

Forum:	Group of Twenty
Issue:	Fostering food security and nutrition through sustainable food systems
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Introduction

As of the past decade, the world has seen an unprecedented rise in food insecurity. With a staggering 345 million people facing acute food insecurity as of 2023, people have become hungrier than ever. The severity of food insecurity varies for each individual. As introduced by the Food and Agricultural Organization of the United Nations (FAO), the Food Insecurity Experience Scale (FIES) measures the intensity of food insecurity ranging from mild to severe. From mild to severe levels of food insecurity, many lack the proper nutrition necessary for basic living due to limited access to food, causing numerous levels of malnutrition. Malnutrition often results in detrimental damages to one's well-being, including the restriction of growth and deprivation of energy needed for an active life. The instability of securing a proper food source puts people at risk for numerous health concerns as the uncertainty of acquiring food may cause them to concede other basic needs for food. The stress of securing food for the day contributes to mental health illnesses and effects on physical health such as obesity. In this day and age, malnutrition and obesity coexist with one another. When there is a struggle for food, people often find the cheapest option when they gain monetary access, resulting in the ever-rising fast food chains. Fast foods provide calories without integrating all needs of nutrition, causing obesity and putting people at a higher risk of diseases such as diabetes.

Catastrophic levels of food insecurity are promoted with the current rise of conflicts. The Gaza Strip has more than 90% of its population facing severe food insecurity caused by the Israel-Hamas War. Ukrainians were forced out of their homes with the Russo-Ukrainian War and had to relocate without any stable sources of income or food. Conflicts across the globe are driving millions to the brink of starvation. With over 70% of the hungry people in the world in areas affected by war and violence, conflict is the largest contributor in today's food crisis. In addition to having destructive impacts on those within the vicinity of the conflict, impoverished nations from all over the globe experience food price inflation due to the ongoing series of war and violence. The World Food Programme (WFP) has been an advocate in the Zero Hunger Sustainable Development Goal (SDG). They have worked to mitigate the effects of

severe crises by stabilizing governments and communities to become more resilient in preparation for sudden shocks.

Definition of Key Terms

Sustainable Food Systems

Sustainable food systems are systems that provide adequately nutritious food and promote food security while keeping resources for future generations uncompromised. The system should be economically, socially, and environmentally sustainable to not cause harm upon the future. Economically, the food system should bring monetary benefits to the population with increased salaries and profits for the food sector. The benefits of the food systems should be distributed equally as not to leave out any marginalized groups. The systems should not be of any harm towards biodiversity, fertility of land, and the environment as a whole.

Food Insecurity

Food insecurity is the condition of having uncertain means of obtaining adequate food. This can be caused by several factors including the lack of financial, geographical, and quantitative access to food. As the standard of living rises, those who are economically unstable cannot afford quality food and may have a hard time acquiring them due to the need to spend their already limited budget on other basic needs of survival.

Malnutrition

Malnutrition is the state of having an imbalanced intake of nutrients, including both excessive and deficient amounts of intake. This condition impairs the growth of children as more than 200 million children under the age of 5 were reported to be either too short, thin or obese for their age. These effects are often the result of malnutrition due to the depletion of essential minerals and vitamins and the excessive consumption of high calorie products.

Sustainable Development Goal 2: Zero Hunger

The SDGs were created by the United Nations, listing out the global crises that are targeted to be solved by 2030. Zero Hunger is the second SDG created by the agreement of the member states and aims to eradicate hunger. However, the rise of conflicts, climate change, and the inflation in food prices, imposes as imminent threats to the achievement of this goal. Although it is nearly impossible to achieve zero hunger, measures such as establishing sustainable food systems and social protection can be taken to drastically reduce the number of hungry people in the world.

Food Insecurity Experience Scale

The FIES is a scale used by the FAO to measure the severity of food insecurity one is experiencing. The scale starts with being food secure or mildly food insecure, amps up to moderately food insecure, and reaches its peak at severely food insecure. The levels range between having a stable source of food to having no food for a whole day. It places people on different severity levels based on the quantity and quality of food they obtain.

Integrated Food Security Phase Classification (IPC)

Similarly to the FIES, the IPC is a measurement system used to classify the magnitude of food insecurity and malnutrition. The IPC has three different scales to address different types of situations: the acute food insecurity scale, chronic food insecurity scale, and acute malnutrition scale. Each scale serves as an indicator for the urgent action needed to combat the specific issue in distinct populations. Within the three scales, there are further levels or phases divided to determine the extremity of the situation at hand.

Social Protection

Social protection is the policies and programs suggesting ways to lessen the vulnerability of a population to provide stability in managing economic and social resources. These policies strive to reduce poverty and restore order among communities, improving the living conditions of many. They may provide dietary and monetary support, but are limited in terms of their reach towards rural areas.

Background Information

Climate Change

Climate change has brought detrimental changes towards agriculture productivity. Extreme environmental changes such as droughts, floods, and storms caused by climate change pose a threat to the livelihood and harvests of the people. Drastic changes in the climate have caused areas near the equator to be warmer than ever while areas away from it cooled. The shifting ocean surface temperature caused variation within global wind patterns and, as a result, created fluctuating rainfall patterns. In areas where rainfall diminished, water scarcity poses risks to agricultural yields by disrupting irrigation and the fertility of land. For countries that rely on agriculture as their main source of income, one wave of a drastic climate change will displace and impoverish millions. Unstable weather patterns severely obstruct the path to the construction of a sustainable food system. With innumerable uncertainties of wind, rain,

and temperature shifts, food systems need to be completely transformed to become resilient to the ever-changing world.

Effects of Conflict

Conflict is the main source of food insecurity, causing the displacement of millions around the world. Civilians within the vicinity of the conflict are forced to seek refuge in foreign countries while leaving their lives behind. They often become refugees waiting for resettlement for an uncertain period of time. The loss of security due to conflicts results in numerous instances of food insecurity. Food systems need to be widespread enough to distribute nutritious diets to those under areas of conflict.

Food prices are inflated due to conflicts in the world. When a country is participating in an ongoing war, they would focus their forces on the military powers instead of managing their exports. The world will see a sharp decline in supplies from nations at war, putting demands over the supplies available. In the Russo-Ukraine War, grain and oil prices skyrocketed as the world relies heavily on their imports. When there is a scarcity of resources, the prices of those remaining would increase, leading to food prices inflations. People in poverty are unable to afford the surged prices and remain malnourished with an unstable source of food.

Ecological Harm of the Current Food System

Food systems contain everything from the production of food to feeding the stomachs of populations. The current system cannot be extrapolated to future generations as the very basis which the system develops from is not sustainable. Around 70% of the accessible freshwater on Earth is being used for agriculture. With more than a quarter of the population experiencing water stress, modern practices would not be able to carry on. Food systems focus on commercial gains rather than the well-being of the environment. Biodiversity of goods are on a sharp decline due to farmers only growing specific breeds of products that appeal to the consumer's tastes. For instance, the biodiversity of apples has dropped by 80% as cultivators only grew commercial apples that tasted sweet and looked attractive, completely disregarding the other varieties of apple. The foundation of food systems relies on the environment, but humans are destroying that very same foundation needed for growth. Intensive farming that clears forests and habitats of wildlife for the expansion of agriculture is not sustainable. As more food is being produced than ever before, more is being wasted. Unsustainable practices of agriculture only contribute to the decline in the planet's health and human race.

UN Food Systems Summit +2 (UNFSS+2)

The UNFSS+2 is a meeting that takes place every two years and is used to support the attempts of obtaining food security by countries and international organizations. This event was marked by the urge to achieve SDG2 by the year 2030 and checks up on the progress and accomplishments of each

entity to achieve the goal. In the 2023 UNFSS+2 that took place in July, the Secretary General of the United Nations urged the acceleration of the transformation of food systems. The current food systems in the world are not sustainable as they bring environmental harm to the earth without fulfilling its purpose of feeding the people.

The meeting was hosted by Italy with assistance from the FAO, World Food Programme (WFP), and the UN body and facilitated by the UN Food System Coordination Hub (Hub). A FAO Task Force was established to organize the UNFSS+2. They ensured the efficient preparation and delivery needed for all necessities of the event. Being in charge of facilitation, the Hub managed a variety of global and regional activities. They made a template for countries to provide voluntary reports on their preparation for the meeting, in which 106 countries completed the report for the Secretary General to take into account the current situation on food systems. Furthermore, to promote inclusivity, the Hub invited non stakeholders to participate in the UNFSS+2.

Major Countries and Organizations Involved

China

As the most populated country in the world, China produces 91 million metric tons of food waste annually. Although China is in charge of feeding 19% of the world's population on only 7% of the world's arable lands, they remain to be the leading producer of food waste. To combat the issue in the face of rising food insecurity, China issued the Clean Plate Campaign, an anti-food waste law in 2021. This policy limited the amount of dishes diners can order in a restaurant based on the size of the group of customers.

India

India is the second most populated country in the world as well as the second largest producer of food waste with 68 million metric tons of waste each year. Despite the excessive production of food, 194 million Indians are malnourished. To combat these prominent issues, the Indian government created policies such as redirecting excess food from large social gatherings to NGOs for distribution to the impoverished. The Food Safety and Standards Authority of India (FSSAI) set regulations to manage the food wastes of businesses. They encourage the donations of wastes through streamlining the charitable process.

United States

As one of the leading producers of food waste, the United States has made efforts to reduce waste by promoting sustainable farming techniques. The Zero Food Waste Act and COMPOST Act

encourages the implementation of sustainable farming techniques. They grant resources to local governments to conduct their own projects targeted towards food waste reduction. The two acts aim to make food waste sustainable by either donating it to food banks or turning it into fertilizer for future agricultural practices.

Nigeria

Nigeria has the second most stunted children in the world after India. Around 2 million children suffer from severe levels of malnutrition with most receiving no treatment due to the lack of healthcare available in the region. As a result of stunting, the cognitive abilities of children do not become fully developed, preventing them from intaking adequate education. This leads to a decline in the country's economy as the children grow up to have low productivity in adulthood. Nigeria is a part of the Scaling Up Nutrition (SUN) Movement that joins together countries and international organizations from all over the world to combat malnutrition. The UN oversees the movement and supports the countries involved with their operations

Food and Agricultural Organization

The FAO is a branch within the UN that aims to achieve food security and eradicate hunger. They have created standards for nutrition and collaborated with governments to ensure proper nutrition among populations and developed sustainable farming techniques to ensure food security for millions of people.

World Food Programme

The WFP aims to stabilize and provide social protection to communities by working with governments. In the Sahel, the WFP turned barren fields arable, promoting agricultural productivity and reducing starvation. They protect farming families from the risks of climate hazards in numerous less developed countries.

United Nations Environment Programme (UNEP)

The UNEP preserves the environment sustainably to improve the lives of civilians. Along with the WFP, UNEP signed an agreement to make adaptations towards climate change, establish sustainable food systems, and manage water resources. They strive to restore the environment and create a strong foundation where future generations will have fertile land to practice agriculture.

World Health Organization (WHO)

The WHO desires to combat malnutrition and improve the well being of all people. They work with member states of the UN to ensure the accessibility of a nutritious diet and usage of sustainable food

systems. Following the 2016~2025 nutrition strategy, the WHO serves as an advisor for member states to provide guidance towards the implementation of effective nutrition actions.

World Bank

The World Bank is an international financial institution that contributes to food security by gathering funds needed to ensure food security and proper nutrition. They raised a total of 45 billion dollars and used the funds across 90 countries to establish social protection and build resilience towards climate change. Through the development of agriculture with the support of the World Bank, employment opportunities opened, farming equipment was received, and resilience was built, all to achieve food security with sustainable food systems.

Timeline of Events

Date	Description of event
June 20th, 2012	The Rio +20 conference was held to create the agenda that guides international organizations and member states of the UN to reach environmental sustainability through the development of action plans and assessment of progress by international bodies to achieve sustainability.
December 15th, 2015	The Paris Agreement was adopted to adapt to effects of climate change. It acknowledges the need for the transformation of food systems to become more sustainable and resilient towards the climate crisis.
January 1st, 2016	The 17 SDGs were adopted by member states. These goals, including the goal of Zero Hunger, were set to be accomplished by 2030.
September 23rd, 2021	The UN Food System Summit 2021 took place to call for urgent actions towards the development of sustainable food systems.

Relevant UN Resolutions and Treaties

- Agriculture development, food security and nutrition, December 2021 (**A/RES/76/222**)
- Eradicating rural poverty to implement the 2030 Agenda for Sustainable Development, December 2021 (**A/RES/76/219**)
- Agricultural technology for sustainable development, December 2019 (**A/RES/74/215**)
- Global health and foreign policy: a healthier world through better nutrition, December 2018 (**A/RES/73/132**)

Possible Solutions

Food security can be achieved by addressing the underlying issue of poverty. Millions are experiencing malnutrition due to their inability to afford food containing proper education. Tackling the issue of poverty would allow populations to be able to sustainably maintain a food source. Ways to eliminate poverty include providing education in impoverished areas to expand the population's job opportunities and increase productivity. With solid foundations of knowledge, people would be able to independently sustain themselves without outside help.

Increasing biodiversity would allow for a more sustainable and flexible food system. By growing a variety of crops, farmers reduce their dependence on a single commodity. Due to the fluctuating climate in recent years, a sudden climate shock would devastate crops that are unsuitable for the new environment. However, by diversifying the crops grown, the entire field would not be eradicated in the face of a sudden climate change as certain harvests would be able to adapt. In addition, a variety of goods grown equates to having a plate of various different nutrients and minerals, combating the issue of malnutrition.

Social safety nets could be established for families experiencing food insecurity. Local governments could subsidize low-income families with meals, and together with non governmental organizations (NGOs) distribute the appropriate portion for each community. Local food banks could be constructed to allow excessive food from food businesses to be easily donated instead of being thrown away. This would significantly decrease food loss and limit greenhouse gasses emitted from the wastes. The collected food from the food banks could be redistributed among rural communities for food insecure families, securing a stable source of food for these families.

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