



# Moving Towards Healthy Diets: The Key Role of Food Environments



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**Abbreviations :** TFCs: Transnational Food Corporations; LMICs: Low and Medium Income Countries

## Introduction

Most countries today, in spite of the progress made in the last decade, face the “triple burden” of malnutrition: under nutrition, micronutrient deficiencies and overweight and obesity [1,2]. Progress in terms of reduction of stunting has been slow and uneven, while overweight and obesity in particular have grown rapidly contributing in part to the increase of non-communicable diseases such as cardiovascular diseases, cancers, chronic respiratory diseases and diabetes. According to the WHO, these have become the world’s “biggest killers” with much of the burden of premature deaths from NCDs lying on the shoulders of low- and middle-income countries [3]. Today, about 2 billion adults are either overweight or obese, and no country has been able to reverse the rising trend [1].

One of the underlying causes of this rise, in addition to a reduced physical activity, has been a shift in dietary patterns worldwide. No doubt, the rise of income in certain parts of the world, notably China and some countries of Latin America, has led to a greater demand for and consumption of nutritious foods such fruits, vegetables, whole grains and seafood. On the other hand though, recent data tells us that there has also been a parallel - and faster- increase in the consumption of highly processed foods, such as sugar-sweetened beverages and processed meat [4]. Known as the “nutrition transition”, diets have shifted worldwide towards a greater consumption of packaged, processed foods high in salt, refined carbohydrates and sugar, animal products and food cooked with vegetable oils to the detriment of coarse grains, root crops, legumes and fresh fruits and vegetables [5].

There is today a broad consensus on the key role played by the evolution of the food system in contributing to this shift. Urbanization, the changing lifestyle it has led to, and

the overall increase in income, especially in middle-income countries, have certainly played a role in shaping a new demand: urbanization brings an increasing demand for meals away from home as commuting distances increase and working hours become long and at times unpredictable [6,7]. The last decades have also seen an increasing number of women enter the workforce, thus making ready-to-eat and ready-to-heat foods more attractive and convenient. However a number of recent reports from international agencies and academia clearly spell out the strong link between high-quality diets and the food system we have inherited from the post-world war II era [8-13].

Food environments in particular have been pointed out as an important mediating factor between what the food system delivers and the types of diets -healthy or not - that people have. There is to date no one agreed upon definition of food environments, but overall we can say that food environments are the underlying determinants of what people eat, and are made up of the foods that are available, affordable and acceptable to people in their surroundings [10-11,14] . In the short term they affect people’s food choices, while in the long run they have an important role to play in affecting people’s food preferences and habits [15].

Some global trends in the way food systems have evolved in the last 50 years have strongly affected food environments in the world. With respect to availability, shifts in the global supply system, especially with the rise of transnational food corporations (TFCs) have made energy-dense, nutrient-poor processed food products much more available. Moreover, technological advances in food processing, such as the extraction of vegetable oils and other processing techniques,

have made the production of this type of food possible, profitable and less expensive for the consumers [16,17].

The above changes have also had an impact on the relative prices of foods. Modern global sourcing strategies by food companies allows the use of cheap ingredients, thus making it possible to cut costs and keep prices - especially of highly processed packaged foods - low [18,19]. The result has been that, overall in the past decades, "healthy" foods such as fresh fruits and vegetables have become more expensive than "unhealthy" foods, both in high-income countries and in emerging economies, such as Mexico, Brazil and China [20]. However, it is important to note that in countries where traditional food systems are still important, fresh foods that are distributed by small, local producers tend to be cheap and therefore accessible [19]. A careful analysis of the retail structure, the type of food sold, and its impact on prices is therefore important in analyzing its effect on diets, as well as more research on issues such as the metrics used (cost per calories versus cost per nutrient, for example), or on the effects of price changes on total diet rather than on the consumption of a specific product [21].

The concept of acceptability includes that of desirability and convenience, and the transformations noted above have shifted the acceptability of food towards unhealthier patterns. The way that certain ultra-processed foods are manufactured is engineered to make them tastier and more palatable, thus making it very difficult to "eat little of them" - as some would advocate [17,22]. Processed food and modern distribution systems are today "trendy", particularly in low and medium income countries (LMICs). Snacking and eating out have increased, and have proceeded in parallel with a certain level of deconstruction of the traditional meal [23,24], as well as with a progressive loss of knowledge: people, especially young people, are no longer knowledgeable about certain types of (usually traditional) foods, nor do they know how to cook/process them. Information has played a key role in this transformation: the vast amount of funds being spent by large companies on advertising and marketing (including the strategic use of shelf space) have all played an important role in shaping acceptability, with an increased use of quick-to-use ultra-processed foods [18,25,26]. Availability therefore has a direct influence on diets- as seen above- but it also has an indirect effect insofar as what is available - and also what is affordable - shapes people's food preferences [15]. The result is that, even if healthier options are available, people may not like the taste or as mentioned above, would not know how to cook the healthy foods.

While problems of overweight and obesity have repeatedly been framed in terms of people's "personal responsibilities", what the above points to is the need to broaden the frame of the debate around diets and nutrition and recognize the role

of environmental and structural drivers in shaping people's eating behaviours [12], implying a strong role for Government and policy intervention. Generally speaking there is today a global consensus on the core policy domains where action is needed to foster a healthier food environment. These include: nutrition labelling, food provisioning (i.e. food offered in specific settings, such as schools), fiscal measures, food reformulation, food promotion (advertising and marketing), food retailing, and trade [10,14]. Some policy frameworks - such as the NOURISHING framework - also include behaviour change communication as a key complementary area of work.

Faced with growing rates of obesity, countries have indeed risen to the challenge and have implemented a series of policies within these domains, ranging from innovative labelling laws in Chile and Ecuador to taxes on "unhealthy" products in Mexico and Hungary, advertising restrictions in the UK and zoning of fast foods especially around schools in the USA and South Korea, just to mention a few [27]. Many of these policy interventions are relatively new, but some are already showing some positive impacts on consumption. They include: relatively large and well signalled taxes, comprehensive advertising regulations on multiple media, and labelling policies, albeit the latter have a greater impact on stimulating reformulation than actually modifying substantially consumer choice [28,29]. Evidence also suggests that integrating food environment policy actions with information and nutrition education campaigns enhances the overall effectiveness of the policy package [21], as does adopting an "integrated policy strategy", i.e. a mix of consistent and coherent food environment policies [30,31].

More will be needed however to rise up to the task of reshaping food environments and, ultimately, food systems, and while great political commitment is required from Governments, greater public support for policy action will be needed by civil society and a range of actors [12-13,32]. "Policy" indeed is not to be considered as an exclusive domain of Government: civil society and the private sector too can forge policy from their respective quarters [33]. In a number of countries, evidence has shown that food-based, local-level initiatives, such as community-supported agriculture, farmers' markets and box delivery schemes can encourage a shift in food practices [34-37]. Translated in governance terms, what this means is a need to "further support, fund and link these movements, coalitions and networks together if change is to come about" [13], and to set up platforms that encourage greater stakeholder participation in the construction of integrated food policies [12]. The task ahead in shifting eating patterns and dietary intake is huge: demanding greater political commitment and action by Governments as well as opening spaces of deliberation for the process to be participatory will be key.

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