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Fragile pillars of food security: exploring the challenges of availability, accessibility, and quality for global food regime

Pilares frágeis da segurança alimentar: exploração dos desafios de disponibilidade, acessibilidade e qualidade para o regime alimentar global

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Pilares frágeis da segurança alimentar: exploração dos desafios de disponibilidade, acessibilidade e qualidade para o regime alimentar global

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"Close to a billion people - one-eighth of the world's population - still live in hunger. Each year 2 million children die through malnutrition. This is happening at a time when doctors in Britain are warning of the spread of obesity. We are eating too much while others starve." Jonathan Sacks¹

Abstract

Hunger is a critical issue impacting a greater part of the world. Food distribution systems are failing millions of people, thereby leading to the crisis of food security. Various international declarations, like the UDHR and the ICESCR, have designated food and basic nutrition as integral elements of human rights. Therefore, provision for adequate and affordable food to all has become the dominant value for relevant regulatory and policy regimes. The problem is particularly sensitive to war-like events as is revealed by troubling statistics emerging against the backdrop of Covid-19, Russia-Ukraine War, and Israel-Hamas crisis. All these recent events have increased global food security concerns. This paper evaluates the fragile nature of food security in its multidisciplinary dimension. The methodology undertaken is a combination of quantitative and qualitative analytical mechanisms to explore the multidimensional issues of food insecurity. A systematic approach has been taken to identify food availability, food accessibility, food utilization, and environmental vulnerability as the intrinsic obstacles to any regulatory intervention. In this context, the paper analyses challenges to food accessibility as the core problem of right to food and food sovereignty regimes. It signifies the connection between the structural notion of accessibility and the legal concept of right to food through food sovereignty. It analyses the causal linkages between the problem of food security and other fundamental policy challenges, like poverty, unemployment, and social inequality. The international nature of the crisis is also manifested in the classic developeddeveloping nations' divide. It, consequently, highlights the structural inefficiencies of the powerful international bodies, like the WTO, the World Bank, and the IMF. The comprehensive nature of the problem is explored

¹ Jonathan Henry Sacks was an English Orthodox rabbi, philosopher, theologian, and author. Sacks also served as the Chief Rabbi of the United Hebrew Congregations of the Commonwealth from 1991 to 2013.

through the idea of food sovereignty, which signifies the cultural sensitivity of food and nutrition. Food insecurity is not merely a productivity problem. The paper, therefore, suggests a consumer-centric model of food distribution and accessibility as an optimal and practical model for public policy and regulations.

Keywords: food security; food sovereignty; nutrition; social inequality.

Resumo

A fome é um problema crítico que afeta uma grande parte do mundo. Os sistemas de distribuição de alimentos estão falhando para milhões de pessoas, o que leva à crise da segurança alimentar. Várias declarações internacionais, como a DUDH e o PIDESC, consideraram a alimentação e a nutrição básica como elementos integrantes dos direitos humanos. Portanto, o fornecimento de alimentos adequados e acessíveis a todos se tornou o valor dominante para os regimes regulatórios e políticos relevantes. O problema é particularmente sensível a eventos bélicos, como revelam as estatísticas preocupantes que surgem no contexto da Covid-19, da guerra entre a Rússia e a Ucrânia e da crise entre Israel e Hamas. Todos esses eventos recentes aumentaram as preocupações com a segurança alimentar global. Este artigo avalia a natureza frágil da segurança alimentar em sua dimensão multidisciplinar. A metodologia utilizada é uma combinação de mecanismos analíticos quantitativos e qualitativos para explorar as questões multidimensionais da insegurança alimentar. Foi adotada uma abordagem sistemática para identificar a disponibilidade de alimentos, a acessibilidade aos alimentos, a utilização dos alimentos e a vulnerabilidade ambiental como obstáculos intrínsecos a qualquer intervenção regulatória. Nesse contexto, o documento analisa os desafios à acessibilidade dos alimentos como o problema central do direito à alimentação e dos regimes de soberania alimentar. Isso significa a conexão entre a noção estrutural de acessibilidade e o conceito legal de direito à alimentação por meio da soberania alimentar. Este artigo também, analisa os vínculos causais entre o problema da segurança alimentar e outros desafios políticos fundamentais, como a pobreza, o desemprego e a desigualdade social. O caráter internacional da crise também se manifesta na clássica divisão entre nações desenvolvidas e em desenvolvimento. Consequentemente, ela destaca as

ineficiências estruturais dos poderosos órgãos internacionais, como a OMC, o Banco Mundial e o FMI. A natureza abrangente do problema é explorada por meio da ideia de soberania alimentar, que significa a sensibilidade cultural da alimentação e da nutrição. A insegurança alimentar não é apenas um problema de produtividade. O artigo, portanto, sugere um modelo de distribuição e acessibilidade de alimentos centrado no consumidor como um modelo ideal e prático para políticas e regulamentações públicas.

Palavras chave: segurança alimentar; soberania alimentar; nutrição; desigualdade social.

1 Introduction

Hunger is a critical issue impacting a greater part of the world. Despite advancement in agricultural technology, food distribution systems are failing millions of people. This issue is often referred as lack of food security. Right to food is recognized under the Universal Declaration of Human Rights (UDHR) 1948, whereby its Article 25 commits "to a standard of living adequate for the health and wellbeing of himself and his family, including food. " Similarly, the committee on Economic, Social and Cultural Rights (ICESCR) states that "the right to adequate food is realized when every man, woman and child, alone or in community with others, has physical and economic access at all times to adequate food or means for its procurement."² Thus, provision for adequate and affordable food to all becomes the dominant value for relevant regulatory and policy regimes. For instance, Philip Alston argues that the travaux préparatoires of Article 11 of ICESCR connects right to food as an integral part of adequate standard of living. Right to food does not merely signify the condition of populace as being hunger-free³. The right generates consequent legal obligations for relevant authorities to enable optimal access to food.

² U.N. Covenant on Economic Social and Cultural Rights (ICE-SCR), General Comment No. 12: The Right to Adequate Food, ¶
6, U.N. Doc. E/C.12/1999/5 (May 12, 1999). General Comment No. 12, lays down three key elements—availability, accessibility and adequacy.

³ Alston, *Russia to Impose Temporary Ban on Grain Exports*, BBC News (Aug. 5, 2010). *See also* U.N. Food & Agri. Org [FAO], Initiative on Soaring Food Prices: Country Responses to the food Security Crisis: Natu re and Preliminary Implications of the Policies Pursued 10 (2009).

The 'right to food' is an umbrella expression which includes a wide range of entitlements. The expression essentially means to be free from malnutrition. It does not, therefore, suffice to have any food on the table. The essence rather lies in the attainment of adequate nutrition. However, this project of adequate access to food for all is set to be frustrated in the near and distant future. Hunger is not a novel concept, and the factors responsible for hunger are well-documented. In the time of 'polycrisis', the global community suffers widespread and unending misery⁴. According to 2023 Global Hunger Index (GHI), the steady progress against hunger has halted since 2015. The GHI score for the world was 18.3 in 2023 as compared to GHI score of 19.1 in 2015, with disproportionately impacting the developing regions. Under such circumstances, regional scores touching 27 for South Asia and South Africa are alarming⁵.

The problem is particularly sensitive to war-like events as is revealed by troubling statistics emerging against the backdrop of Covid-19, Russia-Ukraine War, and Israel-Hamas crisis. All these recent events have increased global food security concerns. Ukraine-Russia War has caused disruptions to supply network around the world. As the Black Sea Grain Initiative came to an end in 2023, the problem was further intensified with the destruction of the Nova Kakhovka dam in Ukraine. These immediate contexts have severely jeopardized the food security initiatives, as most such regulatory policies depend upon large-scale exports of grain and fertilizers.6 Other connected concerns like climate shocks and high fertilizer prices also add to the problem. According to the World Economic Forum, these violence--induced bottlenecks have forced people to adjust their food budget. For instance, Consumers International Cost-of-living Survey shows that 66 per cent of consumer groups have reported as 'seriously affected' by increasing food prices. Some are skipping meals whereas others are depending on government support.

This paper evaluates the fragile nature of food security in its multidisciplinary dimension. The methodology undertaken is a combination of quantitative and qualitative analytical mechanisms to explore the multidimensional issues of food insecurity. A systematic approach has been taken to identify food availability, food accessibility, food utilization, and environmental vulnerability as the intrinsic obstacles to any regulatory intervention. Food security is a multifaceted concept including food availability, food accessibility, food utilization and environmental vulnerability⁷. Food availability means physical access to food, food accessibility demotes economic capacity to purchase food, food utilization signifies absorption of nutrients into one's body and vulnerability reflects sustained availability of sufficient food.8 In this sense, the paper analyses the challenges to food accessibility as the core problem of right to food and food sovereignty regimes. The paper signifies the connection between the structural notion of accessibility and the legal concept of right to food through food sovereignty.

Figure 1 - Source: Composite food security index



Fonte: Mahadevan and Hoang, 2016.

Food insecurity may prevail as entrenched even in a well-stocked market through imports, domestic pro-

⁴ The term 'polycrisis' is a new term appearing in literature to capture the interconnections between global crises. Multiple global crises – including the Covid-19 pandemic, climate change issues, and Russia's war on Ukraine–have devastating effect on the world. See LAWRENCE, M.; HOMER-DIXON, T.; JANZWOOD, S.; ROCKSTÖM, J.; RENN, O.; DONGES, J. F. Global polycrisis: the causal mechanisms of crisis entanglement. *Global Sustainability*, v. 7, p. e6, 2024.

⁵ 2023 Global Hunger Index: the power of youth in shaping food systems.

⁶ ABAY, K. A. *et al.* The Russia-Ukraine war: implications for global and regional food security and potential policy responses. *Global Food Security*, v. 36, p. 100675, mar. 2023.

⁷ MAHADEVAN, R.; HOANG, V. Is there a link between poverty and food security?. *Social Indicators Research*, v. 128, p. 179-199, 2016. ⁸ MIGOTTO, M.; DAVIS, B.; CARLETTO, C.; BEEGLE, K. Measuring food security using respondents' perception of food consumption adequacy. *In:* GUHA-KHASNOBIS, B.; ARCHAYA, S. S.; DAVIS, B. (ed.). *Food security:* indicators, measurement, and the impact of trade openness. Oxford: UNU-WIDER; ICSSR, 2007. p. 13-41.

duction, and aid. Such a scenario deals with insufficient means to purchase from the well-stocked market. Food access is often measured by calorie intake compared to prescribed calorie intake set by appropriate forum. Any significant deficiency in quantum of calories and nutrients can be considered as food crisis. Food security is a continuing crisis which is complex and multidimensional⁹. An individual needs continuous access to safe and nutritious food for appropriate psycho-somatic flourishing¹⁰. Food insecurity also adversely impacts upon health and safety. Poverty connects food safety with food security. This is so because poverty is a significant contributor to food insecurity. Unemployment or insufficient income act as a hindrance in procuring nutritious and quality food. Therefore, a noteworthy percentage of population suffering with food insecurity reside in low income, unequal and poverty affected countries.

Social inequality adversely affects the purchasing power of ordinary consumers. Decline in purchasing capacity has progressively led to replacement of natural nutritious food by less nutritious processed food. The poverty-induced food crisis has also contributed to worldwide epidemic of obesity and diet-related disorders. Thus, availability, accessibility, and quality of food are perhaps the most important pillars of food security. Moreover, reduced purchasing power diminishes consumer choice. Lesser purchasing power forces individuals to buy cheap food with reduced nutritional value thereby depriving them of sustainable health. Therefore, household income directly impacts the capability of families to access a balanced and diverse diet.

Similarly, low- and middle-income households are disproportionately afflicted by foodborne diseases. Unsafe food and mishandling of animal source foods, fruits and vegetables result in contamination.¹¹ Poor people prefer to buy at cheaper price without paying attention to safety standards and regulations. Thus, they become prey to foodborne diseases, thereby further reducing the quality of their health¹². Food crisis has become one of the top concerns of the governments and consumer groups. In a recent cost-of-living survey of Consumers International member group, it was found that around 91 per cent of respondents revealed keeping a close watch on food prices. Considering its comprehensive causes and effects, it is pertinent to identify and analyse different elements of food security. Further, the correlation between family income and nutrition level of food consumption at home also contribute significantly¹³. It is often projecting a nexus between income and consumption capacity of a family.

2 Nexus between food crisis and poverty

The existing nexus between food insecurity and poverty has colonial underpinnings. Poorer countries were compelled for plant-based production under European colonial regimes. Consequently, these countries have entered world economy as historical exporters of agricultural goods and consumers of finished goods¹⁴. Being agricultural goods exporter does not provide steady income due to fluctuating prices of such products. The structural disadvantage of such agriculturebased export economy also affects food security at domestic level. For instance, many such countries have suffered during the 2008 food crisis as price of food staples increased dramatically compared to the price of cash crops such as coffee, cotton, and rubber, that these countries largely export.

The world leaders are focused on poverty reduction in developing countries. The continuing food crisis is an illustration of struggle people face every day. The World Food Programme estimates more than 333 million people are under acute levels of food insecurity in 2023. The numbers have increased compared to pre-covid pandemic periods. Increase in price of staple food around the world has impacted world's poor. Figure 2

⁹ BOLIKO, M. C. FAO and the situation of food security and nutrition in the world. *Journal of Nutritional Science and Vitaminology*, v. 65, p. S4-S8, 2019. Supplement.

¹⁰ SASSI, M. Coping strategies of food insecure households in conflict areas: the case of South Sudan. *Sustainability*, v. 13, n. 15, p. 8615, 2021.

¹¹ GRACE, D. *Food safety in developing countries*: an overview. London: Evidence on Demand; IRLI, 2015.

¹² LIGUORI, J.; TRÜBSWASSER, U.; PRADEILLES, R.; LE PORT, A.; LANDAIS, E.; TALSMA, E. F.; LUNDY, M.; BÉNÉ,

C.; BRICAS, N.; LAAR, A.; AMIOT, M. J. How do food safety concerns affect consumer behaviors and diets in low-and middle-income countries? A systematic review. *Global Food Security*, v. 32, p. 100606, 2022.

¹³ CHEN, Y.; LU, C. A comparative analysis on food security in Bangladesh, India and Myanmar. *Sustainability*, v. 10, n. 2, p. 405, 2018.

¹⁴ CYPHER, J. M. *The process of economic development.* 4. ed. New York: Routledge, 2014; ROBBINS, P. *Stolen fruit*: the tropical commodities disaster. London: Zed Books, 2003.

shows the relation between food prices and poor people of the world. The economic turbulence of the world is also intertwined with frequent climatic shocks¹⁵. Thus, the global world is witnessing volatile agricultural prices. These sudden changes in food price affects the marginalized section of the society¹⁶.

Figure 2 - Food and Agriculture Organization of the United Nations



Source: tradingeconomics.com | Food and Agriculture Organization of the United Nation

Another set of scholars have taken a different approach. According to Engel's law, poor people spend bulk of their money on food. At the same time, most of the economically marginalized section are working in agriculture or agriculture-related industries. Thus, high food prices have both positive and negative impact on them. In the short run, the higher price of food articles will be harmful but in the long run, the higher prices are bound to be beneficial for the food producers¹⁷. Hoyos & Medvedev dealt with a larger data set¹⁸. The study predicted 155.6 million people to slip under poverty in developing countries¹⁹. More recently, Ivanic & Martin surveyed in 31 developing countries and confirmed higher food price increases global poverty as a short-term effect²⁰. The result shows an average of a 50% increase in real food prices increases poverty by 5.8 percentage points. Similarly, Mahadevan and Hoang have shown a nexus between poverty and food security²¹.

Friedman & Levinsohn found that Urban Poor are worst affected by increase in food prices²². On the other hand, rural poor shows a mixed reaction because of their dual capacity as producer and consumer²³. Strikingly, arranged survey evidence demonstrations that households dramatically reduced eating of more expensive foods such as eggs to preserve consumption of cheaper calories, such as rice²⁴. Thus, there are ample empirical evidences to prove the connection between food crisis and poverty. Most of the world food is produced by small farmers who depend upon marketing of their agricultural produce²⁵. These farmers suffer when aid policies reduce food prices. But they do not gain from hike in food prices as they must purchase seeds and fertilizers at rocket high value.

The food crisis of 2007-2008 resulted in lot of research to establish a nexus between poverty and food security. The food crisis of 2008 has shown that the additional causes of food insecurity include bad weather conditions, increase in global meat consumption, higher oil prices and growth in demand for grain-based biofuels²⁶. United Nations Food and Agriculture (FAO) also agreed that food crisis was result of escalating demand rather than reduced food supply. High food price with substantial gains by multinational corporations dominating the market disbalanced the food system²⁷. But G-8 along with other international financial institu-

¹⁵ Intergovernmental Panel on Climate Change, 2012.

¹⁶ HEADEY, D. D.; MARTIN, W. J. The impact of food prices on poverty and food security. *Annual Review of Resource Economics*, v. 8, p. 329-351, 2016.

¹⁷ DEATON, A. Price elasticities from survey data: extensions and Indonesian results. *Journal of Econometrics*, v. 44, n. 3, p. 281-309, 1990.

¹⁸ HOYOS, R. E.; MEDVEDEV, D. Poverty effects of higher food prices: a global perspective. *Review of Development Economics*, v. 15, n. 3, p. 387-402, 2011.

¹⁹ Around 141.2 million people in South and Southeast Asia were acting under poverty.

²⁰ IVANIC, M.; MARTIN, W. Implications of domestic price insulation for global food price behavior. *Journal of International Money and Finance*, v. 42, p. 272-288, 2014. On average, they find that a 50% increase in real food prices increases poverty by 5.8 percentage points.

MAHADEVAN, R.; HOANG, V. Is there a link between poverty and food security?. *Social Indicators Research*, v. 128, p. 179-199, 2016.
 FRIEDMAN, J.; LEVINSOHN, J. The distributional impacts of

Indonesia's financial crisis on household welfare: a "rapid response" methodology. *The World Bank Economic Review*, v. 16, n. 3, p. 397-423, 2002.

²³ Strikingly, high-frequency survey evidence from that crisis found that households dramatically reduced consumption of more expensive foods (such as eggs) to preserve consumption of cheaper calories, namely rice Block et al. 2004) use these dietary shifts to explain the large observed increases in child anemia.

²⁴ BLOCK, S. A. *et al.* Macro shocks and micro outcomes: child nutrition during Indonesia's crisis. *Economics & Human Biology*, v. 2, n. 1, p. 21-44, 2004.

 ²⁵ WESSELS, C.; MEROW, C.; TRISOS, C. H. Climate change risk to southern African wild food plants. *Regional Environmental Change*, v. 21, p. 1-14, 2021; Harvesting poverty: the unkept promise. *N.Y. Times*, Dec. 30, 2003, at A20.

²⁶ MITTAL, A. *The 2008 food price crisis*: rethinking food security policies. New York: UN, 2009.

²⁷ HOLT-GIMÉNEZ, E. The World food crisis: what's behind it and what we can do about it. *Hunger Notes*, v. 23, p. 181-192, 2008.

tions responded with food aid and techniques to boost food production²⁸. The international community failed to address the root cause of food insecurity. There is sufficient food in the global market to meet needs of all but many families are too poor to purchase food from the market.

3 Global food security regime and developing countries

One of the most important multilateral negotiating forum, General Agreement on Tariffs and Trade (GATT), since the beginning, was reluctant in discussing agricultural protectionism under trade deliberation rounds²⁹. The agreement was negotiated in 1947 when most of the current developing countries were still under colonial rule. Thus, the focus was on benefits of global North³⁰. Trade negotiations concluded, allowed heavy agricultural subsidies in developed countries. A reorganization of the setup was pushed after the emergence of developing countries under GATT. However, such attempts often came in the form of non-obligatory language³¹.

GATT was successful in reducing tariff on manufactured goods but agricultural subsidies are addressed in soft law format. Such protectionism allows countries like United States and Western European States to flourish as they were gaining through trade liberalization for finished goods. At the same time, they were practicing protectionism in the sectors where they were weak. Agricultural subsidy in these countries allow them to produce in bulk and dump the excess produce in the developing countries as food aid in consonance to legislations like U.S Public Law 480³². Such laws were making developing economies dependent on global North by destroying food sovereignty.

The next big global event with respect to food security is Green Revolution. The general opinion about the event is a successful attempt in reducing poverty by increasing crop production. Funded by the Ford and Rockefeller Foundations, Green Revolution was flawed from the beginning. New varieties of wheat, corn and rice were introduced to boost production in response to synthetic fertilizers and controlled irrigation³³. It was effective in enhancing production but also increased poverty and inequality in developing countries. Wealthy farmers were benefitted as they could afford fertilizers, equipment, and improved seeds to support high yields and further derogate small scale farmers³⁴. Moreover, high production reduced price of agricultural produce thereby putting many small-scale farmers under double jeopardy³⁵.

Uniform seeds and synthetic fertilizers promoted under Green Revolution also resulted in environment degradation. The consequences include loss of soil fertility, contamination of ground water, loos of biodiversity, health hazards arising out of pesticide use and many more³⁶. Food crop diversity used in traditional form of agriculture maintain ecosystem of the soil. Thus, Northern trade practices and aid snatched the food security from global South. Similarly, the debt crisis of 1980s also contributed to the downfall of food sanctuary of developing nations. In 1970s, developing countries have borrowed from international financial institutions for importing fuel and petroleum³⁷. The borrowing countries

²⁸ MITTAL, A. *The 2008 food price crisis*: rethinking food security policies. New York: UN, 2009.

²⁹ SMITH, F. Regulating agriculture in the WTO. *International Journal of Law in Context*, v. 7, n. 2, p. 233-247, 2011.

³⁰ ISMAIL, F. Rediscovering the role of developing countries in GATT before the Doha Round. *The Law and Development Review*, v. 1, n. 1, p. 51-73, 2008.

³¹ LEE, Y. S. Reclaiming development in the world trading system. Cambridge: Cambridge University Press, 2006.

 ³² Agricultural Trade Development and Assistance Act of 1954, 7
 U.S.C. §§ 1691–1736e (1982); Food for Peace Act of 1966, Pub. L.
 No. 89–808, § 3(c), 80 Stat. 1526 (codified at 7 U.S.C. §§ 1427, 1431, 1431b, 1446a-7, 1691–1736e (1982)).

³³ CONWAY, G. *The doubly green revolution*. New York: Cornell University Press, 1998.

³⁴ GRIFFIN, K. *The political economy of agrarian change*: an essay on the green revolution. Berlim: Springer, 1979; DENNY, Danielle Mendes Thame *et al.* Food security and economic global governance. *Food Rights and Fight Against Hunger International Law Journal*, v. 14, n. 1, 2017.

³⁵ GONZALEZ, C. G. Trade liberalization, food security, and the environment: the neoliberal threat to sustainable rural development. *Transnational Law and Contemporary Problems*, v. 14, p. 419, 2004.

³⁶ THRUPP, L. A. Linking biodiversity and agriculture: challenges and opportunities for sustainable food security. *WRI Issues and Ideas* (USA), 1997; TUTWILER, M.; BAILEY, A.; ATTWOOD, S.; REMANS, R.; RAMIREZ, M. Agricultural biodiversity and food system sustainability. *In:* BIOVERSITY INTERNATIONAL. *Mainstreaming agrobiodiversity in sustainable food systems:* Scientific foundations for an agrobiodiversity index. Rome: Bioversity International, 2017. p. 1-22.

³⁷ PEET, R. *Unboly trinity*: the IMF, World Bank and WTO. London: Bloomsbury Publishing, 2009.

were struggling to pay off their debts. Structural Adjustment Programs (SAP) were introduced by World Bank and IMF as conditionalities for new loans. SAP forced agricultural commodity export to maximize revenue. The sudden and aggressive shift from food producing countries to cash crops, made the developing countries dependent on food imports. Moreover, SAP also insisted on elimination of non-tariff barriers and curtailment of government subsidy and other forms of support to vulnerable local farmers³⁸. This economic strategy again benefitted developed nations by providing them market for their extra produce. Like other strategies, SAP also used double standards by allowing protectionism to wealthy nations and imposing free market for poor.

World Trade Organization tried to mitigate the devastating effects by introducing Agreement on Agriculture (AoA). AoA was incorporated in WTO to provide market access by eliminating tariff and non-tariff barriers, to diminish export subsidy and to reduce trade--distortion by domestic subsidies. AoA further suggest WTO members to convert qualitative restriction into tariffs but does not lay down any strict formula for such conversion. Developed countries have been taking advantage of the lacuna for engaging in 'dirty tariffication³⁹. In sum, global food insecurity is a creation because of policies imposed on South in the form of international aid, trade policies and international financial programs. Such policies have helped the transnational companies of food industries and North at the cost of right to food of poor. Access to food relates to physiological, cognitive and emotional development of human beings. Adequacy of quality food will ensure a sustainable future for the human world⁴⁰.

led to provide nutritious and adequate food to most people, especially in low- and middle-income countries. This essay contributes to the discourse of food security by discussing sustainability in global food through three components. The central theme is focused on dynamic youth participation. The other two key components revolve around "inclusive" food system and "contextualized" food system. The paper attempts to construct a functional framework of food security through partnership and shared responsibility.

The food crisis did not affect only the vulnerable. Most of the households have been exposed to its severe impact. Young people are more susceptible to food insecurity⁴². Multiple factors, like advertisements of processed food, peer pressure to consume certain categories of food can also affect youth judgement regarding food intake⁴³. These dietary habits are often hard to transition on attaining adulthood⁴⁴.

Global youth population is 1.2 billion which is the largest until now. This section of the population suffered the most during the pandemic in terms of health and livelihood⁴⁵. At the same time, they are entering adulthood in the unsustainable global food system. Combined effect of all these challenges is taking away right to food from global youth. The right to food is ancillary to education, health, decent work, and livelihood. These ancillary rights ensure healthy and long life of youth population. Thus, lack of food security is one of the biggest flaws of global food system.

Food security can be achieved through food sovereignty. Food sovereignty is based on four factors: people, rights, quality of food produced and cultural

4 Sustainability of global food regime

The outdated, vulnerable, and unstable global food system lacks inclusion and equity⁴¹. The system has fai-

³⁸ HUGHES, H. Michel Chossudovsky: The globalisation of poverty: impacts of IMF and World Bank reforms. *Asian Pacific Economic Literature*, v. 12, p. 67, 1998.

³⁹ WISE, T. A.; MURPHY, S. The World Trade Organization is to blame for inequality in agriculture, not agribusinesses. *The Industrial Food Complex*, p. 181, 2019.

⁴⁰ COOK, J. T.; FRANK, D. A. Food security, poverty, and human development in the United States. *Annals of the New York Academy of Sciences*, v. 1136, n. 1, p. 193-209, 2008.

⁴¹ BJORNLUND, V.; BJORNLUND, H.; VAN ROOYEN, A. Why

food insecurity persists in Sub-Saharan Africa: a review of existing evidence. *Food Security*, v. 14, n. 4, p. 845-864, 2022; MUSTAFA, M. A.; MABHAUDHI, T.; AVVARI, M. V.; MASSAWE, F. Transition toward sustainable food systems: a holistic pathway toward sustainable development. *In*: GALANAKIS, Charis M. (ed.). *Food security and nutrition*. London: Academic Press, 2021. p. 33-56.

⁴² 2023 Global Hunger Index: the power of youth in shaping food systems.

⁴³ FLEMING, C. A. *et al. Food and me*: how adolescents experience nutrition across the World: a companion report to the state of the World's children 2019. Sydney: Western Sydney University; Unicef, 2020.

⁴⁴ KUPKA, R.; SIEKMANS, K.; BEAL, T. The diets of children: overview of available data for children and adolescents. *Global Food Security*, v. 27, p. 100442, 2020.

⁴⁵ High Level Panel of Experts on Food Security and Nutrition (HLPE), 2021.

aspects of food system⁴⁶. Lack of food sovereignty can be associated with factors like colonial rule, lack of efficient governance and capitalization of food systems⁴⁷. For example, poor governance is leading to rejection of indigenous and local farming knowledge. The traditional know-hows are excluded thereby disassociating youths from food systems alongside the elders. Sometimes the traditional farmers are even stopped from using their seeds for crop⁴⁸. Legislations are enacted in Asia, Africa, and South America⁴⁹. Such practices are robbing people of their human right to food by monopolizing food systems. Consequently, lack of food sovereignty is leading to adverse health⁵⁰. Furthermore, no active steps are taken to restore food sovereignty ever since World Food Summit, 1996⁵¹.

Nyeleni Forum in 2007 discussed about *reclaiming control* over land, production, and market by locals⁵². A

path to reinstate global food security is attenable through indigenous methods like mix-crop and livestock farming. Such practices are self-sustainable and resilient towards climate stress⁵³. Similarly, inclusive and united seed systems will also support the cause⁵⁴. Local small scale farming system can also secure food security by mitigating the risk factors. Such approach will uplift right to food for local consumers. A policy shift is desirable to implement the above-mentioned steps.

Policy decisions are based on interactions between stakeholders and experts. Inclusivity approach will ensure collective responsibility. Yong people have innovative ideas which can help in uplifting food sovereignty. But youth participation at formal level is insignificant. Stockermer and Sundstrom points out the fact that average age of members of legislature is near 50 in most of the counties⁵⁵. Therefore, engaging young minds in food governance system will lead to adoption of innovative strategic plans for uplifting nutrition and food security. For instance, food system can be aligned with their local relevance thereby connecting nutrition to location. Similarly, traditional and neglected crops can be brought back into cultivation. Such steps are bound to improve the scenario. The right to food is a recognized right which can be attained through social, cultural, and ecological alignment⁵⁶. Moreover, these changes will ensure green and sustainable employment opportunities for youth.⁵⁷ Sustainability will support and enhance the capacity of choice and innovation in food production system.

⁴⁶ 2023 Global Hunger Index: the power of youth in shaping food systems.

⁴⁷ SHILOMBOLENI, H. SFSGEC-SYNTHESIS-Sustainable food systems and global environmental change. *Canadian Food Studies / La Revue Canadienne des Études Sur L'alimentation*, v. 2, n. 2, p. 321-325, 2015.

⁴⁸ MUDAU, M.; RAMASHIA, S. E.; MASHAU, M. E. Mineral content, functional, thermo-pasting, and microstructural properties of spontaneously fermented finger millet flours. *Foods*, v. 11, n. 16, p. 2474, 2022; SIDIBÉ, A.; MELDRUM, G.; COULIBALY, H.; PADULOSI, S.; TRAORE, I.; DIAWARA, G.; SANGARÉ, A. R.; MBOSSO, C. Revitalizing cultivation and strengthening the seed systems of fonio and Bambara groundnut in Mali through a community biodiversity management approach. *Plant Genetic Resources*, v. 18, n. 2, p. 31-48, 2020.

⁴⁹ Section 326 of Kenya's Seeds and Plant Varieties Act of 2012, for example, criminalizes the exchange of seeds for all "unregistered crop varieties"—often traditional crop varieties—restricting farmers' choices regarding food production and agricultural and food systems

⁵⁰ GUNARATNE, M. S.; FIRDAUS, R. B. Radin; RATH-NASOORIYA, S. I. Climate change and food security in Sri Lanka: towards food sovereignty. *Humanities and Social Sciences Communications*, v. 8, n. 1, p. 229, 2021; SAMPSON, D.; CELY-SANTOS, M.; GEMMILL-HERREN, B.; BABIN, N.; BERNHART, A.; KERR, R. B.; BLESH, J.; BOWNESS, E.; FELDMAN, M.; GONÇALVES, A. L.; JAMES, D. Food sovereignty and rights-based approaches strengthen food security and nutrition across the globe: a systematic review. *Frontiers in Sustainable Food Systems*, v. 5, p. 686492, 2021.

⁵¹ CAMPESINA, L. V. Food of our future grows from seeds of our past. In: GOODYEAR-KA'OPUA, N.; OSORIO, J. K. K.; YAMASHIRO, A. (ed.). The value of Hamatari it. Hulihia, the turning. Honululu: University of Hawaii Press, 2021. v. 3. p. 111-114.; BJORNLUND, V.; BJORNLUND, H.; VAN ROOYEN, A. Why food insecurity persists in Sub-Saharan Africa: a review of existing evidence. Food Security, v. 14, n. 4, p. 845-864, 2022.

⁵² SONNINO, R. Food system transformation: urban perspectives. *Cities*, n. 134, p. 104164, 2023.

⁵³ WIJERATHNA-YAPA, A.; PATHIRANA, R. Sustainable agrofood systems for addressing climate change and food security. *Agriculture*, v. 12, n. 10, p. 1554, 2022.

⁵⁴ MABHAUDHI, T.; CHIBARABADA, T. P.; CHIMONYO, V. G. P.; MURUGANI, V. G.; PEREIRA, L. M.; SOBRATEE, N.; GOVENDER, L.; SLOTOW, R.; MODI, A. T. Mainstreaming underutilized indigenous and traditional crops into food systems: a South African perspective. *Sustainability*, v. 11, n. 1, p. 172, 2018.

⁵⁵ STOCKEMER, D.; SUNDSTROM, A. *Youth without representation*: the absence of young adults in parliaments, cabinets, and candidacies. Ann Arbor: University of Michigan Press, 2022.

⁵⁶ JERNIGAN, V. B. B. *et al.* Food sovereignty indicators for indigenous community capacity building and health. *Frontiers in Sustainable Food Systems*, v. 5, p. 704750, aug. 2021.

⁵⁷ MABHAUDHI, T.; CHIMONYO, V. G. P.; HLAHLA, S.; MAS-SAWE, F.; MAYES, S.; NHAMO, L.; MODI, A. T. Prospects of orphan crops in climate change. *Planta*, v. 250, p. 695-708, 2019.

Figure 3 -



Source: Authors.

5 Role of national governments and international bodies

Global food crisis is a structural issue. For example, scholars like Francis Moore Lappe, Amartya Sen and Susan George believe that food crisis is a distributional problem. The central argument by Susan claims that the multinational agricultural companies, food aid policies of western government and biased multilateral organizations are responsible for shortage of food in poor developing countries⁵⁸. Similarly, Sen contended that famines could be stopped if support strategies are well planned to protect the needs of vulnerable⁵⁹. The 'entitlement approach' rejected the popular notion that famines were caused by unavailability of food.

Human right activists also support the claim. Food insecurity should be addressed by altering the underlying strategies that defines the global food system. Thus, change in institutional structures and state structure should be done. FIAN has promoted formation of new policies based on human rights to defend right to food for people. Alongside international institutions, states also have corresponding obligation to *respect, protect and fulfil* the right to food. The three words denote three level of action- *respect* requires the state to fulfil a negative right by not engaging in activities which hamper the ability to access food; obligation to *protect* requires state to stop third parties from hindering people's ability to produce or purchase food and lastly, *fulfil* puts a positive obligation to ensure nobody goes hungry even in crisis period⁶⁰.

At international level Food and Agricultural Organization (FAO) was adopted in 2004. 187 member states adopted Voluntary Guidelines to Support the Progressive Realization of the Right to Adequate Food in the Context of National food Security. The guidelines also lay down the foundation for track progress in reducing food issues. Moreover, most debates are revolving around the question whether food sovereignty should be implemented with top-down approach or bottom--up approach? Analysis of the various activist movement suggest a bottom-up approach. Out of these two possibilities, top-down approach appears to be easily attainable. External institutional approach will be effortlessly implemented under multilateral trade regime. But to make food security effective, tailor-made solutions are required for each country. Food like culture varies from place to place. Thus, one legislation, whether international or national, would not fit all. Disagreements are bound to exist in appropriate time, nature, and conditions for launching a policy. Additionally, right to food is entrusted to states as a duty. A mismatch between maker of legislation and enforcer of legislation would not be desirable. Botton-up approach may require greater adjustment and struggle but once achieved would be a self-sustaining model. Thus, the global institutions should extent support to national initiatives⁶¹.

National laws including Constitutions⁶², laws⁶³ and policies have already identified right to food as part of national norms which are read with states' decisions

⁵⁸ GEORGE, S. How the other half dies. *In*: MARSH, I.; CAMP-BELL, R.; KEATING, M. (ed.). *Classic and contemporary readings in sociology*. New York: Routledge, 1998. p. 266-271.

⁵⁹ DRÈZE, Jean; SEN, Amartya Kumar. *Hunger and public action*: in the Amartya Sen & Jean Drèze omnibus. 1989.

⁶⁰ SONNINO, R. Food system transformation: urban perspectives. *Cities*, n. 134, p. 104164, 2023.

⁶¹ MCKEON, Nora; KALAFAT, Carol. *Non-governmental liaison service, strengthening dialogue*: UN experience with small farmer organizations and indigenous peoples. New York: United Nations, 2009.

⁶² National Constitution of Uganda, 1995, Objective XIV(b).

⁶³ India Supreme Court, *People's Union for Civil Liberties v. Union of India and Others*, Writ Petition (Civil) No. 196 (2001) (India); Supreme Court of Bangladesh (High Court Division), *Dr Mohiuddin Farooque v. Bangladesh and Others* (No.1) (July 1, 1996) (Bangl.); *rakash Mani Sharma and others on behalf of Forum for Protection of Public Interest (Pro-Public) v. Prime Minister and Office of Council of Ministers and Others*, Writ Petition No. 0065-w0-149 of 2065 BS (2008) (Nepal); *G v. An Bord Uchtala*, 2005 (Ir.).

with respect to food and agricultural policies. Yet the global approach to food security remains difficult to implement in the light of conflicting WTO-related obligations. Food security was kept as one of the central focuses for agricultural negotiations in the 13th Ministerial Conference (MC 13), but the future will depend on the obligatory nature of such commitments. Despite four days of deliberations, 166 members of WTO could not reach a common understanding on resolving the food crisis of the current world. The developed countries are divided among themselves. For instance, countries like Brazil and Australia claim public stocking (PSH) leads to trade distortion thus there should not be export restrictions. The US is demanding for market access for its agricultural produce. Similarly, the EU wants a cut in subsidies. On the other hand, developing countries like India, are seeking more permanent solution in the form of formula amendment to calculate the food subsidy cap. Although India is one of the largest producers of fruits and vegetables, yet its citizens are not immune against food insecurity⁶⁴. The two repeated problems of countries like India are exponential population growth and nature-dependent agricultural productivity⁶⁵. Thus, several developing countries are suffering from food crisis. In the context, India also pointed out that the external reference price used for calculating market price support in PSH is still based on 1986-88 reference. These differences between the governments of countries must be resolved in the greater humanitarian interest.

Furthermore, the discussion on global attempts cannot be completed without mention of the committee on World Food Security (CFS). CFS is the chief UN political platform dealing with food security, nutrition, and agriculture. It is also acting as alternative deliberation forum on the global concern as the membership extends beyond states to include International Financial Institutions and other private sector and civil society actors. But Vía Campesina has little faith over the methods by CFS. CFS is not focused on the connection between international trade and food security hence it is unlikely the dead lock of WTO ministerial conferences can be resolved in near future. Given the nature of right, the right to food requires intersectoral co-ordination between agriculture, social welfare, education, and health.

It is time for realizing that right to food is a transformative right which keeps adjusting to the methods of government interaction with people, mechanism of procurement of food by people and other legislative actions. The right requires variable support in different context based on continuous evaluation of food system of the nation. Hence, coordination is the key to ensure food security whether at national or global level⁶⁶.

6 Conclusion: moving forward

Endless institutions and declarations pledging to reduce world hunger will not automatically convert into action. The underlying cause of hunger must be addressed. Unless addressed properly, the future generations will face severe shortage of food thereby lack holistic development. The debate is no longer on whether food sovereignty will ever be recognized as human rights. Whether recognized as human right or not, food sovereignty is part of human development. In the context, Amartya Sen's seminal work on poverty and famine, changed our understanding of hunger⁶⁷. Hunger is no longer viewed as low productivity but a matter of distribution of resources. Often hunger is used as a tool of disempowerment⁶⁸. Thus, it is essential to look at hunger through right based approach.

Right to food is something which is due to each person since she or he is human. Therefore, states should access the impacts of new industrial policies before implementing them. Often such policies have serious environmental impact on the soil, water, and other factors of agriculture. States should start to take negative rights seriously. Ancillary influence on human rights violations should also be considered. For instance, treats of eviction from land can also affect violation⁶⁹. Additionally,

⁶⁴ SAH, S.; JOHAR, V.; KARTHI, J. S. Status and marketing of fruits and vegetables in India: a review. *Asian Journal of Agricultural Extension, Economics & Sociology*, v. 40, n. 7, p. 1-11, 2022.

⁶⁵ RANJANA, Ferrão. Food security in India. Food Rights and Fight Against Hunger International Law Journal, v. 14, n. 1, p. 113-124, 2017.

⁶⁶ The Right to Food Guidelines—Information Papers and Case Studies (2006) and Bultrini, Clemens Breisinger et al., International Food Policy Research Institute [IFPRI], Beyond the Arab Awa kening: Policies and Investments for Poverty Reduction and Food Security viii (2012). See also Protests and the Pump: The Egypt Effect May be More Pronounced for Food than Oil, The Economist (Feb. 3, 2011).
⁶⁷ SEN, A. Poverty and famines: an essay on entitlement and depriva-

tion. Oxford: Oxford University Press, 1982.

⁶⁸ SEN, A. *Poverty and famines*: an essay on entitlement and deprivation. Oxford: Oxford University Press, 1982.

⁶⁹ For more information on FIAN, see http://www.fian.org/.

to respect negative right, people should be empowered to participate in decision making process including policy decisions. State activities that may incumber people's way to food accessibility must be decided after stakeholder consultations. Participation in terms of negotiations is to be encouraged. Mere consent to the policy decision will not give power to the vulnerable. The process should reflect participation, voices, and desires. Sustainable and accessible food should be part of such rights.

Sustainable development involves capacity of resource distribution to ensure balanced rate of production and consumption⁷⁰. Food consumption also denotes economic consumption and has become one of the key factors in denoting national sustainable approach. The current era is based on global capitalism focused on life choices, culture and basic needs of one's life⁷¹. Even though, food consumption is often considered as a 'normal' or mundane habit in everyday life, but price fluctuations and consumer market are dependent on such purchase⁷². Likewise, right to food cannot be limited to calculation of calorie intake and nutrition received by general population.

A consumer-based approach can be beneficial for two reasons. First, consumers are the ultimate user of food, energy, and broader concerns of climate crisis. Secondly, world leaders are convinced on the role of consumer action at the time of crisis. We must utilize the opportunity to use consumers for reducing cost of living crisis and build a sustainable and inclusive global market. Consumption patterns with respect to food, is governed by three aspects of consumerism. Firstly, the culture influences the consumption of food in a house hold. Secondly, the economic status explains the nexus and lastly, social interactions explain the food choices⁷³.

Similarly, phasing out agricultural food subsidies in developed countries will help in maintaining fair price of food. Fair price would eliminate dumping thereby promoting food security. However, eliminating agricultural subsidy in developed country can help when such reforms are accompanied by policy intervention in developing countries. Policy decisions to relocate resources towards small scale farms can be advantageous. Moreover, the governments of the developing countries must reclaim their role on agriculture sector. They should not be influenced by the pressure of multilateral organization dominated by the will of developed countries. Thus, a collective responsibility achieved through shared efforts will reinstate right to food for all. Right to food is a basic right available to all which also acts as a duty of all towards each other.

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⁷¹ DALGLIESH, B. Zygmunt Bauman and the consumption of ethics by the ethics of consumerism. *Theory, Culture & Society*, v. 31, n. 4, p. 97-118, 2014.

⁷² SEDA, F. S.; SETYAWATI, T. T. L.; NOBEL, K. Consumerism index in the context of sustainable development: pattern of house-hold food consumption. *Journal of Sustainability Science and Management*, v. 16, n. 4, p. 285-302, 2021.

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