CHAPTER 1

Traditional Balkan foods in a global context: an introduction

Alina-Ioana Gostin
College of Food and Hospitality Management, University College Birmingham, Birmingham, United Kingdom

1.1 Where are we standing now with our food systems and nations health?

Today 7.7 billion people live on the planet. According to the United Nations (UN) projections, this number will increase to 8 billion in 2024, 10 billion in 2056, and 11 billion in 2088 (Roser, Ritchie, & Ortiz-Ospina, 2019) and with it, food demand will increase (Bene et al., 2019). Although global discussions have focused in the last decades on food quantity, to produce enough food to feed the world's growing population, it is now being recognized the importance of food quality and the nutrition this provides, and its impact on consumer health and the environment. Not only the food we produce must suffice, it must be safe and nutritious to feed the population of the globe without putting more strain on our environment (Berners-Lee, Kennelly, Watson, & Hewitt, 2018). Food quality is therefore highlighted in current agendas of international organizations like the World Health Organization (WHO) and the Food and Agriculture Organization of the United Nations (FAO) (Bene et al., 2019; FAO & WHO, 2018). According to modeling analyses, we can feed a healthy diet to 10 billion people within planetary boundaries and still leave the natural ecosystems intact, at least 50% of it, provided we shift to healthy diets, reduce by 50% food loss and waste, and transition to regenerative production practices (Rockström, Edenhofer, Gaertner, & DeClerck, 2020). Healthy diets involve access to and availability of high-quality, diverse, and nutritious foods that are safe to consumers. A healthy diet can be achieved by (1) consuming plenty of fruits and vegetables, legumes, and whole grains; (2) low consumption in food components of public health concern, such as sugars and salt (to be consumed in moderation, with all salt iodized), and fats (unsaturated fat to be consumed instead of saturated or trans fats); (3) limited or no consumption of highly processed foods, such as sugar-sweetened beverages and processed meats; and (4) appropriate consumption of other nutritious foods aligned with dietary needs for life stages (FAO, 2016; FAO & WHO, 2018).

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Globally, 11 million premature deaths in 2017 were attributed to poor diet, with high sodium intake and low intake of whole grains and fruits representing the leading factors. Of these, cardiovascular disease constituted the leading cause of deaths (10 million cases), followed by cancers and type 2 diabetes (GBD 2017 Diet Collaborators, 2019). The health of hundreds of millions of people is at risk due to malnutrition, which can range from child stunting to obesity. In many countries and even in the same household, obesity and undernutrition coexist. Since 2015, the number of undernourished people in the world has been growing. In 2018, one in nine people were suffering from hunger (Boliko, 2019). Today there are more than 900 million people undernourished (Rockström et al., 2020), although there is enough food produced to feed the global population, but this food and the technology used for its production do not reach always those in need. Paradoxically, more than one in eight people in the world are obese (Boliko, 2019). Studies have shown that one in five deaths globally could be potentially prevented through improved diet (GBD 2017 Diet Collaborators, 2019). Therefore, nutrition should be incorporated throughout the entire food system (Box 1.1), from "field to fork" (Rockström et al., 2020), from addressing nutrient imbalances in the soil for improving crop quality to proper food processing, preparation, and consumption at the household level (FAO & WHO, 2018).

If current trends continue, malnutrition is estimated to affect 25 million more children than today by 2050 because of climate change, while a third of the world population will be overweight by 2030 (UNSCN, 2017). Climate variability and extremes, conflict, economic slowdown and income inequality are main causes for increasing food insecurity in future that will impact human health (Rockström et al., 2020; Willett et al., 2019).

"Food security is a situation that exists when all people, at all times, have physical, social and economic access to sufficient, safe and nutritious food that meets their dietary needs and food preferences for an active and healthy life" (FAO, IFAD, UNICEF, WFP, & WHO, 2018). In order to address the global challenges of food security, the 2030

BOX 1.1 Aspects to consider for developing nutrition-sensitive agriculture and food systems (FAO & WHO, 2018).

Nutrition-sensitive agriculture and food systems place consumers' nutrition and health needs at the center of development planning. This means not only asking what can we produce and sell more of, but also, "what are people eating?"; "what should they eat more (or less) of?"; "how do they access their food?"; and "how can more diverse, safe and nutritious foods that contribute to a healthy diet be made more available and accessible?". It also entails seeing how agricultural activities affect individuals' health, such as through food safety, access to safe water, and reducing the workload associated with agricultural work, especially for women. Agriculture and food system investments need to be tailored to specific contexts.

Agenda for Sustainable Development was adopted in 2015 by the 193 Member States of the UN. This agenda contains 17 Sustainable Development Goals (SDGs) to be achieved by 2030 with the overarching aim "to ensure prosperity for all people while caring for the planet and maintaining world peace." For many of these goals, food and agriculture play a key role in their achievement (Boliko, 2019). Moreover, the UN Decade of Action on Nutrition 2016–25 was developed in which people's health, well-being, rights, and dignity are priorities, along with the sustainable management of natural resources. This plan targets to eliminate all forms of malnutrition (e.g., micronutrient deficiencies, undernutrition, overweight, or obesity) and to reduce the burden of diet related noncommunicable diseases by 2030 in all age groups, in all countries. Until the present, the nutrition targets however remain unmet (UNSCN, 2017).

1.2 How can traditional foods promote food and nutritional security?

Foods and diets are changing with time; as they deviate from the original, they may become less healthy as seen with the Mediterranean diet (Bock et al., 2014; Garrido-Miguel, Cavero-Redondo, & Álvarez-Bueno, 2019). In the 2016–25 strengthening nutrition action plan, WHO and FAO have made recommendations for diets to be improved through better access to nutritious, healthy food, which conforms with the culture, traditions, beliefs, dietary habits, and preferences of individuals in accordance with the national and international laws and obligations (FAO & WHO, 2018). When developing food based strategies to tackle malnutrition, reintroduction and promotion of traditional foods (TF) and diets have been proposed, following recent trends of revival of artisanal and local traditional food cultures that oppose to the spread of highly processed foods on the market and to fast-food (Dilis et al., 2013). Despite the globalization of the food markets, which has characterized the 20th century and has promoted large production of cheap, uniform foods (Vanhonacker et al., 2013), TF have received a growing interest in the last decades from industry, producers, retailers, as well as governments and consumers (Lartey, Meerman, & Wijesinha-Bettoni, 2018; Trichopoulou, Soukara, & Vasilopoulou, 2007; Vanhonacker et al., 2010). This is attributable to the overall positive image TF have, which are perceived as natural, environmentally friendly, and healthy (Bonadonna, Macar, Peira, & Giachino, 2017).

TF have a long history in terms of their consumption. For the European consumer, these are foods "frequently consumed or associated to specific celebrations and/or seasons, transmitted from one generation to another, made in a specific way according to the gastronomic heritage, naturally processed, distinguished and known because of their sensory properties and associated to a certain local area, region or country" (Vanhonacker et al., 2010). TF also provide an indissoluble union between cultural value and taste that is much appreciated by consumers (Bonadonna et al., 2017). In Europe, consumers find that the specific taste, appearance, quality, nutritional value,

safety and healthiness of the TF make up for the cost and time required to prepare them (Almli, Verbeke, Vanhonacker, Næs, & Hersleth, 2011). Not only being culturally accepted, certain TF have high content in micronutrients (Dilis et al., 2013), are naturally available and affordable, and can contribute to food security (Briones Alonso, Cockx, & Swinnen, 2018). When culture was excluded from discussions of policymakers and researchers on fighting malnutrition, many well-intended food security interventions failed (Briones Alonso et al., 2018).

TF are part of the history, identity, culture, and heritage of a country or region, and represent important elements for understanding dietary patterns of individuals living there (Costa et al., 2013). There are noticeable differences in food preferences, food-related behaviors, habits, and attitudes that exist at national level, as well as at a regional/local level (Guerrero et al., 2010). These differences are even more noticeable for countries whose traditional cuisine and TF rely on resources naturally available in the area (Vanhonacker et al., 2010). This is reflected in the variety and number of foods with a Protected Designation of Origin (PDO), Protected Geographical Indication (PGI), and Traditional Specialities Guaranteed (TSG) status (Bock et al., 2014). To date, the Balkan region has over 500 products (foods and beverages) listed in the EU geographical indications register with Greece being top of the list (281 products), followed by Romania (78) and Bulgaria (74) (EC, 2020). Consumers not only expect to be able to purchase their favorite foods throughout the year, but they also demand variety (Bock et al., 2014), which is strongly associated with nutritional status, especially with micronutrient content of diets (Hunter & Fanzo, 2013). There is little knowledge on the nutritional composition of these foods in most countries and hence there is a need for their research, registration, and promotion (Costa et al., 2013). The few available studies have shown that some TF from countries in the Balkans are good sources of minerals (Albuquerque et al., 2013), vitamins and other health-promoting compounds (Sanches-Silva et al., 2013), with high antioxidant potential and phenolic content (Danesi, Pasini, Caboni, D'Antuono, & Bordoni, 2013), and they could be eligible to bear a wide variety of nutrition claims in accordance with the European legislation (Dilis et al., 2013). By advancing the collection of data on the composition of TF, these can be included in available national food composition databases, which will support and inform (1) food industries to better exploit and promote TF depending on their potential nutritive value; (2) food decision-making authorities; (3) researchers in health effects and epidemiological studies related to diets; and (4) health professionals in comprehensive dietary advice. A knowledge base of traditional Balkan foods can also help to foster local biodiversity, rural growth, and sustainable diets by preserving safe dietary patterns in local cultures (Costa et al., 2013). It is now acknowledged that culture matters in people's food choices and that through meaningful, culturally-relevant interventions, food security and nutrition can be improved (Briones Alonso et al., 2018; Winham, 2009).

However, depending on the cultural, dietary, and economic value of the food, there may be heterogeneous social, economic, and ecological implications across different communities (Briones Alonso et al., 2018). Therefore it is important to observe and compare TF across countries with different cultural background (Vanhonacker et al., 2010), to gather information on their nutritional, antinutritional, and potential toxic compounds, as well as on the techniques used for their preparation, processing, and production (Briones Alonso et al., 2018).

It can be concluded that in today's globalized society, nutritionists and ethnologists have a key role to play in saving from extinction traditional diets that are culturally important and that promote health for the benefit of future generations (Dilis et al., 2013).

1.3 What does each chapter contain? Filling the gap in the Balkans

Despite their growing potential value, the benefits and disadvantages of TF and diets have been little explored (Briones Alonso et al., 2018), especially from low-income countries, such as those in the Balkans. The book is one of a series to cover the entire globe, aimed at filling the knowledge gap, from a traditional and scientific point of view. It provides complete coverage of countries in the Balkans, the southeastern part of Europe, it is written by local experts, presents TFs of the region, evaluates both claimed and scientifically evidenced nutritional and health aspects, and considers both local and international regulatory aspects.

- Chapter 1, Traditional Balkan Foods in a Global Context: An Introduction, provides a global overview on the current food systems and population's health status, it discusses international agendas on food sustainability and nutrition highlighting the importance of nutrition-sensitive systems and culturally acceptable foods that do not put the planet under more stress. In this context, the traditional Balkan foods are considered as a potential tool for promoting food and nutrition security.
- Chapter 2, History of Eating Habits in the Balkans, covers the historical perspectives that have formed the Balkan diet, the influence of other global cuisines, as well as the attitudes, values, and customs that have contributed to shaping the eating habits of the region's inhabitants. There are reasons for such habits and it may help to understand why some foods are only suitable for some people, but not for others. The chapter will also provide an overview of the pottery, cooking, and preservation methods used in the Balkans.
- Chapter 3, Balkan Food Cultures and Traditions, discusses food cultures, culinary identities, and traditions that characterize and are shared by the population of the Balkan region. It explores how food and food practices connect individuals, families, social groups and delivers health, pleasure, relationships, symbolism, taboos, memory, and excitement in everyday life.

- Chapters 4–16 cover the past, current, and future perspectives of TFs from Albania, Bosnia and Herzegovina, Bulgaria, Croatia, Greece, Kosovo, Macedonia, Montenegro, Serbia, Slovenia, Romania, Moldova, and the European part of Turkey (Thrace). The chapters present the history, geography, and the natural agricultural landscape, as well as the culture and traditions of the countries. Typical foods and food products are described with an overview on their composition, benefits and adverse properties, nutrients and health implications. The chapters also discuss sustainability and environment, preservation methods, nutritional conditions with statistics, trends, and epidemiology, together with deficiencies and remedies, as well as safety aspects on chemical and microbiological potential hazards.
- Chapter 17, Common Nutrition and Health Issues of Food in the Balkans, covers issues related to general diet and nutrition in the Balkans and presents health statistics for the countries of the region. Despite having one of the world's best dietary habits, the Balkans are not exempt from the global health patterns associated with nutrition-induced diseases that worsen the overall health of the region's population.
- Chapter 18, Common Regulatory Issues and Proposals to Harmonize Nutrition and Health Claims Regulations, reviews the common aspects regarding the EU trademarks (logos) for the PDO, PGI, and TSG products, together with the general food law and nutrition labeling legislation, as well as the regulations regarding health claims with examples of products and quality schemes for the Balkan countries. Recommendations for harmonizing the legislation on energy and nutrition claims for certified TFs and beverages are given. Additionally, two indicators are proposed for assessing the harmonization degree and the level of compliance across the world.
- Chapter 19, Traditional Balkan Foods: Future Outlook, provides a perspective on the quality and safety of traditional Balkan foods, taking into account international food trade markets, and discusses the key roles that different stakeholders, from educational institutions to governments, play in improving health and diets, thus creating healthier societies for the future.

The book is intended for undergraduates, graduates, professionals like food scientists, nutritionists, dietitians, food technologists, toxicologists, regulators, product developers in the food processing and food service industries, but can be a valuable source to cooks, medical doctors, cookbook writers, general public interested in cooking, food inspectors, teachers, restaurants, communities, airlines, trains and cruises, too.

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