how various components of food supply chains can become more sustainable, the United Nations implemented the 17 Sustainable Development Goals in 2015 as a means of addressing poverty while also promoting environmental sustainability initiatives; these SDGs serve as an overarching goal for various potential solutions and policy measures suggested by various UN bodies (The SDGs in Action). The second goal, achieving "zero hunger," aims to "end all forms of hunger and malnutrition by 2030" through efforts that include "promoting sustainable agriculture, supporting small-scale farmers and equal access to land, technology and markets," as well as "international cooperation to ensure investment in infrastructure and technology to improve agricultural productivity," (Goal 2: Zero Hunger). However, these goals are by design interconnected, with the second goal of "zero hunger" going hand-in-hand with the twelfth goal of "responsible production and consumption," (*The SDGs in Action*). For instance, with regards to increased sustainability for agricultural production, the FAO suggests a more holistic shift in agriculture as a way of reducing resource use, such as agroecology, climate-smart agriculture, and conservation agriculture (Djekic et al., 2021). Other possible solutions to achieve these goals with regards to other central areas of food supply chains include improved technology to decontaminate wastewater from food processing for reuse, utilization of sustainable materials for food packaging, increased prevalence of lower-emissions vehicles and replacement of

hydrofluorocarbon refrigeration systems with a more carbon-friendly method for food transportation, and shift in consumer demand to more sustainable dietary practices like less animal products and processed foods and reduction of food waste (Djekic et al., 2021).

1.5d. Thai Policy Towards Food Sustainability: Measures Taken So Far

The larger global conversation surrounding climate change and environmental sustainability has brought the issue of food sustainability to the forefront of policy discussion in many nations, Thailand included. Thailand's official approach to achieving such goals is based on the Sufficiency Economy Philosophy developed during the reign of the late King Bhumibol; this philosophy, having been applied to royal projects for over thirty years, includes sustainable agriculture initiatives such as integrated farming, agroforestry, organic farming, natural farming, and replacing presumably harmful agricultural chemicals (Muangasame & Park, 2019; Nelles et al., 2021). Furthermore, the Thai government launched the National Economic and Social Development Plan in 2012, which emphasized global food security while placing particular importance on agricultural management and enhanced value of agricultural commodities through improved supply chain management (Muangasame & Park, 2019). A notable recent example of an environmental food sustainability improvement would be the enhanced fishing methods and practices, given the importance of fish and seafood in Thai cuisine; improved farming techniques lead to less waste, feed mill has become more reliably sourced, and new water management

systems result in greater water recycling, according to the Thai Sustainable Fisheries Roundtable (Thailand's environmental-friendly shrimps set to entice more American consumers, 2020). Leading up to the United Nations Food Systems Summit in 2021, Dr. Chalermchai Sri-on, Minister of Agriculture and Cooperatives, announced Thailand's adoption of the 'Three-S' model (food Safety, food Security, and Sustainability of natural resources and agro-ecology) and the Bio-Circular-Green (BCG) economic model ("The Time for Action is Now: Thailand's Commitments to the UN Food Systems Summit," 2021). He categorized Thailand's food systems solution into four key points: self-reliance in food production, equitable balance among sustainability dimensions, biodiversity protection and sustainable use of natural resources, and good governance; at the summit, Prime Minister Prayut Chan-o-cha affirmed commitment to the United Nations' Sustainable Development Goals ("The Time for Action is Now: Thailand's Commitments to the UN Food Systems Summit," 2021). As of 2022, the Thai government has partnered with the private sector to establish the research and development hub Food Innopolis and the biotechnology hub Biopolis, which aims to convert agricultural products into bioingredients and bioactive compounds to create more sustainable foods; a prominent example would be the development of plant-based and insect-based meat alternatives, given the wide recognition of animal agriculture as a contributor to climate change ("Thailand: How the Kitchen of the World is

Transforming Our Future Food," 2022).

Street food in Thailand appears to be a practice that promotes all three of the aforementioned areas of sustainability (economic, social, and environmental) to an extent, though there are challenges faced. In terms of economic sustainability, street food has provided individuals from poor backgrounds a means of earning a living. However, given that a criteria of economic sustainability as defined by the FAO includes tax revenue for governments, the largely informal nature of Bangkok's street stalls results in lost tax revenue. Furthermore, reports from various street food vendors of having to bribe police or pay other informal organizations to continue selling food in that location indicates an unscrupulous use of money that could otherwise be going to tax revenue or workers' pockets, though it is unclear how pervasive this practice is (Seneviratne, 2018). Regarding social sustainability, arguably the most positive contribution of street food is that it provides affordable, fresh food to a large number of Bangkok's low-income population; however, the outdoor nature of street food poses a risk of substandard sanitation and hygiene practices that, if done incorrectly, could cause illness among customers, many of whom cannot afford to take time off from work. Environmentally, street food both promotes some aspects of sustainability while also engaging in other unsustainable practices. The low overhead and smaller batches of cooking seems to use less energy and contribute to less food waste than larger operations, and street food vendors would be likely to use locally-sourced ingredients purchased from traditional Thai markets that use less packaging

and labels than supermarkets. However, street food often relies on unsustainable packaging made from plastic and styrofoam for takeaway orders, as evidenced by a 2019 initiative to eliminate unsustainable street food packaging on Khao San Road having been met with backlash and criticism from food vendors (Boonbandit, 2019). Additionally, many vendors often offer meat and seafood-based dishes despite the harmful environmental impact of large-scale meat production, a harmful impact that is not offset by the possibility of being locally-sourced as transportation only comprises a small amount of a food's greenhouse gas emissions (Gonzalez et al., 2020; Ritchie, 2020). Although the plant-based meat alternatives industry is rapidly expanding in Thailand and a growing number of Thai people aim to reduce their consumption of meat, meat is still a very common menu item at street food stalls, though this has potential to change in the future if market demand is strong enough to lower the price and increase the availability of alternative products ("Plant-Based Meat Innovations in Demand," 2022; Sirikeratikul, 2021). The issue of polluted wastewater from street food vendors entering the city's sewer system is also an environmental concern, and while the innovation of a new design of food cart with a wastewater treatment mechanism is certainly a step in the right direction, its high cost renders in inaccessible to many individuals (Rojanaphruk, 2020). This points to an overall contentious relationship between sustainable practices and higher costs that impact food vendors' bottom lines.

1.5e. Thailand's Potential Relationship Between Gastrodiplomacy and Food Sustainability

As discussed in previous sections, it is evident that both gastrodiplomacy initiatives and food sustainability projects are significant priorities for the Thai government and that there has been evidence of success regarding both areas. Given that the overall purpose of this paper is to explore the possible relationship between these two areas, it is vital to determine what, if any, efforts have been made to overtly combine the two goals and promote food sustainability abroad in a similar manner as the gastrodiplomacy campaigns. Although the two areas are inextricably linked, as Thailand's food supply is directly related to Thai food both domestically and abroad, this chapter will focus on combining food sustainability and gastrodiplomacy with regards to promotion of these areas abroad.

With regards to food tourism, a key concept related to gastrodiplomacy, there have been demonstrated efforts to combine food tourism and food sustainability both in terms of promotion and behind the scenes; these efforts have been made through institutions such as the TAT and DASTA, among others. The TAT has not only been promoting Thailand's cuisines from a food tourism angle, but has also aimed to promote environmental sustainability as well, with the 7 Greens Programme announced in 2008 as a way to "provide a conceptual framework and establish practical guidelines for balancing tourism with a healthy and sustainable environment," (Muangasame & Park, 2019). This framework included a destination management program for the

purpose of environmental protection, as well as recognition of food as a key component of a "socially and environmentally sustainable local experience," (Muangasame & Park, 2019). This sustainable tourism framework was formally combined with Thailand's gastrodiplomacy campaigns in 2014 by encouraging improved food supply chain innovation as a way to support the Kitchen of the World initiative, a program started with one of its goals being increased export value (Muangasame & Park, 2019). This consisted of new technology for small and medium enterprises, establishment of a database to document such new technology, elevation of food supply chain efficiency to an international standard, and further expansion of industrial food development capabilities (Muangasame & Park, 2019). Furthermore, DASTA has overseen responsibilities pertaining to sustainable tourism and benchmarking best practices; DASTA's involvement in the food supply from the farming to the processing and delivery phases of food production is undoubtedly linked to the food tourism sector and works to boost food tourism from "behind the scenes," but does not involve promoting to tourists directly.

One area indirectly promoted by both gastrodiplomacy and the TAT that is correlated to food sustainability would be vegetarianism. As previously mentioned, reduction in the consumption of animal products and a shift to a more plant-based diet is in line with environmentally sustainable practices, as animal agriculture emits more greenhouse gasses and uses land and water less efficiently than most crops (Ritchie, Rosado, & Roser, 2022). Thailand's

Nine Emperor Gods Festival, commonly known as the Vegetarian Festival or Jay Festival, is a nine day-long holiday of Daoist origin that was brought to Thailand, specifically Phuket, by Hokkien Chinese migrants; as the colloquial name of the festival suggests, one of the practices of the festival is for adherents to eat vegetarian throughout its duration (Jakraphan, 2018). Focusing on the festival as a unique cultural experience, the TAT began promoting this festival as a tourist attraction in 1989, which not only resulted in more foreigners learning about the festival, but also in spreading the festival's popularity from a relatively small community in Phuket to the rest of Thailand as well (Jakraphan, 2018). The festival continues to be promoted by the TAT to this day, with the 2022 festival having been expected to bring in 3 billion THB to Phuket alone (Chuenniran, 2022). The popularity of the festival and the prevalence of vegetarian foods during this time no doubt appeals to individuals who choose to consume meatless foods, many of whom may choose to do so for environmental reasons. These same vegetarian or mostly plantbased individuals may also be enticed to visit Thailand believing that vegetarian food is usually widely available as a result of the prevalence of vegetarian items in Thai restaurants in Western countries. Increasing popularity of plant-based foods in Western countries, combined with a restaurant culture of consumer customization of dishes and a cultural norm of tofu being used as a meat substitute, has resulted in Thai restaurants in Western countries being more vegetarian friendly than Thai restaurants in Thailand and possibly misleading some foreign tourists. While

this is merely an unintentional side effect of gastrodiplomacy, it demonstrates how the practices and methods of Thai restaurants work to portray an idea about Thai food to those abroad, whether true or not; therefore, there remains the possibility of using such tactics to promote Thailand's food sustainability efforts abroad, as no information was found to show any initiatives of the sort having been implemented at the systemic level.

1.6. Methodology

This research consists of document research for the factual information surrounding gastrodiplomacy, food sustainability, and food tourism, as well as field observation in two different areas where street food is served. The intention of the field observation is to witness firsthand what, if any, sustainable practices are implemented in these areas; "sustainable practices" includes selection of plant-based meals, timited use of unsustainable packaging, environmental management, and sustainable habits of both vendors and customers. While there are many street food areas in Bangkok to have been chosen as observational locations for the case study, Chinatown and Jodd Fairs Market were ultimately chosen. Both of these areas are popular street food destinations among local Thais and international tourists alike, and provide an overall experience of a lively environment rather than solely a place to get food. Each chosen place also represents old and new areas of Bangkok, respectively, with Chinatown having existed since Bangkok's founding and Jodd Fairs Market having opened at the tail end of the COVID-19

pandemic. Despite the vastly different histories of the two areas, both have become popular destinations for street food enthusiasts living or traveling in Bangkok.

The observational research conducted at these street food areas focuses on the following criteria: vendors who opt for more sustainable packaging such as paper rather than plastic or styrofoam; vendors who offer entirely meatless food items (this includes fruit stalls, dessert stalls, and beverage-only stalls); vendors who offer dedicated plant-based menu items in addition to dishes that feature meat; and vendors who feature advertising or marketing of the sustainability of their products in English at their stalls. For clarification, the term "plant-based" can be used interchangeably with "ovo-lacto vegetarian," including eggs and dairy while excluding red meat, poultry, and seafood; despite the earlier mention of sustainability improvements being made regarding Thailand's seafood sector, it is unclear the extent of how these improvements have been implemented, and the details of how vendors' seafood has been obtained is impossible to know through observation. These criteria were selected because it is easily observable, unlike identifying the aforementioned redesigned food carts which would be difficult for a layperson unfamiliar with its appearance to notice at first glance; additionally, information such as the source of food vendors' ingredients was not chosen, as such criteria is not easily determined through observation and would require additional measures such as interviewing vendors. This criteria pertains to the environmentally sustainable aspect of food

sustainability; although economic and social sustainability are also highly important elements of food sustainability, as previously discussed, information such as tax status, possible bribery, and potential equity for marginalized groups would be extremely difficult to determine using solely observational research methods. Furthermore, too many variables would complicate and possibly risk the quality and conclusion of the research.

Observations were conducted on four different occasions between June and October, 2023, by visually surveying all street food stalls within a given area, tallying the number of stalls that fit the aforementioned criteria and determining the proportion of such stalls in relation to the total number of stalls. General observations of the approximate age groups and nationalities of the customers at the market, the materials used for the packaging of the food items, the tendency of customers to eat their food on-site or take it to-go, and the waste management practices of the areas were also made. The observational research can provide a cursory view of the sustainability aspects of street food at these locations; however, limitations certainly exist.

The limitations of this methodology include the language barrier between the vendors and the researcher, in addition to the inability to know more information about vendors' sourcing of ingredients or other possible sustainability practices.

Chapter 2: A Case Study of Chinatown

2.1. Background

Chinatown is one of the oldest areas of Bangkok, with Chinese traders, merchants, and laborers having lived in the area along the Chao Phraya River since the 16th century, before Bangkok became the capital (Sattar, 2013; Sirisrisak, 2015). After the capital was moved from Ayutthaya to Bangkok in 1782 and construction of the Grand Palace began, the already settled Chinese were relocated to the area outside of the original city walls near the Chakkrawat Temple and Sampeng Temple, the area that is known today as Chinatown (Sattar, 2013; Sirisrisak, 2015). Since then, Thailand experienced several waves of mass immigration of Chinese, most of whom came from the Guangdong and Fujian areas of southern China; motivated by the push factor of food shortages in their home areas and the pull factor of labor demand for Thailand's emerging rice export businesses, Chinese migrants worked diligently and would often do difficult jobs that Thais would not (Sirisrisak, 2015). Bangkok's Chinese population eventually gained significant economic success, leading to the development of warehouses, piers, and retail businesses in the Chinatown area and spurring the area's development as not only a commercial center, but also an entertainment district that featured theaters, dance clubs, and gambling halls (Sirisrisak, 2015). Chinatown's economic importance also served to bolster the community's unique cultural aspects, such as Chinese temples, shrines, and architecture; Chinatown's temples and shrines

such as Wat Leng Noei Yi, Li Ti Biew Shrine, Leng Buay Eah Shrine, and Tai Hong Gong Shrine served not only as spiritual and religious havens for Chinese descendents, but also as associations were Bangkok's Chinese community could provide resources to one another (Sirisrisak, 2015). Chinatown's history and community landmarks have resulted in a unique cultural heritage landscape in a bustling area of the city that attracts locals and visitors alike.

Chinatown is also widely known for its street food, with the street food markets along the area's Yaowarat Road commonly featured on travel websites, blogs, social media sites, and YouTube videos as a street food haven. Chinatown's street food is not only popular among tourists, but also provides the local population with constant access to affordable food, as the area has street food vendors operating at all hours of the day and night. Its status as a prominent food tourism destination, in conjunction with its importance to so many local people for food,

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Figure 1: The route taken in Chinatown

2.2. Observations CHULALONGKORN UNIVERSITY

The observations were made in Chinatown by following the route depicted in figure 1 that consisted of heading straight from the Wat Mangkon MRT station onto Plaeng Nam Road, turning right onto Yaowarat Road and continuing until the intersection of Yaowarat Road and Ratchawong Road, crossing the street and turning back down Yaowarat Road on the opposite side, turning into Itsaranuphap Alley, circling around the alley before continuing onto Yaowarat Road, continuing until the intersection of Yaowarat Road and Song Sawat Road, and crossing the

street and heading back down Yaowarat Road until arriving back at Plaeng Nam Road. Each food stall along this route was observed and the category of food sold was recorded and the stall was observed to determine if it met the other criteria. The categories of food are listed in figure 2. Permanently fixed food establishments facing the street were excluded, as they do not consist of the "temporary stalls or mobile carts" description of street food as discussed in the conceptual framework. The very few street vendors observed selling ingredients such as raw vegetables and dry grains were excluded, as the objective was to observe the ready-to-eat aspect of street food. Additionally, aspects of waste management in the area were observed by documenting the quantity and locations of trash receptacles such as public trash cans and recycling bins, privately owned trash cans, and trash bags set up by street vendors for customers to use. An adequate supply of waste management receptacles is related to environmental and social sustainability as a means of providing an alternative to littering garbage on the streets, though garbage creation in and of itself remains a significant pollution issue in Thailand even when the waste is collected and handled through the proper channels (Chin & Deroose, 2022).

Chinatown appears to have attracted a diverse array of customers, including Thais as well as numerous foreigners from all over the world given the wide variety of both European and Asian languages being spoken. Most customers appeared to be rather young, such as individuals that seemed to be in their 20s or 30s visiting the area with friends or partners, as well as families

with small children; however, there were also some older individuals observed enjoying the street food as well.



Figure 2: Customers of various nationalities eating at streetside tables. Facial features have been censored to protect individuals' privacy

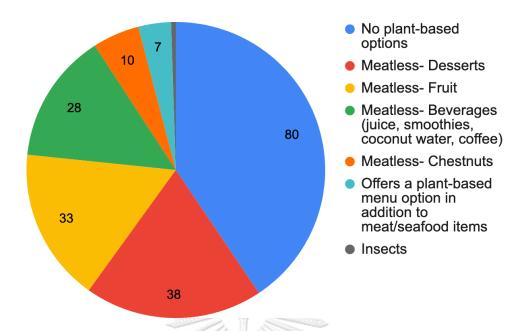


Figure 3: Breakdown of street food categories in Chinatown

As shown in figure 3, 109 of the 197 surveyed street food vendors sold entirely meatless food items; however, these consisted of beverages and snack foods like fruit, desserts, and chestnuts rather than staple meals. The 80 vendors in the "no plant-based options" category sold food items spanning cooked meals like soups, curries, and stir fried dishes, Thai salads like som tam, and cooked savory items that could be considered part of a meal, such as grilled meat and seafood skewers; while the variety of food items included under this category is vast, the unifying feature is that all of these vendors offered meals or meal components that only featured meat and seafood items on their menus. Only seven vendors selling meal components were observed featuring a plant-based option on the menu, such as vegetable dumplings and grilled vegetable skewers.



Figure 4: A variety of foods are sold at street food stalls in Chinatown. Left to right: a fruit stall, a stall selling pork soup, a stall selling fish maw dishes, and a stall selling gyoza dumplings



Figure 5: One of the few stalls that offered a meatless option, vegetarian dumplings alongside pork and chicken dumplings

As previously mentioned, the criteria for the street food vendors also includes sustainable packaging and marketing of sustainability features at food stalls; however, very little of this was observed at Chinatown. No vendors of the 197 surveyed stalls featured any marketing or advertising in English about sustainability. With regards to packaging, no stalls were observed to be fully using sustainable packaging, as all of them incorporated plastic or styrofoam in some way, even if other materials were more sustainable. For instance, a few vendors who would initially place the food on a banana leaf, a more sustainable material, would then place the banana leaf into a plastic or styrofoam container as well; chestnut vendors would put the chestnuts into paper-based boxes, albeit boxes that contained a clear plastic window along with paper bags coated in plastic. Even vendors who would place the food into a paper-based container with no visible clear plastic would often also give customers plastic utensils, though a few were observed providing wooden skewers for foods capable of being eaten that way. The only products observed being sold with no necessary plastic or styrofoam were whole fruits, though vendors would typically put the fruits into a plastic shopping bag for the customer, and the meals sold at the few stalls that offered the option to eat on-site using reusable dishes. As a result, most customers purchased food for takeaway to either eat while continuing to walk along the street or to presumably bring back to their accommodation to eat at a later time. While expanding the prevalence of on-site dining with reusable dishes could be a positive step in

reducing the amount of unsustainable packaging being used, it in turn presents the challenges of requiring vendors to secure a larger area of street and sidewalk space for the dining area, hire more staff to continuously wash the dishes, and expend more labor for the transport of the tables and chairs.



Figure 6: Customers eating at streetside tables using reusable bowls and cutlery alongside plastic cups and straws



Figure 7: A street food stall featuring washed reusable dishes in addition to a team of several workers

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The prevalence of takeaway food in Chinatown and frequent use of unsustainable packaging begs the question of waste management practices and whether or not they are adequate. While following the route depicted in figure 1, waste receptacles were observed and classified into the following categories: public trash cans that had been placed by the local authorities and contain a "general waste" label; private trash cans presumably owned and placed by individuals running a street food stall or other local business; recycling bins placed by

local authorities and are labeled for recycling, typically a yellow color; and trash bags attached to street food stalls or carts by the vendors to collect trash from customers. There were 15 observed public trash cans along the route, though one was located a bit far from the street food stalls at Soi Yaowarat 15, three others were together next to the Wat Mangkon MRT station away from the street food stalls, and four together on Yaowarat Road, leaving only seven public trash cans distributed throughout the rest of the route. Only seven recycling bins were observed along the route, with two located a bit far from the street food stalls at Soi Yaowarat 8 and Soi Yaowarat 15, respectively. There were 15 private trash cans observed along the route, and 19 street stalls featured trash bags available for customers to use, though these bags varied in size. It is clear that the number of public waste receptacles is not adequate for the quantity and popularity of street food stalls in Chinatown, and while it is great that individual vendors have provided trash receptacles themselves for customers, it is evidently not enough as there was a significant amount of trash litter observed on the street.



Figure 8: A trash can and recycling bin on the street at Yaowarat Road in Chinatown, with bags of trash placed alongside them by unknown individuals

It is evident that, despite some of street food's sustainable characteristics as previously discussed, there remains some significant challenges to be faced with regards to environmental sustainability, particularly in Chinatown. This will be further explored in chapter 4.1.

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Chapter 3: A Case Study of Jodd Fairs Market

3.1. Background

Jodd Fairs Market is an evening market with a much shorter and vastly different history compared to Chinatown, having opened in November 2021 after its operating company's previous night market, Ratchada Train Night Market, closed as a result of the COVID-19 pandemic (Supanat, 2021). Jodd Fairs Market not only contains numerous street food vendors operating in a

designated food market area, but also features attractions such as bars, clothes vendors, live music performances, and a skateboarding park, indicating a contrast from Chinatown as a location specifically intended to be an overall fun experience rather than a convenient location to sell food that happens to have fun appeal (Supanat, 2021). Given Jodd Fairs Market's popularity among tourists and locals since its opening, it is also a prime candidate for sustainability measures, particularly since it is managed by an operating company with greater power to implement regulations than the street food markets of Chinatown. It will also be interesting to observe if there are any noticeable differences in sustainability practices when compared to Chinatown's street food.

3.2. Observations

Unlike Chinatown's street food, which consists of stalls set up alongside actively used streets, Jodd Fairs Market is on a designated plot of land with stalls set up in an organized grid formation; observations were made while weaving through the grid of stalls to view each one. Like in Chinatown, observations were made by observing each food stall, recording the category of food sold, and taking note if the stall met the other aforementioned criteria. The categories, listed in figure 3, are mostly the same as those from the Chinatown observation, though with the addition of potato and corn-specific categories and replacing the chestnuts category with dried

fruit. Stalls that primarily sold alcoholic beverages were excluded from the survey. Like the observation in Chinatown, waste management practices were observed by documenting the quantity and locations of trash receptacles such as public trash cans and recycling bins, privately owned trash cans, and trash bags set up by street vendors for customers to use. Given that Jodd Fairs Market is run by a private company, "public trash cans" refers to trash cans provided by the market with "Jodd Fairs Market" printed on them, whereas "private trash cans" refers to those set up by individual vendors at their stall.



Figure 9: The sign at the entrance of Jodd Fairs Market

Although Jodd Fairs Market appeals to both locals and tourists, and is frequently documented by travel bloggers online, the customer base had considerably fewer Western tourists than Chinatown, possibly due to Chinatown's proximity to historic and culturally significant sights, though the reason is not known. While the majority of market customers

seemed to be Thai, there was also a significant portion of Chinese customers, as evidenced by the many overheard conversations occurring in Mandarin and even the occasional use of Mandarin by Thai vendor employees as a way to entice Chinese customers. This could possibly be explained by Jodd Fairs Market's close proximity to the Huai Khwang area of Bangkok, commonly referred to as the city's "New Chinatown" due to the area's large Chinese community, though this theory has not been proven (Siriphon, Banu, & Gatchalee, 2022). The market clientele also appeared to be a younger crowd of individuals in their 20s or 30s, with seemingly fewer aging customers than in Chinatown. Most customers appeared to be at the market with groups of friends, with partners, or with their young children.

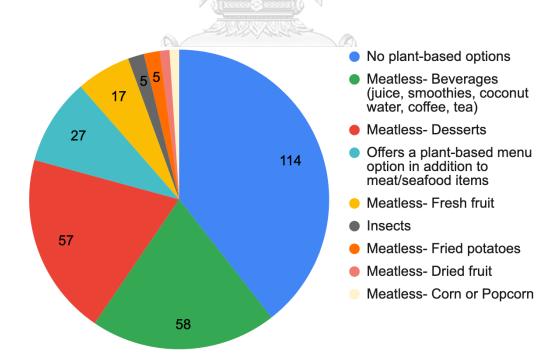


Figure 10: Breakdown of street food categories at Jodd Fairs Market

As shown in figure 10, almost half of the total number of food stalls (143 out of 289) sold meatless items, although, as in Chinatown, these stalls sold desserts, beverages, fruit, and snack foods rather than staple meals. Also similarly to Chinatown, the 114 stalls in the "no plant-based options" category at Jodd Fairs Market sold food items spanning cooked meals like soups, curries, and stir fried dishes, Thai salads like som tam, and grilled meat and seafood. Although a larger proportion of Jodd Fairs Market's stalls (27 out of 289 compared to Chinatown's 7 out of 197) featured a plant-based option in addition to meat and seafood items, many of these options were stir fried vegetable dishes meant to accompany meat or seafood dishes and thus did not feature any plant-based protein source. Of these 27 food stalls, only two stalls, both of which sold pad Thai, featured the words "vegetarian" or "plant-based" on their menus.

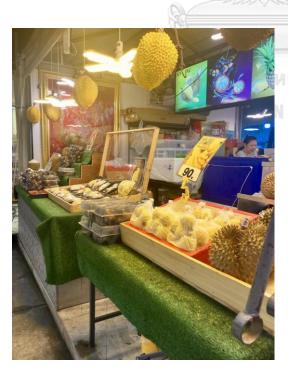


Figure 11: A stall selling fruit



Figure 12: A stall selling insects





Figure 13: A stall selling ribs and seafood, advertising to customers in Chinese



Figure 14: A stall selling desserts

Regarding environmental sustainability features beyond the food itself, none of the food stalls at Jodd Fairs Market featured advertising or marketing in English about sustainability, at least large enough to be observed in passing; this was also the case in Chinatown. While a few of the stalls used packaging made from paper and wooden skewers as utensils for takeaway food items that could be eaten that way, the stalls nonetheless featured heavy use of plastic packaging and single-use utensils. However, a notable sustainability improvement when compared to Chinatown was the prevalence of sit-down restaurant areas for customers to order food served on-site using washable and reusable dishes and cutlery, as the design of the market allows vendors to have seating without the challenges of space and additional labor for washing dishes as previously discussed with regards to Chinatown. The market also provided public tables in common areas, allowing customers who purchased food from vendors without restaurant-style seating to have a place to sit and eat nonetheless; possibly as a result, few people were seen leaving the market with takeaway food.

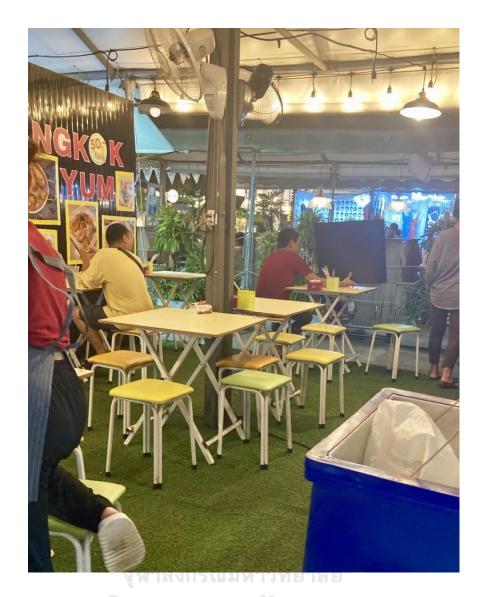


Figure 15: An example of a restaurant-style food vendor featuring dedicated space for seating. There are many vendors with this style at Jodd Fairs Market

There seemed to be an improved system of waste management at Jodd Fairs Market compared to Chinatown, which would make sense given that Jodd Fairs Market is privately owned and operated. As in Chinatown, waste receptacles were observed and classified into the following categories: public trash cans that had been placed by Jodd Fairs Market and were labeled as such; private trash cans owned and placed by vendors at their stall location; recycling

bins; and trash bags attached to stalls or carts by the vendors to collect trash from customers. Throughout the entire market, 47 public trash cans were observed, strategically spaced throughout the area and placed mostly next to public tables, though several were located near the entrances/exits and restrooms. This is a much more efficient setup than Chinatown, where there are fewer trash cans that are more sparsely distributed. There were 13 private trash cans at vendors' stalls, most of which were restaurant-style stalls with many tables and a larger volume of customers, thus a greater need for trash cans. Only two stalls were observed to have private trash bags available for customers to use, which makes sense given how readily available trash cans are at Jodd Fairs Market. There were no recycling bins observed, which could provide an area of improvement for the market. However, the waste management of the market appears to be more successful than that of Chinatown, as there was considerably less trash litter observed on the ground.



Figure 16: Trash cans labeled with the Jodd Fairs Market logo that were provided by the market for customer use. This is considered "public trash cans" in this section



Figure 17: A trash can next to a picnic table. Jodd Fairs Market has many regularly placed areas of picnic tables with trash cans nearby

As in Chinatown, the observational research demonstrates that additional challenges remain to be addressed with regards to environmental sustainability in Jodd Fairs Market, and potentially street food as a whole. This will be discussed further in chapter 4.1.

Chapter 4: Findings Regarding the Relationship Between Gastrodiplomacy and Food Sustainability

As previously discussed in earlier chapters, gastrodiplomacy and food sustainability in Thailand are inextricably linked by the country's food supply, as gastrodiplomacy prompts greater interest in food tourism in Thailand and Thai food exports. While previous chapters have determined that there have been no overt fusion of gastrodiplomacy tactics with the goal of promoting food sustainability beyond TAT marketing about sustainable tourism, this chapter will explore the overall relationship between the two areas with regards to the observational research conducted as well as the importance of the the larger socio-political context, while suggesting possible ways to merge the two areas even further.

4.1. Relationship Between Gastrodiplomacy and Food Sustainability as Reflected Through the Street Food Case Studies

While conducting the observational research at both Chinatown and Jodd Fairs Market, there seemed to be little relationship between gastrodiplomacy and food sustainability, given the

abundance of meat and seafood-based dishes with few plant-based alternatives, heavy use of unsustainable packaging like plastic and styrofoam, and no marketing or promotion of sustainability features at the street food stalls. While roughly half of the stalls at both locations sold mostly meatless items, these stalls consisted of dessert items, beverages, and snack foods rather than meals, with the vast majority of stalls selling meal items not featuring a meatless option. There could be several possible reasons as to why this is the case.

First, the topic of plant-based meals, or lack thereof, appears to boil down to the issue of supply and demand. With regards to local Thai people who consume street food for sustenance, it is possible that, despite the rapid expansion of the plant-based meat alternatives industry in Thailand and a growing number of Thai people aiming to reduce their consumption of meat, meatless options are currently too expensive for the largely low-income urban population of people looking to consume an inexpensive, filling meal ("Plant-Based Meat Innovations in Demand," 2022; Sirikeratikul, 2021). For tourists who consume street food as part of the travel experience, as well as locals who visit attractions with street food like Jodd Fairs Market as a special occasion activity, sustainability may not be a priority for those on vacation or who want to enjoy a special night with their friends, even if it may be a priority for those same individuals in their day-to-day life. This could be especially true for tourists from other areas of the world, as

potential environmental impact; considering travel to faraway places using airplanes is already not environmentally friendly, the prioritization of cultural experiences makes sense. Comparing the discussion of food tourism in the conceptual framework section with the TAT's efforts to promote sustainable tourism in another chapter, it seems clear that food tourism is a significantly stronger motivator for travel, with sustainable tourism appearing to be a possible additional benefit to travel that tourists would do anyway. Regardless of whether the street food consumer base consists of low-income individuals aiming to eat affordably, people planning a fun night out with friends, or tourists hoping to gain a fun cultural culinary experience, if the speculated reasons are correct, then the consumer demand does not include plant-based street food meals. Therefore, street food vendors operating with little space and resources may not have the means to try to offer food items that may not sell, especially given the competitive selection of vendors in areas like Chinatown and Jodd Fairs Market. These same reasons could also explain the lack of marketing of sustainability features at the street food stalls, as it may not be seen as worth it to advertise something that consumers are not there to partake in.

The issue of street food's reliance on unsustainable packaging materials such as plastic and styrofoam seems to be explained by practicality. As previously mentioned, a 2019 initiative launched by the Khao San Road Street Vendors Association to discourage the use of unsustainable packaging materials for street food in the area was met with criticism from vendors;

they cited practical issues such as the need for clear plastic to show customers the freshness of the items and the need for styrofoam for customers carrying hot food, functions that materials like paper would not be suitable for (Boonbandit, 2019). Cost could be another issue if packaging made from materials such as paper and bagasse are more expensive, as this would discourage vendors, many of whom come from low-income backgrounds and have families to support, from cutting into their bottom line. As previously discussed, offering dine-in options for customers to eat street food on-site with reusable dishes and cutlery could be a solution, though the limited space on sidewalks and additional labor needed to wash dishes and transport seating arrangements pose logistical challenges. It appears that efforts to boost the environmental sustainability of street food are at odds with its economic and social sustainability factors, as they provide hurdles for individuals who make a living through this avenue and could limit the options of those who rely on street food for sustenance.

4.2. The Larger Socio-political Context of Food Sustainability Efforts

The issue of food sustainability efforts providing a greater benefit at the cost of the livelihoods of some individuals points to the larger issue of various stakeholders and their differing, sometimes contrasting, goals. While environmental protection on the surface may seem like an issue with universal approval, the systemic changes needed to implement environmental

protection efforts can appear to be at odds with not only the large corporations making significant decisions, but the employees at all steps in the supply chain that want to support themselves and their families. Although the prospect of delaying environmental protection efforts in favor of prioritizing economic growth is actually more costly in the long run given the increasingly worse impact of climate damage and resource depletion, businesses nonetheless may be apprehensive towards efforts that could impact their bottom line (Ekins & Zenghelis, 2021). This is particularly true if consumers are unable or unwilling to drastically alter their consumption habits to shift demand from the status quo. The inability or unwillingness to change consumer spending habits is true across many areas, but this discussion will continue the previous themes of meat and seafood consumption and unsustainable packaging.

The Organization for Economic Cooperation and Development (OECD) and the UN FAO released the Agricultural Outlook 2022-2031, which provides an assessment of the future prospects for agricultural commodities over the coming decade. According to this report, although the demand for meat is expected to decline in higher-income regions like Europe, the overall global demand for meat consumption is expected to grow 15% by 2031 due to factors such as high per-capita income growth in Asian countries as well as large population growth in sub-Saharan Africa ("6. Meat," 2022). Given the need for large-scale industrial animal agriculture operations to supply such an increasing demand and such operations' contribution to

greenhouse gas emissions and heavy use of land and water resources, this increase in demand is antithetical to environmental sustainability (Scanes, 2017). These operations are also antithetical to social and economic sustainability to an extent, given the propensity of animal agriculture to spread zoonotic diseases and contribute to antibiotic resistance (Hayek, 2022; Martin, Thottathil, & Newman, 2015). Innovation is therefore needed to shift the supply to more sustainable means if demand is unfortunately unlikely to change, with lab-grown meat being the closest option to meet such demand in the future. Lab-grown meat, also known as cultured meat, cultivated meat, and cell-based meat, refers to meat and seafood produced through replicating cultivated animal cells directly in a lab setting using modern biotechnology; the ultimate purpose of labgrown meat would be as a replacement to meat and seafood produced through traditional means using live animals, though it will be a considerable amount of time before this technology is pervasive enough to provide a widely-available alternative at a competitive cost (Sinke et al., 2023). A recent analysis of lab-grown meat production facilities determined that lab-grown meat will likely have a lower environmental impact when compared to animal agriculture, particularly with regards to land use, air pollution, and nitrogen-based emissions; the overall carbon footprint of lab-grown meat was found to be much lower than that of beef, and possibly lower than that of chicken and pork depending on whether or not renewable energy sources are used in the energy-intensive process (Sinke et al., 2023). Although it will be years before lab-grown meat

becomes readily available at an affordable price, this technology appears to present a possible viable alternative that will be less environmentally damaging while still enabling individuals to maintain their demand for meat products.

Unsustainable packaging presents a similar issue, with the added challenge of providing consumers with few alternatives given the propensity for necessary products to be packaged using materials such as plastic. Innovation could provide the solution to this problem, a pertinent issue to be addressed given that the OECD reports that only 9% of plastic waste globally actually gets recycled ("Plastic Pollution is Growing Relentlessly as Waste Management and Recycling Fall Short, Says OECD," 2022). Like lab-grown meat, innovation to provide an alternative to plastic will likely require years before it can become as widely available as plastic is currently. However, one possible option was recently created by a research team at the University of Hong Kong that is made from bacterial cellulose combined with polyethylene glycol; the bacterial cellulose is a biodegradable material made from certain bacteria, while the polyethylene glycol makes the material more similar in performance to plastic while also adding water-resistant properties (Bryce, 2023). While it is much too soon to determine how widely available this material will eventually be and whether or not it will be able to replace plastic packaging, its creation appears to be a positive step.

Chapter 5: Conclusion

This research aimed to answer the following questions: What are the factors that enable food sustainability, and what are the main issues that risk global food sustainability? What food sustainability projects and initiatives are currently being pursued in Thailand, particularly with funding, incentives, or encouragement from the Thai government, and how do they align with the enabling factors and mitigate the risks of food sustainability? What elements, if any, of Thailand's gastrodiplomacy and food tourism promotion initiatives highlight or include food sustainability, and is there a link between the two topics with regards to government promotion?

What sustainable practices, if any, are implemented at Bangkok's street food scenes, including

Jodd Fairs Market and Chinatown? How well do these practices, if any, align with those being promoted by the Thai government? How do the practices at these markets relate to the larger socio-political issue of food sustainability?

To summarize, food sustainability enables food security in a way that provides economic benefits, social benefits for all involved, and positively or neutrally impacts the environment; some of the main issues that risk global food security would be large-scale demand for products and packaging that harms the environment, in conjunction with the incentives that businesses involved in various parts of the supply chain have to meet such a demand in order to gain profits. Food sustainability projects currently being pursued in Thailand include the 2012 National

Economic and Social Development Plan which emphasized global food security and agricultural management, enhanced seafood farming techniques spearheaded by the Thai Sustainable Fisheries Roundtable, the adoption of the 'Three-S' model (food Safety, food Security, and Sustainability of natural resources and agro-ecology) and the Bio-Circular-Economic Green (BCG) economic model in 2021, and establishment of research and development hubs to create more sustainable foods through innovation. Although the research found that there have been some efforts by the TAT to promote environmentally sustainable tourism, as well as a plan implemented to improve the food supply chain in relation to the Kitchen of the World gastrodiplomacy initiative, there has been no evidence of the tactics used to promote gastrodiplomacy being overtly used to promote Thailand's environmental sustainability projects. However, this could be changed through measures such as a possible certification system for Thai restaurants abroad that adhere to a particular set of sustainability criteria, or perhaps encouraging use of promotional materials for restaurateurs abroad to communicate to their customers. The observational research of street food at Chinatown and Jodd Fairs Market found little environmentally sustainable practices being implemented besides those inherent to street food itself (e.g. low overhead, small batches of foods, less waste, likely use of locally sourced ingredients), as meals were heavily reliant on meat and seafood and unsustainable packaging was extremely prevalent. The practices of food sourcing for street food are likely related to the

efforts made by the Thai government to improve the food supply chain and implement more sustainable farming practices, though this was not visible through the observational research and would have required in-depth interviews to determine. However, innovative environmentally sustainable foods such as alternative protein items made from plants or insects were not observed through the research. The observed phenomenon at the markets of little environmental sustainability efforts relates to the larger socio-political issue of food sustainability being at odds with not only consumer demand, but also the businesses involved at every level of the supply chain that depend on unsustainable practices to preserve their bottom line.

The overall conclusion is that further efforts are needed at both the government and

private sector levels, in Thailand and beyond, to promote environmentally sustainable efforts and practices and incentivize innovative practices that can satisfy all stakeholders involved in the food supply chain. While this conclusion is not particularly groundbreaking in the larger context, **LHULALONGKORM UNIVERSITY** the findings of this street food-focused case study have served to narrow the knowledge gap surrounding the relationship between sustainability and street food, one of the last links of the food supply chain that has historically been studied in relation to economic, culture, or tourism fields. In keeping with the big-picture idea of a sustainable food supply chain, perhaps future research could include in-depth interviews or surveys with stakeholders at various levels of the food supply chain to gain firsthand perspectives of what challenges can be more easily overcome

compared to other, more daunting issues. Additionally, the street food-focused aspect could be further explored through interviews with vendors discussing current practices, the obstacles they face to implementing sustainable practices, and what they believe to be positive improvements that can be made. While this is a small case study, it hopefully has the potential to be one of the many items that can lead to a further sustainable world.



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