

Reducing the Prevalence of Diabetes in Mauritius through a Food Systems Transformation

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Abstract—The diabetes epidemic is affecting many of our societies and isolated Small Island Developing States (SIDS) are particularly vulnerable as compared to countries on continental lands. Overweight and obesity rates are prevalent in those net food importing SIDS, so much so that diabetes and other Non-communicable Diseases (NCDs) are leading causes of death. The ease of access to cheap fast foods and ultra-processed products mean that items of lower nutritive value are more popular among populations. At the same time, our sedentary lifestyles trigger a decrease in physical activity to maintain a healthy weight. The effects of climate change, the socio-economic crises nurtured by the COVID-19 pandemic and the knock-on effects of the war in Ukraine only made a dire situation worse. Food shortages and rising food and fuel prices mean that the less financially able have more limited food choices, to the detriment of healthy eating habits. Against such a background, what are the solutions SIDS have put in place to alleviate the impacts of the food and nutrition crises? This paper provides a commentary on Mauritian initiatives to transform food systems, encourage local production of fruit and vegetables and reduce imports of ultra-processed foods. With the various crises we face signalling an impetus for change, agriculture and nutrition can be clients for transformation towards a healthier consumption of local and nutritious produce.

Index Terms—diabetes, nutrition, food security, local production, sustainable development, food sovereignty

I. INTRODUCTION

Along the main road connecting Mauritius's capital city Port Louis to the town of Beau Bassin, a scarlet billboard catches everyone's eye. Its simple message leaves its imprint on the minds of passers-by and drivers on the run: "One out of two people aged 50 or more is at risk of developing diabetes. It could be you". Global estimates for 2030 (Fig. 1) warn of the insidious nature of diabetes in some of the 58 Small Island Developing States (SIDS) - out of a total of 195 countries [1]. The fact that the SIDS are net food importers makes their food supply chains highly sensitive to external shocks and disruptions in global markets. The call for healthy diets is a pressing issue in SIDS to relieve those small islands of Non-communicable Diseases (NCDs), especially diabetes.

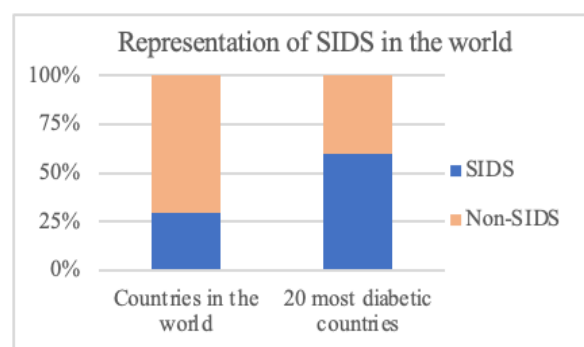


Figure 1. Representation of SIDS in the world against the projected 20 most diabetic countries in 2030.

Diabetes has many causes, both genetic and environmental. Modifiable risk factors generally include tobacco use, unhealthy eating habits, sedentary lifestyles, and alcohol abuse [2]. In Mauritius, low-priced *dholl puris* (a wrap made of split peas filled with a selection of curries) and *mine bouilli* (a vegetable-free dish made of 200g of boiled noodles served with a few tablespoons of meat) are more popular than the three or four times as expensive carbs-protein-vegetables standard.

In their fight against diabetes, states are encouraged to develop a whole-of-society approach to promote healthy diets, good nutrition, sports, and education on their path to sustainable development [3]. The global multisectoral action plan on ending NCDs mentions the need to reduce the portion size and increase the availability and affordability of fruit and vegetables [2]. The World Health Organization (WHO) goes even further in recommending individuals to limit their intake of energy-dense foods, salt, added sugars and trans-fats for a diet to be considered "healthy" [2]. A crucial component of this approach is agriculture.

This paper will look at the contribution that transforming food systems can bring in the fight against diabetes in Mauritius, and possibly extending to other SIDS. During my time at the United Nations Resident Coordinator's Office (UNRCO) for Mauritius and Seychelles, I helped organize a "Knowledge Exchange on Food Systems" at the end of November 2021. During two half-day workshops, we invited local entrepreneurs, heads of national agricultural and manufacturers associations, and researchers to this follow up to the UN Food Systems Summit that UN Secretary-General António Guterres convened in September 2021.

The aim of our Knowledge Exchange was to discuss ways to transform our food systems and render them more sustainable, resilient, and fair; this commentary presents the main findings from the discussions. The transformation of our food systems into more sustainable ones is deemed key to promote food security and nutrition. Strengthening our local food production capacities will have the added benefit of making the island more resilient to future shocks. Likewise, upscaling local production would yield a more diverse range of available food produce, enabling Mauritians to make healthier choices and reduce the prevalence of diabetes in the island.

II. DIABETES IN MAURITIUS

Before going any further, a definition of diabetes warrants mention. The disease arises from a malfunction between the insulin produced by the body and the glucose it absorbs to be converted into energy. If an individual's sugar intake exceeds the amount of insulin present to absorb the glucose, the surplus is dissolved in the blood and affects different body parts. Complications such as limb amputation, blindness, strokes, and renal failure are likely to follow. Most diabetic people in Mauritius suffer from Type 2 diabetes, and lifestyle habits encouraging obesity and lack of exercise account for major risk factors [4].

Diabetes represents the main cause of death attributed to NCDs in Mauritius with 4,000 deaths per year, or 23% of total NCD-induced deaths. Out of its 1.3 million inhabitants, 250,000 Mauritians have diabetes, and another 200,000 are prediabetic [5]. The last major survey on NCDs conducted by the Ministry of Health and Quality of Life corroborates these numbers, indicating that 20.5% of the Mauritian population aged 20 to 74 suffer from Type 2 diabetes [6]. At the same time, an estimated 400,000 people in this age bracket are overweight or obese. That said, not all are equal in the face of diabetes: those with 13 or more years of education are twice less likely to have diabetes compared to those with less than 3 years of schooling [7], [8]. The level of education plays a determining role in predicting NCD risks, an important element to consider when curbing the spread of diabetes in the country.

A. Food Security and Access to Unhealthy Diets

To understand the diabetes epidemic in Mauritius, the evolution of the concept of food security is worth reviewing. The first widely accepted definition of food security referred to the availability of basic foodstuffs [9]. The focus later shifted to the access to the food required by individuals to lead a healthy and productive life [10]. It is in 2007 that the Nyéléni Declaration added a degree of sophistication in the re-framing of food security; it proclaims “the right of peoples to healthy and culturally appropriate food” through ecologically sound agricultural practices [11]. Food security is not just about eating to survive but involves making conscious choices at every stage of the food chain, from sowing to consumption.

In their study on malnutrition, Popkin *et al.* linked increases in overweight rates to profound changes in our global food systems over the years [12]. Our societies have seen the emergence and omnipresence of ultra-processed foods, a trend that is hard to reverse [12], [13]. While this is frequently the case with low- and middle-income countries, Mauritius and its upper-middle income status is no stranger to such phenomenon either [8]. In a country where 77% of its food requirements is imported, the food situation in Mauritius was always hanging by a thread [14]. With an event as disruptive to the economy as the COVID-19 pandemic was, practices that went unchallenged for years are now being questioned.

B. The Current Exclusion of Farmers

This paper contends that the prevalence of diabetes in Mauritius and other SIDS can be reduced by promoting more healthy and affordable diets in the population. This is where the transformation of food systems comes in. As introduced by the 2019 United Nations Environment Programme (UNEP) Food Systems Framework (Fig. 2), the Food Systems Summit recently called for a rethinking in our ways of growing, producing, transforming, and consuming food [15]. A food systems approach considers this transformative process in its entirety, with emphasis laid on the welfare of the planet and its people. It is not about producing more food to feed growing populations but adopting long-term practices to address unsustainable food production and consumption.

Mauritius, as other parts of the world, has witnessed an acute loss of interest in agriculture among its youth, a fact that could threaten the nation's very survival. This could be explained by what Colombian anthropologist Arturo Escobar describes as the “peasant economy”. He presents a distinction between capitalist farmers and peasant farmers, with the former having more political influence than the latter. Global dynamics and the “laws of motion” of capital maintain the availability of poorly paid labour through cheap food and exploitation of the working force. While expected to be more productive, ‘peasants’ are not necessarily rewarded with a pay rise: the regulation of wages, profits and consumption that occurs in mainstream society, referred to as the “centre”, simply does not exist in society's margins, or its “periphery” [16]. Mauritius's vulnerability to natural disasters put peasant farmers even more at risk of losing their harvest to cyclones and floods in the absence of adequate infrastructure. The reality is that the hard work and effort involved in farming is not enough to meet one's needs and most farmers are then required to take a side job.

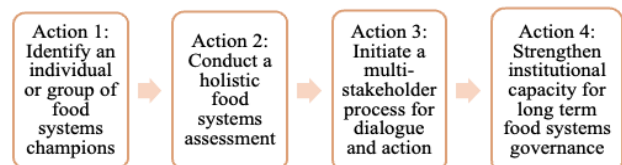


Figure 2. The four actions of the UNEP food systems framework [15].

Most of the suggested actions in UNEP's Food Systems Framework are already in place in Mauritius

(Fig. 2). Recommendations such as the assessment of food systems in the country and the design of a national pathway for action exist as a result of consultations under the National Food Dialogue held in July

2021 prior to the Food Systems Summit [17]. A proposal that Mauritius could now envisage is the merging of ministries to yield sustainable outcomes. In Britain and in Denmark for example, departments from the environment and agriculture ministries have merged to explore sustainable food production together [15]. For now, the paper will demonstrate how the UNRCO Knowledge Exchange on Food Systems put into practice Action 1 of UNEP's framework: identifying individual champions working towards a food systems transformation. Their initiatives could then be replicated on a larger scale to promote the local production of nutritious produce and hence encourage populations to adopt healthier eating habits.

III. A THREE-PONGED SOLUTION TO PROMOTE LOCAL AGRICULTURE AND HEALTHY DIETS

The Knowledge Exchange enabled technical experts and representatives of relevant public and private authorities to share their experiences, hopes and concerns on the future of the agricultural sector in Mauritius. Local agriculture and trade emerged as key themes to continue the work already started towards the food systems transformation. These are also interlinked with nutrition when deciding which foods should be made available across the country. Along with those action areas, education and government initiatives could further help in promoting healthier eating habits to reduce the prevalence of diabetes.

A. Reframing Local Production and Consumption

A recurring theme throughout our Knowledge Exchange was the digitalization of agriculture. The Food and Agricultural Research and Extension Institute (FAREI) highlights the role of our generation to start the "Green Revolution 2.0" [18]. During the First Green Revolution in the 1960s, the mechanization of the agricultural industry helped to produce food for growing populations in record time. This, however, came at a cost as the overreliance on chemicals at the time has since been linked with decreasing yields. This time, the point of departure would be the focus on the environment, biodiversity, and human health. To restore the health of our degraded soils, practices such as agroforestry to allow trees and crops to grow together, and regenerative agriculture, a farming system that not only preserves surrounding landscapes but constantly restores them, should be a priority [19]-[21]. These would encourage a change in our relationship with nature, with greater respect paid to our surroundings.

The digitalization of local agriculture would consider the tools that already exist and use them to farm in a more sustainable way. The Knowledge Exchange has provided examples of agricultural systems that encourage humans to adapt to nature, rather than the other way round. For instance, agro-ecology is designed to use few chemical

inputs, permaculture as a farming system emulates and integrates with nature's dynamics, while organic agriculture, similar to the first two, is supportive of the environment and aims to minimize the use of synthetic fertilizers and pesticides [21], [22]. These techniques could also integrate disease management to reduce the damage caused by pests that have adapted to local conditions. New technologies such as vertical farming would enable crop production in a controlled environment indoors that is resistant to droughts, floods, and other extreme weather conditions. It could also help to better manage our water resources to ensure irrigation efficiency, especially during the water-deficit season [18].

As the cost of imported seeds increases, FAREI encourages farmers to think local in their choosing of seeds and crops to be harvested. Current farming activities tend to produce selected crops - pumpkin, calabash, chayote or tomato - that are on demand on the market. Other local but less consumed vegetables such as *patole* (a gourd close to cucumber and squash) are not a priority for production, despite being resistant to climatic conditions [18].

For farming practices to be sustainable, they must also consider inclusive growth for all. For this, decent jobs need to become the norm rather than the exception. This would refer to productive work receiving a fair income, providing a safe working environment and some degree of social protection to the workers and their families [23]. Decent work is both part of the recommendations of the Food Systems Summit Secretariat and the International Labour Organization's Decent Work Agenda which pays particular attention to involving women, reducing social inequalities and being more attractive to the youth [23], [24].

Additionally, speakers at the Knowledge Exchange have noted the importance of engaging with rural communities [17]. Nowadays, decisions are mostly taken by centralized bodies and their representatives who rarely speak in terms matching the experience of the peasants' daily work [16]. Agriculture is framed in the ways those institutions see the world, and not by the realities of the peasants. There is a need to see development not simply as a finished product celebrating the end of poverty but as a process involving actors at different steps of the way. This will help decision-makers to see how they deal with their issues, to value their demands and respond to their grievances [16]. A national strategy seeking to revolutionize the field of agriculture should place its direct contributors at the forefront, that is, its farmers and producers.

In parallel to revisiting decision-making, the rest of society has to feel incentivized to use and consume local crops in Mauritius. A creative idea shared by a Food Science student from the University of Mauritius combined under-utilised crops such as jackfruit, oyster mushrooms and pumpkin seeds into an innovative burger [25]. These unpopular products share the common quality of scoring high on nutrition scales. Yet, their odorant or chewy nature make them repellant to some. For others, those crops recall less prosperous times where they were

the only foods available on the island. Revaluing these products is in line with the Ministry of Agro-Industry's recommendation of converting local starchy crops such as breadfruit into flour, thereby encouraging the transformation of our abandoned local crops [14]. A burger might hence be an example of how to give an innovative outlook to our local produce, a move that might prove crucial to our survival.

This echoes the perspective shared by the United Nations World Tourism Organization (UNWTO) and their concept of rural tourism. As a form of sustainable tourism, visitors coming to Mauritius would no longer dream of eating lobster or oysters but would appreciate the 'simpler' side of the island through the consumption of local crops such as breadfruit and cassava. This is part of a wider movement on the African continent led by UNWTO to promote local dishes from 38 countries. Seychelles has its creole-styled red snapper, Ethiopia presents its *kitfo* kebab and Mauritius can boast of its tomato sauce shrimps and chayote [26]. That way, our local culinary heritage will be leading our tourism strategy by making use of what the island can truly offer.

Based on the suggestions above, Mauritius has what it takes to transform its agricultural practices and rely more on the food crops its soils can provide. If local production and consumption of nutritious, locally sourced foods can be increased, the country could rely less on 'unhealthy' imports, which could help in the fight against diabetes.

B. Reducing Processed Food Imports

When breaking down Mauritius's food import sheet, food preparations represent 38% of imported goods, compared to sauces and seasonings (13%) and fruit juices (9%) [27]. The liberalization of trade has eased the production and transaction of highly processed products that come with higher rates of sodium and nitrates. They are the crux of "unhealthy" diets and are closely linked to a risk of cancer and diabetes [28]. At the same time, Mauritius is already close to self-sufficiency for fruit and vegetables, poultry meat, eggs and venison [14]. These ingredients can form the basis of a healthy diet, thereby questioning the need to import as much processed food.

By relying less on unhealthy imports, Mauritians would not only help themselves in making healthier diet choices; they would concurrently support local farmers in need of financial and social recognition for their contribution to society. They would also help to reduce food routes by promoting locally and regionally sourced produce rather than imported food items traveling miles and carrying with them a substantial carbon footprint.

Yet, as much as Mauritius wants to upscale local agricultural production and diversify its crop base, the island does not produce its most consumed commodities: wheat and rice. The country has no other choice than to import these to meet its consumption needs. The 2017 national food balance sheet showed that wheat and rice, including their derivatives, represent 270,000 and 60,000 tonnes of domestic utilization a year respectively. These numbers lead to another point worth mentioning: the quality of local diets. The typical Mauritian eats on average 125 grams of rice a day and 230 grams of

products made from wheat flour. In comparison, locally sourced tubers that undergo less processing, such as potatoes, sweet potatoes, cassava, and taro barely meet the 60-gram mark per day in a Mauritian diet [29].

A strategy to transform food systems that was shared during the Knowledge Exchange relates to the concept of food sovereignty. Just like food security in its day, food sovereignty has received many definitions to meet varying needs. Nyéléni again proposes a simple way of phrasing it as the right for nations to define their own food and agricultural systems. This does not negate trade as long as consumers enjoy the right to control their food and nutrition as they wish [11]. In a world where the means of production are unevenly distributed between multi-national corporations, human producers and consumers, food sovereignty recognizes the access to healthy, locally produced food as a right and not a privilege [30].

For the Association of Mauritian Manufacturers (AMM), trade markets, national safety and food security among the population are interconnected, and a strategy to transform food systems will need to address all three aspects [31]. The solution is not to stop imports altogether but to assess the quality of imports and identify locally produced food items that can replace foods from elsewhere. Prior to the pandemic, Mauritius already had an active food processing industry in which local and imported products could be transformed to receive a new appearance. For instance, aged tomatoes can be converted into *aigre doux* (a famous local sweet and sour sauce), and mangoes and vegetables are preserved into *achards* (a pickling technique). Furthermore, tropical fruit are processed into jams and fruit pastes, techniques that all help to lengthen the shelf life of those raw materials [27]. The processing industry is an example of a dynamic sector that the country can continue relying on.

C. Incentives for a Reverse Nutrition Transition

While poverty and food insecure households are present in Mauritius, the country is not on the brink of famine. To the opposite, the availability of cheap food often leads to overconsumption among Mauritian food lovers, a quality it shares with most war-free, high-income countries [28]. A lack of diversity in the food available means that the Mauritian population consumes the same food served in the wrong proportions: too much rice, bread, and noodles and not as much meat, protein-rich foods or fruit and vegetables.

The priority is hence not to produce more food but to eat better. While food security used to be a valid focus in ensuring that the greatest number of people had access to enough food to meet its daily energy requirements, the current situation in Mauritius calls for a change in priorities. Indeed, we are now facing a situation of abundance that we may not be sufficiently armed to navigate properly. The EAT-Lancet Commission on healthy diets adopts a radical stance in calling for reduced meat consumption to normalize "win-win" diets: meal compositions that are beneficial for both human and environmental health [28]. Without forcing populations to become vegetarian overnight, the WHO has led

campaigns with the Ministry of Health in Mauritius to increase awareness on the importance of healthy eating and physical activity in fighting NCD risk-related factors [5]. But such campaigns often inspire a déjà-vu impression that may have little impact, if any, on populations.

When asking populations to consume healthier foods and include more fruit and vegetables in their diets, this healthy nutrition transition often proves expensive for their wallet. A solution that would require the government's involvement could be taxing sugary foods and soft drinks. This could be part of a wider strategy to subsidize new technologies to promote sustainable agricultural production as discussed above [28]. Alternatively, the government could increase the purchasing power of its citizens. In an attempt to respond to the various crises and recent food price increases, the Mauritius Revenue Authority has announced the payment of an additional Rs 1,000 (about USD 22 USD) to all employees earning less than Rs 50,000 (about USD 1,100) a month [32]. Changing our ways of producing and consuming food comes at a cost, but not taking action can create more severe consequences for societies in the long run. Governments can hence see expenses on “win-win” diets as an investment on future generations to achieve a development that is sustainable.

Consumers are more likely to shift their consumption patterns and the choices they make if they are well-informed about it. This includes workshops as our office's Knowledge Exchange and messages to the general public to explain the part nutrition plays in our daily lives, especially to more marginalized groups. But for the transition to be effective, consumers need not to accumulate debts to afford healthier eating habits. It is the government's role to employ financial instruments that will make this transition as smooth as possible for the lay citizen.

IV. CONCLUSION AND POSSIBLE IMPACTS

14 years after Nyéléni, the call for a transformation of our ways of growing, producing and consuming food has found an echo in the 2021 UN Food Systems Summit. Mauritius could see this movement as an opportunity to curb the silent killer that is diabetes. A change in the agricultural panorama could induce a more diverse crop base that would then allow its population to have greater access to local fruit and vegetables. As a result of this increased availability of nutritious produce, the population may see its intake of added sugars and salts decrease, thereby reducing the likelihood of diabetes and other NCDs. Of course, healthy diets will bring more benefits if they happen in complement to an active lifestyle. Bearing this in mind, the objective of this commentary was to demonstrate how local agricultural practices in Mauritius could be transformed to improve our diets and this rationale could be applied equally to other SIDS.

The COVID-19 pandemic has had the benefit of acting as an accelerator to do things differently on a variety of topics, including agriculture and nutrition. Governments,

including that of Mauritius, no longer deny the urgency to act and rethink our usual practices. Along with the commitments taken at the Food Systems Summit, the UNRCO Knowledge Exchange provided a platform for stakeholders to share their views on the feasibility of an agricultural transition. The transformation of current production, trade and consumption patterns into ones that are more considerate over our health and that of the planet can only benefit everyone. COVID-19 is not the last shock the world will face; in addition to this, climate change offers an uncertain future for Mauritius and other SIDS. At the same time, solutions and resources are available to reverse the trajectory we have been taking. In terms of the NCD burden Mauritius and other SIDS face, relying more on local and nutritious ingredients than on processed, imported food products would be of great help in fighting the diabetes epidemic.

APPENDIX A 20 MOST DIABETIC COUNTRIES

TABLE I. 2030 ESTIMATES OF TOP 20 COUNTRIES WITH HIGHEST DIABETES PREVALENCE [1]

	Country	Region	2030 Estimate (%)
1.	Pakistan	South Asia	32.8
2.	Kuwait	Middle East	24.9
3.	French Polynesia	Pacific	26.9
4.	Mauritius	Western Indian Ocean	25.2
5.	Nauru	Pacific	25.0
6.	New Caledonia	Pacific	25.0
7.	Northern Mariana Islands	Pacific	25.0
8.	Marshall Islands	Pacific	24.8
9.	Kiribati	Pacific	23.5
10.	Egypt	Africa	22.6
11.	Tuvalu	Pacific	21.9
12.	American Samoa	Pacific	21.7
13.	Qatar	Middle East	21.7
14.	Solomon Islands	Pacific	21.4
15.	Guam	Pacific	21.0
16.	Saudi Arabia	Middle East	20.4
17.	Sudan	Africa	20.1
18.	Fiji	Pacific	19.6
19.	Malaysia	Southeast Asia	18.6
20.	Mexico	North America	18.3

CONFLICT OF INTEREST

The author declares no conflict of interest.

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REFERENCES

- [1] International Diabetes Foundation. Diabetes estimates (20-79 y): Age-adjusted comparative prevalence of diabetes, %. *IDF Diabetes Atlas*, 10th Edition 2021. [Online]. Available: <https://diabetesatlas.org/data/en/indicators/2/>

- [2] World Health Organization, *Global Action Plan for the Prevention and Control of Noncommunicable Diseases 2013-2020*, Geneva: WHO Press, 2013.
- [3] United Nations, "SIDS Accelerated Modalities of Action (SAMOA) pathway," presented at the 69th session of the General Assembly, New York, December 15, 2014.
- [4] *The National Service Framework for Diabetes (NSFD)*, Government of Mauritius, Port Louis, 2009.
- [5] World Health Organization, *WHO Mauritius Annual Report 2018*, Port Louis: WHO Mauritius, 2018.
- [6] D. Magliano, J. Shaw, P. Zimmet, et al., *The Trends in Diabetes and Cardiovascular Disease Risk in Mauritius: The Mauritius Non Communicable Diseases Survey 2015*, Port Louis: Government of Mauritius, 2015, pp. 5-31.
- [7] World Health Organization, *WHO Country Cooperation Strategy 2015-2019: Mauritius*, Port Louis: WHO Mauritius, 2015.
- [8] Government of Mauritius and United Nations, *Strategic Partnership Framework 2019-2023*, Port Louis: United Nations Mauritius, 2019.
- [9] United Nations, "Program of action of the world food conference," presented at the World Food Conference, New York, November 16, 1974.
- [10] The World Bank, *Poverty and Hunger: Issues and Options for Food Security in Developing Countries*, Washington, D.C.: The World Bank, 1986, p. 1.
- [11] V. Campesina, "Nyléléni declaration," presented at the Forum for Food Sovereignty, Sélingué, Mali, February 23-27, 2007.
- [12] B. M. Popkin, C. Corvalan, and L. M. Grummer-Strawn, "Dynamics of the double burden of malnutrition and the changing nutrition reality," *The Lancet*, vol. 395, pp. 65-74, December 2020.
- [13] *New Strategic Options for Agricultural Diversification 2007-2015*, Mauritius Ministry of Agro Industry and Fisheries, Port Louis, 2008.
- [14] *Strategic Plan (2016-2020) for the Food Crop, Livestock and Forestry Sectors*, Mauritius Ministry of Agro-Industry and Food Security, Port Louis, 2016.
- [15] Collaborative Framework for Food Systems Transformation: A Multi-stakeholder Pathway for Sustainable Food Systems, *United Nations Environment Programme*, Nairobi, Kenya, 2019.
- [16] A. Escobar, "The dispersion of power: Tales of food and hunger," in *Encountering Development: The Making and Unmaking of the Third World*, Princeton, NJ: Princeton University Press, 1995, ch. 4, pp. 122-165.
- [17] *Pathway for a Green, Fair, and Resilient Food System in the Republic of Mauritius*, Government of Mauritius and United Nations Mauritius, Port Louis, Mauritius, 2021.
- [18] A. Goolaub, "Food systems knowledge exchange," presented at the UNRCO Knowledge Exchange on Food Systems, Port Louis, Mauritius, November 25, 2021.
- [19] N. Venis and M. Blin, "Regeneration Mauritius," presented at the UNRCO Knowledge Exchange on Food Systems, Port Louis, Mauritius, December 3, 2021.
- [20] C. K. Ong and R. M. Kho, "A framework for quantifying the various effects of tree-crop interactions," in *Tree-Crop Interactions: Agroforestry in a Changing Climate*, C. K. Ong, C. Black, J. Wilson, and C. R. Black, Eds. Wallingford, CT: CAB International; 2015, ch. 1, pp. 1-23.
- [21] N. Rose, "Fair food: Stories from a movement changing the world," Brisbane, Australia: University of Queensland Press, 2015.
- [22] *Codex Alimentarius: Organically Produced Foods*, 3rd ed., World Health Organization and Food and Agriculture Organization of the United Nations, Rome, Italy, 2007, pp. 1-3.
- [23] *Decent Work and the 2030 Agenda for Sustainable Development*, International Labour Organization, Geneva, 2017, pp. 1-19.
- [24] *Action Track 4 - Advance Equitable Livelihoods and Value Distribution*, Food Systems Secretariat, New York, 2020.
- [25] P. Seenauth, "Application of scientific knowledge to transform the food system," presented at the UNRCO Knowledge Exchange on Food Systems, Port Louis, Mauritius, November 25, 2021.
- [26] United Nations World Tourism Organization, *A Tour of African Gastronomy*, Madrid, Spain: UNWTO, 2021.
- [27] *Mauritius National Export Strategy: Agro-processing Sector*, Government of Mauritius and International Trade Centre, Port Louis. 2017, pp. 9-15.
- [28] W. Willett, J. Rockström, B. Loken, et al., "Food in the Anthropocene: The EAT-lancet commission on healthy diets from sustainable food systems," *The Lancet*, vol. 393, pp. 447-492, February 2019.
- [29] *Digest of Agricultural Statistics 2018*, Statistics Mauritius, Port Louis, Mauritius, 2019 pp. 101-161.
- [30] R. Patel, "Food sovereignty," *The Journal of Peasant Studies*, vol. 36, pp. 663-706, October 2009.
- [31] B. Dubarry, "Vision stratégique 2019-2023 (Strategic vision 2019-2023, translated from French)," presented at the UNRCO Knowledge Exchange on Food Systems, Port Louis, Mauritius, November 25, 2021.
- [32] Mauritius Revenue Authority. (2022). *Payment of Social Contribution (CSG) Income Allowance of Rs 1,000*. [Online]. Available: <https://www.mra.mu/download/PressReleaseCSG060722.pdf>

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