

Nutrition Challenges in a Changing World

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Abstract

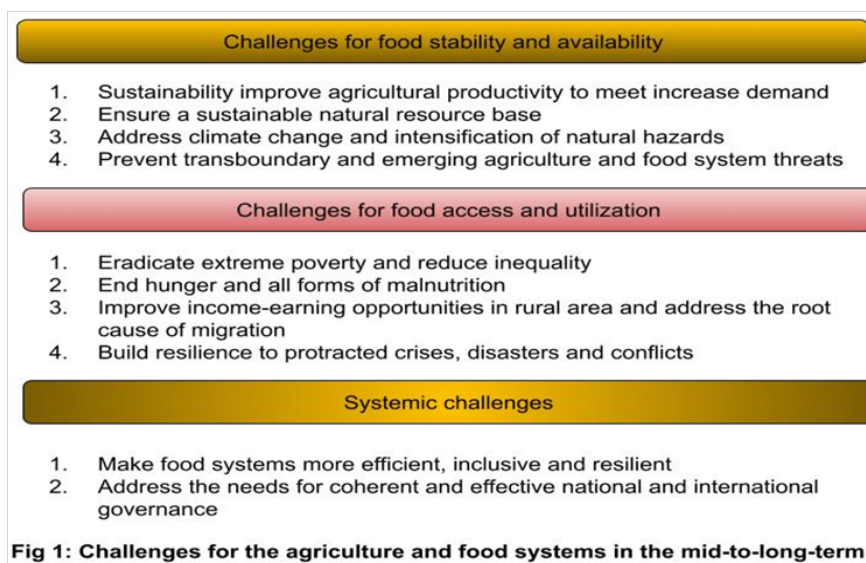
The nutritional value of foods and diets, their price, their acceptance in culture, and their environmental impact are the four main pillars of sustainable food and nutrition security. Nutrient-rich, safe, and healthful foods are essential to sustainable diets. The consequences of the for the environment measures to reduce the effects of the food supply system must be taken into consideration. Consumption habits for energy, water, and land use. Malnutrition and food insecurity are pervasive in many low- and middle-income families. Enhancing food security will benefit food availability and consumption. Decision-makers will find it easier to prioritize issues when they have a clear understanding of the qualitative linkages between the insights and obstacles. To effectively execute the recommended strategies to address the difficulties, however, more thorough quantitative analysis is required.

Keywords: Food security, Sustainable agriculture, Nutritional quality, Cultural acceptability

Introduction: The world is experiencing transformations that will influence the livelihoods of millions in the forthcoming years. In order to manage the demand for solutions for future food security and sustainable livelihoods for everyone in the changing world, it would be helpful to understand the underlying causes of the various trends and the relationships between them. Even with the worldwide population rate increasing, there will likely be a notable uptick in the upcoming year (AFO, 2017). Increased competition for already limited land and water resources will result from this growth. Furthermore, as more nations look for renewable energy and material substitutes for their fossil fuel-based economies, the rivalry for natural resource inputs for food, energy consumption, and national bioeconomy plans is expected to intensify (Bracco e al., 2018). In addition to the stress on land resources, water shortage affects more than 40% of the world's rural population at present because of demands for water from industry, agriculture, and cities. since irrigation accounts for 80% of freshwater resources globally, shortages and further reductions in water availability are going to cause problems when competition for water from non-agricultural sources grows. This could lead to disparities in access to water, thereby sustaining poverty (AFO, 2018). As the nation's food system changes, population expansion and dietary shifts toward greater nutritious levels will increase demand for agriculture. In the end, though, even the globe has not enough resources to produce food for even the triple burden of malnutrition (undernutrition, micronutrient deficiencies, and expanding population and obesity) continue to affect a sizable portion of the global population, despite the fact that food availability does not suggest consuming a diet rich in a variety of nutrients. However, well-balanced meals not only would have a major negative influence on public health and wellbeing but also on the environment by resulting in reduced resource intensity and

greenhouse gas (GHG) emissions connected to the avoidance of consuming excessive amounts of protein sources originating from animals (Gómez et al., 2013).

Agricultural and food systems face the following challenges: The main obstacles that the food and agriculture systems must overcome in the near future



Challenges for food stability and availability: Increasing Demand while Maintaining Agricultural Productivity The way that food and agricultural items are produced will be impacted by changes in the nature of consumer demand brought about by urbanization, growing populations, and rising per capita income. Moreover, crop productivity increases began to plateau even while the need for food is rising. These tendencies will put natural resources under strain, necessitating an increase in resource demand overall. The environment is negatively impacted by the frequent use of chemical inputs. To address this issue, it is therefore essential to demand the implementation of sustainable food systems. Increasing resilience can be facilitated by climate-smart agriculture. Moreover, agricultural subsidies will need to be more coherent. The availability and stability of the food supply are being impacted by climate change, which also affects fish supplies, crop yields, and animal health. The deleterious effects of climate change on farmers' earnings and lives have an adverse effect on food access as well (Braun, 2020).

Acceptability of Foods and Eating Habits in Different Cultures: Certain meals are acceptable to different people and cultures in different ways. Eating habits that are accepted in a given culture might differ between and within communities. The term "cuisine" is typically used to refer to the particular sets of customs and practices related to eating habits that have to do with preparing and cooking food. Ultimately, it results in a certain eating and drinking pattern with distinguishing features. Cuisines are frequently linked to certain locations or regions, and occasionally they are also linked to particular ethnic groups. The meals and products that are readily available in the area, trade, religion, history, as well as cooking and food preservation methods and lifestyles, all have a significant impact on them. Geographic diversity in climate, food customs, and cultural backgrounds influence global eating habits, foodways, and the main regional cuisines. Although there are changes being brought about by reasons like urbanization and climate change, eating habits and cuisines are still very unique; they are highly valued and protected components of culture that change very slowly.

It is impractical to think that individuals will quickly and willingly alter their customary meals. However, a significant amount of global homogenization is occurring. Regional eating habits can now be derived from both more contemporary modifications brought about by the shift in nutrition and traditional cuisines. Global cuisines, which are practiced globally and whose food is provided everywhere, are evolving in addition to regional cuisines(Roy, 2020).

Environmental Effects on Air Quality, Water Quality, and Land: Environmental Effects on Air Quality, Water Quality, and Land A sustainable food system prevents excessive depletion of natural resources, therefore maintaining the ecological equilibrium. As we've just seen, there are significant variations in the sustainability of various foods and staples, as well as in the types of food that are typically consumed around the globe. While some eating habits are changing due to reasons like urbanization and climate change, overall eating patterns remain consistent and vary gradually across different locations. There are two main areas where climate change and food and nutrition security intersect. Examining the potential effects of climate change, water scarcity, and extreme weather on future agricultural output and the food supply is one strategy. Future eating patterns could be influenced by the weather. Examining present eating habits, and the consumption of animal and plant meals in particular, in light of greenhouse gas emissions and the depletion of natural resources, is the opposing strategy. The way we consume now has the potential to cause climate change. In recent years, food loss and waste have increasingly become more prominent issues(You et al., 2022).

Relationships Between Population Health Outcomes, Nutritional Status, and Food and Nutrition Security:In addition, category, chronological, socio-organizational, managerial, and situation-related conceptualizations of the many facets of food and nutrition security can be made. Food availability, accessibility, and use (human metabolism) are required for reaching and maintaining a good nutritional status, according to the categorical or explicit dimension. If there is enough food that is affordable, safe, palatable, and acceptable to the consumer's sociocultural background, then food security and nutrition security are attained. On the other hand, over time, the food needs to be sustainably produced. Achieving and maintaining nutritional status requires maintaining availability, accessibility, and use, which is the time dimension. Ensuring the attention and continuous implementation of all domains of food and nutrition security is a key component of the situation-related and management factors involved. A healthy nutritional status and positive health outcomes for communities is dependent on all of these (AFO, 2017).

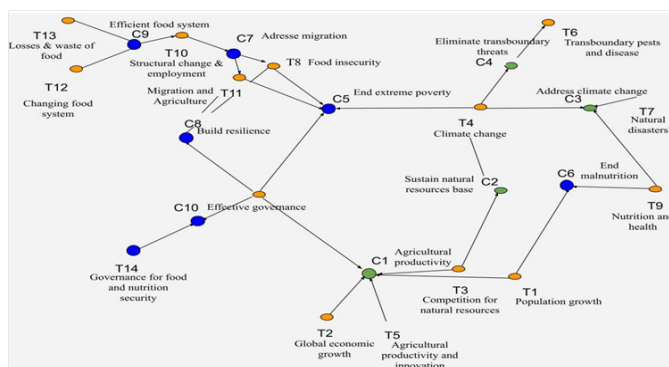


Fig 2: A network diagram showing the connections between the trends, problems with food security, accessibility, and use, as well as structural issues with the food and agricultural systems

Conclusion: In order to achieve food and nutrition security, it is critical to integrate numerous different domains, as highlighted by the trends previously described. The most important theme is who should make dietary recommendations to governments and consumers that take into account concerns about increased sustainability, cultural acceptance, dietary affordability, environmental effect, and dietary/nutritional quality. In the future, figuring out how to combine nutritional quality with affordability/accessibility, cultural acceptance, and sustainability will be a challenges issue. Long-term nutritional preference changes may also be generated by educational initiatives and other kinds of intervention.

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