

Background Guide

Food and Agricultural Organization



Property of Lagos Model United Nations

Background Guide: Food and Agricultural Organization

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LMUN 2021: The Sixth Session

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Letter from the USG

Dear Delegates,

Welcome to the Lagos Model United Nations Conference 2021. We are pleased to have you showcase your diplomacy, public speaking, and negotiations skills at this year's conference, particularly in the Food and Agricultural Organization (FAO).

This year, the staff of the Food and Agricultural Organization are: **Oluwadaara Openiyi** (Under Secretary General), **Jemima Ojo** (Chair), **Ayooluwa Adekoje** (Vice Chair), **Precious Afolabi** (Researcher) and **David Ugochukwu** (Researcher).

Oluwadaara is currently a 400 level law student at the University of Lagos. She was a delegate in The Lagos Model United Nations Conference in 2018 where she won the outstanding delegate award. She was also a delegate of The Cambridge University International Model United Nations in the same year. She went on to serve as a researcher for the Economic and Social Council at LMUN 2019. Finally, at the LMUN 2020 and The Youth International Summit Model United Nations (YISMUN), she served as the Vice Chair of The United Nations Environmental Assembly and the Co-Chair of the International Atomic Energy Agency (IAEA) respectively. Oluwadaara enjoys travelling, cooking and meeting new people. **Jemima** is a 400 level student at the Faculty Of Law, University of Lagos. In the past, she has engaged in a number of extra curricular activities, which have contributed to who she is today. In 2018, she participated in the Lagos Model United Nations Conference as a delegate of The Republic of Bolivia in the Security Council. In 2020, she was also a delegate from South Africa in the Food and Agricultural Organization where she emerged as the outstanding delegate. She is concerned about Sustainable Development and achieving the goals set by the United Nations. **Ayooluwa**, a 300 level law student at the University of Lagos began his MUN journey in 2019 where he was a delegate in the Assembly of African Union (AAU). In that year, he emerged as a distinguished delegate in his committee. In 2020, he also won the outstanding delegate award in the General Assembly. A lover of sports, Ayooluwa enjoys watching football and formula 1 races as well as playing video games. **Precious** is a 400 level law student at the University of Lagos. She is passionate about the SDGs, especially Goal 16 on Peace, Justice and Strong Institutions and Goal 10 on Reduced Inequalities. In 2019, she was a delegate at LMUN and she will be serving as a researcher for the Food and Agricultural Organization at LMUN 2021. **David** is a 200 level law student at the University of Lagos, Nigeria. He served as an LMUN researcher for the Food and Agriculture Organization in 2021. He has participated in over ten MUNs including the Oxford Global Virtual MUN and in the process, he has won numerous awards including Best Delegate. He's interest in MUN spans Global and regional Security, Climate change, refugee crisis, Space exploration and Peaceful uses of Nuclear power in peacetime.

The topics to be deliberated upon by the committee for this year's conference are:

- I. **The Effects of COVID-19 on the Availability and Effective Distribution of Food.**
- II. **Investing in Agriculture for Food Security and Economic Growth.**

Delegates are reminded that though this Background Guide serves as an introduction to the topics for this committee, it is not intended to replace individual research. We encourage you to explore your Member State's policies in depth and use the Annotated Bibliography and Bibliography to further your knowledge on these topics.

Furthermore, to encourage adequate preparation for the conference, each delegate or delegation is to submit a Position Paper on the date communicated upon registration, in accordance with the position paper guide.

Other essential documents that will aid preparation for the conference have been provided for delegates on the LMUN official website- www.lmun.ng.

For further questions or concerns regarding preparations for the conference, please contact me at usgdevelopment@lmun.ng of the committee at – fao@lmun.ng.

We look forward to having you at The LMUN Conference 2021. See you soon!

Naomi Oluwadaara Openiyi
USG Development Department, LMUN 2021.

Abbreviations

| | |
|------------------|--|
| CESCR Rights | United Nations Committee on Economic, Social, and Cultural |
| CFS | Committee on World Food Security |
| CSO | Civil Society Organization |
| ECOSOC | Economic and Social Council |
| FAO | Food and Agriculture Organization |
| GDP | Gross Domestic Product |
| ICESCR Rights | International Covenant on Economic, Social and Cultural |
| IIA | International Institute of Agriculture |
| LDC | Least Developed Country |
| MDGs | Millennium Development Goals |
| NAPA | National Adaptation Programmes of Action |
| NGO | Non-Governmental Organization |
| RAI | Responsible Agricultural Investment |
| SDGs | Sustainable Development Goals |
| UDHR | Universal Declaration on Human Rights |
| UN | United Nations |
| UNDP | United Nations Development Programme |
| UNEP | United Nations Environment Programme |
| UNGA | United Nations General Assembly |
| UNICEF | United Nations Children's Fund |
| WFP | World Food Programme |
| WHO | World Health Organization |

Committee Overview

Introduction

The Food and Agriculture Organization (FAO) is a specialized agency of the United Nations (UN), tasked with the responsibility of ensuring food security globally.¹ Preceding the formation of the FAO, a conference on Food and Agriculture with participants from 44 countries was held in Hot Springs, Virginia in 1943. This conference led to the creation of an Interim Commission on Food and Agriculture with the aim of introducing an agricultural organization, and this led to the birth of the FAO.² Established in 1945, this organization is at the forefront of activities that pertain to the eradication of hunger and malnutrition around the world, just like its predecessor, the International Institute of Agriculture (IIA). The organization carries out its activities, in partnership with the UN through the Economic and Social Council (ECOSOC).³ The main aim of the organization is to promote food security for everyone and make sure that people have regular access to enough high-quality food to lead active, healthy lives.⁴

FAO holds up and follows a plethora of conventions, agreements and treaties with relation to its core focus area. Some of the treaties, agreements and conventions to which the Director-General of FAO acts as the Depositary of include: Multilateral treaties approved under Article XIV of the FAO Constitution, which operate within the framework of FAO; Multilateral treaties which are developed and operate outside the framework of FAO, where the Contracting Parties have requested the Director-General of FAO to discharge the Depositary functions and; Bilateral agreements adopted under Article 15 of the International Treaty on Plant Genetic Resources for Food and Agriculture, which calls for the conclusion of agreements between the Governing Body of the Treaty and International Agricultural Research Centres of the Consultative Group on International Agricultural Research (CGIAR) that hold ex situ collections of plant genetic resources for food and agriculture in trust.⁵

The organization assists Member Countries to create strategies and guidelines, which protects consumer health and promotes fair practices in food distribution and develops national action plans to help member states achieve their goals in food and nutrition. Examples of which include: Bangladesh National Plan for Disaster Management 2010-2015; National Action Plan on Antimicrobial Resistance 2019-2023 in Papua New Guinea and the; Samoa Climate Change Policy 2020.⁶

¹ FAO, "About FAO", 2021.

² FAO, "FAO, its origins, formation and evolution 1945-1981", 2021.

³ Ibid

⁴ Ibid.

⁵ FAO, "Treaties and Background"

⁶ Ibid

Governance, Structure and Membership

The Food and Agriculture Organization (FAO) leads international efforts to defeat hunger. FAO has its headquarters in Rome, Italy and it has offices in over 120 countries, employing 11,560 staff members as of 2019⁷. As of today, the organization comprises 194 member-states, two associates (the Faroe Islands and Tokelau) and one-member organization (European Union).

The apex body of the FAO is the Conference, created by *Article III of the FAO Constitution* (1945)⁸. The Conference holds its meetings biennially in Rome, Italy. It should be noted that there may be special sessions if there is a majority vote at the regular sessions that call for it or if the council so instructs the Director-General⁹. Each Member state and Associate of the Conference are represented by a delegate. Associate members on the other hand have the right to participate in deliberations of the Conference but cannot participate in the voting process or hold offices¹⁰. A Member State of the Conference is entitled to one vote on the sole condition that such Member State upholds its financial obligations. This financial obligation may be waived if the Conference is satisfied that the failure to pay is beyond the control of such Member State¹¹. The Conference is to be assisted by a committee on World Food Security. The committee is expected to report to the Conference and to the United Nations General Assembly (UNGA), through the Economic and Social Council (ECOSOC)¹². It is the function of the Conference to approve the budget of the FAO, thus solidifying its place as the apex body of the FAO. It is the responsibility of the Conference, by a two-thirds majority, to make recommendations to Member States and Associate Members on matters relating to food and agriculture with the expectation that these recommendations be implemented nationally¹³. The Conference has the power to review the decisions of the council or other subsidiary committees as well as make recommendations to international organizations on matters relating to the purpose in which the FAO was established. It is the responsibility of the Conference to establish regional conferences to aid in carrying out its functions. Regional conferences currently exist for Africa, Asia and the Pacific, Europe, Latin America and the Caribbean and the Near East¹⁴. These regional conferences serve as the highest governing bodies of the Conference regionally and act as platforms through which the Conference can assess its performance.

The Council of the FAO comprises 49 Member Nations with a Chairperson. All members of the Council are elected by the Conference and each Member state and Associate are

⁷ FAO, Structure and Finance

⁸ Constitution of the United Nations Food and Agriculture Organization, 1945.

⁹ Ibid

¹⁰ FAO, "Basic Texts of the Food and Agricultural Organization of the United Nations" 2017.

¹¹ Ibid

¹² Ibid

¹³ Ibid

¹⁴ FAO, FAO Regional Conferences, 2020.

represented by a delegate¹⁵. Member States are entitled to one vote and are elected for a period of three years. However, Members of the Council may appoint alternates, associates and advisers to its representative. The Council serves as the executive organ of the Conference and intervenes in world food and agricultural related programs¹⁶.

According to Article IV of its Constitution, the conference, which constitutes delegates from every member state, is the supreme and representative organ of the FAO. It makes recommendations to member-states and International Organisations on issues regarding or relating to the FAO's mandate. The Conference may also review the activities and decisions of various regional councils of the FAO. The Conference is the ultimate decision-making body of the FAO. It determines its overall policy and strategy, and takes the final decisions on objectives, strategy and budget. According to Article VII of its Constitution, the office of the director-general sits at the helm of the affairs of the FAO. In a bid to promote gender equality in the workplace, the FAO since 2012 have increased the proportion of its female staff from 36% to 43%¹⁷.

Article V of the FAO's constitution which deals with the Council of the Organization, provides for the Council to be assisted by eight committees which are; Program committee, Finance committee, Committee on Constitutional and Legal Matters, Committee on Commodity Problems, Committee on Fisheries, Committee on Forestry, Committee on Agriculture, Committee on World Food Security¹⁸. These committees carry out most of the substantive work of the Council. One other committee of similar rank exists, although it was not established under Article V but was set up jointly by FAO and the UN, namely: Committee on Food Aid Policies and Programmes. The director-general is appointed by the conference for a duration of four years and he may be re-elected for a second term of additional four years. The current director-general is Qu Dongyu. He is the ninth elected director-general of the FAO since its establishment in 1945¹⁹.

The goal of the FAO is to achieve food security globally to this end. The FAO is composed of eight departments: Agriculture and Consumer Protection, Climate, Biodiversity, Land and Water Department, Economic and Social Development, Fisheries and Aquaculture, Forestry, Corporate Services and Technical Cooperation and Programme Management²⁰. The FAO's budget is funded by its members through periodic contributions set at the FAO conference²¹.

¹⁵ Supra Note 9.

¹⁶ FAO, "Governing and Statutory Bodies" 2020.

¹⁷ Ibid.

¹⁸ Ibid.

¹⁹ Ibid.

²⁰ FAO, Basic Texts of the Food and Agriculture Organization of the United Nations, Volume I and II, 2017.

²¹ Ibid

Mandate, Functions and Power

The preamble of FAO's constitution clearly states that the organization exists to ensure the provision of food for all while enhancing the nutritional value of foods provided globally. It is also charged with the responsibility of improving the standard of living of people, contributing towards the expansion of the world economy and ensuring that global food production and distribution systems are efficient.²²

The committee's functions include the collection, analysis, interpretation and dissemination of data relating to food, agriculture and nutrition. It provides in the recommendation of international and national actions on everything related to the improvement of agriculture, food and nutrition, and provides technical and technological assistance in programs related to improving agriculture, forestry, fisheries, and land and water resources to member states that require it in order to achieve the objectives of the organization²³.

The FAO provides assistance to its member countries to strengthen their capacity to prevent natural disasters or all kinds of emergencies. It provides this support through the development of institutional frameworks at the regional, national and local level for managing risks and coping with emergencies. It also provides emergency relief together with their partner organizations by producing assessment reports like an assessment of emergency agricultural relief requirements, impact assessment as well as resource mobilization.²⁴

Recent Sessions and Current Priorities

The current efforts of the FAO are guided by the themes of gender, governance, nutrition, disease control, technical leadership, climate change and impacts of the COVID-19²⁵. The FAO recognizes that strengthening food production and distribution systems is key in combating world hunger and this would help aid tackle diseases whenever they emerge in humans, plants, animals or even the environment²⁶. Coronavirus disease (COVID-19) is a global health crisis, and the FAO is keen on playing a role in assessing and responding to its potential impacts on the income and life of people, global food trade, markets, food supply chains and livestock.

FAO's COVID-19 response spans 7 key priority areas which include: Global Humanitarian Response Plan, Data for Decision-making, Economic Inclusion and Social Protection to Reduce Poverty, Trade and Food Safety Standards, Boosting Smallholder Resilience for Recovery, Preventing the Next Zoonotic Pandemic Food Systems Transformation²⁷. The

²² Ibid.

²³ Ibid.

²⁴ FAO, "FAO's Role In Emergencies".

²⁵ FAO, "FAO-led global COVID-19 Food Coalition gains momentum"2020

²⁶ Ibid

²⁷ FAO, "FAO Covid-19 Response and Recovery Programme"2020

impacts of the pandemic on food security evolves and varies based on virus peaks, lockdown measures and different countries and regions. In relation to the Global Humanitarian Response Plan, the FAO has realised that the main obstacle in achieving this project is that the prevention of food crises cannot wait until the health crisis is over (That is, until the Covid-19 pandemic is over)²⁸ Rather, it should be treated as one of the core aspects of the Humanitarian Response Plan. To this end, the FAO has adopted 4 key activities in order to solve this issue. It is the belief of the FAO that these measures would ensure the most vulnerable are able to keep producing and accessing food, while levels of intense food insecurity do not rise as a result of COVID-19. FAO in response to the COVID-19 has up scaled and reoriented its work on data, information and analysis²⁹. This initiative (Data for Decision-making) is structured around four components, with the aim that this new data collection system would provide innovative alternatives to solving food insecurity³⁰. This programme is an important aspect of FAO's comprehensive response to COVID-19. Furthermore, it builds on the 50x2030 initiative, the AGRI Survey programme, the European Union-FAO Food and Nutrition Security Impact, Resilience, Sustainability and Transformation (FIRST) programme, the FAO Voices of the Hungry initiative, the FAO Data Lab for Statistical Innovation and The Monitoring and Analysing Food and Agricultural Policies (MAFAP).

The impacts COVID-19 has had socio-economically necessitates the urgency to eradicate poverty, particularly in rural areas. Approximately 80 percent of the 734 million extreme poor live in rural areas and about 70 percent of the SDG targets relate to rural areas, these facts highlight the importance of rural development in achieving the 2030 Agenda³¹. In achieving Economic Inclusion and Social Protection to reduce Poverty FAO has partnered with a number of international bodies such as; Appius au Développement Autonome (ADA) Microfinance, the African Union, the Centre for International Environmental Law, the Community of Latin American and Caribbean States, the Inter-Agency Network for Youth Development, the Intergovernmental Authority on Development; the International Food Policy Research Institute, the International Fund for Agricultural Development, the International Institute for Environment and Development, the International Labour Organization, the United Nations Industrial Development Organization, the World Bank, the World Food Programme and UN Women³². These partnerships are done with the aim of strengthening rural women's economic power.

²⁸ FAO, "FAO Global Humanitarian Response Plan" 2020

²⁹ Ibid.

³⁰ FAO, COVID-19 Response and Recovery Programme - Data for decision-making: "Ensuring quality data and analysis for effective policy support to food systems and Zero Hunger" 2020

³¹ FAO, COVID-19 Response and Recovery Programme: "Economic inclusion and social protection to reduce poverty: Pro-poor COVID-19 responses for an inclusive post-pandemic economic recovery" 2020

³² Ibid.

The FAO in support of smallholders³³ has incorporated in its 2020-2024 resilience program a suit of complementary COVID-19 sensitive and specific interventions for the social, economic, environmental and government dimensions for sustainable development³⁴. This resilience program is aimed at aiding smallholders recover from COVID-19 shocks, enabling them to build their resilience to future threats. FAO monitors the impact the pandemic has had on food and agriculture as well as nutrition with the aim of mitigating and creating plausible solutions to these challenges.

Conclusion

In conclusion, FAO launched the International Year of Fruits and Vegetables 2021 in Rome, Italy on 15th December 2020. This initiative is focused on improving food production and reducing food waste through technical and technological innovation. The decision was also informed by the COVID-19 pandemic as stated by The Director-General of the Food and Agriculture Organization of the United Nations (FAO), QU Dongyu.³⁵ Hence, FAO is currently committed to discovering new and innovative ways to tackle food insecurity and protect the global and national food supply chains in view of the impending deadline of the SDGs.

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"This document defines the purpose for the existence of the FAO through its constitution and determines its functions and powers. It also dictates the structure of its administration. Delegates will find this useful in understanding the basis and modus operandi of the FAO".

Food and Agriculture Organization, "FAO and the SDGs" [Report], available at: <http://www.fao.org/3/a-i6919e.pdf> (accessed 4 May, 2020)

This document shows the network between the activities of the FAO and the SDGs. It reveals the FAO's actions towards ensuring that the SDGs are achieved by 2030.

³³Smallholders are small-scale family farmers, pastoralists, forest keepers, fishers who manage areas varying from less than one hectare to ten hectares.

³⁴FAO, COVID-19 Response and Recovery Programme - "Boosting Smallholder Resilience for Recovery: Protecting the most vulnerable, promoting economic recovery and enhancing risk management capacities"

³⁵FAO, FAO launches the UN's International Year of Fruits and Vegetables 2021, 2020.

Food and Agriculture Organization, Europe and Central Asia, United Nations Economic Commission for Europe Regional Overview of Food Security and Nutrition, available at <http://www.fao.org/europe/news/en/> (accessed May 2 2020)

This document provides a comprehensive analysis of Food Security and Nutrition, forms of malnutrition, current dietary patterns, and the costs of diets for individuals, society, and the planet in Europe and Central Asia.

Food and Agriculture Organization, Covid-19 Response and Recovery Programme: "Trade and Food Safety Standards". Available at [FAO COVID-19 Response and Recovery Programme - Trade and food safety standards](#) (Accessed 29 May 2020).

This document analytically breaks down the drastic effects of the pandemic on the current trade and safety standards.

Food and Agriculture Organization, "FAO in Action". Available at [FAO in Action](#) (Accessed June 5 2021).

This document provides examples of Food and Agricultural Organization, providing support to countries during times of disaster or emergencies.

Food and Agriculture Organization, FAO launches the UN's International Year of Fruits and Vegetables 2021, available at: [FAO - News Article: FAO launches the UN's International Year of Fruits and Vegetables 2021](#) (accessed 27 December, 2020).

This document highlights the plan the United Nation has embarked upon

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Food and Agriculture Organization," FAO-led global COVID-19 Food Coalition gains Momentum"2020. Available at <http://www.fao.org/news/story/en/item/1300989/icode/> (Accessed 28 May 2020).

The Effects of COVID-19 on the Availability and Effective Distribution of Food

COVID-19 threatens to unravel decades of progress in eradicating poverty and hunger
-Alexander Trepelkov, of the Department of Economic and Social Affairs.³⁶

Introduction

For decades, the United Nations through the Food and Agriculture Organization has strived to ensure global food security and these efforts have recorded considerable success. Sustainable Development Goal 2 provides that efforts shall be made to ensure Zero Hunger³⁷. Unfortunately, the negative effects of COVID-19 Pandemic (the pandemic) threaten to reverse progress made towards achieving this goal. The most recent State of Food Security and Nutrition Report titled "Safeguarding Against Economic Slowdowns and Downturns"³⁸, projects that the pandemic will add 820 million individuals to the world's growing list of undernourished people.

The FAO recognizes the effects of the pandemic and has raised four major concerns in relation to its effect on the food industry and the food supply chain³⁹ which are the demand for functional foods which contain bioactive ingredients; the issue of food safety; the effect on the lockdown on food security and the issue of food sustainability.

The pandemic has greatly affected food systems and has threatened people's access to food via multiple streams. Not only has there been a disruption of major supply food chains but also the lockdowns (aimed at slowing down the rate at which the pandemic spreads) have led to a global economic slowdown. In India alone, it is estimated that 42% of the workforce were employed in agriculture⁴⁰. This highlights the alarming rate of food insecurity the country currently faces.

This crisis has led to lower income but higher prices of some foods, putting such foods out of reach of many individuals. The prices of food have risen by 38% since January 2020⁴¹. Maize and wheat prices have also grown by 66% and 23% respectively. This is as a result of the strong demand for products which are short in supply or existence. This shortage of supply has been caused by the pandemic which led many Manufacturers to either shut down their factories completely or reduce the number of its staff. The reduction of the number of staff leads to a reduction in the number of goods produced, hence, the current situation the world finds itself in.

³⁶United Nations, Covid19 Threatens to Undo Decades of Progress in Eradicating Poverty, 2020.

³⁷United Nations, "Regional Information Center for Western Europe"

³⁸The State of Food Security and Nutrition in The World: "Safeguarding Against Economic Slowdowns and Downturns"

³⁹Ibid

⁴⁰Aaron O'Neil, "Distribution of the Workforce Across Economic Sectors in India 2020"

⁴¹World Bank Group, "Food Security and Covid-19".

At the national level, the effects the pandemic has had on food security are; the higher retail prices, coupled with lower income leading more consumers to cut down the quantity and quality of food consumed⁴². Food producers also face losses from the perishable and nutritious food produced. Consumers tend to go for cheaper products seeing as there's less money (as a result of the pandemic) to spend on luxurious commodities. As at April 2021, the World Food Programme (WFP) estimated about 296 million people in 35 of the countries it works are without sufficient food⁴³. The above statistics already portrays the precarious situation the world currently faces. According to the World Health Organization, the worst effects are yet to come⁴⁴. Most health analysts and experts predict that this virus will continue to circulate for a least one or two more years⁴⁵. The WFP⁴⁶ is currently working with the government of Angola in restoring food security as over 200,000 children under five currently face malnutrition⁴⁷. To this end, the FAO has provided 6,500 supplements to aid in the fight against malnutrition.

At least 25 countries, including Lebanon, Yemen and South Sudan, are at risk of significant food security deterioration⁴⁸. This is as a result of the secondary socio-economic impacts of the pandemic⁴⁹. In Latin America, the number of people requiring food assistance has almost tripled in 2020⁵⁰. Food productivity could also be affected in the future, especially if the virus is not contained and the lockdown measures continue.

International and Regional Framework

A plethora of international instruments recognize the importance of food for the reasonable existence of every human being. As such, Article 25(1) of *the Universal Declaration on Human Rights* provides that "everyone has the right to a standard of living adequate for the health and well-being of himself and of his family, including food, clothing, housing..."⁵¹. In the same light, the ICESCR⁵² provides in Article 11, that States Parties are obliged to acknowledge the right of everyone to adequate food as it is incidental to a reasonable standard of living.

⁴²Ibid.

⁴³United Nations: "World Food Programme".

⁴⁴"Worst is yet to come": WHO chief gives countries strict warning to contain Covid spread, The Print, 2020.

⁴⁵Megan Scudellari, "How the pandemic might play out in 2021 and beyond".

⁴⁶World Food Programme

⁴⁷OCHA services, WFP Angola Country Brief, April 2021

⁴⁸Ibid.

⁴⁹Ibid.

⁵⁰World Food Program, "Global Monitoring of School Meals During COVID-19 School Closures, 2021.

⁵¹FAO, *The Right to Food in Theory and Practice*, 1998.

⁵²International Covenant on Economic, Social and Cultural Rights

Article 11 (1) of the International Covenant on Economic, Social and Cultural Rights (ICESCR) recognizes the right of everyone to have access to adequate standard of living including adequate food, and to the continuous improvement of living conditions.⁵³

The Rome Declaration on World Food Security (1996), reaffirms the right of everyone to have access to safe and nutritious food, consistent with the right to adequate food and the fundamental right of everyone to be free from hunger.⁵⁴

The General Assembly in the A/RES/70/1 Transforming Our World: The 2030 Agenda for Sustainable Development sets out steps to achieving the 17 Sustainable Development Goals (SDGs) especially, eliminating hunger and all forms of malnutrition as well as ensuring food security (Goal 2) and, ensure sustainable consumption and production pattern (Goal 12).⁵⁵

In resolution A/C.2/75/L.56, the General Assembly noted with deep concern the threat the coronavirus poses on human health and the economy.⁵⁶ The General assembly also recognizes the increase of food insecurity and malnutrition especially in African countries, Latin America and Asian countries. Malnutrition is estimated to affect one in five people as well as small producers, farm labourers, smallholder farmers and people in vulnerable situations and developing countries.⁵⁷

Role of the International System

In its 165th Session, which held from 30th November to 5th December 2020, the Food and Agriculture Organization acknowledged that the pandemic has led to the greatest global recession that the world has seen since the Second World War⁵⁸. As a result of the nature of the virus, several countries responded to its outbreak by closing their borders and shutting down public activities. It is worthy to note however, that a report by the World Bank proposes that a restriction in the export of food products would not aid in quelling the virus but would only prove detrimental to importing countries⁵⁹. The report also identified that the main risks involved relate to domestic food chains and the prevalence of poverty in many countries. This section will look into the various efforts of several international bodies in addressing the topic.

In a bid to combat the negative effects of the virus, FAO released several speculations on how the virus has and will affect various aspects of food and nutrition. Some of these documents such as *the Europe and Central Asia Regional Overview of Food Security and*

⁵³ OHCHR, International Covenant on Economic, Social and Cultural Rights.

⁵⁴ FAO, Rome Declaration and Plan of Action, 1996.

⁵⁵ United Nation, Transforming Our World: The 2030 Agenda for Sustainable Development, 2015.

⁵⁶ United Nation, General Assembly A/C.2/75/L.56,2020.

⁵⁷ Ibid

⁵⁸ FAO, "CL 165/5 - FAO's response to COVID-19: Building to Transform"

⁵⁹ The World Bank, "Joint Statement on COVID-19 Impacts on Food Security and Nutrition"

*Nutrition 2020*⁶⁰, *Mitigating the effects of the COVID-19 pandemic on food and nutrition of school children*⁶¹, *the Food System Policy Priorities and Programmatic Actions for Healthy Diets in the context of COVID-19*⁶² highlight key areas that countries must take into account in tackling the virus. These include; ensuring equal access to healthy diets through food supply chains and adapting social assistance programmes to protect the diets of nutritionally vulnerable groups. It also includes: ensuring diverse and nutritious foods are available for school-aged children, supporting the inclusion of behaviour change communication and nutrition education in food and agriculture responses, facilitating an enabling policy environment to promote multi-sectoral actions and how data and information can be used to assess the impact of COVID-19 on diets.⁶³ Other organizations such as; the United Nations International Children’s Emergency Fund (UNICEF) and the World Health Organization (WHO) have also aided in the fight against malnutrition in view of the pandemic. UNICEF’s current focus is shifted towards ensuring school children receive learning support while schools are closed as a result of the pandemic⁶⁴. WHO and UNICEF are also engaged in the Global Nutrition Cluster initiated by key UN, civil society and academia partners to guide regional-level, multi-sector decision-makers⁶⁵. This is geared towards ensuring that vulnerable members are a priority during COVID-19, including schoolchildren. The Organizations are also members of the Global Education Coalition’s COVID-19 Response. The African Development Bank (AfDB) provided support to African governments and businesses through its Feed Africa Strategy.⁶⁶

The Agriculture and Agro-Industry Department of the African Development Bank Group in 2016 launched its “Strategy for Agricultural Transformation in Africa 2016-2025”⁶⁷ at the AfDB⁶⁸ headquarters in Abidjan, Côte d’Ivoire. The Feed Africa Strategy is centered towards eliminating extreme poverty in Africa. This strategy has four specific goals, these are: contribute to eliminating extreme poverty in Africa by 2025; end hunger and

⁶⁰FAO, WFP, UNECE, UNICEF, WHO, WMO. 2021. Regional Overview of Food Security and Nutrition in Europe and Central Asia 2020: “Affordable healthy diets to address all forms of malnutrition for better health.” Budapest.

⁶¹ FAO, WFP, UNICEF, *Mitigating the effects of the COVID-19 pandemic on food and nutrition of schoolchildren*.

⁶² FAO, “Food system policy priorities and programmatic actions for healthy diets in the context of COVID-19”.

⁶³ FAO, *Food system policy priorities and programmatic actions for healthy diets in the context of COVID-19*, 2020.

⁶⁴FAO, WFP, UNICEF, *Mitigating the effects of the COVID-19 pandemic on food and nutrition of schoolchildren*.

⁶⁵ Ibid.

⁶⁶ African Development Bank, “African Development Bank approves \$20 million to contain spread of COVID-19 in G5 Sahel nations”2020.

⁶⁷ African Development Bank, AfDB launches “Feed Africa: A Strategy for Agricultural Transformation in Africa 2016-2025”

⁶⁸African Development Bank

malnutrition in Africa by 2025; make Africa a net food exporter; and move Africa to the top of export-orientated global value chains where it has comparative advantage⁶⁹.

The Policy advice given by the FAO to the governments of Ethiopia, Ghana, Kenya, Lesotho and Zambia in 2014-2015 massively improved the impact of agricultural and social protection policies⁷⁰. This highlights the practical steps the FAO have taken to ensure food security. In 2019, the FAO launched the Hand-in-Hand initiative⁷¹ to match-make countries who have the highest poverty rates with countries who can provide support. The aim of this partnership is targeted at highly populated and underdeveloped countries.

FAO has also partnered with regional and local communities in its fight against hunger. The support FAO has given the Latin America and Caribbean states is visible through FAO's partnership and support of the Hunger-free initiative and the Community of Latin American and Caribbean States (CELAC). This initiative is geared towards eradicating hunger entirely in the Caribbean states⁷² with the aim of strengthen food and nutrition security in the Petro Caribe economic zone and in ALBA countries through national and regional hunger eradication projects⁷³. The FAO as well as the Republic of Korea (South Korea) have in partnership come together to prioritize efforts in ensuring Zero Hunger⁷⁴. This partnership is focused on the Asia-Pacific region. The aim of this collaboration is to make available for the vulnerable rural population the country's technical knowledge of agriculture, forestry and fishery.

Pursuant to FAO's interest in ensuring food security and in accordance with the Malabo Declaration adopted in Africa in 2014, FAO has worked hand in hand with African Countries through the African Union and the New Partnership for Africa's Development (NEPAD) in creating and implementing a roadmap to end hunger for the region of Africa⁷⁵. The FAO's support in Asia has been significant in integrating nutrition issues into the food security strategy of the Association of Southeast Asian Nations (ASEAN)⁷⁶.

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⁶⁹AfDB, Feed Africa: "Strategy For Agricultural Transformation In Africa 2016-2025"

⁷⁰FAO, Strategic work of the FAO to; "Help Eliminate Hunger and Malnutrition".

⁷¹International Institute for Sustainable Development, "FAO Matchmaking Initiative to Focus on Hunger and Poverty".

⁷²FAO, "South American and Caribbean countries agree on hunger and poverty eradication plan".

⁷³Ibid.

⁷⁴FAO, "FAO and the Republic of Korea to bolster Zero Hunger efforts in Asia-Pacific"

⁷⁵Ibid.

⁷⁶Ibid.

The world currently faces an impending global food emergency⁷⁷. The outbreak of the novel Coronavirus (COVID-19), the control and alleviation measures enforced worldwide, combined with the massive economic impacts of these necessary measures are the direct causes of this emergency. Border restrictions and lockdowns are slowing production in various parts of the world, leaving millions of seasonal workers without sources of income, while also restricting transport of food to markets. Meat processing plants and food markets are being forced to close in many locations due to serious COVID-19 outbreaks among workers. Farmers have been burying perishable produce or dumping milk as a result of supply chain disruption and falling consumer demand⁷⁸. As a result, many people in urban centres now struggle to access fresh fruits and vegetables, dairy, meat and fish.

By 2030, 653 million people globally would be undernourished as a result of the effects the pandemic has had on current food system⁷⁹. Furthermore, there has also been a drastic increase in the number of undernourished individuals from 624 million people in 2014 to 688 million in 2019⁸⁰. The effects of the pandemic on food security has led 28 million people worldwide into famine and over 2 million people in Yemen alone⁸¹. The pandemic came at a time when food security and our food systems were already under strain⁸². Before the outbreak of the virus, the State of Food Security and Nutrition report⁸³ already stated that about 2 billion people faced food insecurity at moderate and severe levels. This shows the already fragile state of the world's food security and nutrition. Conflict, natural disaster, climate change, and the arrival of pests and plagues on a transcontinental scale preceded the COVID-19 and were already crippling food security in so many ways. For example, in East Africa, people are facing a “triple menace” of mutually exacerbating disasters, as ongoing heavy rain hampers attempts to deal with swarms of locusts in the midst of the COVID-19 outbreak⁸⁴. Meanwhile, the worst locust crisis in decades threatens crops heading into the harvest period in East Africa. The COVID-19 pandemic is a health and human crisis threatening food security and nutrition of millions of people around the world. Long term, the combined effects of COVID-19, as well as corresponding mitigation measures and the emerging global recession could disrupt the functioning of food systems. Such disruption can result in consequences for health and nutrition of a severity and scale unseen for more than half a century.

The effect the pandemic has on food and nutrition is so grave that as of late May 2020, 264 million schoolchildren were already missing their daily food which they depended on

⁷⁷ HLPE “Impact of COVID-19 on Food Security and Nutrition (FSN)

⁷⁸ UN “Policy Brief: The Impact of COVID-19 on Food Security and Nutrition”.

⁷⁹ FAO “The Future of Food and Agriculture: Trends and Challenges”.

⁸⁰ The World Bank, “Food Security and Covid-19”.

⁸¹ John Drake, “The Effects of Covid-19 on Global Food Security”.

⁸² HLPE “Impact of COVID-19 on Food Security and Nutrition (FSN).

⁸³ FAO, “The State of Food and Nutrition in the World”, 2020.

⁸⁴ IFRC “East Africa: Red cross raises the alarm over a triple menace of Flood, COVID-19 And Locusts”,

for survival⁸⁵. The inability of these children to get their necessary daily meals highlights one of the many effects COVID-19 has had on food security and nutrition. The pandemic could also push about 49 million people into extreme poverty⁸⁶. Many more of the people enduring hunger and malnourishment are those for whom regular, reliable, and safe access to nutritious food is blocked by factors beyond their control.

Potential risk for global food availability will depend on the duration of the outbreak and the severity of the measures needed to control it. Country policies that are isolated are likely to amplify the effects of the Pandemic on food security and nutrition at a global level, especially for the low income and food insecure countries. Furthermore, the impacts of COVID-19 on food production in major food producing and exporting countries such as China could have serious ramifications for global food security, availability and prices.

Unfortunately, the global pandemic has drastically weakened efforts to achieve SDG 2⁸⁷. The lockdowns intended to contain the disease are creating conditions for a major disruption to the food supply chain, loss of income and livelihoods, uneven food prices, widening of inequality, which has given rise to a dramatic increase in hunger.

The Situation in Developing Countries: Nigeria, Congo and Somalia

Although malnutrition heightens susceptibility to COVID-19, the virus majorly affects the respiratory system and there is little to show that it may be transferred through food⁸⁸. However, the virus and means put in place to prevent its escalation have had far-reaching consequences for food security and systems as well as nutrition.⁸⁹ This was reiterated in the 165th FAO session which recognized that the coronavirus pandemic and measures to quell it led to an increase in malnutrition and hunger in countries like the Democratic Republic of the Congo, Nigeria and Somalia, among others.⁹⁰

In Nigeria, about 9 out of 10 residents cannot afford a decent meal.⁹¹ Unfortunately, the pandemic triggered a surge in food prices.⁹² A report by PWC⁹³ In June, 2020 forecasted that the negative impacts of COVID-19 on the Nigerian food supply chain would include; degraded Farming Season, hike in food prices, disruption in food distribution and supply chain, and depletion of food reserves. The report also stated that a decline in export earnings from agri-business, slowdown in the implementation of government planned agricultural schemes and the decline in farmers' incomes would occur as a result of the

⁸⁵ WFP "Global Monitoring of School Meals during COVID-19 School Closures".

⁸⁶ Carolina Sánchez-Páramo "COVID-19 will hit the poor hardest"

⁸⁷ FAO "The Future of Food and Agriculture: Trends and Challenges".

⁸⁸ ICMSF, 2020.

⁸⁹ HLPE, 2020.

⁹⁰ Food and Agriculture Organization, "Novel Coronavirus (COVID-19).

⁹¹ Bloomberg, "Congo, Nigeria Are among Worst Hotspots for Hunger" 2020.

⁹² *ibid*

⁹³ PWC, COVID on Food Security, 2020.

virus. Although the government provided several food palliatives measures, their mismanagement hampered equitable distribution among vulnerable populations.

In Congo, which has the world's largest food crisis in terms of absolute numbers, studies show that about 21.8 million people in the nation are acutely food insecure.⁹⁴ At the initial stages of the discovery of the virus in the country, a plethora of important actions were taken to prevent its spread, especially in Kinshasa which was the heart of the virus in Congo⁹⁵. Currently, the number of COVID-19 cases continue to increase daily.⁹⁶

Somalia which is majorly underdeveloped is currently in a situation whereby agricultural production and livelihoods are threatened. Consequently, there is an increasing concern with regards to the level of food insecurity in the country.⁹⁷ Households which engage in farming saw significantly low produce during the Gu harvests season (April-June). There was also an upward rise in the prices of imported rice during the Gu harvest season which may be accounted for by the travel and exportation restrictions occasioned by COVID-19 as well as panic buying and increased demand during the month of Ramadan in the county.

Mitigating the Effects of COVID-19 Shock on Small Scale Farmers

The negative impact of the Covid-19 pandemic has far-reaching effects on every aspect of human life. The agricultural sector is not spared, especially the small-scale farmers who form a substantive percentage of the agricultural labour force. Most of these small-scale farmers rely on agriculture for their livelihoods. The International Food Policy Research Institute (IFPRI) estimates that the economic contraction in 2020 could increase the number of people living in extreme poverty by a staggering 20% or 140 million people, which will result in a heightened level of food insecurity in many countries⁹⁸.

It is estimated that household farmers cultivate at least 75% of the earth's agricultural land. A substantial portion of which is used by small-scale farms; with 95% having lands smaller than 5 hectares⁹⁹. This implies that any massive disruption to the operation of small-scale farm operations like the COVID-19 would ultimately shake up the global food supply chain. According to the FAO, most of the small-scale farmers constitute a majority of the global poverty population and are heavily concentrated in developing countries

⁹⁴ Devex "Opinion: Beyond COVID-19 — Addressing Food Insecurity in Nigeria"

⁹⁵ Integrated Food Security Phase Classification "Over 21 million people in DR Congo facing high levels of acute food insecurity driven by conflict, COVID-19, flooding and economic decline".

⁹⁶ FAO, Democratic Republic of the Congo Situation Report, November 2020.

⁹⁷ FAO, SOMALIA Agricultural livelihoods and food security in the context of COVID-19 Monitoring Report January 2021.

⁹⁸ Laborde D, Martin W, Vos R (2020) Poverty and food insecurity could grow dramatically as COVID-19 spreads. International Food Policy Research Institute (IFPRI), Washington, DC.

⁹⁹ FAO, An Overview of the effects of COVID-19 on small farm holders.

from Africa, Asia and Latin America. Therefore, any minimal disruptions to the operation of these farmers would ultimately push these Farmers.

The role of the FAO in this regard revolves around advising and providing needed expertise to ensure that effective and efficient farmer friendly policies are put in place to ensure that these small scale farmers receive all the help they could get. The FAO also coordinates international fundraising efforts to support poorer countries; to enable them implement this small scale farmers policies and initiatives. To this ends, the FAO has been able to raise funds to the governments of Jamaica and five other Caribbean countries to support their small scale farmers during the pandemic¹⁰⁰.

FAO encourages global and country-specific interventions are to be taken simultaneously at various scales: measures meant to preserve and re-adjust the global food supply chains need to be complemented with context-specific solutions harnessing locally-available resources and goods¹⁰¹. FAO believes that Small scale farmers are particularly well positioned to provide contextualized and comprehensive solutions. This is because being local organizations and cooperatives, which are rooted in their territories and in their communities, they are closely embedded in their local realities and peculiar experiences, and for the production activities, they rely on their own production (or reproduction) of productive resources or on the locally available inputs¹⁰². With this organizational structure already in place their respective governments could easily work with them to achieve shared goals.

In harnessing this opportunity, the governments can undertake multiple challenges and reach objectives encompassing economic, social and environmental dimensions of sustainable development. Beyond the immediate interventions addressing the current emergency situations, countries should take this opportunity to pursue permanent solutions and promote transformation towards more sustainable food systems¹⁰³. On the international stage, this small-scale farmer organization and cooperatives provide a standby structure for International organizations to reach out directly to the farmers. For example, the world bank in furtherance of its objectives have stepped up financial intervention in countries like Afghanistan, Angola, Bangladesh, Bhutan, Sierra Leone, India amongst other¹⁰⁴

Affordability and Accessibility to Technology for Food Production in Times of Crisis

As the coronavirus crisis continues to unfold, there are long-term risks to food security at the global and national level such as disruptions in food supply chains and food production. Food producers are experiencing losses as a result of perishable and

¹⁰⁰ FAO,"Small-scale farmers to benefit from US\$1.5-m project"2020

¹⁰¹ FAO, COVID-19 and Family Farming.

¹⁰² Ibid.

¹⁰³ Ibid.

¹⁰⁴ World Bank, COVID-19 and Food Security.

nutritious food as consumption patterns shift towards cheaper staples¹⁰⁵. Many African farmers lack access to ready markets or storage facilities and lack local processing facilities to produce consumable foods from raw products, which means that much high-value produce is processed outside of the region. The importation of processed goods limits agribusiness in the rural communities, decreases employment prospects and drives up the costs of agricultural products farmers have to import. Lack of affordable refrigeration and electricity limits the production, preservation, and sale of high-value perishables such as vegetables, fruits, dairy, and meat.¹⁰⁶

Consumers are pushing for technology for processing and packaging that results in foods with “less processed quality”. There is a need to change the way foods are processed, produced, or tested to global food supply shift towards fresh and minimally processed food to minimize food hazards and increase food safety¹⁰⁷.

The innovation technology has achieved in other industries can also be successfully implemented in agriculture to curb losses. Technology can be used to provide food and nutrition security, alleviate hunger and poverty, its accessibility and affordability to smallholder farmers and producers can alleviate hunger and poverty, promote rural development and advance the Sustainable Development Goals.

Technological advancements such as synthetic biology, tissue engineering, are changing the face of agriculture in terms of food security and food production. Many developed countries like Canada and the USA are tilting towards these applications in anticipation of the future of food production, and are partnering with underdeveloped countries and smallholder farmers in minimizing the loss experienced by small scale farmers¹⁰⁸.

Nanotechnology is one of the technologies used in several projects to improve the preservation of crops. The Canadian International Food Security Research Fund and the International Development Research Centre support a program to enhance the preservation of fruits in collaboration with five other countries: India, Kenya, Sri Lanka, Trinidad, and Tobago, and the United Republic of Tanzania. The program aims to increase environmentally sustainable food security for poor people, particularly small-scale farmers and women, through applied, collaborative, results-oriented research that informs development practice.¹⁰⁹

Technological advances have gone a long way in ensuring that “precision farming” is feasible by gathering real-time data and obtaining actionable insights that help smallholder farmers who produce most of the food worldwide¹¹⁰. Smallholder farmers can

¹⁰⁵ World Bank “Food Security and COVID-19”.

¹⁰⁶ Ibid.

¹⁰⁷ FAO “New Technologies for Ensuring the Quality, Safety and Availability of Food”.

¹⁰⁸ UNCTAD “The Role of Science, Technology and Innovation in Ensuring Food Security by 2030”.

¹⁰⁹ Ibid.

¹¹⁰ Ben Dickson “Will Technology Prevent the Next Food Shortage Crisis”

take part in new technology research and development in identifying as well as procuring solutions to problems they face. In this mode of farming, new information technologies can be used to make better decisions about many aspects of crop production¹¹¹.

Post COVID-19 Opportunities To Reorient Food Systems

In light of the COVID-19 pandemic, food systems are at the crossroads of human well-being, economic development, and environmental state¹¹². The COVID-19 pandemic has highlighted the susceptibility of our current food system¹¹³. It further revealed the areas of inequalities of the current food system. It is for the above reasons that an urgent reorientation of the food system is needed. Post COVID-19 offers a unique opportunity to seize the moment and remodel policies towards a food system that is resilient and sustainable¹¹⁴.

Universally, food systems serve as a driver of climate change and the planet's current environmental crises. Food systems give rise to nearly a third of all greenhouse gases emissions and have contributed to substantial biodiversity loss¹¹⁵. There is therefore an urgent need to rethink how we produce, what we produce, process, market, consume our food and dispose of waste.

Actors in all parts of the food system are affected by this pandemic¹¹⁶. The deep global economic shocks caused by COVID-19 will impact the flow of cash and financial liquidity of producers, small and medium (SMEs) Agri- businesses to financial institutions. This would be as a result of reduced production capacity, limited market access, loss of remittances, lack of employment and unexpected medical expenses.

Cities with higher population density are particularly more vulnerable to the COVID-19 pandemic, and many cities and towns in developing countries do not have sufficient capacity to address the changes to their food system a post COVID-19 world would require. The risk is particularly high for the 1.2billion people living in the congested and overcrowded informal urban settlements where conditions are already unsafe and unhealthy for human living.

The COVID-19 pandemic is distorting urban food systems worldwide, posing a number of problems for cities and local governments that are obliged to deal with rapid changes in food availability, accessibility and affordability – which strongly impact the food security and nutrition situation of urban populations. The majority of the urban population in underdeveloped and developing countries rely on informal sector activities and casual

¹¹¹ Precision Agriculture: Tomorrow's Technology for Today's Farmer

¹¹² Nicoletta Batini "Why Sustainable Food Systems are Needed in a post-COVID World".

¹¹³ Ruerd Ruben, John McDermott, and Inge Brouwer "Reshaping Food Systems after COVID-19".

¹¹⁴ FAO "Novel Coronavirus COVID-19".

¹¹⁵ FAO "The State of The World's Biodiversity for Food and Agriculture".

¹¹⁶ UN "Policy Brief: The Impact of COVID-19 on Food Security and Nutrition".

labour including those related to food systems (street food vendors and those working in wet markets) and have access to limited or no assets or savings. Policies to limit the effects of the virus such as lockdowns, or physical distancing can spell disaster for the livelihoods of those individuals and their families leading to food insecurity and deficient nutrition¹¹⁷. This crisis can serve as a turning point to rebalance and transform our food systems, making them more inclusive, sustainable and resilient. This would go a long way in mitigating the impacts the Pandemic has had on society.

Conclusion

Covid-19, a pandemic that ultimately altered the economic progress as well as the availability and effective distribution of food, food security, showed the inequalities faced by developing countries or areas of conflicts, natural disasters as well as countries affected by the arrival of pests. The economic impact on small scale farmers cannot be termed minimal. The restrictions placed on borders and transports have led to food loss and wastage in the production as well as preservation stage.

As the world becomes more technologically advanced, technology should be used for long term solutions to issues faced by farmers such as mechanisms like refrigerators to promote the sale of high value perishable crops. High technology storage facilities help reduce food waste and food loss in the production stage which means that rural communities can have access to less processed quality food.

Further Research Questions

What opportunities does Post COVID-19 offer in further integrating sustainable practices in the farming system? What are the long-term damages to food security and nutrition? How can they be solved? How can digital dynamism transform post Covid food systems? How can technology further reduce food losses in the supply chain in developing countries? How do we ensure that small scale farmers have advanced mechanisms to enable long time preservation of farm produce? How do we reduce food loss and food wastage?

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¹¹⁷ FAO "The Future of Food and Agriculture: Trends and Challenges".

fundamental understanding of the current state of food insecurity the world is facing.

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Investing in Agriculture for Food Security and Economic Growth

*"Sustainable agriculture has been proven to drive economic growth, and in so doing provides opportunities for smallholder farmers and ensures improved food security and better nutrition."*Former Deputy Director-General, James Butler¹¹⁸.

Introduction:

With an ever-increasing human population, steady decreasing death rate, reduction in the availability of fertile lands, a looming climate disaster and a global pandemic which has disrupted the food chains and has pushed people into starvation and abject poverty. Today more than ever, the world is moving in the direction of global extinction except a global cooperation and plan is developed to mitigate this impending disaster¹¹⁹. According to the World Bank reports, in 2018, agriculture accounted for 4 percent of global gross domestic product (GDP) and 43 percent of global trade¹²⁰. The economic profitability of investing in agriculture now and in the future cannot be underestimated. These figures are expected to experience a quantum leap as researchers are recording breakthroughs in applying artificial intelligence, nanotechnology and biosciences to increase productivity and while causing less harm to the environment.

Looking forward to the future, investment in agriculture is one of the most powerful tools to end extreme poverty, boost shared prosperity and feed a projected 9.7 billion people by 2050¹²¹. Growth in the agricultural sector is two to four times more effective in raising incomes among the poorest compared to other sectors¹²². Analyses in 2016 found that 65 percent of poor working adults made a living through agriculture¹²³. The import of all these statistics shows that investment in agriculture can be a catalyst for sustainable development and poverty alleviation.

The FAO on its part has been encouraging responsible investment in agriculture and food systems, FAO works through a needs-driven Umbrella Programme to engage with governments, small-scale producers, civil society, academia and the private sector. Key Programme activities include raising awareness, building capacities, and supporting the application of international guidance instruments such as the Principles for Responsible Investment in Agriculture and Food Systems (CFS RAI)¹²⁴.

Since 1964, FAO has helped mobilize over USD 120 billion in agricultural investment¹²⁵. To achieve this, FAO works in partnership with governments and over 30 financing

¹¹⁸ FAO; Agriculture and Food Security Trust Fund Launched.

¹¹⁹ Investment in global agriculture.

¹²⁰ World Bank; Agriculture Overview.

¹²¹ FAO: The Future of Food and Agriculture (Trends and Challenges)

¹²² World Bank; Agriculture Overview.

¹²³ World Bank Reports; Agriculture and Food.

¹²⁴ FAO; "Supporting Responsible Investment in Agriculture and Food Systems".

¹²⁵ FAO; Policy Support and Governance Gateway

institutions and banks.¹²⁶FAO supports governments by providing technical advice, economic analysis, public-private dialogue and capacity building to improve investments. This work promotes sustainable agriculture, rural development, food security and improvement in nutrition¹²⁷. Majority of these interventions have been carried out in developing countries and this has helped maintain stability in the global supply chain, at least prior to the Covid-19 pandemic.

Prior to the pandemic, it was predicted by FAO that the investments required in developing countries to support the expansion in agricultural output amount to an average annual net investment of US\$83 billion (in 2009 US dollars). This total includes investment needs in primary agriculture and necessary downstream services such as storage and processing facilities but does not include public goods like roads, large scale irrigation projects, electrification and others that are also needed¹²⁸ The global gap in what is required vis-à-vis current investment levels can be illustrated by comparing the required annual gross investment of US\$209 billion (which includes the cost of renewing depreciating investments) with the result of a separate study that estimated that developing countries on average invested US\$142 billion (in 2009 US dollars) annually in agriculture over the past decade. The required increase is thus about 50 percent.¹²⁹ However, the amount of investment has increased owing to disruption engendered by the Covid-19 pandemic.

Therefore, there is an urgent need to reassess and re-evaluate these plans and strategies to adapt to the post Covid-19 environment and ultimately to meet the SDGs timeline.

International and Regional Framework:

The Universal Declaration of Human Rights Article 25(1) provides that “Everyone has the right to a standard of living adequate for the health and well-being of himself and of his family, including food, clothing, housing...”¹³⁰. The UDHR recognizes the right to food as a right to an adequate standard of living. This right to food has also been highlighted in the *Universal Declaration on the Eradication of Hunger and Malnutrition 1974* ¹³¹. The declaration recognized specific action to be taken in resolving the world food crisis that affects ill-nourished people in developing countries.

The discussion in the correlation of food security as a means of economic growth is a topic that has been severally discussed by the UN through agencies like the FAO, International Fund for Agricultural Development (IFAD). The General Assembly Resolution

¹²⁶ Ibid.

¹²⁷ Ibid.

¹²⁸ FAO; How to Feed the World in 2050

¹²⁹ Ibid.

¹³⁰ United Nations, UDHR Book.

¹³¹ OHCHR, Universal Declaration of Hunger and Malnutrition

70/259¹³², calls upon the World Food Programme, International Fund for Agricultural Development, Food and Agriculture Organization, World Health Organization to lead the implementation of the United Nations Decade of Action on Nutrition (2015-2025) as well as developing a programme based on the Rome Declaration on World Food Security 1996.¹³³

The adoption of *the Rome Declaration on World Food Security 1996* at the first World Food Summit facilitated by the FAO, recognized poverty as a major cause of food security. Conflict, terrorism, corruption and environmental degradation were noted as factors that contributed to food insecurity. The urgency of taking action to fulfil responsibility to achieve food security was emphasized by state leaders.¹³⁴ State governments were given the responsibilities of developing and adopting policies that enabled human resource development, as well as infrastructure for achieving food security. The Rome declaration allowed for enabling the environment politically, socially and economically in order to create conditions enough to eradicate poverty by ensuring equal participation of women and men, an important aspect in achieving sustainable food security for all.¹³⁵ According to the FAO, over 160 million undernourished people were living in protracted crisis situations in 2010.¹³⁶ Factors ranged from armed conflict, natural disasters, to weak governance or public administration, scarce resources, unsustainable livelihood systems and breakdown of local institutions. These figures birthed the *CFS Framework for Action for Food Security and Nutrition in Protracted Crisis (CFS-FFA)*¹³⁷. The CFS-FFA represented the first global consensus on how to mitigate the threat to food security and nutrition during protracted crises. It recognized building resilience as a capacity booster to adapt to challenges in times of crises. The CFS-FFA draws on technical work contributing to the State of Food Insecurity in the World (SOFI) 2010, and is informed by the outcomes of a CFS-mandated High-level Expert Forum on Food Insecurity in Protracted Crises, held in Rome in September 2012¹³⁸. A process to develop the document was approved by the Thirty-Ninth Session of the CFS in October 2012. The Framework was further elaborated by an Open-Ended Working Group comprising CFS stakeholders that met between July 2013 and January 2015, supported by a Technical Support Team and the CFS Secretariat. The CFS-FFA framework was endorsed on 13 October 2015 by the CFS at its Forty-Second session. It draws on international and regional frameworks including the 2030 Sustainable Development Goals Agenda.¹³⁹

¹³² General Assembly Resolution, United Nations Decade of Action on Nutrition (2016-2025), 2016.

¹³³ United Nations Research, United Nations Milestones, Food Security and Nutrition - A Global Issue.

¹³⁴ FAO, "Rome Declaration on World Food Security", 1996.

¹³⁵ Ibid.

¹³⁶ FAO, "State of Food Insecurity in the World: Addressing Food Security in Protracted Crisis"

¹³⁷ FAO, CFS "Framework for Action for Food Security and Nutrition in Protracted Crises (FFA), 2015

¹³⁸ FAO, "Framework for Action for Food Security and Nutrition in Protracted Crises".

¹³⁹ Ibid

The CFS RAI principles were developed through an inclusive international and intergovernmental multi-stakeholder process in the Committee on World Food Security. Endorsed by the CFS in 2014, it represents the most comprehensive international guidance instrument for agricultural investments.¹⁴⁰ It has a broad scope, covering all kinds of investments in agricultural value chains and food systems, and encompassing all stakeholders that are involved in, benefit from, or are affected by agricultural investments. The CFS RAI principles build on existing instruments including the Voluntary Guidelines on the Responsible Governance of Tenure (VGGT), the Voluntary Guidelines on the Right to Food, and others¹⁴¹.

Role of International System

The pandemic exposed a lot of deficiencies and vulnerabilities in the global system. One of such deficiencies is the insufficiency of food supply experienced by some countries especially the third world countries during the pandemic which was marred by widespread economic shutdown. The side effects of this shutdowns being hikes in food prices, hunger and starvation

The FAO is tasked with ensuring food security while providing access to healthy or food with high nutritional value.¹⁴² The FAO created three goals under the FAO Strategic Objective 3 to ensure the eradication of rural poverty.¹⁴³ Reducing poverty in rural areas is a primary objective of the FAO because, “hunger and food insecurity, above all, are expressions of rural poverty. Reducing rural poverty, therefore, is central to FAO’s mission.”¹⁴⁴

FAO has partnered with governments, the private sector, national and international organizations, within and outside the UN, as well as financial institutions to increase the amount of investments in agriculture and underdeveloped communities where small scale farming occurs.¹⁴⁵ According to FAO, about \$83 billion is needed in underdeveloped, impoverished areas to catch up with developed communities.¹⁴⁶ The President of the International Fund Agricultural Development (IFAD), Kanayo F. Nwanze also called for more investments to be made to Africa’s small farms in rural areas at the 23rd African Union Summit.¹⁴⁷

The FAO has begun to shift focus to technological advancement that ensures Food security, stability and sustainability. *Resolution 64/197* adopted by the General Assembly

¹⁴⁰Ibid.

¹⁴¹Ibid.

¹⁴²FAO, “About FAO”, 2014

¹⁴³FAO, “FAO’s Strategic Objective 3: Reduce Rural Poverty”, 2014, p. 2

¹⁴⁴FAO, “Reduce Rural Poverty”, 2014

¹⁴⁵FAO, “in Agriculture”, 2014.

¹⁴⁶Ibid.

¹⁴⁷IFAD, “IFAD President calls on African Union leaders to invest in sustainable rural development for all on 26 June 2014”, Rome/Malabo, 2014

focused on agricultural technology development and its use in agriculture.¹⁴⁸The importance of agriculture as well as the role innovative emerging technology plays in bringing about development to sustainable agriculture was emphasized.¹⁴⁹

Promoting Sustainable Agricultural Practices:

The main vision of the Food and Agriculture Organization is the creation of global food security and a world whereby each person has access to adequate and nutritious food. This vision also extends to the improvement of standards of living in countries through food and agriculture," especially the poorest, in an economically, socially and environmentally sustainable manner".¹⁵⁰ For a while now, sustainability has been the backbone of any effort towards development and the agricultural sector is not left out. The 2012 Rio+20 Conference recognized this and encouraged efforts towards promoting food security and nutrition through more sustainable agricultural methods and this led to the introduction of the Sustainable Development Goals (SDGs) as incorporated in the UN Post-2015 Development Agenda, and also resulted in the Zero Hunger Challenge.¹⁵¹

According to the FAO, the hallmarks of sustainable agricultural practices are "long term fertility and productivity of soil at economically viable levels".¹⁵² The five key principles of sustainability and agriculture include: increasing productivity, protecting and enhancing natural resources, improving livelihoods and fostering inclusive economic growth, enhancing the resilience of people, communities and ecosystems and Adapting governance to new challenges.¹⁵³

It should be noted that in implementing sustainability measures, partnerships, coalitions and creative modes of collaboration are increasingly important¹⁵⁴. Significant progress has been made by FAO and its Member Countries in improving the quality of agricultural productivity and sustainability at the sub-divisional level. Approaches and frameworks such as the Ecosystem Approach to Fisheries and Aquaculture, "Save and Grow", the framework programme for sustainable crop production intensification, the Global Agenda for Sustainable Livestock, Sustainable Forest Management, the Global Soil Partnership, Climate-Smart Agriculture, Coping with Water Scarcity, have been adopted and adapted according to each countries' needs.¹⁵⁵ Furthermore, with a projected global population increase of 1.9 billion, it is estimated that production of food would have to increase as well by 60 percent globally, and 100 percent more in developing countries, if it

¹⁴⁸UNGA, "Agricultural technology for development", 2010.

¹⁴⁹Ibid.

¹⁵⁰FAO, "The future of food and agriculture: Trends and Challenges", 2017.

¹⁵¹UN, "Food Security and nutrition and Sustainable Development".

¹⁵²FAO; "Sustainable Agricultural Development for Food Security and Nutrition: What Roles for Livestock?"

¹⁵³Ibid.

¹⁵⁴Ibid.

¹⁵⁵FAO, "The future of food and agriculture: Trends and Challenges", 2017.

is to meet demand at current levels of consumption.¹⁵⁶ In the past, technological innovation and improvements in institutions have led to significant gains in agricultural production and productivity. Hence the move towards technological applications for food sustainability.¹⁵⁷

Capacity Building for Food Deficit Countries:

Developing countries are often at a disadvantage with regards to food security and economic growth. Acknowledging this and recalling the unified approach to the achievement of the SDGs, this section would identify ways in which developing countries may use agriculture as a tool for economic growth.

A report by FAO on Crop Prospects and Food Situation¹⁵⁸ in March 2020 revealed that globally 44 countries continue to be in need of external assistance for food. Agricultural droughts have worsened food insecurity conditions, due to a reduction in harvests that also caused price hikes¹⁵⁹. Regions in sub-Saharan Africa have the highest prevalence of undernourishment due to a combination of factors including poverty, environmental conditions such as drought, inadequate transportation system, and price volatility amongst other factors.¹⁶⁰

As a result of the identification of the vulnerability of several countries, the FAO introduced the ECHO building funded capacity project which places emphasis on crisis-prone countries in the Sahel (Burkina Faso, Chad, Mali and Niger) and the Horn of Africa (Ethiopia, Kenya, Somalia, South-Sudan). It is designed to address issues relating to seeds, nutrition, accountability and resilience. At its core are four main strategies which include: Strengthening capacity to conduct high quality and accurate seed security assessments (SSA); Building capacities to integrate nutrition in food security programming; Ensuring better integration of accountability to affected populations (AAP) in food security programming (mainstreamed across all project activities); and Building capacities in resilience analysis and measurement and communicate this effectively to decision-makers¹⁶¹. To combat these issues, the FAO encourages Member States to enact policies and programs that are nutrition-sensitive.

Eradication of Pests on Farmlands:

Food security is threatened by the increase in the number of pests and diseases on plants and animals. These pests jeopardize food security and have wide economic,

¹⁵⁶Ibid.

¹⁵⁷Ibid.

¹⁵⁸FAO, "Crop Prospects and Food Situation"2020

¹⁵⁹Ibid.

¹⁶⁰FAO, The State of Food Insecurity in the World: The multiple dimensions of food security, 2013, p. 13

¹⁶¹FAO "Food Security Capacity Building"

environmental and social impacts¹⁶². Agricultural pests are any unwanted species of plant, animal, insect or microorganism that damages or reduces the productivity of crops and livestock¹⁶³. These unwanted Pests diminish the hard work farmers have put into cultivating various plants. It is for this reason that sustainable methods are required so as to put an end to the damage pests cause to plants. Pest control is best achieved with an Integrated Pest Management plan using a range of biological, chemical, mechanical, physical or cultural control methods¹⁶⁴.

Transboundary plants, pests and diseases have enormous effects on food crops. These effects cause monumental losses to the farmers and can threaten food security¹⁶⁵. These diseases spread easily from crop to crop threatening the livelihood of farmers and the food and nutrition security of millions of humans¹⁶⁶. Two good examples of transboundary diseases are the Cassava Virus disease and the Desert Locust. The Cassava Mosaic and Brown Streak (Cassava Virus Disease), affect mainly food crops (cassava). This disease mostly occurs in the Great Lakes region of Eastern and Southern Africa, The FAO strategic program “Cassava Diseases in Central, Eastern and Southern Africa (CacCESA) continues to provide support for cassava dependent populations through better control of the diseases and pests infestation that community might be facing.

Desert Locust on the other hand are responsible for the potential threat of livelihood of one-tenth of the population¹⁶⁷. This pest has caused significant effects in agricultural production in Africa, the Near East and Southwest Asia. In 2012, the Desert Locust threat in the Sahel was controlled adequately as a result of the contributions of USD 8.2 million and the FAO Emergency Prevention System (EMPRES). This was done through the FAO Commission for Controlling the Desert Locust in the Western Region (CLCPRO)¹⁶⁸.

By 2050, opportunistic pests such as beetles, nematodes and caterpillars would have saturated the world¹⁶⁹. It therefore comes as no surprise that pests are responsible for destroying one fifth of the world’s crop production annually¹⁷⁰. Provision of food has always been a challenge for mankind. A fundamental part of this challenge is the competition from insect pests. Particularly in the tropics and sub-tropics where the climate provides a highly beneficial environment for a wide range of insects. Massive efforts are required to suppress population densities of the different pests in order to achieve an adequate supply of food.

¹⁶²FAO “The future of food and agriculture: Trends and challenges”.

¹⁶³Jermaine Hind “A whole Farm Approach to Managing Pests”.

¹⁶⁴Department of Primary Industries and Regional Development (Australia) “Pests, weeds and diseases| Control methods”.

¹⁶⁵FAO, Plants, Pests and Diseases.

¹⁶⁶Ibid

¹⁶⁷FAO, Plants, Pests and Diseases.

¹⁶⁸Ibid

¹⁶⁹Daniel P. Bebber, Timothy Holmes, “The global spread of crop pests and pathogens”.

¹⁷⁰FAO “Insect damage: Post- harvest operations”.

Enhancing the role of Youth and Children in Agriculture:

The importance of the role played by youths and children in agriculture processes and activities cannot be underestimated. Generally, the role played by youths is and has been important and judged to be morally right and indispensable in so far as agriculture is concerned. But there is genuine concern about the role performed by children. Experts has voiced the concerns that the SDGs cannot be achieved if punitive and aggressive child labour continues to allowed in agriculture. According to the FAO Deputy Director-General (Programmes), Daniel Gustafson,

Since more than 70 percent of child labour worldwide takes place in agriculture, it is vital to integrate child labour into national agricultural policies and address the issue at the household level. Otherwise, it will further exacerbate poverty and hunger in rural areas. We need to break this vicious circle if we want to achieve progress towards the Sustainable Development Goals. Zero Hunger is not possible without zero child labour.¹⁷¹

To prevent and curtail this trend, the FAO and its partners are trying to end the dependence of family farms and enterprises on child labour through improving skills of especially small family farmers, providing access to inputs and credit, especially for women, and implementing sustainable agricultural practices in order to improve productivity and make smallholder farms viable enough to employ adults in decent work. The Organization also supports countries in integrating child labour in national policy, legislation, programmes and strategies¹⁷²

The youths are the live-blood of agriculture. The aforesaid statement becomes more obvious and evident when talking about agricultural practices in developing countries where direct human labour is required to get most of the jobs done. That notwithstanding, the UN has predicted that by 2030, 6 out of every 10 people will live in a city, and by 2050, this proportion will increase to 7 out of 10 people¹⁷³. This trend portends grave consequences for the agricultural sector if the rate of urban to rural migration is not met with an increase in overall technologically advanced equipment availability.

To mitigate this impending problem and to better position the youths to drive agricultural activities in the post-Covid-19 era. The FAO has implemented and suggested for implementation the following measures to public and private stakeholders in the agricultural sector. These include; Provision of ICT gadgets for young extension workers; Provision of distant learning for young farmers; Rebranding agricultural studies in school, Training young farmers on Agri-enterprise and management; Creation of youth's research centres on agriculture; provision of ICT solutions to the farmers amongst other factors¹⁷⁴.

¹⁷¹FAO; Child Labour in Agriculture is on the Rise, driven by conflicts and disasters,2014

¹⁷²Ibid.

¹⁷³ILO; Agricultural Sector 2018

¹⁷⁴FAO; Youths and Agriculture; Key challenges and Concrete solutions,2017

All these has the FAO to provide relevant ICT training and gadgets to youths in many developing countries such as Tunisia, Rwanda amongst others.¹⁷⁵

The FAO has also taken measures to provide access to finance to young Agricultural entrepreneurs. For example, in Uganda, the FAO in conjunction with the Ugandan central bank and the International Monetary Fund has provided massive financial support to the budding agricultural entrepreneurs in the country¹⁷⁶. Similar interventions have been made in African and South-East Asian countries in identifying key challenges for young agri-entrepreneurs and good practices through participatory capacity analyses and strategic planning processes which were carried out with, and for the youth¹⁷⁷. Each of these interventions are tailor made to meet the peculiar needs of the entrepreneurs.

The FAO has put in place all these programmes and policies to ensure that the idea of agriculture remains attractive to young people. It is believed that with a widespread adoption of these measures that young people will be convinced to see agriculture as a lucrative and endearing venture as they will have access to new technologies, improved crops amongst other incentives that the digital world has to offer.

Provision of Adequate Storage Facilities and Transportation Systems for the Effective Distribution of Food:

Globally, food wastage amounts to a monetary loss of USD 1 trillion. In developing countries, this loss is estimated to be high at around USD 310 billion; and 40 percent of the losses occur at post-harvest and processing levels. In Sub-Saharan Africa, approximately 150 kilograms of food produced is lost per person per year. FAO estimates that saving one-quarter of the food lost annually would be enough to feed the world's hungry. Amongst the Latin America and Caribbean countries such as Ecuador, Paraguay and Haiti, post-harvest losses range between 35 percent-50 percent of the total product¹⁷⁸.

Lack of adequate information, inappropriate use of technology, transportation barriers and climate change are some of the factors that result in such huge losses in the region. The environmental footprint of food wastage is also very high¹⁷⁹. According to FAO, water used for irrigation to grow crops that is eventually wasted is enough to meet the domestic water needs of 9 billion people¹⁸⁰. In developing countries, significant post-harvest losses from farm to depot are caused due to financial and structural limitations in harvesting, storage, packing, and transportation.

¹⁷⁵FAO," Youth employment and agriculture: Harnessing the potential of ICT and entrepreneurship" 2018

¹⁷⁶FAO," Agricultural finance and the youth – Prospects for financial inclusion in Uganda

¹⁷⁷FAO," Empowering young agri-entrepreneurs to invest in agriculture and food systems" 2019.

¹⁷⁸Ibid.

¹⁷⁹Ibid.

¹⁸⁰FAO; "Supporting Responsible Investment in Agriculture and Food Systems".

Further, challenges in institutional and regulatory frameworks, market mechanisms, and climatic conditions also contribute to food spoilage. It is difficult to penetrate the vast and fragmented smallholder farmer population, and small and upcoming companies find it cost-prohibitive to reach thousands of dissimilar farms, while big companies encounter a number of logistics issues¹⁸¹. A major drawback in agriculture supply chains in developing nations is limited access to a formalized cold-storage network, especially for smallholder farmers. Inadequate infrastructure including roads, electricity supply, and inadequate handling of post-harvest agricultural produce adds to the challenges¹⁸². For instance, in India, there is a need to double the cold storage capacity to prevent further food wastage¹⁸³

Post-harvest storage solutions are the responsibility of the public sector in a number of developing countries. With increasing population and growing demand for food, there is excess pressure on agricultural production. To remedy this problem a lot of responsibility rests on the government of most of these developing countries to increase funding for basic infrastructure such as roads, storage systems amongst others. Public-private partnerships have also been identified as a possible source of funding for these infrastructure projects. On its part, the FAO keeping with its founding principles have been interfacing with governments and farmers alike to facilitate the transfer of technologies and provide access to finance through its various regional and country specific initiatives¹⁸⁴

To this end, the Agricultural Engineering Department of the FAO has revised the FAO Manual No. 60 "Handling and Storage of Food Grains" prepared by Mr. D.W. Hall in 1970, and which was subsequently reprinted three times¹⁸⁵. This is to incorporate newer storage processes and this manual has been widely distributed. The FAO also encourages privatization and liberalization of storage facilities in countries where these facilities are under governmental control. This is in a bid to spark healthy competition and innovation in food preservation while lowering the cost of such services¹⁸⁶.

Food Waste and its Threats to Food Security

Each year, one-third of all food produced for human consumption is lost or wasted across the globe.¹⁸⁷ Around \$940 billion economic loss occurs every year due to food loss and waste¹⁸⁸ Food waste is a decrease in the quality or quantity of food due to actions or inactions of retailers, food service providers, and consumers. Food waste occurs at every

¹⁸¹Nicoletta Batini "Why Sustainable Food Systems are Needed in a post-COVID World".

¹⁸²Ibid.

¹⁸³WEF; India must tackle food wastage

¹⁸⁴ Supra Note 111

¹⁸⁵ FAO," Grain Storage Processes- Foreword"2020

¹⁸⁶ Ibid.

¹⁸⁷ FAO, Global Food Losses and Food Waste, 2011.

¹⁸⁸ FAO, Food Wastage Footprints and Climate Change.

stage of the supply chain, food waste affects investments, labour, and resources such as; seeds, feeds, and water and occurs during the retail or at the consumer level. Food wastage is a contributor to climate change and greenhouse gas emissions.¹⁸⁹

Target 12.3 of SDG 12 is to “*halve per capita food waste at the retail and consumer levels and reduce food losses along production and supply chains, including post-harvest losses by 2030*”.¹⁹⁰

Achieving food wastage and loss reduction will significantly improve food security and nutrition, lower pressure on water and land resources, foster economic growth, and reduce greenhouse gas emissions. Proactive steps need to be taken in order to prevent or curb food losses and their long-term effects.

At the International day of Awareness of Food Loss and Waste Day,¹⁹¹The FAO and the UNEP requested for participative action from everyone in reducing food loss and waste as it poses a greater threat to food security globally. The coronavirus disease pandemic has increased the threats to food and nutrition security of up to 130 million people, as well as the rapid decline in the ecosystem and the consequences of global warming.¹⁹²

The UNEP with the FAO, in collaboration with the Champions 12.3,¹⁹³ developed a “Target-Measure-Act approach to food loss and waste reduction,”¹⁹⁴ making use of the **Food Waste Index (FWI)** and the **Food Loss Index (FLI)** reports. The FAO has also conducted meta-analysis research measuring food loss and food waste in countries all over the world.

The United Kingdom has successfully achieved a 27 percent reduction in post-farm gate food loss and waste per capita in 2018, it became the first country in the world to make halfway progress in achieving the SDG 12.3 target.¹⁹⁵ This feat, the UK achieved by public-private partnership in order to facilitate supply chain collaboration, impacts on household behaviour during the global pandemic.

In Rwanda, an African Centre of Excellence for Sustainable Cooling and Cold Chain which aims to help farmers reduce food waste. The Rwanda’s Cooling Initiative (RCOOL), supported by the United Nation Environment Programme’s United for Efficiency Initiative, is providing sustainable cooling for farmers in order to reduce food waste and improve food security.¹⁹⁶

¹⁸⁹ FAO, Food Loss and Waste and The Right to Adequate Food, 2018.

¹⁹⁰FAO, 12.3.1 Global Food Losses | Sustainable Development Goals.

¹⁹¹ FAO, International Day of Awareness of Food Loss and Waste. 2020.

¹⁹² UNEP, Food Loss and Waste Must Be Reduced for Greater Food Security and Environmental Sustainability, 2020.

¹⁹³ Champions 12.3, About Champions 12.3.

¹⁹⁴ Ibid

¹⁹⁵ Ibid

¹⁹⁶ UNEP, Centre of Excellence in Rwanda Aims to Support African and Rwanda Aims to Support African Farmers and Rural Communities, 2020.

The FAO has adopted the Reduce, Reuse, Recycle/Recover,¹⁹⁷ in curbing food wastage and reducing resources used for production of food and labour as well as reducing environmental, economic and social impact caused by food waste. Donating to food banks is an effective way households can promote the reuse pattern. The FAO has introduced sustainable packaging as a way to transport fresh goods in Southern and South-east Asian countries, crates usage has contributed in the reduction of vegetable and fruit loss up to 87 percent.¹⁹⁸

Conclusion

The importance of investment in agriculture in furthering Goal 2 “Zero hunger” and Goal 8 “Decent Work and Economic Growth” cannot be overemphasised. Investing in agriculture has and will continue to be a sustainable way to ensure food security especially in rural areas. As well as continue to drive global economic growth and rural economic growth. Investments enable capacity building for small scale farmers thereby ensuring little or no wastage or loss of food in the production and transportation process of food down to its final consumer. Several factors like pests, food wastage and food loss as well as limited participation by youths in the agricultural process in food deficit countries.

Harnessing the currency of private sector contribution governmental organisations in the agricultural sector will not only promote sustainability but accountability.

Further Research Questions

What sustainable measures have been taken by countries to promote food security? What are the funding opportunities that can be provided for underdeveloped countries? How can food waste and loss in production be reduced? How does regional collaboration help in transportation systems and storage facilities for the effective distribution of foods? How can private and government partnership achieve capacity building for sustainable farming practices in order to curb food insecurity? What sustainable methods can be implemented in eradicating pests on farmlands? How will youth participation open up social discussions around food security? What change can these discussions drive? What steps can the governments of developed countries take to minimize food wastage?

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¹⁹⁷ FAO, Toolkit - Reducing the Food Wastage Footprint, 2013.

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