

Editorial

Challenging the Status Quo to Shape Food Systems Transformation from a Nutritional and Food Security Perspective

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Food security and nutrition have been prominent elements of the international development agenda. Over time, however, development priorities and challenges have oscillated, and the investment required has not been sustained. A broader consensus has emerged: one that guarantees food security and, in all its aspects, reduces hunger and malnutrition to promote strong economies, human and planetary health, and sustainable development. Our moral imperative is to positively change food systems to ensure that the food we produce is accessible, sustainable, safe, healthy, and equitable for everyone. Therefore, this special issue about Food Systems and Nutritional and Food Security focuses on connecting the importance of food systems to change nutrition and food security around the globe.

In this context, attitude and knowledge of health, food, and nutrition can be one of the keys to facing food insecurity in several countries. Health and nutritional education are imperative to fight malnutrition [1–4]. Knowledge in these aspects is essential in tackling misinformation and promoting good food choices. Since birth, it can be constructed along life using households, schools, the internet, and other channels to allow learning on food, health, and nutrition and stimulate adequate food choices [1–7].

Adequate and healthy diets imply choosing and consuming balanced and adequate foods on nutrients and amount, variety, and sustainable aspects. Therefore, achieving the main social, economic, environmental, cultural, and security goals [1,3,6–16]. Food production must also be alert to the waste produced in the food chain related to environmental pollution and food waste that could be used to feed food-insecure people [10,15,17]. In order to support sustainable and healthy diets and food security, it is also essential to search for alternatives to stimulate local production and regional food consumption. Other priorities are reducing animal suffering and meat consumption, food production in sufficient quantity and quality with the least possible waste production, and understanding the main aspects of food, nutrition, society, and the environment [11–22].

During these past two years of the COVID-19 pandemic, the world has faced new food security and safety challenges. Firstly, food sales worldwide became more complex, and farmers faced many overstocked products leading to food loss [8]. On the other hand, countries' economic crisis conducted to more unemployment, therefore, more food insecurity. Governments need to learn from this period and improve the food supply chain with innovative techniques and logistics to have more organized food systems [8]. To guarantee the four pillars of food security, availability, access, stability, and utilization, Sun and Zhang [9] emphasize the importance of trade openness and sustainable food system strategies. Guiné et al. [7] discuss that the agrifood supply chain should be improved

through policies worldwide to promote access to healthy and sustainable food. Authors also call the attention to researchers to rethink the four pillars of food security to include new dimensions like climate change.

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References

1. Shapu, R.C.; Ismail, S.; Lim, P.Y.; Ahmad, N.; Garba, H.; Njodi, I.A. Effectiveness of Triple Benefit Health Education Intervention on Knowledge, Attitude and Food Security towards Malnutrition among Adolescent Girls in Borno State, Nigeria. *Foods* **2022**, *11*, 130. [[CrossRef](#)] [[PubMed](#)]
2. Florença, S.G.; Ferreira, M.; Lacerda, I.; Maia, A. Food Myths or Food Facts? Study about Perceptions and Knowledge in a Portuguese Sample. *Foods* **2021**, *10*, 2746. [[CrossRef](#)] [[PubMed](#)]
3. dos Santos, E.B.; Maynard, D.D.C.; Zandonadi, R.P.; Raposo, A.; Botelho, R.B.A. Sustainability Recommendations and Practices in School Feeding: A Systematic Review. *Foods* **2022**, *11*, 176. [[CrossRef](#)] [[PubMed](#)]
4. de Queiroz, F.L.N.; Nakano, E.Y.; Botelho, R.B.A.; Ginani, V.C.; Raposo, A.; Zandonadi, R.P. Eating Competence among Brazilian Adults: A Comparison between before and during the COVID-19 Pandemic. *Foods* **2021**, *10*, 2001. [[CrossRef](#)] [[PubMed](#)]
5. Cupertino, A.; Maynard, D.; Queiroz, F.; Zandonadi, R.; Ginani, V.; Raposo, A.; Saraiva, A.; Botelho, R. How Are School Menus Evaluated in Different Countries? A Systematic Review. *Foods* **2021**, *10*, 374. [[CrossRef](#)] [[PubMed](#)]
6. Lu, Y.; Zhang, Y.; Hong, Y.; He, L.; Chen, Y. Experiences and Lessons from Agri-Food System Transformation for Sustainable Food Security: A Review of China's Practices. *Foods* **2022**, *11*, 137. [[CrossRef](#)]
7. Guiné, R.D.P.F.; de Jesus Pato, M.L.; da Costa, C.A.; Costa, D.D.V.T.A.D.; da Silva, P.B.C.; Martinho, V.J.P.D. Food Security and Sustainability: Discussing the Four Pillars to Encompass Other Dimensions. *Foods* **2021**, *10*, 2732. [[CrossRef](#)]
8. Pu, M.; Chen, X.; Zhong, Y. Overstocked Agricultural Produce and Emergency Supply System in the COVID-19 Pandemic: Responses from China. *Foods* **2021**, *10*, 3027. [[CrossRef](#)]
9. Sun, Z.; Zhang, D. Impact of Trade Openness on Food Security: Evidence from Panel Data for Central Asian Countries. *Foods* **2021**, *10*, 3012. [[CrossRef](#)]
10. Rao, M.; Bilić, L.; Duwel, J.; Herentrey, C.; Lehtinen, E.; Lee, M.; Calixto, M.A.D.; Bast, A.; de Boer, A. Let Them Eat Fish!—Exploring the Possibility of Utilising Unwanted Catch in Food Bank Parcels in The Netherlands. *Foods* **2021**, *10*, 2775. [[CrossRef](#)]
11. Chaosap, C.; Sahatsanon, K.; Sitthigripong, R.; Sawanon, S.; Setakul, J. The Effects of Using Pineapple Stem Starch as an Alternative Starch Source and Ageing Period on Meat Quality, Texture Profile, Ribonucleotide Content, and Fatty Acid Composition of Longissimus Thoracis of Fattening Dairy Steers. *Foods* **2021**, *10*, 2319. [[CrossRef](#)] [[PubMed](#)]
12. Uyeh, D.D.; Asem-Hiablie, S.; Park, T.; Kim, K.; Mikhaylov, A.; Woo, S.; Ha, Y. Could Japonica Rice Be an Alternative Variety for Increased Global Food Security and Climate Change Mitigation? *Foods* **2021**, *10*, 1869. [[CrossRef](#)] [[PubMed](#)]
13. Soares, P.; Martinelli, S.; Davó-Blanes, M.; Fabri, R.; Clemente-Gómez, V.; Cavalli, S. Government Policy for the Procurement of Food from Local Family Farming in Brazilian Public Institutions. *Foods* **2021**, *10*, 1604. [[CrossRef](#)] [[PubMed](#)]
14. Njoga, U.; Njoga, E.; Nwobi, O.; Abonyi, F.; Edeh, H.; Ajibo, F.; Azor, N.; Bello, A.; Upadhyay, A.; Okpala, C.; et al. Slaughter Conditions and Slaughtering of Pregnant Cows in Southeast Nigeria: Implications to Meat Quality, Food Safety and Security. *Foods* **2021**, *10*, 1298. [[CrossRef](#)]
15. Althumiri, N.A.; Basyouni, M.H.; Duhaim, A.F.; AlMousa, N.; AlJuwaysim, M.F.; BinDhim, N.F. Understanding Food Waste, Food Insecurity, and the Gap between the Two: A Nationwide Cross-Sectional Study in Saudi Arabia. *Foods* **2021**, *10*, 681. [[CrossRef](#)]
16. Bvenura, C.; Witbooi, H.; Kambizi, L. Pigmented Potatoes: A Potential Panacea for Food and Nutrition Security and Health? *Foods* **2022**, *11*, 175. [[CrossRef](#)]

17. Poto, M.P.; Elvevoll, E.O.; Sundset, M.A.; Eilertsen, K.-E.; Morel, M.; Jensen, I.-J. Suggestions for a Systematic Regulatory Approach to Ocean Plastics. *Foods* **2021**, *10*, 2197. [[CrossRef](#)]
18. Anastasiadis, F.; Apostolidou, I.; Michailidis, A. Food Traceability: A Consumer-Centric Supply Chain Approach on Sustainable Tomato. *Foods* **2021**, *10*, 543. [[CrossRef](#)]
19. Rahman, M.; Islam, R.; Hasan, S.; Zzaman, W.; Rana, R.; Ahmed, S.; Roy, M.; Sayem, A.; Matin, A.; Raposo, A.; et al. A Comprehensive Review on Bio-Preservation of Bread: An Approach to Adopt Wholesome Strategies. *Foods* **2022**, *11*, 319. [[CrossRef](#)]
20. Suhandoko, A.A.; Chen, D.C.-B.; Yang, S.-H. Meat Traceability: Traditional Market Shoppers' Preferences and Willingness-to-Pay for Additional Information in Taiwan. *Foods* **2021**, *10*, 1819. [[CrossRef](#)]
21. Iftekhhar, A.; Cui, X.; Yang, Y. Blockchain Technology for Trustworthy Operations in the Management of Strategic Grain Reserves. *Foods* **2021**, *10*, 2323. [[CrossRef](#)]
22. Chen, L.; Cui, X.; Li, W. Meta-Learning for Few-Shot Plant Disease Detection. *Foods* **2021**, *10*, 2441. [[CrossRef](#)]