



# Sustainable diets: How ecological nutrition can transform consumption and the food system

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In a world where food consumption and its production seem to threaten the environment in diverse ways, access to affordable, culturally acceptable and nutritious food remains a challenge. According to Garnett (2014), food consumption contributes to 20-30% of anthropogenic greenhouse gas emissions and accounts for 70% of human water use and a source of water pollution. Urbanization, social status, culture and lifestyle changes have contributively altered consumer behaviour of today's generation. It is against this background that the current food system needs to be re-evaluated.

The complexity of the current food system makes it extremely susceptible to climatic, socio-economic, political and financial crisis. The movement towards a more sustainable diet, with low inputs and the adoption of local and agro-ecological food production, coupled with shorter distance production-consumption nets for fair trade seems to be an effective alternative. Similarly, this review aims at discussing the different perceptions held on sustainable diets and posits on how ecological nutrition can transform food consumption and the food system.

Although sustainable diet is the way forward, it is not easy to assess. According to Perignon et al. (2016), high-quality indicators are needed to assess the social, economic and environmental dimensions of a sustainable diet. For instance, if environmental impacts of diets are limited to energy and micronutrient content of the diet or using basic nutritional indicators, a clear conclusion of sustainability results cannot be achieved. Consequently, the authors of this book have proposed a sustainable dietary guideline strategy. They evaluate the impact of diet on environment, health, social values, quality, economy and governance. This provides a

deeper understanding of a 'good' and 'sustainable' diet (Mason & Lang, 2017).

These authors with a rich background in food policy, public health, and nutrition have addressed the omissions and gaps in the literature and challenges overall to transform food consumption towards sustainability. Pamela Mason, one of the main authors of this book under review, has a bachelor's degree in pharmacy, as well as a MSc and PhD in Nutrition from King's College in London, United Kingdom (UK). She also has a MSc in food policy from City University of London, United Kingdom. Pamela is a registered public health nutritionist with the UK Association for Nutrition. She is working with local food networks in Monmouth, South Wales.

The second author, Tim Lang, is a Professor of food policy at the Centre for Food Policy at City University of London, UK. Lang also co-authored this book. He was the founder of the Centre for Food Policy since 1994 and was Director until 2016. He authored a book on Food Wars and the Unmanageable Consumer in 2015. Other books authored by him include the Ecological Public Health (2012) and Food Policy (2009). He was the policy co-lead on the EAT-Lancet Commission on Healthy Diets from Sustainable Food Systems since 2016 to 2017.

Indeed, the present food production, supply, and consumption system cannot satisfy the growing population. Although the food system generates food energy for over 7 billion of the world's population, adequate and affordable nutrition is lagging (Garnett, 2014). Our food system is deficient in micronutrients and promotes obesity due to the excess intakes of fat and sugar. New strategies need to be



developed to ensure food security and quality. Without any actions, these problems will gradually become acute. But the question remains unanswered. Will new strategies and mass production solve the problem of unsustainability in our food diet?

Sustainable diet refers to a diet that is environmentally friendly and contributes to food security and nutrition of all generations. According to Mason and Lang (2017), a sustainable diet also adheres to dietary guidelines for maintaining long-term health and avoids excessive degradation and consumption of natural resources. This includes a diversified diet which is high in quality, nutritious, and safe. Moreover, a sustainable diet aims at protecting biodiversity, while simultaneously meeting the socio-economic and cultural goals of humans.

Although the concept of nutrition and incorporating sustainability in the human diet is nothing new, it is one of the main topics in the current world of food policy due to the impact it has on the environment (Meybeck et al., 2015). However, achieving a sustainable diet is saddled with many controversies from a social, economic and environmental perspective. Arguably, a sustainable diet is often limited to being environmentally sound or healthy, but the economic and social aspects remain silent.

According to Burlingame and Dernini (2012), 70% of the world's population in 2050 will be urban dwellers. Changes in society, as a result of rural migration and a growth in income, lead to the consumption of more animal products, and an increased demand for livestock feed that is putting pressure on natural resources. A change in dietary patterns will require a drastic shift from the production side to healthy, low environmental impact food. In this light, Mason and Lang (2017) capture certain hidden factors, such as culture, social values, price of food, and cost of production, among other factors.

Undoubtedly, the world is seen to undergo a transition in nutrition. Food items, which were once seasonally available, can be purchased annually. The evolution of large-scale retailers has introduced changes in consumer food choice behavior (Meybeck et al., 2015). Consumers, with their lifestyle and food choices, play a leading role in the food production system as they select certain types of products, production processes or producers. Increases in income has led many to eat 'feast-day' meals each day. As our population grows and the economies of different countries improve with industrialization, the demand for more resources and energy rich foods, such as animal products, are on the rise (Garnett, 2014).

Population growth, as stated by Meybeck et al. (2015), is ac-

companied by an increase in the number of people that can increase their income. As high incomes are earned, more food is consumed. The probability of consuming certain foods, which were once impossible due to financial status, now become a common habit. Simpler food diets have given way to complex diets. This implies that traditional diets are gradually replaced by diets high in calories, refined sugars, meat and fats. Unfortunately, this direction embarked is responsible for global obesity and an incidence of non-communicable diseases does not emphasize who pays for the true cost of food (Meybeck et al., 2015).

It is obvious that price is one of the determinants of food consumption choices. In contrast, low food prices reduce investment capacity and affects economic sustainability. Promotion of low production costs not only encourages negative social impacts like low income and wages for food producers and workers, but encourages other negative environmental practices like food waste (Meybeck & Gitz, 2017). If the pursuit of cheaper food continues to shape the world food systems, it is the environment that pays in the end. The cost of food should be assessed based on the effects of sustainability, considering different approaches to production and food consumption.

More often, sustainable diets are limited to impacts on the environment or economy. However, the element of social aspects is often ignored. Mason and Lang (2017), emphasize on this gap in the literature by defining a sustainable diet as one which is socially just and safeguards the health and safety of workers by providing decent working conditions. The social conditions shape eating patterns. It highlights the social values pertaining to food diets, and the role social morals and cultural norms play in what one consumes.

Some social movements, such as for fair trade, animal welfare, and workers' rights are also trying to redefine the 'social' element in diet. They try to address the importance of the welfare of workers, farmers, and farm animals in a sustainable system. For example, proponents of animal stress on less meat production to prevent the continuous pain suffered by farm animals before slaughter. Additionally, workers' rights need to be protected. Thus, farmers and farm workers need a decent living and equal access to farm land. However, this issue is entangled with some cultural debates. Thus, the cultural aspects of food diet are worth noting.

Although a good diet may satisfy human and environmental health, if it is not available to everyone in a form that is culturally appropriate, it cannot be classified as sustainable. Therefore, the movement towards sustainable diets should consider the socio-cultural factors behind eating patterns. In some instances, food also provides social pleasure and



identity. Critics seeking more sustainable diets have sometimes appealed to tradition and historic authenticity as a motive for change. A chapter in this book is dedicated to identifying and clarifying the social and cultural dimension of sustainable diets, drawing knowledge from some social movements.

Furthermore, as most of the focus on sustainable diet is centered on the socio-economic and environmental implications, good governance and policy is needed to shape consumer behavior. Some proponents of sustainability postulates that a sustainable dietary guideline as one of the ways forward. With a sustainable dietary guideline, a systematic approach can be followed by all to arrive at a uniform method of sustainable consumption. In addition to an effective guideline, an effective policy is essential to shape the food system for the future.

If consumers are to act as food citizens, they need some form of cultural rules. These rules or policies need to be transparent and open to audits. More so, a framework of governance needs to be designed to direct discussions leading to effective results. A transition team in this process of policy implementation will be useful to spearhead the shift, provide reasons for choosing a more sustainable diet, and direct its implementation. However, good governance is saddled with problems, such as good leadership, and legitimacy which this book addresses.

In addition to the existence of an effective framework towards sustainability in diets, it is essential for policy makers, food companies, scientists, and consumers to have an indicator for measuring sustainable diets. Increasingly in other chapters of this book, various guidelines towards a sustainable dietary is drawn from government, business and civil society. It introduces various indicators that both policy makers and the public adopt to measure sustainable diets. Indirectly, the reader is provoked to answer questions, such as when, why and how the (un) sustainability of diets can be measured. In this view, one can assess the reliability of a chosen indicator.

Briefly outlined, sustainable diets in this context is being assessed by public health indicators, such as obesity and incidence of Non-Communicable Disease (NCD), safety indicators (pathogens, antibiotics and pesticides), nutrition indicators (intake of energy, macronutrients and micronutrients), healthy eating and quality indicators, as well as other indicators in relation to diet like environmental, economic, and food security measures. Besides these indicators, a working guideline is needed to develop a standardized multi-criteria methodology for assessing sustainable diets. The effectiveness of the concept of a sustainable diet is

grounded on the idea that to increase sustainability of systems, both production and consumption, and supply and demand, need to be considered. The choice of diet and food consumption affects sustainability. There are increasing opportunities for more sustainable consumption patterns and choices to drive towards greater sustainable production patterns. A comprehensive view of the contributions made on this topic in this book gives an informed direction towards sustainable diets. However, sustainable diets are both constrained and enabled by the food system. Therefore, the state of the food system determines the space of possible diets and the possibility to choose sustainable diets based on the number of consumption choices and incentives available.

The core concept of such a movement is not limited to public health. It must consider the socio-cultural aspects of the consumers, economic issues from farm to fork, and the environmental effects of the choice of diet.

Overall, the food system is shaped by many drivers, its status being the result of different diets, environmental, economic and social issues at different levels from local to global. Therefore, a general guideline for sustainable diet can be downplayed by most sustainability proponents. This is because many economies and consumption choices are bound to evolve. Thus, food diet and eating patterns are often influenced, if not controlled, by culture, beliefs, status and place.

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