



Editorial

The Multifaceted Nature of Food and Nutrition Insecurity around the World and Foodservice Business

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Keywords: agriculture; consumer behavior; food habits; food industry and technology; food policy; food safety and quality; food security; nutritional diseases; tourism; service quality at restaurants/cafés/hotels

Food security is more than a basic requirement for survival; it is a human right that has implications for global safety, economic strength, security, and sustainability [1,2]. The international concept of food security is a situation where all people have physical, social, and economic access at all times to sufficient, safe, and nutritious food that meets their dietary needs and food preferences for an active and healthy life. All four parameters (availability, access, utilization, and stability) should therefore be measured to determine food security status [3,4].

The matter of hunger, which is generally equated with access to inadequate amounts of food and compromised food quality to reach the required daily intake, is addressed by both food and nutrient insecurity. In the past, the food security term has been the issue of food availability and accessibility, and the utilization aspect has more recently been identified as essential [5,6]. Nutrition, on the other hand, centered on consuming adequate diversified meals and nutrient absorption that could contribute to other forms of malnutrition, such as hidden hunger and obesity [7].

Food quality is another critical issue across the globe. In their daily life, individuals eat at restaurants/cafés/hotels and seek better quality food and service. The quality performance of food and service at a foodservice operation contributes to making one's consumption more satisfying and his/her life healthier [8].

Taking into account these premises and the multifaceted nature of food and nutrition insecurity around the world and foodservice business, this Special Issue presents 12 papers published by researchers from 19 different countries all over the world, including Brazil, China, Czech Republic, Egypt, Finland, India, Indonesia, Iraq, Italy, Korea, Malaysia, Norway, Pakistan, Poland, Portugal, Russia, Saudi Arabia, Slovakia, and the USA.

Regarding the review papers included in this Special Issue, two investigations can be found that address the following themes: the evaluation of the relationship between negative affect and maladaptive eating behavior as a regulation strategy in normal-weight individuals [9] and a summary of the data on the chemical composition of reindeer meat depending on the region of the *Rangifer tarandus*—a systematic review and meta-analysis [10].

In terms of original articles, we can mention 10 relevant works that focus on different areas common to the objectives of this Special Issue, namely: the study by Batista et al. [11], which constructed and validated an instrument containing three questionnaires to identify the level of knowledge, practices, and risk perception of food safety by low-income students between 11 and 14 years old; the application of a multidisciplinary approach based on ecological and medical research methods with the inclusion of socioeconomic



Citation: Raposo, A.; Han, H. The Multifaceted Nature of Food and Nutrition Insecurity around the World and Foodservice Business. Sustainability 2022, 14, 7905. https://doi.org/10.3390/su14137905

Received: 21 June 2022 Accepted: 23 June 2022 Published: 29 June 2022

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analysis to investigate the impact of climate change on the food (in)security of the Siberian indigenous peoples in the Arctic, focused on the environmental and health risks [12]; and the evaluation of the yield of Melaleuca bracteata essential oil together with its antioxidant and antimicrobial properties under local prevailing conditions of the subtropics [13]. Furthermore, on 8 May 2021, Abdullah et al. [14] published the significant work entitled "A Comprehensive Appraisal of the Wild Food Plants and Food System of Tribal Cultures in the Hindu Kush Mountain Range; a Way Forward for Balancing Human Nutrition and Food Security" dedicated to the memory of Habib Ahmad (TI), Emeritus of Hazara University, Pakistan, and Fellow of the Pakistan Academy of Sciences who passed away on 7 April 2021. Habib was an extraordinary scholar and great human being, and he represented an irreplaceable academic guide for generations of young botanists, plant ecologists, and agricultural scientists across the globe. Langvan et al. [15] presented an investigation planned to understand the variability and inter-relationships among various nutritional quality attributes of maize kernels to identify potential donors of the respective traits for future hybridization programs. Akbara et al. [16] conducted an importance-performance analysis to examine international students' perceived importance and perceived performance of university foodservice attributes. Lee et al. [17] conducted a study to define detailed factors by combining the factors of social network services information attributes and dual processing process theory and to investigate the relationship between customer satisfaction, brand attitude, and sustainable use intention. Poto and Porrone [18] promoted a co-created methodological approach to address the relational dimension of environmental challenges: where critical legal analysis meets illustrated storytelling. Vindigni et al. [19] presented the results of an online survey carried out in Italy with 700 randomly selected participants on consumer attitudes towards food obtained by new plant breeding techniques. Bogdanova et al. [20] developed a study that aimed to reflect on appropriate policies for strengthening resilience and reducing migration outflows in the Arctic Siberian population.

The issues raised in this Special Issue are thought-provoking, and researchers, academics, policymakers, food processors, indigenous peoples, and other stakeholders should reflect on them.

Author Contributions: This Special Issue was edited jointly by A.R. and H.H. This editorial was written jointly by the editors. All authors have read and agreed to the published version of the manuscript.

Funding: This research received no external funding.

Acknowledgments: We would like to thank and congratulate all the authors who published their manuscripts in this Special Issue with *Sustainability*/MDPI for this valuable data collection. We also thank the reviewers, the *Sustainability* Editor-in-Chief, and the entire MDPI team, without which it would be impossible to construct this successful Special Issue.

Conflicts of Interest: The authors declare no conflict of interest.

References

- 1. Faridi, M.R.; Sulphey, M.M. Food security as a prelude to sustainability: A case study in the agricultural sector, its impacts on the Al Kharj community in The Kingdom of Saudi Arabia. *Entrep. Sustain. Issues* **2019**, *6*, 1536–1545. [CrossRef]
- 2. Iversen, K. Food: A Fundamental Human Right. Available online: http://www.fao.org/focus/e/rightfood/right2.htm (accessed on 21 June 2022).
- 3. FAO. The State of Food Insecurity in the World 2001. 2010, pp. 4–7. Available online: http://www.fao.org/3/y4671e/y4671e06. htm (accessed on 21 June 2021).
- 4. Heydari, L.; Mohammadinejad, A.; Zeraatkish, S.Y.; Moghaddsi, R. The impact of agricultural development on different dimensions of food security in developing countries. *Agric. Ext. Educ. Res.* **2021**, *13*, 15–30.
- 5. Raposo, A.; Zandonadi, R.P.; Botelho, R.B.A. Challenging the Status Quo to Shape Food Systems Transformation from a Nutritional and Food Security Perspective. *Foods* **2022**, *11*, 604. [CrossRef] [PubMed]
- 6. Raposo, A.; Ramos, F.; Raheem, D.; Saraiva, A.; Carrascosa, C. Food Safety, Security, Sustainability and Nutrition as Priority Objectives of the Food Sector. *Int. J. Environ. Res. Public Health* **2021**, *18*, 8073. [CrossRef] [PubMed]
- 7. Amorim, A.; de Holanda Barbosa, A.; do Amaral Sobral, P.J. Hunger, Obesity, Public Policies, and Food-Based Dietary Guidelines: A Reflection Considering the Socio-Environmental World Context. *Front. Nutr.* **2021**, *8*, 805569. [CrossRef] [PubMed]

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8. Shimmura, T.; Ichikari, R.; Okuma, T.; Ito, H.; Okada, K.; Nonaka, T. Service robot introduction to a restaurant enhances both. labor productivity and service quality. *Procedia CIRP* **2020**, *88*, 589–594. [CrossRef]

- 9. Brytek-Matera, A. Negative Affect and Maladaptive Eating Behavior as a Regulation Strategy in Normal-Weight Individuals: A Narrative Review. *Sustainability* **2021**, *13*, 13704. [CrossRef]
- 10. Andronov, S.; Lobanov, A.; Bogdanova, E.; Popov, A.; Yuzhakov, A.; Shaduyko, O.; Raheem, D.; Kobelkova, I. The Relationships among Microelement Composition of Reindeer Meat (*Rangifer tarandus*) and Adaptation: A Systematic Review and Meta-Analysis. *Sustainability* **2022**, *14*, 1173. [CrossRef]
- 11. Batista, S.A.; Stedefeldt, E.; Nakano, E.Y.; Cortes, M.D.O.; Botelho, R.B.A.; Zandonadi, R.P.; Raposo, A.; Han, H.; Ginani, V.C. Design and Development of an Instrument on Knowledge of Food Safety, Practices, and Risk Perception Addressed to Children and Adolescents from Low-Income Families. *Sustainability* **2021**, *13*, 2324. [CrossRef]
- 12. Bogdanova, E.; Andronov, S.; Soromotin, A.; Detter, G.; Sizov, O.; Hossain, K.; Raheem, D.; Lobanov, A. The Impact of Climate Change on the Food (In)security of the Siberian Indigenous Peoples in the Arctic: Environmental and Health Risks. *Sustainability* **2021**, *13*, 2561. [CrossRef]
- 13. Yasin, M.; Younis, A.; Ramzan, F.; Javed, T.; Shabbir, R.; Noushahi, H.A.; Skalicky, M.; Ondrisik, P.; Brestic, M.; Hassan, S.; et al. Extraction of Essential Oil from River Tea Tree (*Melaleuca bracteata* F. Muell.): Antioxidant and Antimicrobial Properties. *Sustainability* **2021**, *13*, 4827. [CrossRef]
- 14. Abdullah, A.; Khan, S.M.; Pieroni, A.; Haq, A.; Haq, Z.U.; Ahmad, Z.; Sakhi, S.; Hashem, A.; Al-Arjani, A.-B.F.; Alqarawi, A.A.; et al. A Comprehensive Appraisal of the Wild Food Plants and Food System of Tribal Cultures in the Hindu Kush Mountain Range; a Way Forward for Balancing Human Nutrition and Food Security. *Sustainability* **2021**, *13*, 5258. [CrossRef]
- 15. Langyan, S.; Dar, Z.A.; Chaudhary, D.P.; Shekhar, J.C.; Herlambang, S.; El Enshasy, H.; Sayyed, R.Z.; Rakshit, S. Analysis of Nutritional Quality Attributes and Their Inter-Relationship in Maize Inbred Lines for Sustainable Livelihood. *Sustainability* 2021, 13, 6137. [CrossRef]
- 16. Akbara, A.Z.; Chua, B.-L.; Han, H.; Raposo, A. Investigating International Students' Perception of Foodservice Attributes in Malaysian Research Universities. *Sustainability* **2021**, *13*, 8190. [CrossRef]
- Lee, S.; Bae, G.; Kim, H. A Study on the Sustainable Use Intention of Restaurant Companies Using the Information Attributes of SNS: The Dual Process Theory. Sustainability 2021, 13, 12922. [CrossRef]
- 18. Poto, M.P.; Porrone, A. A Co-Created Methodological Approach to Address the Relational Dimension of Environmental Challenges: When Critical Legal Analysis Meets Illustrated Storytelling. *Sustainability* **2021**, *13*, 13212. [CrossRef]
- 19. Vindigni, G.; Peri, I.; Consentino, F.; Selvaggi, R.; Spina, D. Exploring Consumers' Attitudes towards Food Products Derived by New Plant Breeding Techniques. *Sustainability* **2022**, *14*, 5995. [CrossRef]
- Bogdanova, E.; Filant, K.; Sukhova, E.; Zabolotnikova, M.; Filant, P.; Raheem, D.; Shaduyko, O.; Andronov, S.; Lobanov, A.
 The Impact of Environmental and Anthropogenic Factors on the Migration of the Rural Arctic Population of Western Siberia.

 Sustainability 2022, 14, 7436. [CrossRef]